

SVPLTR # 11-0053

December 16, 2011

U. S. Nuclear Regulatory Commission  
ATTN: Document Control Desk  
Washington, DC 20555-0001

Dresden Nuclear Power Station, Unit 2  
Renewed Facility Operating License No. DPR-19  
NRC Docket No. 50-237

Subject: Licensee Event Report 237/2011-003-00, MSIV Closure Times Outside of  
Technical Specification Limits

Enclosed is Licensee Event Report 237/2011-003-00, "MSIV Closure Times Outside of  
Technical Specifications Limits." This event is being reported in accordance with 10 CFR  
50.73(a)(2)(i)(B) and 10 CFR 50.73(a)(2)(vii), any operation or condition which was prohibited  
by the plant's Technical Specifications and any event where a single cause or condition caused  
at least one independent train or channel to become inoperable in multiple systems or two  
independent trains or channels to become inoperable in a single system, respectively.

There are no regulatory commitments contained in this submittal.

Should you have any questions concerning this letter, please contact Mr. Dennis Leggett at  
(815) 416-2800.

Respectfully,



For  
David M. Czufin  
Site Vice President  
Dresden Nuclear Power Station

Enclosure

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

TEZZ  
NRB

# LICENSEE EVENT REPORT (LER)

(See reverse for required number of digits/characters for each block)

Estimated burden per response to comply with this mandatory collection request: 80 hours. Reported lessons learned are incorporated into the licensing process and fed back to industry. Send comments regarding burden estimate to the FOIA/Privacy Section (T-5 F53), U.S. Nuclear Regulatory Commission, Washington, DC 20555-0001, or by internet e-mail to [infocollects.resource@nrc.gov](mailto:infocollects.resource@nrc.gov), and to the Desk Officer, Office of Information and Regulatory Affairs, NEOB-10202, (3150-0104), Office of Management and Budget, Washington, DC 20503. If a means used to impose 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.

<b>1. FACILITY NAME</b> Dresden Nuclear Power Station, Unit 2	<b>2. DOCKET NUMBER</b> 05000237	<b>3. PAGE</b> 1 OF 3
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**4. TITLE**  
MSIV Closure Times Outside of Technical Specifications Limits

5. EVENT DATE			6. LER NUMBER			7. REPORT DATE			8. OTHER FACILITIES INVOLVED	
MONTH	DAY	YEAR	YEAR	SEQUENTIAL NUMBER	REV NO.	MONTH	DAY	YEAR	FACILITY NAME	DOCKET NUMBER
10	17	2011	2011	- 003 -	00	12	16	2011	N/A	05000
									FACILITY NAME	DOCKET NUMBER
									N/A	05000

**9. OPERATING MODE**  
4

**11. THIS REPORT IS SUBMITTED PURSUANT TO THE REQUIREMENTS OF 10 CFR §:** (Check all that apply)

<input type="checkbox"/> 20.2201(b)	<input type="checkbox"/> 20.2203(a)(3)(i)	<input type="checkbox"/> 50.73(a)(2)(i)(C)	<input checked="" type="checkbox"/> 50.73(a)(2)(vii)
<input type="checkbox"/> 20.2201(d)	<input type="checkbox"/> 20.2203(a)(3)(ii)	<input type="checkbox"/> 50.73(a)(2)(ii)(A)	<input type="checkbox"/> 50.73(a)(2)(viii)(A)
<input type="checkbox"/> 20.2203(a)(1)	<input type="checkbox"/> 20.2203(a)(4)	<input type="checkbox"/> 50.73(a)(2)(ii)(B)	<input type="checkbox"/> 50.73(a)(2)(viii)(B)
<input type="checkbox"/> 20.2203(a)(2)(i)	<input type="checkbox"/> 50.36(c)(1)(i)(A)	<input type="checkbox"/> 50.73(a)(2)(iii)	<input type="checkbox"/> 50.73(a)(2)(ix)(A)
<input type="checkbox"/> 20.2203(a)(2)(ii)	<input type="checkbox"/> 50.36(c)(1)(ii)(A)	<input type="checkbox"/> 50.73(a)(2)(iv)(A)	<input type="checkbox"/> 50.73(a)(2)(x)
<input type="checkbox"/> 20.2203(a)(2)(iii)	<input type="checkbox"/> 50.36(c)(2)	<input type="checkbox"/> 50.73(a)(2)(v)(A)	<input type="checkbox"/> 73.71(a)(4)
<input type="checkbox"/> 20.2203(a)(2)(iv)	<input type="checkbox"/> 50.46(a)(3)(ii)	<input type="checkbox"/> 50.73(a)(2)(v)(B)	<input type="checkbox"/> 73.71(a)(5)
<input type="checkbox"/> 20.2203(a)(2)(v)	<input type="checkbox"/> 50.73(a)(2)(i)(A)	<input type="checkbox"/> 50.73(a)(2)(v)(C)	<input type="checkbox"/> OTHER
<input type="checkbox"/> 20.2203(a)(2)(vi)	<input checked="" type="checkbox"/> 50.73(a)(2)(i)(B)	<input type="checkbox"/> 50.73(a)(2)(v)(D)	Specify in Abstract below or in NRC Form 366A

**12. LICENSEE CONTACT FOR THIS LER**

NAME Edward Burns – Regulatory Specialist	TELEPHONE NUMBER (Include Area Code) 815-416-2810
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**13. COMPLETE ONE LINE FOR EACH COMPONENT FAILURE DESCRIBED IN THIS REPORT**

