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Dresden Nuclear Power Station
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October 25, 1994

RLBLTR 94-0021

U.S. Nuclear Regulatory Commission
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Washington, D. C. 20555

Licensee Event Report 91-007-01, Docket 50-249 is being submitted as required by Technical Specification 6.6, NUREG 1022 and 10CFR50.73(a)(2)(i). This revised report provides an update on final local leakage rate testing results and corrective actions performed during the D3R12 Refuel Outage to reduce leakage from primary containment.

Sincerely,

R. L. Bax
Unit 3 Station Manager
Dresden Station

RLB/MMc:cfq

Enclosure

cc: J. Martin, 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

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.

LICENSEE EVENT REPORT (LER)

FACILITY NAME (1)	DOCKET NUMBER (2)	PAGE (3)
Dresden Nuclear Power Station, Unit 3	05000249	1 OF 12

TITLE (4)
Type B and C Primary Containment Local Leak Rate Testing Limit Exceeded due to HPCI Turbine Exhaust Check Valve 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 NAME	DOCKET NUMBER
									None	
09	10	91	91	-- 007 --	01	09	24	91	FACILITY NAME	DOCKET NUMBER

OPERATING MODE (9)	N	THIS REPORT IS SUBMITTED PURSUANT TO THE REQUIREMENTS OF 10 CFR §: (Check one or more) (11)							
			20.2201(b)		20.2203(a)(3)(i)		50.73(a)(2)(iii)		73.71(b)
POWER LEVEL (10)	000		20.2203(a)(1)		20.2203(a)(3)(ii)		50.73(a)(2)(iv)		73.71(c)
			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)		50.73(a)(2)(ii)		50.73(a)(2)(x)		

LICENSEE CONTACT FOR THIS LER (12)

NAME	TELEPHONE NUMBER (Include Area Code)
M. McGivern, Local Leak Rate Test Coordinator Ext. 2526	(815) 942-2920

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	BJ	ISV	M360	Y		X	SJ	ISV	C665	Y
X	SB	ISV	C665	Y		X	BO	ISV	C665	Y

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 15 single-spaced typewritten lines) (16)

On September 10, 1991 with Unit 3 in a refueling outage, while performing Dresden Technical Surveillance (DTS) 1600-01, Local Leak Rate Testing of Primary Containment Isolation Valves, the leakage between the 3-2301-74, High Pressure Coolant Injection (HPCI) [BJ] Turbine Exhaust To Suppression Chamber Stop Check Valve, and the 3-2301-45, HPCI Turbine Exhaust Check Valve, was unable to be determined. Further diagnosis and previous LLRT history indicated that the 3-2301-45 was the leaking valve. This valve leakage exceeded the Technical Specification 3.7.A.2.b(2)(a) limit of 488.452 scfh. Inspection of the check valve revealed a torn seat. The valve was replaced. The valve seat failed as a result of excessive valve cycling. The operating procedures for the turbine have been modified to prevent low turbine exhaust pressure operations which will in turn prevent cycling of check valve 3-2301-45. The safety significance of this event was minimal because the redundant in-line isolation valve leaked 84 scfh.

The total as-found minimum pathway leakage (Type A test) was 1.4595 wt%/day which exceeded the Technical Specification limit of 1.2 wt%/day. Calculations have been performed to prove this leakage did not exceed 10 CFR 100 limits.

NRC FORM 366B
(5-92)

U.S. NUCLEAR REGULATORY COMMISSION

APPROVED BY OMB NO. 3150-0104
EXPIRES 5/31/95

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.

LICENSEE EVENT REPORT (LER)
FAILURE CONTINUATION

FACILITY NAME (1)	DOCKET NUMBER	LER NUMBER (6) YEAR	SEQUENTIAL NUMBER	REVISION NUMBER	PAGE (3)
Dresden Nuclear Power Station, Unit 3	05000249	91	-- 007 --	01	2 OF 11

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	BR	ISV	C665	Y					
X	BO	ISV	A585	Y					
X	BF	ISV	C665	Y					
X	VB	ISV	P340	Y					
X	WD	ISV	C665	Y					
X	IP	ISV	R340	Y					
X	BB	ISV	H037	Y					
X	CC	ISV	C665	Y					

EVENT IDENTIFICATION:

Type B and C Primary Containment Local Leak Rate Testing Limit Exceeded Due to HPCI Turbine Exhaust Check Valve Leakage

