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10 CFR 50
10 CFR 51
10 CFR 54

October 12, 2012

U. S. Nuclear Regulatory Commission
Attention: 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: Response to NRC Request for Additional Information, dated October 10, 2012, related to the Limerick Generating Station License Renewal Application

Reference: 1. Exelon Generation Company, LLC letter from Michael P. Gallagher to NRC Document Control Desk, "Application for Renewed Operating Licenses", dated June 22, 2011
2. Letter from Patrick D. Milano (NRC) to Michael P. Gallagher (Exelon), "Request for Additional Information for the review of the Limerick Generating Station, Units 1 and 2, License Renewal Application (TAC Nos. ME6555, ME6556)", dated October 10, 2012

In the Reference 1 letter, Exelon Generation Company, LLC (Exelon) submitted the License Renewal Application (LRA) for the Limerick Generating Station, Units 1 and 2 (LGS). In the Reference 2 letter, the NRC requested additional information to support the staffs' review of the LRA.

Enclosed is the response to this request for additional information.

License Renewal Commitment 46 is modified as shown in Enclosure C. There are no other new or revised regulatory commitments contained in this letter.

If you have any questions, please contact Mr. Al Fulvio, Manager, Exelon License Renewal, at 610-765-5936.

I declare under penalty of perjury that the foregoing is true and correct.

Executed on 10-12-2012

Respectfully,

A handwritten signature in black ink that reads "Michael P. Gallagher". The signature is written in a cursive style and is positioned above a horizontal line.

Michael P. Gallagher
Vice President - License Renewal Projects
Exelon Generation Company, LLC

Enclosures: A: Response to Request for Additional Information
B: Updates to affected LGS LRA sections
C: LGS License Renewal Commitment List Change

cc: Regional Administrator – NRC Region I
NRC Project Manager (Safety Review), NRR-DLR
NRC Project Manager (Environmental Review), NRR-DLR
NRC Project Manager, NRR- DORL Limerick Generating Station
NRC Senior Resident Inspector, Limerick Generating Station
R. R. Janati, Commonwealth of Pennsylvania

Enclosure A

**Response to Request for Additional Information related to Open Item 3.0.5-1
Associated with the LGS License Renewal Application (LRA)**

RAI B.1.4-4

Section B.1.4, "Operating Experience"

RAI B.1.4-4

Background

On July 10, 2012, the U.S. Nuclear Regulatory Commission (NRC) staff issued request for additional information (RAI) B.1.4-3 requesting changes to the updated final safety analysis report (UFSAR) supplement to reflect the time frame for implementation of the operating experience program enhancements described in Exelon Generation Company, LLC (the applicant)'s response to RAI B.1.4-2. In the background discussion of this RAI, the staff stated that it had "reviewed the proposed time frame and its basis for the implementation of the programs, as described in the June 19, 2012, response to RAI B.1.4-2 and determined it to be acceptable." However, subsequent to the issuance of RAI B.1.4-3, on July 31, 2012, the staff issued the Safety Evaluation Report with Open Items Related to the License Renewal of Limerick Generating Station, Units 1 and 2, which includes Open Item 3.0.5-1 regarding the applicant's proposed implementation schedule. By letter dated September 12, 2012, the applicant responded to this open item.

Issue

As proposed, the UFSAR supplement description of the operating experience review activities, as contained in license renewal application Section A.1.6, "Operating Experience," allows for a two-year period after license renewal before operating experience related to aging is considered in maintaining the aging management programs. This consideration of operating experience begins at a later date rather than immediately upon receipt of a renewed operating license. As such, the applicant's response does not provide reasonable assurance that the applicant will consider relevant plant-specific and industry operating experience and incorporate it into the aging management activities on an ongoing basis.

Request

Revise the UFSAR supplement to clearly address how plant-specific and industry operating experience will be considered on an ongoing basis prior to full implementation of operating experience program enhancements, or justify why no revisions to the UFSAR supplement are necessary.

Exelon Response

The UFSAR supplement, LRA Section A.1.6, has been revised to require that the enhancements to the LGS Operating Experience program detailed in Exelon's letter dated March 13, 2012 are implemented no later than the date that the LGS renewed operating licenses are issued, and are conducted on an ongoing basis throughout the terms of the renewed licenses. Appropriate changes have also been made to LRA Appendix B, Section B.1.4 and the license renewal commitment table, LRA Section A.5.

See Enclosure B for revisions to LRA Sections A.1.6 and B.1.4, and Enclosure C for the revision to LRA Section A.5.

