

Exelon Generation Company, LLC  
Quad Cities Nuclear Power Station  
22710 206<sup>th</sup> Avenue North  
Cordova, IL 61242-9740

www.exeloncorp.com

July 27, 2007

SVP-07-048

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

Quad Cities Nuclear Power Station, Unit 2  
Renewed Facility Operating License No. DPR-30  
NRC Docket No. 50-265

Subject: Licensee Event Report 265/06-001, Revision 1, "Two Main Steam Safety Valves and Two Main Steam Safety/Relief Valves Outside of the Technical Specification Allowed Tolerance"

Enclosed is Licensee Event Report (LER) 265/06-001, Revision 1, "Two Main Steam Safety Valves and Two Main Steam Safety/Relief Valves Outside of the Technical Specification Allowed Tolerance," for Quad Cities Nuclear Power Station, Unit 2.

This report is submitted in accordance with the requirements of the Code of Federal Regulations, Title 10, Part 50.73(a)(2)(i)(B), which requires the reporting of any operation or condition that was prohibited by the plant's Technical Specifications.

This report was revised to provide a more complete description of the corrective actions.

There are no regulatory commitments included in this report.

Should you have any questions concerning this report, please contact Mr. W. J. Beck at (309) 227-2800.

Respectfully,



Timothy J. Tulon  
Site Vice President  
Quad Cities Nuclear Power Station

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

IE22  
NRR

# 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: 50 hours. Reported lessons learned are incorporated into the licensing process and fed back to industry. Send comments regarding burden estimate to the Records and FOIA/Privacy Service Branch (T-5 F52), U.S. Nuclear Regulatory Commission, Washington, DC 20555-0001, or by internet e-mail to infocollects@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> Quad Cities Nuclear Power Station, Unit 2	<b>2. DOCKET NUMBER</b> 05000265	<b>3. PAGE</b> 1 of 4
--	-------------------------------------	--------------------------

**4. TITLE** Two Main Steam Safety Valves and Two Main Steam Safety/Relief Valves Outside of the Technical Specification Allowed Tolerance

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
04	10	2006	2006	- 001 -	01	07	27	2007	N/A	N/A
									FACILITY NAME	DOCKET NUMBER
									N/A	N/A

<b>9. OPERATING MODE</b>  5	<b>11. THIS REPORT IS SUBMITTED PURSUANT TO THE REQUIREMENTS OF 10 CFR§:</b> (Check all that apply)			
<b>10. POWER LEVEL</b>  000%	<input type="checkbox"/> 20.2201(b)	<input type="checkbox"/> 20.2203(a)(3)(i)	<input type="checkbox"/> 50.73(a)(2)(i)(C)	<input 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**

<b>NAME</b> Wally Beck, Regulatory Assurance Manager	<b>TELEPHONE NUMBER (Include Area Code)</b> (309) 227-2800
---	---

**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
XCM9	SB	RV	D245/T020	Y					

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

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

On April 10, 2006, at approximately 1400 hours, Quad Cities Nuclear Power Station determined that two of the four removed Main Steam Safety Valves (MSSVs) and the Main Steam Safety/Relief Valve (SRV), all removed from Unit 2 during the Spring 2006 refueling outage (Q2R18), and the SRV removed during a planned outage in April of 2005 (Q2P03), had been found during as-found testing to have lift set pressures outside of the +/-1% Technical Specification (TS)-allowed tolerance. Both SRVs were also outside of the +/-3% ASME Code tolerance.

The cause of these events is setpoint drift. No mechanical wear, degradation or foreign material was identified for the two MSSVs and the SRV removed during Q2R18, or for the SRV removed during Q2P03.

All four of the removed MSSVs and the SRV were replaced during Q2R18 with newly refurbished valves that were certified to be within the +/-1% TS-allowed tolerance. Quad Cities Nuclear Power Station is pursuing a revision to the TS-allowable value for the MSSVs and SRVs to reflect the ASME code allowable.