A. PLANT CONDITIONS PRIOR TO EVENT:

Unit: 3 Event Date: 09/10/91 Event Time: 0630 hrs

Reactor Mode: N Mode Name: Refuel Power Level: 0%

Reactor Coolant System Pressure: 0 psig

B. DESCRIPTION OF EVENT:

On September 10, 1991 with Unit 3 in a refuel outage, while performing Dresden Technical Surveillance (DTS) 1600-01, Local Leak Rate Testing of Primary Containment Isolation Valves, the volume between the High Pressure Coolant Injection (HPCI) [BJ] Turbine Exhaust to Suppression Chamber Stop Check Valve, 3-2301-74, and the HPCI Turbine Exhaust to Suppression Chamber Check Valve, 3-2301-45, could not be pressurized to test pressure (48 psig). This undetermined leakage exceeded the Technical Specification 3.7.A.2.b(2)(a) limit of 488.452 scfh for the as-found 10 CFR 50, Appendix J Type B and C leakage. Diagnostic testing, performed by observing the vent path upstream of the test volume, indicated significant leakage past the 3-2301-45 valve. LLRT records dating back to 1980 indicated two previous failures.

During the D3R12 refueling outage, approximately 91 test volumes were tested. These volumes included valves electrical penetrations, bellows and other primary containment penetrations. Out of this number, the following list of 17 test volumes required repairs or adjustments. A summary of as-found results for these volumes are listed below:

VOLUME	SYSTEM	"As-Found" Type C (Maximum Pathway) LEAKAGE RATE	"As-Found" Type C (Minimum Pathway) LEAKAGE RATE
3-220-1 & 2	Main Steam	14.6 scfh	6.50 scfh
3-220-57A & 58A	Feedwater	47.77	17.71 scfh
3-220-57B & 58B	Feedwater	Undetermined	11.86 scfh
3-220-57A & 62B	Feedwater	17.71 scfh	17.71 scfh
3-1001-1A,1B, 2A,2B & 2C	Shutdown Cooling	312.73 scfh	156.37 scfh
3-1101-1 & 15	SBLC	39.3 scfh	1.98 scfh
3-1501-25B & 26B	LPCI	Undetermined	18.80 scfh

3-1599-61 & 62	LPCI	71.5 scfh	35.79 scfh
3-1601-20A & 31A	Torus Vent	Undetermined	1.51 scfh
3-1601-20B & 31B	Torus Vent	Undetermined	1.50 scfh
3-1601-21,22,55, 56 & 8502-500	Drywell Purge	64.7 scfh	32.35 scfh
3-1601-23,24, 60,61,62 & 63	Drywell Vent	Undetermined	2.35 scfh
3-2001-5 & 6	DW Equip. Drain Sumps	20.85 scfh	10.43 scfh
3-2499-28A & 29A	CAM	87.3 scfh	87.3 scfh
3-2499-28B & 29B	CAM	Undetermined	Undetermined
3-2599-3A & 24A	ACAD	Undetermined	0.38 scfh
3-3703 & 3706	RBCCW	110.9 scfh	28.0 scfh

C. CAUSE OF EVENT:

This report is being submitted in accordance with 10 CFR 50.73(a)(2)(i) which requires the reporting of any operation or condition prohibited by the Technical Specifications.

The HPCI Turbine Exhaust to Suppression Chamber Check Valve 3-2301-45 was removed and inspected under Work Request D03575. An inspection of the valve internals revealed that the Viton seats were torn. This premature failure of the check valve has been attributed to excessive cycling of the check valve which was due to operating the HPCI turbine at 1000 rpm during monthly surveillance testing. Turbine exhaust pressure at 1000 rpm is approximately 7 psig and this low exhaust pressure causes the 3-2301-45 to cycle excessively.

A summary describing the cause and corrective actions for the remaining volumes which exhibited leakage in excess of Station guidelines are contained in Section E of this report.

D. SAFETY ANALYSIS:

Since the HPCI Turbine Exhaust To Suppression Chamber Stop Check Valve 3-2301-74 is used as a blocker valve during the Type C testing of valve 3-2301-45, this line is considered to be a single valve pathway from primary containment and all leakage is assumed past the 3-2301-45 valve. The stop-check function of valve 3-2301-74 was tested during the Unit 3 D3R13 refuel outage Type A Integrated Leak Rate Test. With the suppression chamber pressurized to 49 psig, the ILRT induced leakage flow meter was connected to valves 3-2301-41A and 3-2301-42A which are the test connections located between valves 3-2301-45 and 3-2301-74. This test quantified zero leakage past valve 3-2301-74; however, since the lowest gradation on this flow meter is 1.4 scfm (84 scfh), the recorded leakage is 84 scfh.