CAUSE	SYSTEM	COMPONENT	MANU-FACTURER	REPORTABLE TO EPIX	CAUSE	SYSTEM	COMPONENT	MANU-FACTURER	REPORTABLE TO EPIX
B	JM	33	N007	Y					

<b>14. SUPPLEMENTAL REPORT EXPECTED</b>			<b>15. EXPECTED SUBMISSION DATE</b>		
<input type="checkbox"/> YES (If yes, complete 15. EXPECTED SUBMISSION DATE)			<input checked="" type="checkbox"/> NO		
MONTH	DAY	YEAR			

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

On October 17, 2011, with Unit 2 in Mode 4, plant personnel performed closure time testing of the Main Steam Isolation Valves (MSIVs). Dresden's Technical Specification Surveillance Requirement 3.6.1.3.6 requires the isolation time of each MSIV to be verified  $\geq 3$  seconds and  $\leq 5$  seconds. During testing, it was identified that three of eight valves closed faster than the time specified in the plant's Technical Specifications.

The cause of the fast closure times was related to a procedural deficiency which allowed the valves' closure time to be set with little or no margin to the minimum closure time. Additionally, heat degradation of a full closed limit switch was noted in one instance.

The valves were repaired and successfully retested. The as-left closure times were within the limits of the required Technical Specifications Surveillance Requirement.

The safety significance of this condition is low. A sensitivity case utilizing the actual closure times determined that less than a five psi increase in vessel pressure would have resulted. The turbine control valve fast closure is assumed to occur in 0.1 seconds. Therefore the impact of the MSIV fast closure is bounded by existing analyses. The health and safety of the public were not compromised as a result of this condition.

This event is being reported in accordance with 10 CFR 50.73(a)(2)(i)(B) and 10 CFR 50.73(a)(2)(vii), any operation or condition which was prohibited by the plant's Technical Specifications and any event where a single cause or condition caused at least one independent train or channel to become inoperable in multiple systems or two independent trains or channels to become inoperable in a single system, respectively.

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Dresden Nuclear Power Station, Unit 2	05000237	YEAR	SEQUENTIAL NUMBER	REV NO.	2	OF	3
		2011	- 003	- 00			

**NARRATIVE**

**PLANT AND SYSTEM IDENTIFICATION**

Dresden Nuclear Power Station (DNPS) Unit 2 is a General Electric Company Boiling Water Reactor with a licensed maximum power level of 2957 megawatts thermal. The Energy Industry Identification System codes used in the text are identified as [XX].

**A. Plant Conditions Prior to Event:**

Unit: 02	Event Date: 10-17-2011	Event Time: 0830 hours CDT
Reactor Mode: 4	Mode Name: Cold Shutdown	Power Level: 000 percent

**B. Description of Event:**

On October 17, 2011, at approximately 0830 CDT, Unit 2 had been shutdown for a refueling outage. After entering Mode 4, plant personnel performed Full Closure Timing of the Main Steam Isolation Valves (MSIVs) [JM]. During the testing, it was identified that the closure times on the 2-0203-1B, 2-0203-2B, and 2-0203-1D valves were 2.9, 2.6, and 2.4 seconds respectively. The values exceeded the minimum allowable limits as specified in the plant's Technical Specifications. Based on the as-found times, Surveillance Requirement (SR) 3.6.1.3.6 was not met.

Technical Specifications SR 3.6.1.3.6 states, "Verify the isolation time of each MSIV is  $\geq 3$  seconds and  $\leq 5$  seconds."

The failed valves were repaired and successfully retested. The as-left closure times were within the limits of the required Technical Specification SR.

This event is being reported in accordance with 10 CFR 50.73(a)(2)(i)(B) and 10 CFR 50.73(a)(2)(vii), any operation or condition which was prohibited by the plant's Technical Specifications and any event where a single cause or condition caused at least one independent train or channel to become inoperable in multiple systems or two independent trains or channels to become inoperable in a single system, respectively.

**C. Cause of Event:**

The cause of the 2-0203-1B and 2-0203-2B timing failure was due to a procedural deficiency that allowed plant personnel to set MSIV times outside of a known acceptable range. Known decreases in stroke times from when the valves are tested cold to when the valves are tested hot were not adequately incorporated into procedures. This resulted in the 2-0203-1B and 2-0203-2B closure times being left with little or no margin to the minimum closure time.

The 2-0203-1D timing failure was attributed to heat related degradation of the full closed limit switch responsible for the closed light indication in the Main Control Room.

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**NARRATIVE**

**D. Safety Analysis:**

The safety significance of this condition is low. An evaluation was performed to determine the effects of the MSIV fast closures on reactor vessel pressure. A sensitivity case utilizing the actual closure times determined that less than a five psi increase in vessel pressure would have resulted. The turbine control valve fast closure is assumed to occur in 0.1 seconds. Therefore the impact of the MSIV fast closure is bounded by existing analyses. Therefore, health and safety of the public were not compromised as a result of this condition.

**E. Corrective Actions:**

The valves were repaired and successfully retested. The as-left closure times were within the limits of the required Technical Specification SR. Procedure revisions are being processed to provide explicit direction to provide for margin accounting for hot versus cold timing.

The degraded full closure limit switch has been replaced. The potential heat degradation of the closed limit switches is being addressed through the plant modification process.

**F. Previous Occurrences:**

A review of DNPS Licensee Event Reports (LERs) for the last three years did not identify any LERs associated with MSIVs failing to meet the required closing times.

**G. Component Failure Data:**

Manufacturer	Component	Model/Serial Number
NAMCO CONTL.-DIV.OF ACME-	33	EA740-50000