Enclosure B
LGS License Renewal Application Updates

Notes:

- To facilitate understanding, portions of the original LRA have been repeated in this Enclosure, with revisions indicated.
- Text from the original LRA or previous RAI responses is shown in normal font. Changes are highlighted with ***bold italics*** for inserted text and strikethroughs for deleted text.

As a result of the response to RAI B.1.4-4 provided in Enclosure A of this letter, LRA Sections A.1.6 and B.1.4 are revised as shown below:

A.1.6 OPERATING EXPERIENCE

The Operating Experience program is an existing program that will be enhanced to ensure, through the ongoing review of both internal and external operating experience, that the license renewal aging management programs are effective to manage the aging effects for which they are credited throughout the period of extended operation. The programs are either enhanced or new programs developed when the review of operating experience indicates that the existing programs do not provide reasonable assurance that aging effects are being effectively managed.

The Operating Experience program will be enhanced to:

1. Explicitly require the review of operating experience for aging-related degradation.
2. Establish criteria to define aging-related degradation.
3. Establish identification coding for use in identification, trending and communications of aging-related degradation.
4. Require communication of significant internal aging-related degradation, associated with SSCs in the scope of license renewal, to other Exelon plants and to the industry. Criteria will be established for determining when aging-related degradation is significant.
5. Require review of external operating experience for information related to aging management, and evaluation of such information for potential improvements to LGS aging management activities.
6. Provide training to those responsible for screening, evaluating and communicating operating experience items related to aging management.

These enhancements will be implemented ***no later than the date that the renewed operating licenses are issued and conducted on an ongoing basis throughout the terms of the renewed licenses.*** ~~within two years following receipt of the renewed operating licenses.~~

~~In addition, to compensate for the fact that the enhancements listed above will not be implemented immediately upon receipt of the renewed licenses, LGS will take the following actions:~~

- ~~1. Review all License Renewal Interim Staff Guidance (LR-ISG) documents issued in the period between receipt of the renewed LGS licenses and implementation of the operating experience enhancements to gain insights regarding aging management lessons learned for incorporation into LGS aging management activities.~~
- ~~2. Review the first revision of NUREG-1801 issued after the enhancements are implemented, to capture significant aging management lessons learned that occur in the~~

~~period between receipt of the renewed LGS licenses and implementation of the operating experience enhancements. This review will identify significant guidance changes driven by industry operating experience that should be incorporated into LGS aging management activities.~~

B.1.4 OPERATING EXPERIENCE

Operating experience is used at LGS to enhance plant programs, prevent repeat events, and prevent events that have occurred at other plants from occurring at LGS. Limerick, as part of the Exelon fleet, receives Operating Experience (internal and external to Exelon Nuclear) daily. The Operating Experience process (OPEX) screens, evaluates, and acts on operating experience documents and information to prevent or mitigate the consequences of similar events. The OPEX process reviews operating experience from external (also referred to as industry operating experience) and internal (referred to as in-house operating experience) sources. External operating experience includes INPO documents (e.g., SOERs, SERs, SENs, etc.), NRC documents (e.g., GLs, LERs, INs, etc.), and other documents (e.g., 10 CFR Part 21 Reports, etc.). Internal operating experience includes event investigations, trending reports, and lessons learned from in-house events as captured in self-assessments, and in the 10 CFR Part 50, Appendix B corrective action program.

Each AMP summary in this appendix contains a discussion of operating experience relevant to the program. This information was obtained through the review of in-house operating experience captured by the Corrective Action Program, Program Self-Assessments, Program Health Reports, and through the review of industry operating experience. Additionally, operating experience was obtained through interviews with system engineers, program engineers, and other plant personnel. New programs utilized plant and or industry operating experience as applicable, and discussed the operating experience and associated corrective actions as they relate to implementation of the new program. The operating experience in each AMP summary identifies past corrective actions that have resulted in program enhancements and provides objective evidence that the effects of aging have been, and will continue to be, adequately managed.

As described above, the existing Operating Experience process, in conjunction with the Corrective Action Program, has proven to be effective in learning from adverse conditions and events, and improving programs that address aging-related degradation. In order to provide additional assurance that internal and external operating experience related to aging management continues to be used effectively during the period of extended operation, Limerick will enhance its Operating Experience Program to:

1. Explicitly require the review of operating experience for aging-related degradation.
2. Establish criteria to define aging-related degradation. In general, the criteria will be used to identify aging that is in excess of what would be expected, relative to design, previous inspection experience and the inspection intervals.
3. Establish identification coding for use in identification, trending and communications of aging-related degradation. This coding will assist plant personnel in ensuring that, in addition to addressing the specific issue, the adequacy of existing aging management programs is assessed. Station personnel are required to periodically assess the

performance of the aging management programs, including insights obtained through operating experience. This could lead to AMP revisions or the establishment of new AMPs, as appropriate.