The calculated as-found leakage rate of 1.4595 wt%/day exceeds the Technical Specification limit of 1.2 wt%/day. Calculations which were performed and reported in LER/Docket 90-018-1/0500237, Leakage Path Discovered During Primary Containment ILRT due to Management Deficiency, dated August 6, 1991, indicate that a leakage rate of approximately 31 wt%/day would not exceed the off-site and control room dose rates specified by the limits of 10 CFR 100 and General Design Criteria 19 with Standby Gas Treatment System operable. The safety significance is mitigated by the integrity of the Secondary Containment and the function of the Standby Gas Treatment System, which is used to maintain a slight negative pressure in the Reactor Building during accident conditions. Filters are provided in the system to remove radioactive particles and charcoal absorbers are provided to remove radioactive halogens which may be present in concentrations significant to environmental dose criteria. The refuel outage D3R12 as-found leakage rate of 1.4595 wt%/day is approximately 4.7% of the 31 wt%/day. Therefore, the safety significance of this as-found minimum pathway leakage is considered minimal.

E. CORRECTIVE ACTIONS:

The HPCI Turbine Exhaust To Suppression Chamber Check Valve 3-2301-45 was replaced with a similar check valve under Work Request D03575. An as-left LLRT was performed which yielded a leakage rate of 0.14 scfh. Records dating back to 1980 indicate two previous valve failures.

Following refuel outage D3R12, interim corrective actions to prevent excessive cycling of valve 3-2301-45 were initiated by increasing the HPCI pump discharge pressure. This increased the amount of steam flow through the turbine exhaust line which greatly reduced the valve cycling, but did not eliminate it completely. In February of 1993, HPCI operating procedures were revised to increase the HPCI turbine warm up speed to 2500 rpm. This increased the HPCI exhaust pressure to approximately 13 psig which eliminated the 3-2301-45 valve from cycling during turbine warm-up. Additional corrective actions included further revisions to operating procedures and modifications that installed a spring with a weaker spring constant and new valve seats.

As a result of all repairs, adjustments and modifications made to primary containment during the D3R12 refuel outage, the total as-left maximum pathway leakage, as measured through Type B and C Local Leak Rate Testing, was 284.54 scfh. This value is 58% of the Technical Specification limit of 488.452 scfh. The as-left minimum pathway leakage rate, as measured through the Type A Integrated Leak Rate Test, was 0.6706 wt%/day which is less than the 1.2 wt%/day limit specified in the Technical Specifications.

A summary of the repairs, adjustments, and final leak rate testing results for volumes which exceeded Station guidelines for leakage, along with any modifications made to containment pathways, are listed below:

3-220-1 — Inboard Main Steam Line Drain Valve 3-220-1 was cut out and replaced under Work Request D03734. During the previous refuel outage, D3R11, this valve had a new disk/stem assembly installed which had required lapping the seats to achieve full 360 degree seat contact. Since it was determined that there had been slight error in the disc seat contact caused by misalignment of the lapping tools during refuel outage D3R11, the valve was replaced. An as-left LLRT was performed which yielded a leakage rate of 6.50 scfh. LLRT data dating back to 1980 indicates only one previous failure for this valve.

3-220-58A Inboard Feedwater Check Valve 3-220-58A was disassembled and inspected under Work Request D03590. The inspection revealed a small portion of the disc/seat contact area to have 0.001 inch gap. In addition, the "O" ring, which seals between the disk/seat assembly and the valve body, was found to be cut when it was removed from the valve. This cut "O" ring was considered the major contributing factor for leakage past the valve. A new disk/seat assembly and "O" ring were installed. An as-left LLRT was performed which yielded a leakage rate of 5.85 scfh. LLRT records dating back to 1980 indicate four failures since 1980. Long-term corrective actions to help prevent leakage between the disk/seat assembly and the valve body were approved by the Station Modification Review Committee and were implemented during the D3R13 refuel outage. The corrective actions included machining the valve body to accept a metallic gasket, which will replace the "O" ring seal, and additional hold down hardware for the disk/seat assembly.

