

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

www.exeloncorp.com

July 16, 2007

SVP-07-045

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

Quad Cities Nuclear Power Station, Unit 1
Renewed Facility Operating License No. DPR-29
NRC Docket No. 50-254

Subject: Licensee Event Report 254/07-001, "Two Main Steam Safety Valves and One Main Steam Safety/Relief Valve Outside of Technical Specification Allowed Tolerance Due to Set Point Drift"

Enclosed is Licensee Event Report (LER) 254/07-001, "Two Main Steam Safety Valves and One Main Steam Safety/Relief Valve Outside of Technical Specification Allowed Tolerance Due to Set Point Drift," for Quad Cities Nuclear Power Station, Unit 1.

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.

There are no regulatory commitments contained in this letter.

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

NRC FORM 366 (7-2001)			U.S. NUCLEAR REGULATORY COMMISSION			APPROVED BY OMB NO. 3150-0104 EXPIRES 7-31-2004 Estimated burden per response to comply with this mandatory information 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 Management Branch (T-6 E6), U.S. Nuclear Regulatory Commission, Washington, DC 20555-0001, or by internet e-mail to bjs1@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 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.					
LICENSEE EVENT REPORT (LER)											
1. FACILITY NAME					2. DOCKET NUMBER			3. PAGE			
Quad Cities Nuclear Power Station Unit 1					05000254			1 of 3			
4. TITLE Two Main Steam Safety Valves and One Main Steam Safety/Relief Valve Outside of Technical Specification Allowed Tolerance Due to Setpoint Drift											
5. EVENT DATE			6. LER NUMBER			7. REPORT DATE			8. OTHER FACILITIES INVOLVED		
MO	DAY	YEAR	YEAR	SEQUENTIAL NUMBER	REV NO	MO	DAY	YEAR	FACILITY NAME	DOCKET NUMBER	
05	16	2007	2007	001	00	07	16	2007	N/A	N/A	
9. OPERATING MODE		5		11. THIS REPORT IS SUBMITTED PURSUANT TO THE REQUIREMENTS OF 10 CFR §: (Check all that apply)							
10. POWER LEVEL		000%		20.2201(b)		20.2203(a)(3)(ii)		50.73(a)(2)(ii)(B)		50.73(a)(2)(ix)(A)	
				20.2201(d)		20.2203(a)(4)		50.73(a)(2)(iii)		50.73(a)(2)(x)	
				20.2203(a)(1)		50.36(c)(1)(i)(A)		50.73(a)(2)(iv)(A)		73.71(a)(4)	
				20.2203(a)(2)(i)		50.36(c)(1)(ii)(A)		50.73(a)(2)(v)(A)		73.71(a)(5)	
				20.2203(a)(2)(ii)		50.36(c)(2)		50.73(a)(2)(v)(B)		OTHER Specify in Abstract below or in NRC Form 366A	
				20.2203(a)(2)(iii)		50.46(a)(3)(ii)		50.73(a)(2)(v)(C)			
				20.2203(a)(2)(iv)		50.73(a)(2)(i)(A)		50.73(a)(2)(v)(D)			
				20.2203(a)(2)(v) X		50.73(a)(2)(i)(B)		50.73(a)(2)(vii)			
				20.2203(a)(2)(vi)		50.73(a)(2)(i)(C)		50.73(a)(2)(viii)(A)			
				20.2203(a)(3)(i)		50.73(a)(2)(ii)(A)		50.73(a)(2)(viii)(B)			
12. LICENSEE CONTACT FOR THIS LER											
NAME								TELEPHONE NUMBER (Include Area Code)			
Wally Beck, Regulatory Assurance Manager								(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		
X	SB	RV	D245	Y							
14. SUPPLEMENTAL REPORT EXPECTED								15. EXPECTED SUBMISSION DATE			
YES (If yes, complete EXPECTED SUBMISSION DATE)				X NO				MONTH	DAY	YEAR	

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

On May 16, 2007, Quad Cities Station received as-found test results that showed that two of the four tested Main Steam Safety Valves actuated outside of the +/- 1% set pressure band required by Technical Specifications. On May 22, 2007, as found test results were received showing that the Main Steam Safety/Relief Valve set pressure was outside of the +/- 1% band required by Technical Specifications. In all cases, the results were within the +/- 3% ASME Code criteria.