4. Require communication of significant internal aging-related degradation, associated with SSCs in the scope of license renewal, to other Exelon plants and to the industry. Criteria will be established for determining when aging-related degradation is significant.
5. Require review of external operating experience for information related to aging management, and evaluation of such information for potential improvements to LGS aging management activities. License Renewal Interim Staff Guidance (LR-ISG) documents will be reviewed as part of this external operating experience information as they are issued on an ongoing basis, capturing new insights or addressing issues that emerge from license renewal reviews. Other guidance documents such as GALL Revisions may not be explicitly considered unless communicated in the form of one of the above-listed NRC communication vehicles (e.g., RIS).
6. Provide training to those responsible for screening, evaluating and communicating operating experience items related to aging-related degradation to enhance the effectiveness of this aspect of the operating experience process. This training will be commensurate with their role in the process.

These enhancements will be implemented ***no later than the date that the renewed operating licenses are issued and conducted on an ongoing basis throughout the terms of the renewed licenses.*** ~~within two years following receipt of the renewed operating licenses.~~

~~In addition, to compensate for the fact that the enhancements listed above will not be implemented immediately upon receipt of the renewed licenses, LGS will take the following actions:~~

- ~~1. Review all License Renewal Interim Staff Guidance (LR-ISG) documents issued in the period between receipt of the renewed LGS licenses and implementation of the operating experience enhancements to gain insights regarding aging management lessons learned for incorporation into LGS aging management activities.~~
- ~~2. Review the first revision of NUREG-1801 issued after the enhancements are implemented, to capture significant aging management lessons learned that occur in the period between receipt of the renewed LGS licenses and implementation of the operating experience enhancements. This review will identify significant guidance changes driven by industry operating experience that should be incorporated into LGS aging management activities.~~

~~Aging management related lessons learned from these review activities will be entered into the plant action tracking database for incorporation into credited LGS AMPs or into new LGS AMPs.~~

Enclosure C

LGS License Renewal Commitment List Changes

This Enclosure includes an update to the LGS LRA Appendix A, Section A.5 License Renewal Commitment List, as a result of the Exelon response to RAI:

RAI B.1.4-4

Note: For clarity, portions of the original LRA License Renewal Commitment List text are repeated in this Enclosure. Added text is shown in ***Bold Italics*** and deleted text shown in ~~Strikethrough~~ format.

A.5 License Renewal Commitment List

NO.	PROGRAM OR TOPIC	COMMITMENT	IMPLEMENTATION SCHEDULE	SOURCE
46	Operating Experience	<p>The Operating Experience Program is an existing program that will be enhanced to:</p> <ol style="list-style-type: none"> 1. Explicitly require the review of operating experience for aging-related degradation. 2. Establish criteria to define aging-related degradation. 3. Establish identification coding for use in identification, trending and communications of aging-related degradation. 4. Require communication of significant internal aging-related degradation, associated with SSCs in the scope of license renewal, to other Exelon plants and to the industry. Criteria will be established for determining when aging-related degradation is significant. 5. Require review of external operating experience for information related to aging management, and evaluation of such information for potential improvements to LGS aging management activities. 6. Provide training to those responsible for screening, evaluating and communicating operating experience items related to aging management. <p>In addition, to compensate for the fact that the enhancements listed above will not be implemented immediately upon receipt of the renewed licenses, LGS will take the following actions:</p> <ol style="list-style-type: none"> 1. Review all License Renewal Interim Staff Guidance (LR ISG) documents issued in the period between receipt of the renewed LGS licenses and implementation of the operating experience enhancements to gain insights regarding aging management lessons learned for incorporation into LGS aging management activities. 2. Review the first revision of NUREG-1801 issued after the enhancements are implemented, to capture significant aging management lessons learned that occur in the period between receipt of the renewed LGS licenses and implementation of the operating experience enhancements. This review will identify significant guidance changes driven by industry operating experience that should be incorporated into LGS aging management activities. <p>Aging management related lessons learned from these review activities will be entered into the plant action tracking database for incorporation into credited LGS AMPs or into new LGS AMPs.</p>	<p>Program to be enhanced <i>no later than the date that the renewed operating licenses are issued</i> within two years following receipt of the renewed operating licenses</p>	<p>Section A.1.6</p> <p>LGS Letter dated 3/13/12 RAI B.1.4-1 RAI A.1-1</p> <p>LGS Letter dated 7/11/2012 RAI B.1.4-3</p> <p>LGS Letter dated 9/12/2012 OI 3.0.5-1</p> <p><i>LGS Letter dated 10/12/2012 RAI B.1.4-4</i></p>