

Exelon Generation Company, LLC Quad Cities Nuclear Power Station 22710 206" Avenue North Cordova, IL 61242–9740 www.exeloncorp.com

Nuclear

May 22, 2002

SVP-02-045

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

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

Subject:

Licensee Event Report 265/02-001, "High Pressure Coolant Injection System Uncoupled above 150 psig due to Misapplication of Technical Specifications"

Enclosed is Licensee Event Report (LER) 265/02-001, "High Pressure Coolant Injection System Uncoupled above 150 psig due to Misapplication of Technical Specifications," 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 reporting of any operation or condition prohibited by the plant's Technical Specifications, and Part 50.73(a)(2)(v)(D), which requires reporting of any event or condition that alone could have prevented the fulfillment of the safety function of structures or systems that are needed to mitigate the consequences of an accident.

We are committing to the following actions:

Training will be implemented on Technical Specification sections 1.0 (Use and Application) and 3.0 (LCO Applicability), including the lessons learned from this event, to reinforce that Technical Specifications (TS) are always to be applied as written.

The reactor startup procedure will be revised to include guidance to verify and document operability prior to entry into non-Mode TS conditions of applicability.

Any other actions described in the submittal represent intended or planned actions by Exelon Generation Company (EGC), LLC. They are described for the NRC's information and are not regulatory commitments.

May 22, 2002 U.S. Nuclear Regulatory Commission Page 2

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

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								
LICENSEE EVENT REPORT (LER)					hours. Reported lessons learned are incorporated into the licensing process and ted 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.											
1. FACILITY NAME					2. DOCKET NUMBER					3. PAGE						
Quad Cities Nuclear Power Station Unit 2						05000265					1 of 4					
4.TITLE High Pressure Coolant Injection System Uncoupled above 150 psig due to Misapplication of Technical Specifications																
5	. EVENT DA	TE	T	6. LER NUMBER				7. REPORT DATE			8. OTHER FACILITIES INVOLVED					
												CILITY NAME	!		(ET NUMBER J/A	
МО	DAY	YEA	R	YEAR	SEQUENTIAL NUMBER	REV NO	МО	DAY	. .	YEAR	N/	A		11	V/A	
1410	5,7,1				, ,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,				丅			CILITY NAME			KET NUMBER	
03	04	02	2	02		00	05	22		02	N/				I/A	
9. OPERA	TING				11. THIS REP	ORT IS	SUBMI	ITED P	PURS	SUANT T	<u>0 TI</u>				§: (Check all that	
MODE 2		2	_	20.2201(b)		_)3(a)(3)(ii)			50.73(a)(2)(ii)			0.73(a)(2)(ix)(A)		
10. POWER		_					20.2203(a)(4)			50.73(a)(2)(iii) 50.73(a)(2)(iv)(A)			50.73(a)(2)(x) 73.71(a)(4)			
LEVEL		00	5	20.2203(a)(1)				c)(1)(i)(A) c)(1)(ii)(A)		_				3.71(a)(4) 3.71(a)(5)		
Part Part Part Part Part Part Part Part					2203(a)(2)(i)	+	T		<u>I)(A)</u>			50.73(a)(2)(v 50.73(a)(2)(v		10	THER	
		-	20.2203(a)(2)(ii) 20.2203(a)(2)(iii)		50.36(c)(2) 50.46(a)(3)(ii)			50.73(a)(2)(v)(C)			Specify in Abstract below or in NRC Form 366A					
		-			_	8(a)(2)(i)(A)		Х	50.73(a)(2)(v		1					
							50.73(a)(2)(i)(B)				50.73(a)(2)(v					
				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)			iii)(B)						
					12	2. LICI	ENSEE	CONT	ACT	FOR T						
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 COM		СОМР	MANU- IPONENT FACTURER		RE	PORTABL TO EPIX	E	CAUSE			SYSTEM COMPO		NENT	MANU- FACTURER	REPORTABLE TO EPIX	
											ı					

YES (If yes, complete EXPECTED SUBMISSION DATE) 16. ABSTRACT (Limit to 1400 spaces, i.e., approximately 15 single-spaced typewritten lines)

14. SUPPLEMENTAL REPORT EXPECTED

On March 4, 2002, at 1255 hours during a reactor startup, Unit 2 reactor pressure was increased above 150 psig with the High Pressure Coolant Injection turbine uncoupled from the pump. This put the unit in Technical Specification (TS) 3.5.1, condition F. This is a violation of TS 3.0.4, which does not allow entry into a specified condition of applicability while a Limiting Condition for Operation is not met. HPCI was subsequently recoupled.

X NO

15. EXPECTED

SUBMISSION

MONTH

DAY

YEAR

The root cause of this event was that licensed personnel misapplied TS 3.5.1. As a contributing cause, the reactor startup procedural guidance was inadequate to ensure operable status of TS-required equipment when non-Mode conditions of applicability were entered.

Corrective actions include changes to the reactor startup procedure and training concerning application of TS.

The safety significance of this event was minimal. Reactor pressure did not get above approximately 160 psig until HPCI was recoupled, and the Reactor Core Isolation Cooling and Automatic Depressurization systems, as well as the lowpressure Emergency Core Cooling systems, were available throughout the event.

