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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: License Amendment Request No. LG 99-01766
Response to Request for Additional Information

Reference: Letter from J. A. Hutton (Exelon Generation Company, LLC) to US
Nuclear Regulatory Commission (USNRC) dated June 1, 2001

Dear Sir/Madam:

The reference letter requested changes to Appendix A of Facility Operating License Nos. NPF-39 and NPF-85 for Limerick Generating Station (LGS), Units 1 and 2, respectively, involving drywell average air temperature. Subsequently, by telecon dated January 30, 2002, the NRC requested additional information in order to complete its review of the requested change. The attachment to this letter provides our response to the request for additional information.

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

Respectfully,

Executed on 2-8-02


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

Attachment

cc: H. J. Miller, USNRC Regional Administrator, Region I
A. L. Burritt, USNRC Senior Resident Inspector, Limerick
R. R. Janati - Commonwealth of Pennsylvania

A001

ATTACHMENT

Response to Questions
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1) What is the instrument uncertainty associated with the drywell temperature indications, and how does the licensee's proposal account for the uncertainty's affect on the average drywell air temperature calculation, considering both drywell equipment qualification and the analysis of peak drywell pressure and temperature?

Response:

The instrument uncertainty associated with developing the drywell average air temperature is not changing, nor is the methodology for calculating the average air temperature. Based on the number of instrument data points measured, and the method of averaging the data, these uncertainties have minimal impact on the drywell annual average air temperature calculations. A conservative instrument uncertainty factor is considered during review of the annual temperature effects on the electrical equipment qualified lives calculation. This ensures the actual annual drywell average air temperature does not approach the temperature bases used to determine the currently specified replacement lives of electrical equipment. If the replacement frequency of any component should be affected, there is adequate time to adjust the replacement frequency without any adverse effects to the licensing basis of the plant.

The accident analysis for peak drywell pressure and temperature is based on initial operating conditions up to the temperature of 150°F. The drywell systems, structures and components have also been evaluated for a normal maximum operating temperature of 150°F, and are bounded by the existing design basis consisting of a design temperature of 340°F and design pressure of 55 psig. The current large break accident analysis assumes an initial drywell temperature of 150°F. Therefore, this change does not impact the current accident analysis.

2) The proposed increase to the TS-allowable limit for drywell average air temperature would eliminate the current 10°F margin between it and the annual average temperature used for the equipment qualification program. The staff wishes to verify that this margin does not require the licensee to modify TS SR 4.6.1.7, which provides requirements for the calculation of drywell average air temperature. Has the licensee considered whether the current method of calculating drywell average air temperature (i.e., using at least one temperature reading from each drywell elevation) remains adequate for equipment qualification purposes, considering that this margin will be eliminated? In essence, is the azimuthal drywell temperature variance small enough such that a single reading at each drywell elevation would continue to provide an average air temperature which is adequately conservative for equipment qualification purposes if the proposed change were implemented? On what basis does the licensee have this assurance?

Response:

The determination of qualified lives for electrical equipment using an average annual temperature of 145°F was made relative to the 150°F being too conservative based on actual measured temperatures, and was not associated with maintaining a margin over the 135°F used for the Technical Specifications limit. The Technical Specifications temperature limit is an action point that ensures that the containment peak air temperature does not exceed the design temperature of 340°F during steam line

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break conditions and is consistent with the safety analysis. It is not intended to provide margin to the Equipment Qualification temperature requirements. If the Equipment Qualification reviews should indicate adverse trends after implementing this change, there would be adequate time for replacement frequencies to be adjusted accordingly. However, this is not expected because the change to the overall annual average temperature from this change should be minimal. As long as the equipment qualification annual drywell average temperature review, with the instrument uncertainty factor included, does not exceed the 145°F temperature, there is no change to the qualified lives calculations required. There is no margin being eliminated with respect to how the average annual temperature is currently evaluated. Therefore, a change to TS SR 4.6.1.7 is not required.
