



NUCLEAR ENERGY INSTITUTE

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September 4, 2002

Mr. James E. Lyons  
Director, New Reactor Licensing Project Office  
Office of Nuclear Reactor Regulation  
U.S. Nuclear Regulatory Commission  
Washington, DC 20555-0001

**SUBJECT: Early Site Permits – Seismic Demonstration Activities**

Dear Mr. Lyons:

In a June 13, 2002 public meeting, the Early Site Permit Task Force described the general approach to be taken by Exelon, Entergy and Dominion to satisfy the seismic (and geotechnical) requirements for an ESP application. The NRC staff suggested a pilot demonstration of the application of the relevant regulations and guidance in this area and requested the Task Force to consider such a demonstration and how it might be accomplished.

At a follow-up meeting on July 16, the Task Force proposed the following approach for a joint seismic demonstration project by the three lead ESP applicants:

1. The ESP application farthest along in seismic development work would be the primary focus of the pilot demonstration.
2. The ESP applicants would provide NRC with schedules of seismic tasks. The NRC staff would identify activities or tasks they are interested in observing, assessing, or discussing further.
3. The ESP applicants would make available to NRC internally approved output from key tasks or analysis. The NRC would accept the data as unofficial and provide meaningful and timely feedback on methodology and results.
4. The ESP applicants would coordinate responses to NRC questions and informal requests for additional information.

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5. The ESP Task Force would meet with the NRC staff at appropriate points in the schedule to discuss the Probabilistic Seismic Hazard Analysis (PSHA) and development of ground motions. The purpose of these meetings would be to review findings, approach, and methodology; provide opportunity for other ESP applicants to raise/address differing situations/approaches; exchange lessons learned in applying guidance; and obtain feedback from NRC on significant questions and issues.

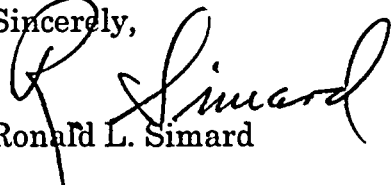
The enclosure provides the schedule for the seismic activities on the Clinton ESP Project, which we have identified as the lead site for the pilot seismic demonstration project. Based on this schedule, we propose the week of October 14, to discuss the method being employed for the PSHA, including preliminary results, and the week of November 18, to discuss the development of ground motions. The need for additional task force or applicant-specific meetings will be evaluated as the pilot demonstration project progresses.

Exelon will lead the Task Force discussions at the two scheduled meetings. Entergy and Dominion will add discussion of differing approaches or issues that are specific to the Grand Gulf and North Anna sites. The involvement of all three applicants will enhance the breadth and value of the pilot seismic demonstration project.

The Entergy and Dominion schedules for their seismic-related activities will be provided by the applicants directly to their respective NRC Project Managers. Please contact the applicants directly to identify specific seismic activities that the staff is interested in observing, assessing, or discussing further.

We look forward to productive interactions to demonstrate the implementation of seismic requirements and guidance for ESP applications. Please contact Russ Bell ([rjb@nei.org](mailto:rjb@nei.org) or 202-739-8087) to set specific dates and times for the proposed October and November meetings.

Sincerely,



Ronald L. Simard

Enclosure

cc: Ronaldo V. Jenkins, NRC/NRR  
Nanette V. Gilles, NRC/NRR  
Stephen S. Koenick, NRC/NRR  
Document Control Desk

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**Early Site Permit Geotechnical Engineering Schedule**

**Field Program**

Seismic field walkdown	(complete)
Drilling & sampling	(complete)
CPT soundings	(complete)
Velocity testing	(complete)
Surveying	(complete)

**Laboratory Tests**

Standard testing	16AUG – 30AUG
Dynamic testing	16AUG – 11OCT

**Geotechnical Evaluations**

Update site and regional geology	(complete)
Assess liquefaction potential	(complete)
Review allowable bearing	26AUG – 06SEP
Evaluate dynamic stability	09SEP – 20SEP

## Early Site Permit Seismic Hazards Evaluation

### Seismic Source Characterization

Review of licensing and supporting documents	(complete)
Compilation and review of new data	(complete)
Update seismicity catalog	(complete)
Evaluation of existing SSC models	(complete)

### Probabilistic Seismic Hazard Analysis

Evaluate bedrock attenuation relations	(complete)
Compare sensitivity to EPRI model	(complete)
Identify controlling earthquakes	26AUG – 04SEP
ESPTF Utility Consultants discuss results	thru 05SEP
Internal reviews	06SEP – 20SEP
Review results with NRC Technical Staff	Wk of 14OCT

### Develop SSE Ground Motions

Review and evaluate existing site data	(complete)
Develop site-specific response analysis	29JUL – 13SEP
Conduct site response analysis	16SEP – 04OCT
Develop SSE spectra	07OCT – 15OCT
ESPTF Utility Consultants discuss results	thru 16OCT
Internal reviews	17OCT – 15NOV
Review results with NRC Technical Staff	Wk of 18NOV