3-220-58B Inboard Feedwater Check Valve 3-220-58B was disassembled and inspected under Work Request D03899. The inspection revealed that the seating surface between the disk/seat assembly and the valve body was rough. This roughness is indicative of leakage past the "O" ring which seals the disc/seat assembly and the valve body. The rough surface in the "O" ring seating area was lapped and a new disk/seat assembly and "O" ring seal were installed. An as-left LLRT was performed which yielded a leakage rate of 4.45 scfh. LLRT records dating back to 1980 indicate one previous failure which occurred during the 1989 D3R11 refuel outage. During that refuel outage, the disk and seat of this valve were found to be in good condition and the "O" ring had been replaced. Long term corrective actions implemented during refuel outage D3R13 included machining the valve body to accept a metallic gasket, which will replace the "O" ring seal, and additional hold down hardware for the disk/seat assembly.

3-220-62A Outboard Feedwater Check Valve 3-220-62A was disassembled and inspected under Work Request D03589. The inspection revealed that the valve was in good condition and that the seating areas were in excellent shape. The hinge pins and bushings were worn such that the flapper would not close properly. In addition, the "O" ring was badly worn and flat. New hinge pins, bushings, and an "O" ring were installed. LLRT records dating back to 1980 indicate one previous failure which occurred during the 1983 D3R08 refuel outage. An as-left LLRT was performed which yielded a leakage rate of 2.32 scfh.

3-1001-1B 3-1001-2B	Shutdown Cooling Inlet Header Isolation Valve 3-1001-1B was disassembled and inspected under Work Request D01621. The inspection revealed a badly cracked wedge and slightly scratched seat. The wedge was replaced and the seat lapped. Shutdown Cooling Pump Suction Isolation Valve 3-1001-2B was disassembled and inspected under Work Request D04548. The inspection revealed an indication on the seat and the valve failed a blue check. The seat was lapped. An as-left LLRT was performed which yielded a leakage rate of 0.29 scfh. LLRT records dating back to 1980 indicate one previous failure.
3-1101-15	Standby Liquid Control Inboard Injection Check Valve 3-1101-15 was disassembled and inspected under Work Request D96746. An inspection of the valve's internals revealed general corrosion buildup from reactor water on the seat. In addition, there was poor contact between the seat and lift type plug. The debris was removed and the seat lapped. An as-left LLRT was performed which yielded a leakage rate of 6.92 scfh. Maintenance records indicated no previous failures.
3-1501-25B 3-1501-26B	LPCI Loop "B" Injection Check Valve 3-1501-25B was disassembled and inspected under Work Request D04360. A blue check of the valve's seating surface indicated low spots at two positions along the circumference of the seating area. The disc was cleaned and the valve seat was lapped until a proper blue check was obtained. The leakage was caused by low spots in the seating surface. The majority of the leakage past this pathway was attributed to leakage past the manual maintenance valve 3-1501-26B. This valve was repaired since it is used as a blocker valve during the performance of the Type C testing of valve 3-1501-25B and is not considered an Appendix J testable valve. An as-left LLRT was performed which yielded a leakage rate of 10.1 scfh. LLRT records dating back to 1980 indicate no previous failures.
3-1599-61 3-1599-62	LPCI Discharge Header Cross-tie Valves 3-1599-61 and 3-1599-62 were flushed to clean the seats. This flushing improved the disk to seat contact of the valve. An as-left LLRT was performed which yielded a leakage rate of 3.76 scfh. LLRT records dating back to 1980 indicate one previous failure for each valve.
3-1601-31A	Torus To Reactor Building Vacuum Breaker 3-1601-31A was inspected and repaired under Work Request D96783. An inspection of the disk/seat assembly revealed a gap between the disk and seat of approximately 0.0045" near the top of the valve and less than 0.001" gap near the bottom of the valve. The disk to seat orientation of this valve was adjusted to obtain a uniform disk to seat gap. An as-left LLRT was performed which yielded a leakage rate of 1.51 scfh. LLRT records dating back to 1980 indicate no previous failures of this valve.

3-1601-31B

Torus To Reactor Building Vacuum Breaker 3-1601-31B was inspected and repaired under Work Request D97648. An inspection of the disk/seat assembly revealed a gap between the disk and seat of approximately 0.001" near the top of the valve and greater than 0.010" gap near the bottom of the valve. The disk to seat orientation of this valve was adjusted to obtain a uniform disk to seat gap. An as-left LLRT was performed which yielded a leakage rate of 1.50 scfh. LLRT records dating back to 1980 indicate one previous failure of this valve.

