

10CFR50.73

December 31, 2008

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

Limerick Generating Station, Units 1 and 2
Facility Operating License No. NPF-39 and NPF-85
NRC Docket No. 50-352 and 50-353

Subject: LER 2008-004-00, Remote Shutdown Procedure Error

This Licensee Event Report (LER) addresses an event that resulted in the nuclear power plant being in an unanalyzed condition that could have significantly degraded plant safety due to a failure to include a required fire safe shutdown action in the remote shutdown procedure.

This LER is being submitted pursuant to the requirements of 10CFR50.73(a) (2) (ii) (B).

There are no commitments contained in this letter.

If you have any questions or require additional information, please do not hesitate to contact us.

Sincerely,

Original signed by Edward W. Callan for Christopher H. Mudrick

Christopher H. Mudrick
Vice President - Limerick Generating Station
Exelon Generation Company, LLC

cc: S. J. Collins, Administrator Region I, USNRC
E. M. DiPaolo, USNRC Senior Resident Inspector, LGS

NRC FORM 366 (9-2007)				U.S. NUCLEAR REGULATORY COMMISSION LICENSEE EVENT REPORT (LER) (See reverse for required number of digits/characters for each block)				APPROVED BY OMB NO. 3150-0104 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 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.				EXPIRES 08/31/2010			
1. FACILITY NAME Limerick Generating Station, Unit 1						2. DOCKET NUMBER 05000352				3. PAGE 1 of 4					
4. TITLE: Remote Shutdown Procedure Error															
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		
11	11	2008	2008	- 004	- 00	12	31	2008	Limerick Unit 2				05000353		
									FACILITY NAME				DOCKET NUMBER		
													05000		
9. OPERATING MODE <div style="text-align: center; font-size: 24pt;">1</div>			11. THIS REPORT IS SUBMITTED PURSUANT TO THE REQUIREMENTS OF 10 CFR §: (Check all that apply)												
10. POWER LEVEL <div style="text-align: center; font-size: 24pt;">100</div>			<div style="display: flex; flex-wrap: wrap;"> <div style="width: 25%;"><input type="checkbox"/> 20.2201(b)</div> <div style="width: 25%;"><input type="checkbox"/> 20.2203(a)(3)(i)</div> <div style="width: 25%;"><input type="checkbox"/> 50.73(a)(2)(i)(C)</div> <div style="width: 25%;"><input type="checkbox"/> 50.73(a)(2)(vii)</div> <div style="width: 25%;"><input type="checkbox"/> 20.2201(d)</div> <div style="width: 25%;"><input type="checkbox"/> 20.2203(a)(3)(ii)</div> <div style="width: 25%;"><input type="checkbox"/> 50.73(a)(2)(ii)(A)</div> <div style="width: 25%;"><input type="checkbox"/> 50.73(a)(2)(viii)(A)</div> <div style="width: 25%;"><input type="checkbox"/> 20.2203(a)(1)</div> <div style="width: 25%;"><input type="checkbox"/> 20.2203(a)(4)</div> <div style="width: 25%;"><input checked="" type="checkbox"/> 50.73(a)(2)(ii)(B)</div> <div style="width: 25%;"><input type="checkbox"/> 50.73(a)(2)(viii)(B)</div> <div style="width: 25%;"><input type="checkbox"/> 20.2203(a)(2)(i)</div> <div style="width: 25%;"><input type="checkbox"/> 50.36(c)(1)(i)(A)</div> <div style="width: 25%;"><input type="checkbox"/> 50.73(a)(2)(iii)</div> <div style="width: 25%;"><input type="checkbox"/> 50.73(a)(2)(ix)(A)</div> <div style="width: 25%;"><input type="checkbox"/> 20.2203(a)(2)(ii)</div> <div style="width: 25%;"><input type="checkbox"/> 50.36(c)(1)(ii)(A)</div> <div style="width: 25%;"><input type="checkbox"/> 50.73(a)(2)(iv)(A)</div> <div style="width: 25%;"><input type="checkbox"/> 50.73(a)(2)(x)</div> <div style="width: 25%;"><input type="checkbox"/> 20.2203(a)(2)(iii)</div> <div style="width: 25%;"><input type="checkbox"/> 50.36(c)(2)</div> <div style="width: 25%;"><input type="checkbox"/> 50.73(a)(2)(v)(A)</div> <div style="width: 25%;"><input type="checkbox"/> 73.71(a)(4)</div> <div style="width: 25%;"><input type="checkbox"/> 20.2203(a)(2)(iv)</div> <div style="width: 25%;"><input type="checkbox"/> 50.46(a)(3)(ii)</div> <div style="width: 25%;"><input type="checkbox"/> 50.73(a)(2)(v)(B)</div> <div style="width: 25%;"><input type="checkbox"/> 73.71(a)(5)</div> <div style="width: 25%;"><input type="checkbox"/> 20.2203(a)(2)(v)</div> <div style="width: 25%;"><input type="checkbox"/> 50.73(a)(2)(i)(A)</div> <div style="width: 25%;"><input type="checkbox"/> 50.73(a)(2)(v)(C)</div> <div style="width: 25%;"><input type="checkbox"/> OTHER</div> <div style="width: 25%;"><input type="checkbox"/> 20.2203(a)(2)(vi)</div> <div style="width: 25%;"><input type="checkbox"/> 50.73(a)(2)(i)(B)</div> <div style="width: 25%;"><input type="checkbox"/> 50.73(a)(2)(v)(D)</div> </div>												
Specify in Abstract below or in NRC Form 366A															
12. LICENSEE CONTACT FOR THIS LER															
NAME Robert E. Kreider, Manager – Regulatory Assurance										TELEPHONE NUMBER (Include Area Code) 610-718-3400					
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						
14. SUPPLEMENTAL REPORT EXPECTED <input type="checkbox"/> YES (If yes, complete 15. EXPECTED SUBMISSION DATE) <input checked="" type="checkbox"/> NO										15. EXPECTED SUBMISSION DATE					
										MONTH	DAY	YEAR			
ABSTRACT (Limit to 1400 spaces, i.e., approximately 15 single-spaced typewritten lines) <div style="font-family: monospace; padding: 10px;"> The procedure for performing a remote shutdown during a MCR or cable spreading room fire did not include a step to align the reactor core isolation cooling system suction to the suppression pool. This alignment is assumed in the plant fire safe shutdown analysis. The procedure was revised to add the required step. </div>															

