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July 26, 1995

TPJLTR 95-0087

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

Licensee Event Report 95-007, Docket 50-249 is being  
submitted pursuant to 10CFR50.73(a)(2)(i)(B) and  
10CFR50.73(a)(2)(ii).

Sincerely,

A handwritten signature in black ink, appearing to read "T. P. Joyce", is written over the typed name.

Thomas P. Joyce  
Site Vice President

TPJ/MM:pt

Enclosure

cc: H. Miller, Regional Administrator, Region III  
NRC Resident Inspector's Office  
File/NRC  
File/Numerical

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NRC FORM 366 (5-92)	U.S. NUCLEAR REGULATORY COMMISSION	APPROVED BY OMB NO. 3150-0104 EXPIRES 5/31/95							
<b>LICENSEE EVENT REPORT (LER)</b>		ESTIMATED BURDEN PER RESPONSE TO COMPLY WITH THIS INFORMATION COLLECTION REQUEST: 50.0 HRS. FORWARD COMMENTS REGARDING BURDEN ESTIMATE TO THE INFORMATION AND RECORDS MANAGEMENT BRANCH (MNBB 7714), U.S. NUCLEAR REGULATORY COMMISSION, WASHINGTON, DC 20555-0001, AND TO THE PAPERWORK REDUCTION PROJECT (3150-0104), OFFICE OF MANAGEMENT AND BUDGET, WASHINGTON, DC 20503.							
FACILITY NAME (1) Dresden Nuclear Power Station, Unit 3		DOCKET NUMBER (2) 05000249							
PAGE (3) 1 OF 5									
TITLE (4) Leakage Limit Exceeded Due to Excessive Leakage Past Main Steam Line Drain Gate Valves									
<b>THIS REPORT IS SUBMITTED PURSUANT TO THE REQUIREMENTS OF 10 CFR §: (Check one or more) (11)</b>									
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 NAME DOCKET NUMBER						
06 30 95	95 -- 007 -- 00	07 30 95	None DOCKET NUMBER						
OPERATING MODE (9)	THIS REPORT IS SUBMITTED PURSUANT TO THE REQUIREMENTS OF 10 CFR §: (Check one or more) (11)								
N	20.2201(b)	20.2203(a)(3)(i)	50.73(a)(2)(iii) 73.71(b)						
POWER LEVEL (10)	20.2203(a)(1)	20.2203(a)(3)(ii)	50.73(a)(2)(iv) 73.71(c)						
000	20.2203(a)(2)(i)	20.2203(a)(4)	50.73(a)(2)(v) OTHER						
	20.2203(a)(2)(ii)	50.36(c)(1)	50.73(a)(2)(vii) (Specify in Abstract below and in Text, NRC Form 366A)						
	20.2203(a)(2)(iii)	50.36(c)(2)	50.73(a)(2)(viii)(A)						
	20.2203(a)(2)(iv)	X 50.73(a)(2)(i)	50.73(a)(2)(viii)(B)						
	20.2203(a)(2)(v)	X 50.73(a)(2)(ii)	50.73(a)(2)(x)						
<b>LICENSEE CONTACT FOR THIS LER (12)</b>									
NAME		TELEPHONE NUMBER (Include Area Code)							
M. McGivern, Local Leak Rate Test Coordinator Ext. 2526		(815) 942-2920							
<b>COMPLETE ONE LINE FOR EACH COMPONENT FAILURE DESCRIBED IN THIS REPORT (13)</b>									
CAUSE	SYSTEM	COMPONENT	MANUFACTURER	REPORTABLE TO NPRDS	CAUSE	SYSTEM	COMPONENT	MANUFACTURER	REPORTABLE TO NPRDS
X	SB	ISV	A391	Yes					
X	CE	ISV	A391	Yes					
<b>SUPPLEMENTAL REPORT EXPECTED (14)</b>				<b>EXPECTED SUBMISSION DATE (15)</b>		MONTH	DAY	YEAR	
X	YES	(If yes, complete EXPECTED SUBMISSION DATE).		NO		10	31	95	

ABSTRACT (Limit to 1400 spaces, i.e., approximately 15 single-spaced typewritten lines) (16)

At approximately 2130, on June 30, 1995, with Unit 3 shutdown for maintenance, the performance of Dresden Technical Surveillance (DTS) 1600-01, Local Leak Rate Testing Of Primary Containment Isolation Valves, identified the Main Steam Line Drain (MSLD) gate valves 3-220-1 and 3-220-2 to be leaking more than the test equipment could measure. The safety significance of the leakage past valves 3-220-1 and 3-220-2 is being evaluated. The gate valves will be inspected, repaired or replaced and Local Leak Rate Tested (LLRT) prior to unit startup. A supplement will be submitted to report the cause(s) of the valve failures, safety significance, corrective actions taken and results of the as-left LLRT.

