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Dresden Nuclear Power Station  
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10 CFR 50.73

March 16, 2001

PSLTR: #01-0038

U.S. Nuclear Regulatory Commission  
ATTN: Document Control Desk  
Washington, DC 20555

Dresden Nuclear Power Station, Unit 3  
Facility Operating License No. DPR-25  
NRC Docket No. 50-249

Subject: Licensee Event Report 2000-005-01, "Technical Specification Non Compliance due to Primary Containment B Inboard and Outboard Main Steam Isolation Valves Exceeding Local Leak Rate Test Allowable Limits"

Enclosed is Licensee Event Report 2000-005-01, "Technical Specification Non Compliance due to Primary Containment B Inboard and Outboard Main Steam Isolation Valves Exceeding Local Leak Rate Test Allowable Limits," for the Dresden Nuclear Power Station (DNPS). This condition is being reported pursuant to 10 CFR 50.73 (a)(2)(ii)(B), which requires the reporting of any operation or condition prohibited by the plant's Technical Specifications. This is a supplement to Revision 0 of LER 2000-005.

The following actions were taken:

The 3-0203-1B valve was repaired and tested satisfactorily.

The 3-0203-2B valve was repaired and tested satisfactorily.

This correspondence contains the following new commitment:

The administrative requirements to properly control OOS sequencing for performance of MSIV LLRT activities during refuel outages is to be incorporated into the MSIV scheduling logic.

IE22

U.S. Nuclear Regulatory Commission

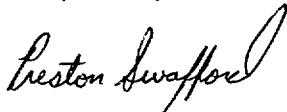
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Any other actions described in the submittal represent intended or planned actions by DNPS. They are described for the NRC's information and are not regulatory commitments.

If you have any questions, please contact Mr. Dale Ambler, Dresden Regulatory Assurance Manager at (815) 942-2920 extension, 3800.

Respectfully,

A handwritten signature in cursive script, reading "Preston Swafford".

Preston Swafford  
Site Vice President  
Dresden Nuclear Power Station

Enclosure

cc:           Regional Administrator – NRC Region III  
              NRC Senior Resident Inspector – Dresden Nuclear Power Station

## LICENSEE EVENT REPORT (LER)

Estimated burden per response to comply with this mandatory information collection request: 50 hrs. Reported lessons learned are incorporated into the licensing process and fed back to industry. Forward comments regarding burden estimate to the information and Records Management Branch (t-6 f33), 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. If an information collection does not display a currently valid OMB control number, the NRC may not conduct or sponsor, and a person is not required to respond to, the information collection.

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Dresden Nuclear Power Station, Unit 3

DOCKET NUMBER (2)

05000249

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TITLE (4)

Technical Specification Non Compliance due to Primary Containment B Inboard and Outboard Main Steam Isolation Valves Exceeding Local Leak Rate Test Allowable Limits

EVENT DATE (5)			LER NUMBER (6)			REPORT DATE (7)			OTHER FACILITIES INVOLVED (8)	
MON	DAY	YEAR	YEAR	SEQUENTIAL NUMBER	REVISION NUMBER	MONTH	DAY	YEAR	FACILITY NAME	DOCKET NUMBER
09	20	2000	2000	005	01	03	16	2001	N/A	N/A
OPERATING MODE (9)			THIS REPORT IS SUBMITTED PURSUANT TO THE REQUIREMENTS OF 10 CFR § (Check one or more) (11)							
5			20.2201(b)			20.2203(a)(2)(v)		X	50.73(a)(2)(i)	50.73(a)(2)(viii)
POWER LEVEL (10)			20.2203(a)(1)			20.2203(a)(3)(1)		X	50.73(a)(2)(ii)	50.73(a)(2)(x)
0			20.2203(a)(2)(i))			20.2203(a)(3)(ii)			50.73(a)(2)(iii)	73.71
			20.2203(a)(2)(ii)			20.2203(a)(4)			50.73(a)(2)(iv)	OTHER
			20.2203(a)(2)(iii)			50.36(c)(1)		X	50.73(a)(2)(v)	Specify in Abstract below or in NRC Form 366A
			20.2203(a)(2)(iv)			50.36(c)(2)		X	50.73(a)(2)(vii)	

