

October 26, 2005

Dr. Graham B. Wallis, Chairman  
Advisory Committee on Reactor Safeguards  
U.S. Nuclear Regulatory Commission  
Washington, DC 20555-0001

SUBJECT: INTERIM LETTER: EXELON GENERATION COMPANY, LLC, APPLICATION FOR EARLY SITE PERMIT AND THE ASSOCIATED NUCLEAR REGULATORY COMMISSION STAFF DRAFT SAFETY EVALUATION REPORT ON THE CLINTON EARLY SITE PERMIT SITE

Dear Dr. Wallis:

This responds to your September 22, 2005, letter on the Committee's review of the Exelon Generation Company, LLC (Exelon) application for an Early Site Permit (ESP) for the Clinton site, the associated Nuclear Regulatory Commission (NRC) staff draft safety evaluation report (DSER) and supplemental DSER. During the Advisory Committee on Reactor Safeguards (ACRS) meeting on September 8, 2005, the staff discussed the Clinton ESP DSER and supplemental DSER with the full committee. At the time of the ACRS meeting, eight open items required additional information from Exelon for resolution. The staff plans to resolve all the open items and issue the final safety evaluation report (FSER) for the Clinton ESP on February 17, 2006. To meet this deadline, the staff is also currently reexamining the list of 15 permit conditions in light of criteria that the staff established during the review of the North Anna ESP application. The staff plans to meet with the ACRS full committee on March 9, 2006, to present the conclusions of the staff's review of the Clinton ESP, as documented in the FSER. Any additional comments resulting from the final ACRS full committee meeting will be addressed in an addendum to the FSER and will be captured in the NRC's final technical report. The ACRS final report will be an additional appendix to the FSER and will also appear in a NUREG.

I appreciate the Committee's recommendation that the staff do a thorough and expeditious review of the applicant's performance-based seismic hazard analysis methodology. The staff is in the midst of reviewing the applicant's proposed methodology and will continue the review until all issues have been resolved. The staff has had several interactions with Exelon on this subject and recently conducted a meeting with Exelon to discuss open items regarding the performance-based seismic hazard analysis. The staff also plans to perform an independent analysis to verify many of the performance-based modeling assumptions.

In the September 22, 2005, letter, the ACRS discussed the staff's findings on the major elements required in an ESP application, such as the nature of the proposed site, the population around the site, the weather, and the seismicity of the site. With regard to seismicity, the staff notes that the applicant's comparison of the safe-shutdown earthquake (SSE) derived using the performance-based approach with the design spectrum for advanced reactors (Regulatory Guide 1.60, "Design Response Spectra for Seismic Design of Nuclear Power Plants," fixed at a maximum ground acceleration of 0.3g) does not validate the

acceptability of the proposed SSE for the Clinton site. When a combined license applicant selects a reactor design, the staff will determine if the site SSE is bounded by the response spectrum for the reactor design. To determine the acceptability of the performance-based SSE approach, the staff is focusing on the adequacy of the target performance level and whether the performance-based SSE adequately represents the regional and local seismic hazard for the Clinton site.

The NRC staff appreciates the ACRS's insights concerning the Clinton ESP safety review. These insights are a valuable contribution to the NRC staff's review and development of the FSER. My staff looks forward to continued interactions with the Committee during your review of the Clinton and future ESP applications.

Sincerely,

**/RA/**

Luis A. Reyes  
Executive Director  
for Operations

cc: Chairman Diaz  
Commissioner McGaffigan  
Commissioner Merrifield  
Commissioner Jaczko  
Commissioner Lyons  
SECY

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Sincerely,

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 Luis A. Reyes  
 Executive Director  
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cc: Chairman Diaz  
 Commissioner McGaffigan  
 Commissioner Merrifield  
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 Commissioner Lyons  
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