From: Nanette Gilles
To: Eddie Grant; Tom Mundy
Date: Fri, Mar 19, 2004 4:29 PM
Subject: DRAFT REQUESTS FOR ADDITIONAL INFORMATION-SSAR 2.5.2

Please find attached a package of preliminary questions, in the form of draft requests for additional information (RAIs) for the Clinton ESP review, SSAR Section 2.5.2. Exelon may request a phone call to seek clarification on the questions before they are issued by letter. Please contact me to let me know if you wish to arrange such a call or if you have other questions.

Sincerely,

Nanette Gilles
Senior Project Manager
Office of Nuclear Reactor Regulation
U.S. Nuclear Regulatory Commission
Phone (301) 415-1180

CC: Ann Hodgdon; Clifford Munson; Gene Imbro; James Lyons; Kamal Manoly; Laura Dudes; Michael Scott; Stephen Koenick

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DRAFT
Exelon Early Site Permit Application
Site Safety Analysis Report (SSAR)
Requests for Additional Information (RAI)

RAI 2.5.2-1

SSAR Section 2.5.2, Vibratory Ground Motion

SSAR Section 2.5.2 describes the results of Exelon's determination of ground motion at the ESP site from possible earthquakes. Regulatory Guide 1.165 (RG 1.165) provides a method acceptable to the NRC staff with respect to the probabilistic evaluations that can be conducted to address the uncertainties associated with the Safe Shutdown Earthquake (SSE) determination. RG 1.165 specifies a target or reference probability (median 10^{-5} per year) that is used to determine the controlling earthquakes, subsequent site ground motion, and the SSE.

Please provide the following information related to the approach used to obtain the SSE in SSAR Section 2.5.2:

a) The approach described in SSAR Section 2.5.2 incorporates component capacity or performance parameters into a scale factor used to compute the SSE. Please justify the incorporation of equipment performance into determination of the SSE.

b) Please explain how the SSE derived in SSAR Section 2.5.2 is characterized by both horizontal and vertical free-field ground motion response spectra at the free ground surface.

c) Please describe how the performance-based approach incorporates the site-specific geology of the ESP site into the determination of the SSE.

Please provide site-specific response spectra from the controlling earthquakes at the reference probability level (median 10^{-5} per year) and demonstrate that the SSE envelopes the response spectra from the controlling earthquakes at the reference probability level, or justify why this information is not needed in determining the SSE. Please also justify any reference probability level used other than median 10^{-5} per year. Appendix B to RG 1.165 discusses situations in which an alternative reference probability level may be appropriate.