3-1601-22
3-1601-55

Drywell/Torus Vent Valve 3-1601-22 was disassembled and inspected under Work Request D06749. The piston rod was not adjusted properly, therefore, the valve was not fully closed. This valve was replaced in 1988. In addition, Drywell/Torus Nitrogen Purge and Pump Back Compressor Suction Valve 3-1601-55 was disassembled and inspected under Work Request D04116. The valve seats were replaced. An as-left LLRT was performed which yielded a leakage rate of 1.09 scfh. LLRT records dating back to 1980 indicate one previous failure for valve 3-1601-55 which occurred during the 1989 refuel outage D3R11.

3-1601-24

Drywell/Torus Vent Valve To Vent System, 3-1601-24, was disassembled and inspected under Work Request D03699. Upon disassembly, an inspection of the valve's internals revealed that the rod link to the piston rod was out of adjustment, therefore, the valve was not fully closed. The rod was lengthened by 1 and 3/4 turns. An as-left LLRT was performed which yielded a leakage rate of 4.78 scfh. LLRT records dating back to 1980 indicate one previous failure which occurred during the 1898 refuel outage D3R10.

3-2001-5
3-2001-6

Drywell Equipment Drain Sump Valves 3-2001-5 and 3-2001-6 were disassembled and inspected under Work Requests D05260 and D05261 respectively. The valves seat and disc seating surfaces were lapped to repair damage caused by the pumping of dirt and grit that accumulates in the sump. An as-left LLRT was performed which yielded a leakage rate of 6.76 scfh. Maintenance records indicated no previous failures. Subsequent to this outage, a new valve design was installed which will reduce the potential for this type of failure.

3-2499-28A

H_2/O_2 Analyzer Discharge Check Valve 3-2499-28A was disassembled and inspected under Work Request D06395. Due to piping corrosion products on the seating surfaces the valve was replaced. An as-left LLRT was performed which yielded a leakage rate of 1.04 scfh. This was the first test of this lift-type check valve.

3-2499-28B

H_2/O_2 Analyzer Discharge Check Valve 3-2499-28B was disassembled and inspected under Work Request D06544. Due to piping corrosion products on the seating surfaces the valve was replaced. An as-left LLRT was performed which yielded a leakage rate of 0.22 scfh. This was the first test of this lift-type check valve.

3-2599-24A — ACAD Torus Air Inlet Header Check Valve 3-2599-24A was disassembled and inspected under Work Request D03765. Minor piping corrosion products were found on the plug guide and seating surfaces. The valve internals were cleaned and an as-left LLRT was performed which yielded a leakage rate of 0.38 scfh. Maintenance records indicated no previous failures.

3-3703
3-3706 — Reactor Building Closed Cooling Water valve 3-3703 was disassembled and inspected under Work Request D03735. The wedge seating surface was built up and machined for proper fit. Reactor Building Closed Cooling Water valve 3-3706 was disassembled and inspected under Work Request D04312. As a result of a blue check performed on the valve internals, the wedge and seats were lapped. An as-left LLRT was performed which yielded a leakage rate of 19.3 scfh. Loss of seating integrity was due to wear of the valve discs. LLRT records dating back to 1980 indicate one previous failure for valve 3-3703 which occurred during the 1989 D3R11 refuel outage.

Electrical Penetration X-202F — Electrical Penetration X-202F was repaired under Work Request D02539 Leakage out of the penetration was reduced from 16.92 scfh to 14.19 scfh after being replaced. LLRT records indicate two previous failures of this penetration.

Penetrations X-105A, X-107B — Bellows penetrations X-105A and X-107B were replaced with a new design which provides an increased space between the plies. This allows the total surface of the bellows to be challenged during Type B Local Leak Rate Testing. The as-left LLRTs yielded leakage rates of 0.10 scfh and 2.18 scfh respectively.

In summary, the above failures collectively reflect ineffective management attention to the material condition of valves. Dresden Station recognizes this deficiency and has taken steps to address the root cause. A project team which will concentrate on valve corrective and preventative maintenance has been formed. This team is formed of technical and maintenance expertise in the key areas such as AOV's, MOV's, Check Valves, and valve internals. Input from Local Leak Rate Testing results is also being used as bases for future corrective and preventative maintenance actions. It is believed that these actions will improve the overall material condition of valves at Dresden Station.

F. PREVIOUS OCCURRENCES:

LER/Docket Numbers	Title
89-009/0500249	Local Leak Rate Testing "As Found" Limit Exceeded Due to Leakage From Primary Containment Valves.
89-004/0500249	Type B and C Local Leak Rate Test Limit Exceeded Due to Leakage Through Primary Containment Isolation Valves.