Based on the results of testing and valve disassembly and inspection, the cause of the out-of-tolerance condition for the SRV is setpoint drift. No mechanical wear, degradation or foreign material associated with the pilot section of the valve was identified. Based on the results of testing and historical performance, the cause of the out-of-tolerance condition for the MSSVs is also setpoint drift.

The safety significance of this event was minimal. Both of the MSSVs and the SRV were found to actuate inside the +/-3% Code tolerance. The accident analyses for the fuel cycle during which these valves were installed assumed 3% tolerance for all installed MSSV and SRV valves. This 3% requirement is likewise utilized for the current fuel cycles on both units. Therefore, the valves were capable of performing the safety function.

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 1	05000254	2007	001	00	2 of 3

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

PLANT AND SYSTEM IDENTIFICATION

General Electric - Boiling Water Reactor, 2957 Megawatts Thermal Rated Core Power

Energy Industry Identification System (EIIS) codes are identified in the text as [XX].

EVENT IDENTIFICATION

Two Main Steam Safety Valves and One Main Steam Safety/Relief Valve Outside of Technical Specification Allowed Tolerance Due to Setpoint Drift

A. CONDITION PRIOR TO EVENT

Unit: 1	Event Date: May 16, 2007	Event Time: 1200 hours
Reactor Mode: 5	Mode Name: Refuel	Power Level: 000%

B. DESCRIPTION OF EVENT

On May 16, 2007, Quad Cities Station received as-found test results that showed that two of the four Main Steam Safety Valves (MSSV) [SB] that were removed during the Spring 2007 refuel outage (Q1R19) actuated outside of the +/- 1% band required by Technical Specifications (TS). One valve actuated at -1.4% and one valve actuated at +1.3%. On May 22, 2007, as-found test results were received showing that the set pressure for the safety function of the Main Steam Safety/Relief Valve (SRV) removed during Q1R19 was outside of the +/- 1% band required by TS. The SRV actuated at +2.7%. In all cases, the results were within the +/- 3% ASME Code criteria.

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.

C. CAUSE OF EVENT

Based on the results of testing and valve disassembly and inspection, the cause of the out-of-tolerance condition for the SRV is setpoint drift. No mechanical wear, degradation or foreign material associated with the pilot section of the valve was identified. Based on the results of testing and historical performance, the cause of the out-of-tolerance condition for the MSSVs is also setpoint drift.

D. SAFETY ANALYSIS

The safety significance of this event was minimal. One of the MSSVs was found to have a lift set pressure below (i.e., conservative with respect to) the nameplate value. Both of the MSSVs and the SRV were found to actuate inside the +/-3% Code tolerance. The accident analyses for the fuel cycle during which these valves were installed assumed 3% tolerance for all installed MSSV and SRV valves. This 3% requirement is likewise utilized for the current fuel cycles on both units. 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

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 1	05000254	2007	001	00	3 of 3

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

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 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 has submitted a License Amendment request to revise the TS-allowable value for the MSSVs and SRVs to reflect the ASME code allowable. Reference November 7, 2006, letter (RS-06-147), D.M. Benyak (EGC) to U.S. Nuclear Regulatory Commission, "Request for License Amendment to Increase Main Steam Safety Valve Lift Setpoint Tolerance and Standby Liquid Control System Enrichment."

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 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.

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 No. 6'-3777-QA-RT Safety Valves manufactured by Dresser Industries/ Consolidated Valve Corporation. The SRV is a Model 7467F Safety/Relief Valve manufactured by Target Rock.