Exelon Nuclear
200 Exelon Way
Kennett Square, PA 19348

www.exeloncorp.com

Exelon Nuclear

10 CFR 50.90

September 12, 2002

U.S. Nuclear Regulatory Commission
ATTN: Document Control Desk
Washington, D.C. 20555

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: License Amendment Request LG 02-00391
Extended Use of Pressure-Temperature Limits Specified in Technical Specifications Figure 3.4.6.1-1 - Supplemental Information

References:

Letter from M. P. Gallagher, Exelon Generation Company, LLC, to U.S. Nuclear Regulatory Commission, Limerick Generating Station, Units 1 and 2, License Amendment Request LG 02-00391, "Extended Use of Pressure-Temperature Limits Specified in Technical Specifications Figure 3.4.6.1-1," dated June 26, 2002.

In the Reference letter, pursuant to 10 CFR 50.90, "Application for amendment of license or construction permit," Exelon Generation Company, LLC (Exelon), requested a change to Facility Operating License Nos. NPF-39 and NPF-85 for Limerick Generating Station (LGS), Units 1 and 2, respectively. The request extends the use of the pressure-temperature (P-T) limits specified in Technical Specification (TS) Figure 3.4.6.1-1, "Minimum Reactor Vessel Metal Temperature vs. Reactor Vessel Pressure," to 32 effective full power years (EFPY) by deleting a note on each unit's TS Figure which was added by a previous license amendment for each respective LGS unit. This note currently limits the applicability of the P-T limits until the end of the current cycle of operation for each LGS unit.

In a teleconference between members of the NRC and Exelon on July 18, 2002, the NRC requested additional information to support their review of the proposed changes. The requested information is provided in the Attachment to this letter.

This supplement does not change the information supporting the finding of No Significant Hazards Consideration and information supporting the need not to perform an Environmental Assessment contained in the Referenced letter.

There are no commitments contained within this letter.

If you have any questions or require additional information, please contact Glenn Stewart at 610-765-5529.

A001

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

Respectfully,

Executed on 09-12-02

M. P. Gallagher
Director, Licensing & Regulatory Affairs
Mid-Atlantic Regional Operating Group

Attachment:
Supplemental Information

cc: H. J. Miller, Administrator, Region I, USNRC w/ attachment
A. L. Burritt, USNRC Senior Resident Inspector, LGS "
S. Wall, Senior Project Manager, USNRC "
R. R. Janati - Commonwealth of Pennsylvania "

License Amendment Request LG 02-00391
Docket Nos. 50-352 & 50-353
Extended Use of P-T Limits
Supplemental Information

Attachment

By letter dated June 26, 2002, pursuant to 10 CFR 50.90, "Application for amendment of license or construction permit," Exelon Generation Company, LLC (Exelon), requested a change to Facility Operating License Nos. NPF-39 and NPF-85 for Limerick Generating Station (LGS), Units 1 and 2, respectively. The request extends the use of the pressure-temperature (P-T) limits specified in Technical Specification (TS) Figure 3.4.6.1-1, "Minimum Reactor Vessel Metal Temperature vs. Reactor Vessel Pressure," to 32 effective full power years (EFPY) by deleting a note on each unit's TS Figure which was added by a previous license amendment for each respective LGS unit. This note currently limits the applicability of the P-T limits until the end of the current cycle of operation for each LGS unit.

In a teleconference between members of the NRC and Exelon on July 18, 2002, the NRC requested additional information to support their review of the proposed changes in the original License Amendment Request submittal. The requested information is provided below.

1. **Provide information on the correlation between the license amendment request and any past or possible future power uprates with respect to predicted neutron fluence.**

   Response

   For power rerate considerations, the original peak reactor pressure vessel (RPV) inside diameter fluence (1.7×10^{18} n/cm^2) was assumed to increase proportional to the increase in power. To be conservative, it was also assumed that the power increased from the first day of commercial operation rather than when the power rerate was implemented. As a result, for a proposed 10% power rerate, the peak RPV inside diameter fluence was increased by 10% to 1.9×10^{18} n/cm^2. Although LGS, Units 1 and 2, are only licensed for 5% power rerate (from 3293 MWth to 3458 MWth), the peak RPV inside diameter fluence of 1.9×10^{18} n/cm^2 was conservatively used to develop the P-T curves contained in both our current and proposed TS Figure 3.4.6.1-1. Similarly, the 1.3×10^{18} n/cm^2 referenced in our current license amendment request is the predicted 32 EFPY neutron fluence for the 110% power rerate condition at the one quarter thickness (¼T) of the vessel beltline, which is the current licensing basis for LGS, Units 1 and 2.

2. **Provide information concerning the assumptions for fuel loadings in the license amendment request.**

   Response

   The operating condition assumed for the bounding fluence analysis is based on the projected LGS Unit 2 Cycle 6 core data. The analysis inputs were based on the core design data generated by Global Nuclear Fuel – America (GNF-A). The core power used is the currently licensed power of 3458 MWth. The LGS Unit 2 Cycle 6 core load contains 544 bundles of GE13, 104 bundles of GE11, and 116 bundles of GE6 (Shoreham fuel). The 8x8 GE6 fuels are loaded solely into the peripheral zone of the core.

Attachment

3. Provide the name of the specific cross section libraries used in the calculations referenced in the license amendment request.

Response

The cross section library used in the calculations is based on Version V of the Evaluated Nuclear Data File (ENDF/B-V). However, cross sections for the important components of BWR neutron flux calculation - oxygen, hydrogen, and individual iron isotopes - have been upgraded to ENDF/B-VI to meet the guidelines of Regulatory Guide 1.190.