G. COMPONENT FAILURE DATA:

Manufacturer	Nomenclature	Model Number	Mfg. Part Number
Crane Valve Co.	Main Steam Line Drain Inboard Isolation Valve 3-220-1	7852-U	N/A

An industry-wide data base search revealed 5 failures for the Crane Model 7852-U gate valve which were due to wear and poor seat conditions. None of the failures were due to leakage past a misaligned gate valve wedge.

Crane Valve Co.	"A" Feedwater Line Inboard Check Valve 3-220-58A	973	N/A
	"A" Feedwater Line Outboard Check Valve 3-220-62A		
	"B" Feedwater Line Inboard Check Valve 3-220-58B		

An industry-wide data base search revealed 91 failures for the Crane Model 973 tilting disc check valve. Twenty six failures were attributed to failures of the "O" ring between the valve body and seat ring assembly and thirteen failures were due to normal wear to the tilting disc hinge pin and bushings. Most of the failures were in high temperature, high flow feedwater systems.

Crane Valve Co.	Shutdown Cooling Inlet Header Isolation Valve 3-1001-1B	783-UL	N/A
	Shutdown Cooling Pump Suction Isolation Valve 3-1001-2B	783-UL	N/A

An industry-wide data base search revealed 33 failures of Crane Model 783 gate valves due to wear and poor seat condition. Two of those failures were to valves in the Shutdown Cooling System.

Crane Valve Co.	Standby Liquid Control Inboard Injection Check Valve 3-1101-15	3888-U	N/A

An industry-wide data base search revealed 4 failures for the Crane Model 3888-U lift- type check valve. All four failures were due to general corrosion of seating surfaces not allowing proper seat-plug contact.

Atwood & Morrill Co. Inc.	LPCI Loop "B" Injection Check Valve 3-1501-25B	20746-H	N/A

An industry-wide data base search revealed 3 failures for the Atwood & Morrill Model 20746-H testable swing check valve. One failure was due to seat deformation from the system environmental conditions.

Crane/Chapman	Torus To Reactor Building Vacuum Breakers 3-1601-31A & 3-1601-31B	L123A	N/A

An industry-wide data base search revealed 1 failure for the Crane/Chapman Model L123A swing check valve. This failure was not due to misalignment of the two halves of the valve body.

Henry Pratt Co	Drywell/Torus Vent Valve 3-1601-22	2F II	N/A
	Drywell/Torus N_2 Purge and Pump Back Compressor Suction Valve 3-1601-55		
	Drywell/Torus Ventilation Valve To Vent System 3-1601-24		

An industry-wide data base search revealed 114 failures of Pratt Co. Model 2FII butterfly valves due to wear and poor seat condition. Nineteen of the failures were in air systems.

Crane Valve Co.	Drywell Equipment Drain Sump Valves 3-2001-5 & 3-2001-6	47-1/2LU	N/A

An industry-wide data base search revealed 45 failures of Crane Model 47-1/2LU gate valves due to wear and poor seat conditions. Twelve failures were due to grit from drain systems.

Mission Mfg. Co.	HPCI Turbine Exhaust To Suppression Chamber Check Valve 3-2301-45	15SMF402	N/A

An industry-wide data base search revealed 6 failures of Mission Mfg. Co. Model 15SMF duo check valves. Three failures were due to worn seating surfaces.

Rockwell Edwards	"A" H_2/O_2 Analyzer Discharge Check Valve 3-2499-28A	36174JTZ	N/A
	"B" H_2/O_2 Analyzer Discharge Check Valve 3-2499-28B		

An industry-wide data base search revealed 1 failure for the Rockwell Edwards lift-type check valve. This failure was also due to debris trapped inside valve internals not allowing the valve to close.

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 3	05000249	91	-- 007 --	01	12 OF 12

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

Hancock	ACAD Torus Air Inlet Header Check Valve 3-2599-24A	5580W	N/A

An industry-wide data base search revealed 33 failures for the Hancock Model 5580W lift-type check valve. Sixteen failures were attributed to debris and corrosion products fouling valve internals and not allowing the valve to close.

Crane Valve Co.	Reactor Building Closed Cooling Water Return From Drywell Isolation Valves 3-3703 & 3-3706	47-1/2XR	N/A

An industry-wide data base search revealed 45 failures of Crane Model 47-1/2XR gate valves due to wear and poor seat conditions. Ten failures were due to wear in component cooling systems.