

December 3, 2004

ORGANIZATION: EXELON GENERATION COMPANY, LLC

SUBJECT: SUMMARY OF PUBLIC MEETING WITH EXELON GENERATION  
COMPANY REGARDING THE SEISMIC ANALYSIS FOR THE CLINTON  
EARLY SITE PERMIT (ESP) APPLICATION

The Nuclear Regulatory Commission (NRC) held a public meeting with Exelon Generation Company, LLC (Exelon) on September 16, 2004, at the Nuclear Regulatory Commission (NRC) offices in Rockville, Maryland. The purpose of the meeting was to discuss Exelon's seismic analysis for their early site permit (ESP) application for the Clinton ESP site. For a list of meeting attendees refer to Enclosure 1. The meeting agenda is Enclosure 2.

Exelon staff stated that they requested the meeting to discuss topics related to the NRC staff's requests for additional information issued on July 26, 2004, concerning Exelon's seismic analysis for the Clinton ESP site found in Section 2.5 of Exelon's Site Safety Analysis Report.. Specifically, Exelon wanted to address its use of the American Society of Civil Engineer's (ASCE) performance-based method for determining the site safe shutdown earthquake (SSE), as outlined in draft Standard ASCE/SEI 43-05, "Seismic Design Criteria for Structures, Systems and Components in Nuclear Facilities and Commentary." The ASCE performance-based methodology has not been reviewed and approved by the NRC, but Exelon stated its belief that the methodology is in conformance with NRC regulations in 10 CFR Part 100. Exelon and the NRC staff discussed the regulations in 10 CFR 100.23(d)(1) that provide the requirements for the determination of the SSE ground motion. Exelon stated its belief that 10 CFR 100.23(d)(1) does not specify a particular methodology for determination of the SSE ground motion, but, rather, defines how it should be characterized or described.

Exelon further stated that the guidance contained in Regulatory Guide (RG) 1.60, "Design Response Spectra for Seismic Design of Nuclear Power Plants," was based on designs of nuclear power plants already in operation and therefore incorporated equipment performance, albeit in a different manner than it is being incorporated in the ASCE methodology. The incorporation of equipment performance in the ASCE method is one of the issues that concerned the NRC staff. Exelon also noted that the determination of the reference probability in RG 1.60 was based on 29 existing nuclear power plant sites being safe based on their individual SSEs and equipment performance at those plants. This reference probability was then used in RG 1.165, Identification and Characterization of Seismic Sources and Determination of Safe Shutdown Earthquake Ground Motion," which outlines the NRC's approved method for determination of the site SSE.

Exelon stated its belief that the ASCE approach gives a more consistent level of risk across the different sites. The NRC staff responded that it believes having a consistent hazard across different sites is important, and that the ASCE method does not provide a consistent hazard across sites. The NRC staff further stated that it believed the goal of an ESP was simply to characterize the site and not to include any information about the plant design in that characterization.

Exelon reiterated its belief that it has met 10 CFR 100.23 with the use of the ASCE method. The NRC staff responded that, even if the staff determined that the new method did not meet 10 CFR 100.23, Exelon could still pursue the use of the ASCE method through a request for an exemption to 10 CFR 100.23. The staff pointed out that the major issue with Exelon's use of the ASCE method is its affect on the NRC review schedule for Exelon's ESP application. Exelon stated that it understood the scheduler implications of seeking approval of its use of the ASCE method.

Exelon and the NRC staff discussed the changes to 10 CFR Part 100 from a historical perspective, including a discussion of the Commission papers and statements of consideration associated with the 10 CFR Part 100 rule change in the 1990s. Differing views were expressed as to whether it was the NRC staff's intent to separate the determination of the SSE from design considerations. The NRC staff indicated that it was in the process of revising RG 1.60 to conform to the revised Part 100 but that completion of that effort was quite a way off.

Exelon asked the staff what it needed to go forward with its review of the ASCE approach. The staff responded that it needed to see the derivation of the approach, including the assumptions used, and that the information in the draft ASCE Standard and the associated commentary was not enough for the staff to reach a conclusion regarding the methodology. The staff stated that it needed a comprehensive, integrated, exhaustive, and coherent document describing the ASCE approach from Exelon. The staff stated that, once it had such a document, it could develop a schedule for review of Exelon's use of the ASCE approach. Exelon agreed to provide the staff with such a document.

