

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

www.exeloncorp.com

June 6, 2005

SVP-05-046

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 254/05-003, "Three Main Steam Safety Valves Outside of Technical Specification Allowed Tolerance"

Enclosed is Licensee Event Report (LER) 254/05-003, "Three Main Steam Safety Valves Outside of Technical Specification Allowed Tolerance," for Quad Cities Nuclear Power Station.

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.

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

## 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](mailto: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.

1. FACILITY NAME Quad Cities Nuclear Power Station, Unit 1	2. DOCKET NUMBER 05000254	3. PAGE 1 of 3
---	------------------------------	-------------------

4. TITLE Three Main Steam Safety Valves Outside of 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	05	2005	2005	- 003 -	00	06	06	2005	N/A	05000
									FACILITY NAME	DOCKET NUMBER
									N/A	05000

9. OPERATING MODE  5	11. THIS REPORT IS SUBMITTED PURSUANT TO THE REQUIREMENTS OF 10 CFR§: (Check all that apply)									
10. POWER LEVEL  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

NAME Wally Beck, Regulatory Assurance Manager	TELEPHONE NUMBER (Include Area Code) (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	Y					

## 14. SUPPLEMENTAL REPORT EXPECTED

☐ YES (If yes, complete 15. EXPECTED SUBMISSION DATE)☒ NO15. EXPECTED  
SUBMISSION  
DATE

MONTH	DAY	YEAR

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

On April 5, 2005, at 1515 hours, Quad Cities Nuclear Power Station was notified that three of the four Main Steam Safety Valves (MSSVs) removed from Unit 1 earlier during the Spring 2005 refuel outage (Q1R18, March 21 to April 19, 2005) had been found during as-found testing to have lift set pressures outside of the +/-1% Technical Specification (TS) allowed tolerance.

All four of the removed valves were replaced during Q1R18 with newly refurbished MSSVs that were certified to be within the +/-1% TS tolerance.

The safety significance of this event was minimal. All of the four removed MSSVs were found to have a lift set pressure below the TS nominal value. Also, all three of the MSSVs that had lift set pressures that were outside the +/-1% TS tolerance had lift set pressures inside the +/-3% Code tolerance. The cycle specific fuels and transient analyses were performed assuming a +/-3% tolerance. Therefore, the valves were capable of performing their 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	2005	003	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

Three Main Steam Safety Valves Outside of Technical Specification Allowed Tolerance

## A. CONDITION PRIOR TO EVENT

Unit: 1                                      Event Date: April 5, 2005                                      Event Time: 1515 hours  
Reactor Mode: 5                                      Mode Name: Refueling                                      Power Level: 000%

Refueling (5) - Mode switch in the Shutdown or Refuel position with average reactor coolant temperature at any temperature and fuel in the reactor vessel with one or more vessel head closure bolts less than fully tensioned or with the head removed.

## B. DESCRIPTION OF EVENT

On April 5, 2005, at 1515 hours, Quad Cities Nuclear Power Station was notified that three of the four Main Steam Safety Valves (MSSVs) [V] [SB] removed from Unit 1 earlier during the Spring 2005 refuel outage (Q1R18, March 21 to April 19, 2005) had been found during as-found testing to have lift set pressures outside of the +/-1% Technical Specification (TS) allowed tolerance. All three of the valves had lift set pressures inside the +/-3% ASME Code tolerance.

All four of the removed valves were replaced during Q1R18 with newly refurbished MSSVs that were certified to be within the +/-1% TS tolerance.

## C. CAUSE OF EVENT

The cause of the MSSVs being outside of the TS tolerance is setpoint drift.

## D. SAFETY ANALYSIS

The safety significance of this event was minimal. All of the four removed MSSVs were found to have a lift set pressure below the TS nominal value. Also, all three of the MSSVs that had lift set pressures that were outside the +/-1% TS tolerance had lift set pressures inside the +/-3% Code tolerance. The cycle specific fuels and transient analyses were performed assuming a +/-3% tolerance. 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

## 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	2005	003	00	3 of 3

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

any operation or condition which was prohibited by the plant's TS.

**E. CORRECTIVE ACTIONS**

All four of the removed valves were replaced during Q1R18 with newly refurbished MSSVs that were certified to be within the +/-1% TS tolerance.

**F. PREVIOUS OCCURRENCES**

There have been previous instances of MSSVs and Safety/Relief Valves (S/RVs) [RV] being outside of the TS allowed value (+/- 1%). Following the Unit 1 refuel outage in October of 2000 (Q1R16), the S/RV 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 S/RV 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 S/RV 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, the S/RV setpoint was 6.8% greater than nameplate (LER 254/04-001).

For every case except the Q2R17 S/RV, the setpoint was within the code allowable of +/- 3%, and therefore there was no effect on functionality. For the Q2R17 S/RV, a specific assessment was performed to show that the safety valve function was met.

Based on the history described above, Quad Cities Nuclear Power Station is pursuing a revision to the Technical Specification allowable value for the MSSVs and S/RVs to reflect the code allowable.

**G. COMPONENT FAILURE DATA**

The MSSVs are MODEL# 6'-3777-QA-RT Safety Valves manufactured by Dresser Industries/Consolidated Valve Corporation.