

10 CFR 50.90
10 CFR 50.69

July 27, 2018

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

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 Application to Adopt 10 CFR 50.69, Risk-Informed Categorization and Treatment of Structures, Systems, and Components for Nuclear Power Reactors

- References:
1. Letter from J. Barstow (Exelon Generation Company, LLC) to U.S. Nuclear Regulatory Commission, "Application to Adopt 10 CFR 50.69, 'Risk-Informed Categorization and Treatment of Structures, Systems, and Components (SSCs) for Nuclear Power Plants'," dated June 28, 2017 (ADAMS Accession No. ML17179A161).
 2. Letter from J. Barstow (Exelon Generation Company, LLC) to U.S. Nuclear Regulatory Commission, "Supplement to Application to Adopt 10 CFR 50.69, Risk-Informed Categorization and Treatment of Structures, Systems, and Components for Nuclear Power Reactors," dated August 14, 2017 (ADAMS Accession No. ML17226A336).
 3. Letter from J. Barstow (Exelon Generation Company, LLC) to U.S. Nuclear Regulatory Commission, "Response to Request for Additional Information, Application to Adopt 10 CFR 50.69, 'Risk-Informed Categorization and Treatment of Structures, Systems, and Components (SSCs) for Nuclear Power Plants'," dated April 23, 2018 (ADAMS Accession No. ML18113A870).

By letter dated June 28, 2017 (Reference 1), as supplemented by letter dated August 14, 2017 (Reference 2), Exelon Generation Company, LLC (Exelon) requested an amendment to the Renewed Facility Operating License Nos. NPF-39 and NPF-85 for Limerick Generating Station (Limerick), Units 1 and 2, respectively. The proposed amendment would modify the licensing basis by the addition of a license condition to allow for the implementation of the provisions of Title 10 of the Code of Federal Regulations (10 CFR), Part 50.69, Risk-Informed Categorization and Treatment of Structures, Systems, and Components for Nuclear Power Reactors.

In a letter dated April 23, 2018 (ADAMS Accession No. ML18113A870) (Reference 3), Exelon replied to a request for additional information by the NRC.

License Amendment Request Supplement
Adopt 10 CFR 50.69
Docket Nos. 50-352 and 50-353
July 27, 2018
Page 2

The attachment to this supplement letter provides revised proposed markups of the Limerick Unit 1 and Unit 2 Renewed Facility Operating Licenses which supersede in their entirety the markups proposed in Attachment 3 of the Reference 3 letter.

Exelon has reviewed the information supporting a finding of no significant hazards consideration, and the environmental consideration, that were previously provided to the NRC in the Enclosure of the Reference letter. Exelon has concluded that the information provided in this response does not affect the bases for concluding that the proposed license amendment does not involve a significant hazards consideration under the standards set forth in 10 CFR 50.92. In addition, Exelon has concluded that the information in this response does not affect the bases for concluding that neither an environmental impact statement nor an environmental assessment needs to be prepared in connection with the proposed amendment.

In accordance with 10 CFR 50.91, "Notice for public comment; State consultation," paragraph (b), Exelon is notifying the Commonwealth of Pennsylvania of this supplement to the application for license amendment by transmitting a copy of this letter and its attachment to the designated State Official.

This letter contains no regulatory commitments.

If you should have any questions regarding this submittal, please contact Glenn Stewart at 610-765-5529.

I declare under penalty of perjury that the foregoing is true and correct. Executed on this 27th day of July 2018.

