

10CFR50.73

July 7, 2009

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

Limerick Generating Station, Unit 2
Facility Operating License No. NPF-85
NRC Docket No. 50-353

Subject: LER 2009-002-00, Condition Prohibited By Technical Specifications Due To
Inoperable Main Turbine Bypass System

This Licensee Event Report (LER) addresses an event that resulted in a condition prohibited by Technical Specifications. The main turbine bypass system was rendered inoperable for periods that exceeded the allowed outage time on three occasions when a lead was lifted to disable the stop valve load limit logic during testing.

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

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			APPROVED BY OMB NO. 3150-0104			EXPIRES 08/31/2010			
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: 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.			
1. FACILITY NAME Limerick Generating Station, Unit 2					2. DOCKET NUMBER 05000353			3. PAGE 1 of 4			
4. TITLE: Inoperable Main Turbine Bypass System											
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	
05	24	2008	2009 - 002 - 00			07	07	2009	FACILITY NAME	DOCKET NUMBER 05000	
9. OPERATING MODE 1		11. THIS REPORT IS SUBMITTED PURSUANT TO THE REQUIREMENTS OF 10 CFR §: (Check all that apply)									
10. POWER LEVEL 100		<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) <input type="checkbox"/> OTHER <small>Specify in Abstract below or in NRC Form 366A</small>									
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							15. EXPECTED SUBMISSION DATE				
<input type="checkbox"/> YES (If yes, complete 15. EXPECTED SUBMISSION DATE) <input checked="" type="checkbox"/> NO							MONTH	DAY	YEAR		
ABSTRACT (Limit to 1400 spaces, i.e., approximately 15 single-spaced typewritten lines)											
<p>A condition prohibited by Technical Specifications was identified during a review of main turbine valve testing activities. In 2008 there were three occasions when the main turbine bypass system was rendered inoperable. The action to verify the minimum critical power ratio above the limit specified in the Core Operating Limits Report was not completed within one hour as required by Technical Specifications. The condition prohibited by Technical Specifications was caused by inadequate site documentation for a critical design basis function. The Design Basis Document will be revised to include the design basis function of the stop valve load limit logic.</p>											

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

Unit Conditions Prior to the Event

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

Description of the Event

On February 15, 2008 all Unit 2 main turbine bypass valves (BPVs) (EIIIS:SO) opened momentarily during stop valve testing. The event investigation determined that the potential cause was an unexpected change in the load limit circuit output. Based on the event it was determined that this could be prevented by lifting a lead to defeat this logic.

On April 26, 2009, all Unit 2 main turbine bypass valves (BPVs) opened momentarily. The event investigation determined that the cause was an unexpected change in the load limit circuit output.

On May 8, 2009 upon further investigation the troubleshooting team discovered that actions taken to lift the lead after the February 15, 2008 event, adversely affected the main turbine bypass system response time. The action of lifting the lead rendered the turbine bypass system inoperable.

Technical Specification (TS) 3.7.8 action statement refers to TS 3.2.3 Minimum Critical Power Ratio (MCPR), which requires the main turbine bypass system to be operable. TS 3.2.3 Action "c" requires a determination, within one hour, that MCPR is greater than or equal to the rated MCPR limit specified by the Core Operating Limits Report (COLR) BPVs inoperable curve.

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

A review of main turbine valve testing activities for the last three years identified three occasions (5/24/08, 9/13/08 and 12/14/08) on Unit 2 when the stop valve load limit logic was intentionally disabled by lifting a lead for periods that exceeded one hour and the BPVs were not declared inoperable. Therefore TS 3.2.3 action "c" was not completed within the one hour allowed outage time (AOT).

This event resulted in a condition prohibited by TS. Therefore, this LER is being submitted pursuant to the requirements of 10CFR50.73(a)(2)(i)(B).

Analysis of the Event

There were no actual safety consequences associated with this event. The potential safety consequences of this event were minimal. MCPR was verified to be greater than the operating limit adjusted for turbine bypass valves out of service for all three events. The system would have responded appropriately for the pressure control function, but the anticipatory function for stop valve closure was not available during the brief times when the lead was lifted during testing.

Cause of the Event

The condition prohibited by TS was caused by inadequate site documentation for a critical design basis function regarding an adverse effect on the main turbine bypass system response time when a lead was lifted to disable the stop valve load limit logic during testing.

Corrective Action Planned

Design Basis Document LS-S-45 "Main Steam, Turbine, and Extraction Steam Systems" will be revised to include the design basis function of the stop valve load limit logic and its impact on main turbine bypass system response time.

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

Previous Similar Occurrences

Three events are being reported in this LER. There are no additional previous occurrences of unplanned main turbine bypass system inoperability that resulted in a condition prohibited by TS in the last five years.

Component Data:

Equipment: Turbine Bypass Valves
Component Number: BPV-001-1-9
Manufacturer: G080 General Electric
Model Number: 823E891