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YEAR	SEQUENTIAL NUMBER	REVISION NUMBER									
95	-- 007 --	00									

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

**EVENT IDENTIFICATION:**

Leakage Limit Exceeded Due to Excessive Leakage Past Main Steam Line Drain Gate Valves

**A. PLANT CONDITIONS PRIOR TO EVENT:**

Unit: 3    Event Date: 06/30/95    Event Time: 2130  
 Reactor Mode: N    Mode Name: Shutdown    Power Level: 0%  
 Reactor Coolant System Pressure: 0 psig

**B. DESCRIPTION OF EVENT:**

During Refuel Outage D3R13 (March 1994 - November 1994), the Main Steam Line Drain (MSLD) [SB] Primary Containment Isolation Valves 3-220-1 and 3-220-2, Crane gate valves, were cut out and replaced with Anchor Darling dual disk gate valves.

On January 16, 1995, with Unit 3 exiting Maintenance Outage D3F17, the MSLD inboard gate valve 3-220-1 was given a close signal. Dual indication (both open and closed), not a full close indication, was received in the Control Room. The valve was opened and again given a close signal. This time the Control Room received a full close indication. Since the indication was erratic, this Primary Containment Isolation Valve was declared inoperable.

Technical Specification 3.7.D.1. states:

During reactor power operation conditions, all primary containment isolation valves and all instrument line flow check valves shall be operable except as specified in 3.7.D.2.

Technical Specification 3.7.D.2. states:

In the event any primary containment isolation valve becomes inoperable, reactor power may continue provided at least one valve in each line having an inoperable valve is in the mode corresponding to the isolated condition.

Therefore, the MSLD outboard gate valve 3-220-2 was taken Out-of-Service in the closed position. This stopped the clock for the Limiting Condition for Operation described in Technical Specification 3.7.D.3. which states:

If specification 3.7.D.1 and 3.7.D.2 cannot be met, an orderly shutdown shall be initiated and the reactor shall be in the cold shutdown condition within 24 hours.

When Dresden Unit 3 shutdown for maintenance, the Motor Operated Valve (MOV) team began investigating the valve's position discrepancy. Limits were found to be engaged and the valve appeared to be closed. The torque switch setting was then increased in order to increase margin between the minimum required thrust and thrust developed at the torque switch setting. At approximately 2100, on

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June 14, 1995, the performance of Dresden Technical Surveillance (DTS) 1600-01, Local Leak Rate Testing Of Primary Containment Isolation Valves, identified the MSLD gate valves 3-220-1 and 3-220-2 to be leaking more than the test equipment could measure. Checking of the vent path revealed that the MSLD outboard gate valve 3-220-2 was leaking greatly. The Unit Supervisor was notified of the event and a Performance Improvement Form (PIF) was written. The ComEd Reportability Manual states:

In general, for the purpose of evaluating the reportability of situations found during surveillance tests, it should be assumed that the situation occurred at the time of discovery, unless there is firm evidence to believe otherwise.

On May 29, 1995, the High Pressure Coolant Injection (HPCI) System [SJ] check valve 3-2301-45 had leaked great enough to cause the cumulative Type B and C leakage to exceed the Technical Specification leakage limit of 0.60 L<sub>v</sub> (488.452 standard cubic feet per hour). This failure was reported in LER/Docket 95-011/0500249. Reporting of the MSLD test volume LLRT failure was to be included in the supplement to that LER.