Respectfully,



James Barstow
Director - Licensing and Regulatory Affairs
Exelon Generation Company, LLC

Attachment: Markup of Proposed Renewed Facility Operating License (RFOL) Pages

cc: USNRC Region I, Regional Administrator
USNRC Project Manager, Limerick
USNRC Senior Resident Inspector, Limerick
Director, Bureau of Radiation Protection – Pennsylvania Department
of Environmental Protection

ATTACHMENT

License Amendment Request Supplement

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

**Application to Adopt 10 CFR 50.69, Risk-Informed Categorization and Treatment
of Structures, Systems, and Components for Nuclear Power Reactors**

Markup of Proposed Renewed Facility Operating License (RFOL) Pages

Unit 1 RFOL Pages

Appendix C, Page 1

Unit 2 RFOL Pages

Page 8

Page 9

Appendix C, Page 1

APPENDIX C

ADDITIONAL CONDITIONS
OPERATING LICENSE NO. NPF-39

~~DELETED~~ > Insert 1

Renewed License No. NPF-39

Amendment No. ~~128, 131, 147, 184~~

- (13) The licensee's UFSAR supplement submitted pursuant to 10 CFR 54.21(d), as revised during the license renewal application review process, and as revised in accordance with license condition 2.C.(12), describes certain programs to be implemented and activities to be completed prior to the period of extended operation (PEO).
- (a) Exelon Generation Company shall implement those new programs and enhancements to existing programs no later than December 22, 2028.
 - (b) Exelon Generation Company shall complete those activities designated for completion prior to the PEO, as noted in Commitment Nos. 18, 19, 20, 22, 23, 24, 28, 29, 30, 38, 39, 40, 41, 42, 43, and 47, of Appendix A of NUREG-2171, "Safety Evaluation Report Related to the License Renewal of Limerick Generating Station, Units 1 and 2," no later than December 22, 2028, or the end of the last refueling outage prior to the period of extended operation, whichever occurs later.
 - (c) Exelon Generation Company shall notify the NRC in writing within 30 days after having accomplished item (a) above and include the status of those activities that have been or remain to be completed in item (b) above.

Insert 2 →

- D. The facility requires exemptions from certain requirements of 10 CFR Part 50 and 10 CFR Part 70. These include (a) exemption from the requirement of Appendix J, the testing of containment air locks at times when the containment integrity is not required (Section 6.2.6.1 of the SER and SSER-3), (b) exemption from the requirements of Appendix J, the leak rate testing of the Main Steam Isolation Valves (MSIVs) at the peak calculated containment pressure, Pa, and exemption from the requirements of Appendix J that the measured MSIV leak rates be included in the summation for the local leak rate test (Section 6.2.6.1 of SSER-3), (c) exemption from the requirement of Appendix J, the local leak rate testing of the Traversing Incore Probe Shear Valves (Section 6.2.6.1 of the SER and SSER-3), and (d) an exemption from the schedule requirements of 10 CFR 50.33(k)(l) related to availability of funds for decommissioning the facility (Section 22.1, SSER 8). The special circumstances regarding exemptions (a), (b) and (c) are identified in Sections 6.2.6.1 of the SER and SSER 3. An exemption from the criticality monitoring requirements of 10 CFR 70.24 was previously granted with NRC materials license No. SNM-1977 issued November 22, 1988. The licensee is hereby exempted from the requirements of 10 CFR 70.24 insofar as this requirement applies to the handling and storage of fuel assemblies held under this renewed license.

- E. Deleted
- F. The licensee shall have and maintain financial protection of such type and in such amounts as the Commission shall require in accordance with Section 170 of the Atomic Energy Act of 1954, as amended, to cover public liability claims.
- G. This renewed license is effective as of the date of issuance and shall expire at midnight on June 22, 2049.