## LICENSEE CONTACT FOR THIS LER (12)

NAME

Richard A. Kelly, Regulatory Assurance

TELEPHONE NUMBER (Include Area Code)

(815) 942-2920 Ext. 2924

## COMPLETE ONE LINE FOR EACH COMPONENT FAILURE DESCRIBED IN THIS REPORT (13)

CAUSE	SYSTEM	COMPONENT	MANUFACTURER	REPORTABLE TO EPIX	CAUSE	SYSTEM	COMPONENT	MANUFACTURER	REPORTABLE TO EPIX
X	SB	ISV	C665	Y					

## SUPPLEMENTAL REPORT EXPECTED (14)

YES

(If yes, complete EXPECTED SUBMISSION DATE).

X

NO

EXPECTED  
SUBMISSION  
DATE (15)

MONTH

03

DAY

16

YEAR

2001

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

On September 20, 2000, at 1830 hours, with Unit 3 shutdown for Refuel Outage D3R16, the Primary Containment Outboard Main Steam Isolation Valve 3-0203-2B failed the as found local leak rate test (LLRT) during performance of Dresden Operating Surveillance (DOS) 7000-02, "Local Leak Rate Testing Of Main Stream Isolation Valves (Wet Test)." Subsequently, an informational leak test of the Inboard Main Steam Isolation Valve 3-0203-1B identified high leakage. The total leakage through the two valves was declared to be undetermined placing the unit in a condition prohibited by the Technical Specifications. The safety significance of the leakage through the primary containment isolation valves is considered to be minimal. The root cause for the LLRT failure of the inboard 2-0203-1B MSIV was due to normal wear indications on the main seating surface. The root cause for the LLRT failure of the 3-0203-2B MSIV was due to pre-testing manipulation of the valve and closing the valve with less than full closing pressure rather than by its normal mode, using air pressure and spring force as the motive force. Corrective actions performed were that both valves were inspected, repaired and tested satisfactorily prior to the completion of D3R16. Additionally, the administrative requirements to properly control OOS sequencing for performance of MSIV LLRT activities during refuel outages are to be incorporated into the MSIV scheduling logic.

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

**PLANT AND SYSTEM IDENTIFICATION:**

General Electric – Boiling Water Reactor - 2527 MWt rated core thermal power

Energy Industry Identification System (EIS) Codes are identified in the text as [XX] and are obtained from IEEE Standard 805-1984, IEEE Recommended Practice for System Identification in Nuclear Power Plants and Related Facilities.

**EVENT IDENTIFICATION:**

Technical Specification Non Compliance due to Primary Containment B Inboard and Outboard Main Steam Isolation Valves Exceeding Local Leak Rate Test Allowable Limits

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

Unit: 3	Event Date: 09-20-2000	Event Time: 18:30
Reactor Mode: 5	Mode Name: Refuel	Power Level: 0
Reactor Coolant System Pressure: 0 psig		

**B. DESCRIPTION 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 (TS). In addition, this LER is also being submitted pursuant to 10 CFR 50.73(a)(2)(ii), 10 CFR 50.73(a)(2)(v), and 10 CFR 50.73(a)(2)(vii).

On September 20, 2000, at 1830 hours, with Unit 3 shutdown for Refuel Outage D3R16, the Primary Containment Outboard Main Steam [SB] Isolation Valve (MSIV) 3-0203-2B failed the as found local leak rate test (LLRT) during performance of Dresden Operating Surveillance (DOS) 7000-02, "Local Leak Rate Testing Of Main Steam Isolation Valves (Wet Test)." Subsequently, an informational leak test of the Inboard MSIV 2-0203-1B identified high leakage. The amount of leakage through the two valves was declared to be undetermined. Based on the undetermined amount of leakage, the requirements of Technical Specification 3.7.D, "Primary Containment Isolation Valves", were not met placing the unit in a condition prohibited by the Technical Specifications.

Upon the discovery of the failures, the valves were disassembled and inspected. The results of these inspections were as follows:

The results of the disassembly and inspection of the 3-0203-1B MSIV showed two indications on the main seat, broken lower liner welds, and a rotated lower liner. The two indications on the main seat were noted to be in the seating area of the valve.

