

April 23, 2010

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

Limerick Generating Station, Units 1 and 2
Facility Operating License Nos. NPF-39 and NPF-85
NRC Docket Nos. 50-352 and 50-353

Subject: Special Report - Seismic Monitoring Instrumentation Inoperability

This Special Report is being submitted pursuant to the requirements of Limerick Generating Station (LGS), Unit 1 and Unit 2 Updated Final Safety Analysis Report (UFSAR) section 3.7.4.5, Technical Specification 6.9.2, and Technical Requirements Manual 3.3.7.2 "With one or more of the seismic monitoring instruments inoperable for more than 30 days, a Special Report shall be prepared and submitted to the Nuclear Regulatory Commission pursuant to Specification 6.9.2 of the Technical Specifications within the next ten days outlining the cause of the malfunction and the plans for restoring the instrument(s) to operable status."

On Tuesday March 16, 2010, Unit 1 was operating at 94% power due to end-of-cycle coast down and Unit 2 was operating at full power with functional testing of the seismic monitoring instrumentation system in progress. During the test, the Operating Basis Earthquake (OBE) red light failed to illuminate and the "OBE exceeded" alarm failed to operate as expected. Operations declared the triaxial response spectrum analyzer inoperable. The failure was later determined to be caused by faulty test equipment.

On Thursday April 22, 2010, both units were operating at full power and seismic instrumentation surveillance test (ST-2-036-426-0) was in progress. The test was being performed as the post maintenance test (PMT) for the inoperable triaxial response spectrum analyzer which passed the test and was later declared operable. However, during the test, the seismic monitor sensor array XE-VA-105 for 'D' Main Steam Line (MSL) failed to provide the expected indication. The time response of channel #2 did not respond per the ST requirement. Instrumentation and Control (I&C) and Engineering personnel determined that 'D' MSL channel sensor array of the seismic monitor was degraded. Accordingly, Operations declared the sensor inoperable. The degraded sensor array is located in the Unit 1 drywell and cannot be accessed for recalibration or repair without a plant outage.

The Seismic Monitoring System consists of two systems. One system is located in the main Control Room (MCR) with 5 sensors located at various plant locations and elevations. The MCR Seismic Monitor has 5 tri-axial time history accelerometers, 1 response spectrum analyzer, 5 digital recorders and a playback unit. Four of the five sensor arrays have passed their channel functional surveillance. The fifth sensor is available but degraded. The seismic monitor sensor array (XE-VA-105) that is located in the drywell of Unit 1 will be repaired,

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tested, and returned to operable status by the end of 1R14 refueling outage (April 2012). This commitment is contained in the attachment to this letter.

The second system is a stand-alone system located at the Spray Pond Pump House. The Spray Pond Seismic Monitor is a self-contained system with its own sensor array not associated with the MCR Seismic Monitor. The Spray Pond Seismic Monitor remains operable and is not affected by the degraded sensor array XE-VA-105.

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
Exelon Generation Company, LLC

Attachment: List of commitments

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

SUMMARY OF EXELON NUCLEAR COMMITMENTS
LS-AA-117-1003 Rev.7

The following table identifies commitments made in this document. (Any other actions discussed in the submittal represent intended or planned actions. They are described to the NRC for the NRC's information and are not regulatory commitments.)

Commitment	Committed Date or "Outage"	Commitment Type	
		One-Time Action (Yes/No)	Programmatic (Yes/No)
The degraded seismic monitor sensor array (XE-VA-105) that is located in the drywell of Unit 1 will be repaired, tested, and returned to operable status by the end of the 1R14 refueling outage (April 2012).	Outage	Yes	No