FOR THE NUCLEAR REGULATORY COMMISSION



William M. Dean, Director
Office of Nuclear Reactor Regulation

Enclosures:

1. Appendix A - Technical Specifications
2. Appendix B - Environmental Protection Plan

3. Appendix C - Additional Conditions

Date of Issuance: October 20, 2014

INSERT 1

Exelon Generation Company, LLC shall comply with the following conditions on the schedule noted below:

<u>Amendment No.</u>	<u>Additional Conditions</u>	<u>Implementation Date</u>
[XXX]	<p>Exelon is approved to implement 10 CFR 50.69 using the processes for categorization of Risk-Informed Safety Class (RISC)-1, RISC-2, RISC-3, and RISC-4 structures, systems, and components (SSCs) using: Probabilistic Risk Assessment (PRA) models to evaluate risk associated with internal events, including internal flooding, and internal fire; the shutdown safety assessment process to assess shutdown risk; the Arkansas Nuclear One, Unit 2 (ANO-2) passive categorization method to assess passive component risk for Class 2 and Class 3 SSCs and their associated supports; and the results of non-PRA evaluations that are based on the IPEEE Screening Assessment for External Hazards, i.e., seismic margin analysis (SMA) to evaluate seismic risk, and a screening of other external hazards updated using the external hazard screening significance process identified in ASME/ANS PRA Standard RA-Sa-2009; as specified in Unit 1 License Amendment No. [XXX] dated [DATE].</p> <p>Exelon will complete the implementation items listed in Attachment 2 of Exelon letter to NRC dated April 23, 2018 prior to implementation of 10 CFR 50.69. All issues identified in the attachment will be addressed and any associated changes will be made, focused-scope peer reviews will be performed on changes that are PRA upgrades as defined in the PRA standard (ASME/ANS RA-Sa-2009, as endorsed by RG 1.200, Revision 2), and any findings will be resolved and reflected in the PRA of record prior to implementation of the 10 CFR 50.69 categorization process.</p> <p>Prior NRC approval, under 10 CFR 50.90, is required for a change to the categorization process specified above (e.g., change from a seismic margins approach to a seismic probabilistic risk assessment approach).</p>	Prior to implementation of 10 CFR 50.69.

INSERT 2

- (14) The Additional Conditions contained in Appendix C, as revised through Amendment No. [XXX], are hereby incorporated into this renewed license. Exelon Generation Company shall operate the facility in accordance with the Additional Conditions.

APPENDIX C

ADDITIONAL CONDITIONS
OPERATING LICENSE NO. NPF-85

Exelon Generation Company, LLC shall comply with the following conditions on the schedule noted below:

<u>Amendment No.</u>	<u>Additional Conditions</u>	<u>Implementation Date</u>
[XXX]	<p>Exelon is approved to implement 10 CFR 50.69 using the processes for categorization of Risk-Informed Safety Class (RISC)-1, RISC-2, RISC-3, and RISC-4 structures, systems, and components (SSCs) using: Probabilistic Risk Assessment (PRA) models to evaluate risk associated with internal events, including internal flooding, and internal fire; the shutdown safety assessment process to assess shutdown risk; the Arkansas Nuclear One, Unit 2 (ANO-2) passive categorization method to assess passive component risk for Class 2 and Class 3 SSCs and their associated supports; and the results of non-PRA evaluations that are based on the IPEEE Screening Assessment for External Hazards, i.e., seismic margin analysis (SMA) to evaluate seismic risk, and a screening of other external hazards updated using the external hazard screening significance process identified in ASME/ANS PRA Standard RA-Sa-2009; as specified in Unit 2 License Amendment No. [XXX] dated [DATE].</p> <p>Exelon will complete the implementation items listed in Attachment 2 of Exelon letter to NRC dated April 23, 2018 prior to implementation of 10 CFR 50.69. All issues identified in the attachment will be addressed and any associated changes will be made, focused-scope peer reviews will be performed on changes that are PRA upgrades as defined in the PRA standard (ASME/ANS RA-Sa-2009, as endorsed by RG 1.200, Revision 2), and any findings will be resolved and reflected in the PRA of record prior to implementation of the 10 CFR 50.69 categorization process.</p> <p>Prior NRC approval, under 10 CFR 50.90, is required for a change to the categorization process specified above (e.g., change from a seismic margins approach to a seismic probabilistic risk assessment approach).</p>	Prior to implementation of 10 CFR 50.69.