## LICENSEE EVENT REPORT (LER)

TEXT CONTINUATION

FACILITY NAME (1)	DOCKET NUMBER (2)	LER NUMBER (6)			PAGE (3)
		YEAR	SEQUENTIAL NUMBER	REVISION NUMBER	
Quad Cities Nuclear Power Station Unit 2	05000265	2006	001	01	3 of 4

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

**D. SAFETY ANALYSIS**

The safety significance of this event was minimal. Both of the MSSVs were found to have a lift set pressure below (i.e., conservative with respect to) the nameplate value and inside the +/-3% Code tolerance. The analysis completed for the April 2004 Unit 2 SRV out-of-tolerance event (LER 265/04-004) bounds the test results described above. That analysis showed that the acceptance criteria for the Anticipated Transient Without Scram, ASME overpressure, and Appendix R analyses were met. Therefore, the valves were capable of performing the safety function. This condition is being reported in accordance with 10 CFR 50.73(a)(2)(i)(B), which requires reporting of any operation or condition that was prohibited by the plant's TS.

**E. CORRECTIVE ACTIONS**

All four of the removed MSSVs and the removed SRV were replaced during Q2R18 with refurbished valves that were certified to be within the +/-1% TS-allowed tolerance.

Quad Cities Nuclear Power Station is pursuing a revision to the TS-allowable value for the MSSVs and SRVs to reflect the ASME code allowable value.

Quad Cities Nuclear Power Station continues to monitor and contribute to industry efforts to improve SRV performance through improved refurbishment process. Additionally, benchmarking efforts are in progress to determine what changes can be made to station processes to improve SRV performance.

Some improved SRV performance is anticipated in response to the greatly diminished Main Steam Line vibration levels as a result of installation in 2006 of Acoustic Side Branches on the MSSV risers.

**F. PREVIOUS OCCURRENCES**

There have been previous instances of MSSVs and SRVs being outside of the TS-allowed value (+/-1%). Following the Unit 1 refuel outage in October of 2000 (Q1R16), the SRV setpoint was 2.203% lower than nameplate, one MSSV setpoint was 2.0643% greater than nameplate, and one MSSV setpoint was 1.20% greater than nameplate. Following the Unit 2 refuel outage in February of 2002 (Q2R16), the SRV setpoint was 2.026% greater than nameplate, one MSSV setpoint was 2.8% less than nameplate, one MSSV setpoint was 1.8% less than nameplate, and one MSSV setpoint was 1.5% less than nameplate. Following the Unit 1 refuel outage in November of 2002 (Q1R17), the SRV setpoint was 2.203% greater than nameplate and one MSSV setpoint was 1.2% lower than nameplate. Following the Unit 2 refuel outage in March 2004 (Q2R17), the SRV setpoint was 6.8% greater than nameplate and one MSSV setpoint was 2.339% greater than nameplate (LER 265/04-001). Following the Unit 1 refuel outage in April 2005 (Q1R18), one MSSV was 1.7% lower than nameplate, one MSSV was 2.3% lower than nameplate, and one MSSV was 2.0% lower than nameplate. Following the Unit 2 refuel outage in Spring 2006 (Q2R18), one MSSV setpoint was found 1.9% below nameplate, one MSSV was found 1.6% below nameplate, an SRV removed

**LICENSEE EVENT REPORT (LER)**

TEXT CONTINUATION

FACILITY NAME (1)	DOCKET NUMBER (2)	LER NUMBER (6)			PAGE (3)
		YEAR	SEQUENTIAL NUMBER	REVISION NUMBER	
Quad Cities Nuclear Power Station Unit 2	05000265	2006	001	01	4 of 4

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

during a mid-cycle outage was found to be 5.4% above nameplate, and the SRV removed during Q2R18 was found to be 3.7% above nameplate. Following the Unit 1 Spring 2007 refuel outage (Q1R19), one MSSV setpoint was 1.4% lower than nameplate, one MSSV setpoint was 1.3% above nameplate, and the SRV setpoint was 2.7% above nameplate.

For every case except the Q2R17 and Q2R18 SRVs, the setpoint was within the ASME code allowable of +/-3%, and therefore there was no effect on functionality. For the Q2R17 and Q2R18 SRVs, specific assessments were performed to show that the safety valve function was met.

Based on the history described above, Quad Cities Nuclear Power Station has submitted a revision to the TS-allowable value for the MSSVs and SRVs to reflect the ASME code allowable.

**G. COMPONENT FAILURE DATA**

The MSSVs are Model 6'-3777-QA-RT Safety Valves manufactured by Dresser Industries/ Consolidated Valve Corporation. The SRVs are Model 7467F Safety/ Relief Valves manufactured by Target Rock.