On June 16, 1995, the MSLD test volume was pressurized and the outboard gate valve 3-220-2 was manually opened and then closed while the vent path was monitored. The leakage past the 3-220-2 was still unmeasurable. Valve disassembly revealed valve internal damage, a bent valve stem and valve internals missing. The Unit Supervisor was notified and a PIF (2492009506300) was written. An inspection of the piping with a boroscope did not locate the missing valve parts. Due to the internal damage suffered by the valve, the valve was cut out. To verify primary containment integrity, a plug was installed in the MSLD piping in order to Local Leak Rate Test the inboard gate valve 3-220-1.

At approximately 2130, on June 30, 1995, the performance of Dresden Technical Surveillance (DTS) 1600-01, Local Leak Rate Testing Of Primary Containment Isolation Valves, identified the Main Steam Line Drain (MSLD) gate valve 3-220-1 to be leaking more than the test equipment could measure.

The Unit Supervisor was notified of the event, and an ENS phone notification was then made at 0400 Eastern Standard Time on Saturday July 1, 1995 to report a condition that was outside of the design basis of the plant and a PIF was written to report a condition prohibited by the plant's Technical Specifications.

The MSLD test volume was again pressurized and the inboard gate valve 3-220-1 was manually opened and then closed while the leakage rate was monitored. The valve was left in the position where leakage was at its lowest rate, 17 scfh (standard cubic feet per hour).

Due to the two MSLD valve failures coupled with knowledge of recent problems with this type of valve at other stations, Engineering determined that Local Leak Rate Testing of the other Anchor Darling dual disk gate valves was warranted. Other Crane gate valves which were replaced with Anchor Darling dual disk gate valves during Refuel Outage D3R13 are the Reactor Water Cleanup (RWCU) System [CE] suction valves 3-1201-1, 3-1201-1A and 3-1201-2 and the Reactor Head

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Spray System [BO] valve 3-205-24. These systems were taken Out-of-Service in order to be given an LLRT. The LLRT on the RWCU valves yielded a leakage which was too great to be measured by the test equipment. Trouble shooting determined that the excessive leakage was past the inboard valve 3-1201-1 and its bypass valve 3-1201-1A and the 3-1201-2 valve was leaking 5 scfh. The LLRT of the Reactor Head Spray System gate valve 3-205-24 yielded a leakage of 1 scfh.

**C. CAUSE OF EVENT:**

This LER is being submitted pursuant to 10 CFR 50.73(a)(2)(i)(B) which requires the reporting of any operation or condition prohibited by the plant's Technical Specifications.

This LER is also submitted pursuant to 10 CFR 50.73(a)(2)(ii) which requires reporting any event or condition that resulted in the condition of the nuclear power plant, including its principal safety barriers, being seriously degraded.

The root cause of the valve failures and corrective actions to prevent future recurrence will be thoroughly reviewed prior to startup. The results of this review will be reported in a supplement to this report.

**D. SAFETY ANALYSIS:**

Work on the 3-220-1 is still in progress, therefore, the safety significance of the leakage through the Main Steam Line Drain is still being evaluated. The safety significance of the leakage past the RWCU valves is minimal due to 5 scfh leakage out of containment. The results will be included in a supplement to this report.

**E. CORRECTIVE ACTIONS:**

Nuclear Tracking System (NTS) tracking code numbers are identified in the text as (XXX-XXX-XX-XXXXX).

The MLSD gate valves 3-220-1 and 3-220-2 and the RWCU gate valves 3-1201-1 and 3-1201-1A will be inspected, repaired or replaced and Local Leak Rate Tested prior to startup. (NTS #249-180-95-00701)

An LER supplement will be submitted to report the cause for the valve failures, safety significance, corrective actions taken and the results of the as-left LLRT. (NTS #249-180-95-00702)

The root cause of the valve failures and corrective actions to prevent recurrence will be resolved prior to startup. (NTS #249-180-95-00703)

**F. PREVIOUS OCCURRENCES:**

<u>LER/Docket Numbers</u>	<u>Title</u>
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None associated with Anchor Darling dual disk gate valves.

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G. COMPONENT FAILURE DATA:

Manufacturer	Nomenclature	Model Number	Mfg. Part Number
Anchor Darling Valve Co.	MSLD 3-220-1 3-220-2	DD	N/A
	RWCU 3-1201-1 3-1201-1A		

An industry - wide data base search revealed 148 corrective maintenance entries for the Anchor Darling Model DD dual disk gate valve. Five failures were attributed to internal valve damage or misalignment of valve internals.