

May 11, 2016

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

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

Subject: Supplement to Submittal of Relief Requests  
Associated with the Fourth 10-Year Interval Inservice Inspection (ISI)  
Program

- References:
- 1) Letter from Exelon Generation Company, LLC (D. P. Helker) to the U.S. NRC regarding "Submittal of Relief Requests Associated with the Fourth 10-Year Interval Inservice Inspection (ISI) Program" dated April 13, 2016.
  - 2) Email correspondence from T. Hood (U.S. Nuclear Regulatory Commission) to S. Hanson (Exelon Generation Company, LLC), regarding "Limerick Generating Station, Units 1 and 2 - DRAFT Supplemental Information Needed for Acceptance of Requested Licensing Action (CAC Nos. MF7585 and MF7586)," dated May 5, 2016.

In the Reference 1 letter, Exelon Generation Company, LLC (EGC), requested U.S. Nuclear Regulatory Commission (U.S. NRC) review and approval of relief requests associated with the Fourth Inservice Inspection (ISI) Interval for Limerick Generating Station (LGS), Units 1 and 2. The Fourth ISI Program complies with the 2007 Edition through the 2008 Addenda of the American Society of Mechanical Engineers (ASME) Boiler and Pressure Vessel (B&PV) Code. LGS will be starting the Fourth 10-Year ISI Interval on February 1, 2017.

In the Reference 2 correspondence, the U.S. NRC requested supplemental information. Attached is our response.

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Relief Requests  
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There are no commitments contained within this submittal.

If you have any questions or require additional information, please contact Stephanie J. Hanson at 610-765-5143.

Respectfully,



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James Barstow  
Director, Licensing & Regulatory Affairs  
Exelon Generation Company, LLC

Attachment: Response to DRAFT Supplemental Information Needed for Acceptance  
of Requested Licensing Action for Limerick Generating Station, Units 1  
and 2

cc: Regional Administrator - NRC Region I	w/attachments
NRC Senior Resident Inspector – Limerick Generating Station	"
NRC Project Manager, NRR – Limerick Generating Station	"
Director, Bureau of Radiation Protection, Pennsylvania Department of Environmental Protection	"

**ATTACHMENT**

**Response to DRAFT Supplemental Information Needed for Acceptance of  
Requested Licensing Action**

**Limerick Generating Station, Units 1 and 2  
Docket Nos. 50-352 and 50-353**

By letter dated April 13, 2016, Exelon Generation Company, LLC (EGC) submitted relief requests associated with the Fourth 10-Year Interval Inservice Inspection (ISI) program for Limerick Generating Station (LGS), Units 1 and 2. The proposed relief requests would allow LGS to use a risk-informed alternative in accordance with 10 CFR 50.55a(z)(1) for the Fourth Interval Risk-Informed Inservice Inspection (RI-ISI) program that is based on Electric Power Research Institute (EPRI) Tropical Report (TR)-112657, Revision B-A "Revised Risk-Informed Inservice Inspection Evaluation Procedure," dated December 1999 as an alternative to the American Society of Mechanical Engineers (ASME) Section XI, Code examination requirements for piping.

The NRC staff has determined that additional information is needed to complete its acceptance review of relief request I4R-01. The specific request for supplemental information is restated below along with EGC's response.

#### Request for Supplemental Information

Please provide the risk results from the risk impact assessment for LGS, Units 1 and 2, that compares the proposed Fourth Interval RI-ISI program to the initial ASME Section XI requirements. The provided results should include both the system level changes in core damage frequency (CDF) and large early release frequency (LERF) and the total change in CDF and LERF. Also, EGC should discuss whether the risk acceptance guidelines of EPRI TR-112657, Revision B-A, are met.

Including the risk results demonstrates that the risk acceptance guidelines of EPRI TR-112657, Revision B-A, are still met for I4R-01.

#### Response to Request for Supplemental Information

Based on the Fourth ISI Interval update of this risk impact assessment, the change in risk from the pre-RI-ISI Section XI Program to the Fourth Interval RI-ISI Program was within the 1.00E-06 and 1.00E-07 acceptance criteria for delta-core damage frequency (Delta – CDF) and delta-large early release frequency (Delta – LERF) as described in Regulatory Guide 1.174, "An Approach for Using Probabilistic Risk Assessment in Risk-Informed Decisions on Plant-Specific Changes to the Licensing Basis." The Delta – CDF and Delta – LERF values for LGS, Units 1 and 2, are listed in the following table.

LGS, Unit 1					LGS, Unit 2				
System	RISI Delta-CDF	Delta-CDF Criteria	RISI Delta-LERF	Delta-LERF Criteria	System	RISI Delta-CDF	Delta-CDF Criteria	RISI Delta-LERF	Delta-LERF Criteria
CRD	1.00E-14	1.00E-07	1.00E-15	1.00E-08	CRD	1.00E-14	1.00E-07	1.00E-15	1.00E-08
CS	1.51E-10	1.00E-07	6.03E-11	1.00E-08	CS	-1.84E-11	1.00E-07	1.16E-12	1.00E-08
FW	-4.18E-09	1.00E-07	-6.52E-10	1.00E-08	FW	-4.02E-09	1.00E-07	-6.46E-10	1.00E-08
HPCI	5.63E-11	1.00E-07	2.35E-11	1.00E-08	HPCI	2.45E-10	1.00E-07	2.73E-11	1.00E-08
MS	2.14E-09	1.00E-07	1.26E-10	1.00E-08	MS	1.53E-09	1.00E-07	1.06E-10	1.00E-08
RCIC	4.36E-11	1.00E-07	7.45E-12	1.00E-08	RCIC	4.08E-11	1.00E-07	7.42E-12	1.00E-08
RHR	3.57E-10	1.00E-07	1.25E-10	1.00E-08	RHR	1.07E-09	1.00E-07	1.74E-10	1.00E-08
RPV-APP	5.04E-08	1.00E-07	1.01E-09	1.00E-08	RPV-APP	5.03E-08	1.00E-07	1.01E-09	1.00E-08
RR	3.40E-09	1.00E-07	1.10E-10	1.00E-08	RR	6.87E-10	1.00E-07	2.23E-11	1.00E-08
RWCU	5.55E-09	1.00E-07	1.06E-09	1.00E-08	RWCU	9.15E-09	1.00E-07	6.10E-10	1.00E-08
SLC	7.78E-10	1.00E-07	2.53E-11	1.00E-08	SLC	-2.85E-10	1.00E-07	-9.21E-12	1.00E-08
<b>Totals</b>	<b>5.87E-08</b>	<b>1.00E-06</b>	<b>1.90E-09</b>	<b>1.00E-07</b>	<b>Totals</b>	<b>5.87E-08</b>	<b>1.00E-06</b>	<b>1.30E-09</b>	<b>1.00E-07</b>