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		2008	-- 004	-- 00	

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

Unit Conditions Prior to the Event

Unit 1 was in Operational Condition (OPCON) 1 (Power Operation) at approximately 100% power. Unit 2 was in Operational Condition (OPCON) 1 (Power Operation) at approximately 100% power. There were no other structures, systems or components out of service that contributed to this event.

Description of the Event

On Tuesday, November 11, 2008, an engineer was participating in senior reactor operator certification training in the main control room (MCR) simulator. The engineer observed that the remote shutdown procedure (SE-1) did not agree with the supporting design calculations for the fire safe shutdown (FSSD) method being implemented by the procedure. The calculations assume that the reactor core isolation cooling (RCIC) (EIIS:BN) system suction will be aligned to the suppression pool during the remote shutdown event. The RCIC system suction is aligned to the condensate storage tank (CST) (EIIS:TK) during normal operation.

The remote shutdown procedure was promptly revised to include a step to align the RCIC system suction to the suppression pool while operating the system at the remote shutdown panel.

This event resulted in the nuclear power plant being in an unanalyzed condition that could have significantly degraded plant safety. This LER is being submitted pursuant to the requirements of 10CFR50.73(a)(2)(ii)(B).

Analysis of the Event

There were no actual safety consequences associated with this event. The safety consequences of this event could have been significant under certain circumstances since this condition had the potential to cause a loss of the only

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credited high pressure coolant injection source during a remote shutdown event. This would have resulted in operator reliance on TRIP procedure direction for depressurization and use of the unaffected low pressure injection system to stabilize reactor level. The RCIC system was capable of being operated at the remote shutdown panel for the majority of affected credible fire scenarios that could occur in the MCR or cable spreading room. However, it was possible that an analyzed fire for these areas could cause one or both motor-operated-valves (MOVs) (EIIS:V) on the CST suction line to fail closed due to a hot-short.

The RCIC and high-pressure coolant injection (HPCI) systems are normally aligned to the CST during plant operation. The CST suction line is equipped with two in-series 20" MOVs located inside the CST dike that are remotely controlled from hand switches located in the MCR. During a design basis fire in the MCR or cable spreading room it is postulated that these MOVs could close due to a hot-short. The FSSD analysis assumes that RCIC is used as the source of high-pressure injection during a remote shutdown event. It is assumed that the RCIC system suction will be manually aligned to the suppression pool early in the event while being operated at the remote shutdown panel. The step to perform this alignment was not included in the remote shutdown procedure when it was initially developed.

Cause of the Event

The cause of the event was a failure to include a required step in the remote shutdown procedure when the procedure was developed. The required step aligns the RCIC system suction to the suppression pool during a remote shutdown event as assumed in the FSSD analysis.

Corrective Action Completed

The remote shutdown procedure was revised to include a step to align the RCIC system suction to the suppression pool while operating the system at the remote shutdown panel.

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Previous Similar Occurrences

There were no previous similar events during the last three years that adversely affected the capability to perform a remote shutdown.

Component data:

System: BN Reactor Core Isolation Cooling System
Component: TRB Turbine
Component Number: 10-S212
Manufacturer: T147 Terry Steam Turbine Co
Model Number: GS-2 TYP
Serial Number: T-36691-A