NRC FORM 366A

(7-2001)

U.S. NUCLEAR REGULATORY COMMISSION

LICENSEE EVENT REPORT (LER)

TEXT CONTINUATION

FACILITY NAME (1)	DOCKET NUMBER (2)		PAGE (3)		
Quad Cities Nuclear Power Station Unit 2	05000265	YEAR	SEQUENTIAL NUMBER	REVISION NUMBER	
		2002	001	00	2 of 4

(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

High Pressure Coolant Injection System Uncoupled above 150 psig due to Misapplication of Technical Specifications

A. CONDITION PRIOR TO EVENT

Unit: 2

Event Date: March 4, 2002

Event Time: 1255 hours

Reactor Mode: 2

Mode Name: Startup

Power Level: 005%

Startup (2) - Mode switch in Startup/Hot Standby position (or in Refuel position with all reactor vessel head closure bolts fully tensioned) with average reactor coolant temperature at any temperature.

B. DESCRIPTION OF EVENT

On March 4, 2002, at 0346 hours, Unit 2 entered Mode 2 for the startup from the 16th Unit 2 refueling outage (Q2R16). Overspeed testing on the High Pressure Coolant Injection (HPCI) [BJ] system was required due to work that had been conducted on the HPCI System. At 1145 hours preparations for the Unit 2 HPCI system turbine [TRB] overspeed test were started. At 1200 hours Mechanical Maintenance workers started to uncouple the turbine for testing and by 1235 the turbine uncoupling was completed. The overspeed test was performed by approximately 1245 hours, verifying that the HPCI turbine tripped in accordance with the acceptance criteria.

At that time, the Nuclear Shift Operator (NSO) initialed the reactor startup procedure to signify completion of the HPCI overspeed test. The reactor startup procedure was worded such that the reactor startup could continue and pressure could be raised above 150 psig after the HPCI overspeed test was performed, without mention of whether the HPCI turbine was coupled or not. Once the satisfactory results were received for the overspeed test, the NSO started raising pressure above 150 psig in accordance with the procedure.

At 1255, reactor pressure reached 150 psig and HPCI was declared inoperable. The NSO documented that Technical Specification (TS) 3.5.1, Condition F, which requires restoration of the HPCI system to operable status within 14 days, was entered.

TS 3.5.1 requires HPCI to be operable prior to exceeding 150 psig. The HPCI TS applicability is Modes 1, 2 & 3, with reactor steam dome pressure greater than 150 psig. The surveillance requirement for the low pressure HPCI test has a note that states that the surveillance is not required to be performed until 12 hours after reactor steam pressure and flow are adequate to perform the test.

NRC FORM 366A **U.S. NUCLEAR REGULATORY COMMISSION** (7-2001)LICENSEE EVENT REPORT (LER) TEXT CONTINUATION **FACILITY NAME (1)** LER NUMBER (6) DOCKET NUMBER (2) PAGE (3) YEAR SEQUENTIAL REVISION NUMBER NUMBER Quad Cities Nuclear Power Station Unit 2 05000265 2002 001 00 3 of 4

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

Raising pressure above 150 psig with HPCI uncoupled is incompatible with TS LCO 3.0.4 that states:

When an LCO is not met, entry into a MODE or other specified condition in the Applicability shall not be made except when the associated ACTIONS to be entered permit continued operation in the MODE or other specified condition in the Applicability for an unlimited period of time. This Specification shall not prevent changes in MODES or other specified conditions in the Applicability that are required to comply with ACTIONS or that are part of a shutdown of the unit.

In this case, the "other specified condition" was having reactor pressure above 150 psig. Entering this condition with HPCI not operable is not allowed by TS 3.0.4.

At 1300 hours, reactor pressure was raised to 160 psig, where it remained until after 1520 hours. At 1315 hours, preparations for recoupling the HPCI turbine were started. By 1520 hours, the HPCI turbine was recoupled and TS 3.0.4 was met.

On March 27, 2002, this event was discovered during a review of the operator logs associated with the startup process for Q2R16.

C. CAUSE OF EVENT

The root cause of this event was that licensed personnel misapplied TS 3.5.1 and did not consider TS 3.0.4 and its application.

As a contributing cause, the reactor startup procedural guidance was inadequate to ensure operable status of TS-required equipment when non-Mode conditions of applicability were entered.

D. SAFETY ANALYSIS

The safety significance of this event was minimal. Reactor pressure was held at about 160 psig until after HPCI was recoupled. Also, the low-pressure Emergency Core Cooling systems were available throughout this event, as were the Reactor Core Injection Cooling system and the Automatic Depressurization system.

E. CORRECTIVE ACTIONS

Corrective Actions to be Completed:

Training will be implemented on Technical Specification sections 1.0 (Use and Application) and 3.0 (LCO Applicability), including the lessons learned from this event, to reinforce that TS are always to be applied as written.

The reactor startup procedure will be revised to include guidance to verify and document operability prior to entry into non-Mode TS conditions of applicability.

NRC FORM 366A (7-2001)		U.S. NUCLEAR REGULATORY COMMISSI								
LICENSEE EVENT REPORT (LER) TEXT CONTINUATION										
FACILITY NAME (1)	DOCKET NUMBER (2)	LER NUMBER (6)			PAGE (3)					
Quad Cities Nuclear Power Station Unit 2	05000265	YEAR	SEQUENTIAL NUMBER	REVISION NUMBER	1,,,					
		2002	001	00	4 of 4					

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

F. PREVIOUS OCCURRENCES

No previous occurrences during the previous two years were identified involving a misapplication of TS by licensed personnel.

G. COMPONENT FAILURE DATA

There were no component failures associated with this event.