The 3-0203-2B valve lower liner belleville washer had a minor indication. Additionally, two radial indications were found on the main seat.

The main disc assembly, for both valves, which includes the pilot disc and seat were removed and replaced.

The 3-0203-1B MSIV main seat was repaired, the liner modification installed and the valve tested satisfactorily. The 3-0203-2B MSIV main seat was lapped and the valve tested satisfactorily.

A historical review of the MSIV LLRTs was performed and identified that these MSIVs have exhibited very small leakage over the past ten years. The investigation confirmed that Out of Service (OOS) activities had been placed and lifted on both the inboard and outboard MSIVs prior to the performance of LLRT testing that resulted in partial cycling and closure of the MSIVs with less than full design force. Interviews confirmed that, in placing the OOS activities, all MSIV control switches were cycled until no valve movement was noted by a change in the

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

status lights. Alarm typer and process computer data confirmed that the outboard MSIVs, including the 3-0203-2B valve, did come off full closed position during the placement of the outboard MSIV OOS. It could not be confirmed if the inboard MSIVs moved from full closed during the control switch cycling. The OOS activities were prepared in support of the Group 1 Logic System Functional Testing (LSFT), to enable the MSIV control switches to be manipulated without moving the MSIVs.

**C. CAUSE OF EVENT:**

The root cause for the LLRT failure of the inboard 2-0203-1B MSIV was due to normal wear indications on the main seating surface. The magnitude of the leak rate may have been elevated due to a combination of degraded lower liner and pre-testing manipulation of the valve. (NRC Cause Code X)

Consideration was given to internal degradation as the cause of the outboard MSIV LLRT failures. Radial indications were found on the 3-0203-2B MSIV main seat, but not in the seating area and were eliminated as the cause of the LLRT failure. The root cause for the LLRT failure of the 3-0203-2B MSIV was due to pre-testing manipulation of the valve and closing the valve with less than full closing pressure rather than by its normal mode, using air pressure and spring force as the motive force. (NRC Cause Code E)

**D. SAFETY ANALYSIS**

The safety significance of indeterminate leakage past the B line inboard and outboard MSIVs during the D3R16 testing is assessed to be minimal. The results of the root cause investigation are that the MSIVs were partially opened and reseated without their full closing force (i.e., air assist) prior to any LLRT tests. This manipulation sequence was accomplished to satisfy an Out of Service (OOS) requirement to support a planned Group 1 Logic System Functional Test prior to LLRT testing. It is believed that the MSIV manipulations placed the main seating surfaces in a configuration different than that expected during a postulated accident. Based on the leak rate history and the results of the internal inspection of the 2B MSIV, it is assessed that the B steam line outboard MSIV would have properly seated. Additionally, the valve would have exhibited a low leakage rate consistent with meeting the Technical Specification and dose analysis requirements had it been closed with its normal closing force during an accident condition. As a result, the safety significance of this event was minimal.

**E. CORRECTIVE ACTIONS:**

The 3-0203-1B valve was repaired and tested satisfactorily. (Complete)

The 3-0203-2B valve was repaired and tested satisfactorily. (Complete)

The administrative requirements to properly control OOS sequencing for performance of MSIV LLRT activities during refuel outages are to be incorporated into the MSIV scheduling logic. (ATI 45746-01)

**F. PREVIOUS OCCURRENCES:**

LER/Docket Numbers

Title

98-004-00/05000237

Outboard Main Steam Line Isolation Valves 2-203-2B And 2-203-2D As-found Leakage Rates Exceeded Technical Specification Limit

98-004-01/05000237

Supplement to Outboard Main Steam Line Isolation Valves 2-203-2B And 2-203-2D As-found Leakage Rates Exceeded Technical Specification Limit

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

**G. COMPONENT FAILURE DATA:**

<u>Manufacturer</u>	<u>Nomenclature</u>	<u>Model Number</u>	<u>Mfg. Part Number</u>
Crane Co.	Unit 3 1B Inboard MSIV	DR34289-20" 3-0203-1B Y Pattern Globe Valve	N/A
Crane Co.	Unit 3 2B Outboard MSIV	DR34289-20" 3-0203-2B Y Pattern Globe Valve	N/A