On another topic, Exelon stated that it noted that the staff did not request any additional information regarding its seismic analysis for high frequency ground motions. Exelon was concerned because the results for the Clinton site in this range were not bounded by the RG 1.60 response spectrum. The staff indicated that this topic was not relevant to the ESP review because the staff was only looking at defining the SSE for the ESP site. Exelon stated that it was hoping to receive a finding that the Clinton ESP site was suitable for any design that was certified to RG 1.60 standards. The staff stated that it did not intend to make such a finding for ESPs. Exelon pointed out that this appeared inconsistent with the staff's earlier plans as noted in the NRC's June 17, 2003, letter to the Nuclear Energy Institute (NEI) on Resolution of Early Site Permit Topic 13 (ESP-13), Guidance for ESP Seismic Evaluations. The staff agreed to review the letter and provide Exelon with any additional feedback on the issue resulting from its review of the letter.

Finally, the NRC staff inquired about the status of the NEI Seismic Task Force. Exelon stated that the Task Force is up and running but that NEI is allowing the ESP applicants to take the lead on seismic issues with NEI providing support.

*/RA/*

Nanette V. Gilles, Senior Project Manager  
New Reactors Section  
New, Research and Test Reactors Program  
Division of Regulatory Improvement Programs  
Office of Nuclear Reactor Regulation

Docket No. 52-007

Enclosures: As stated

cc w/encl: See next page

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**/RA/**

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ADAMS ACCESSION NUMBERS: ML0-Meeting Summary, Agenda (Enclosure 1) and  
Meeting Attendees (Enclosure 2)

OFFICE	PM:RNRP:NRR	SC:EMEB:NRR	SC:RNRP:NRR
NAME	NGilles	KManoly	LDudes
DATE	11/22/2004	11/29/2004	12/02/2004

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Distribution for Meeting Summary dated December 3, 2004

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**MEETING AGENDA: SEPTEMBER 16, 2004  
U.S. NUCLEAR REGULATORY COMMISSION (NRC)  
MEETING WITH EXELON GENERATING COMPANY, LLC (EXELON)  
ON SEISMIC ANALYSES CONTAINED IN EXELON'S SITE SAFETY ANALYSIS REPORT  
SUBMITTED AS PART OF ITS APPLICATION FOR AN EARLY SITE PERMIT (ESP)  
FOR THE CLINTON SITE**

9:00 a.m.	Introductory Comments	NRC/Exelon
9:15 a.m.	Discussion of Exelon's seismic analyses in support of its ESP application	NRC/Exelon
11:30 a.m.	Summary	NRC/Exelon
11:45 a.m.	Public Comment	
12:00 noon	Adjourn	

**Meeting With**  
**Exelon Generation Company, LLC**  
**September 16, 2004**  
**Attendance List**

<b><u>Name</u></b>	<b><u>Affiliation</u></b>
Thomas P. Mundy	Exelon
Eddie Grant	Exelon
George Zinke	Entergy
Carl Stepp	EHS/Entergy
Robert Kennedy	RPK Struct. Mechanics
Allin Cornell	CAC Co. Consultant
Donald Anderson	CH2M HILL
Robert Youngs	Geomatrix Consultants
Jolene Seitz	Department of Energy
Steve Routh	Bechtel
Bill Smith	Energetics
Laura Dudes, NRR	NRC/NRR/DRIP
Nanette Gilles, NRR	NRC/NRR/DRIP
Gene Imbro	NRC/NRR/DE
William Beckner	NRC/NRR/DRIP
Michael Scott	NRC/NRR/DRIP
Raj Anand	NRC/NRR/DRIP
Goutam Bagchi	NRC/NRR/DE
Cliff Munson	NRC/NRR/DE
Yong Li	NRC/NRR/DE
Mauri Lemoncelli	NRC/OGC
Ann Hodgdon	NRC/OGC
Kamal Manoly	NRC/NRR/DE

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