

August 24, 2004

MEMORANDUM TO: Laura A. Dudes, Section Chief
New Reactors Section
New, Research and Test Reactors Program
Division of Regulatory Improvement Programs
Office of Nuclear Reactor Regulation

FROM: Nanette V. Gilles, Exelon ESP Project Manager */RA M. Scott for:/*
New Reactors Section
New, Research and Test Reactors Program
Division of Regulatory Improvement Programs
Office of Nuclear Reactor Regulation

SUBJECT: TRIP REPORT FROM SITE VISIT TO THE CLINTON EARLY SITE
PERMIT (ESP) SITE AND AUDIT OF SEISMOLOGICAL AND
GEOLOGICAL ASPECTS OF EXELON ESP APPLICATION

On May 18-19, 2004, members of the Office of Nuclear Reactor Regulation (NRR), the Office of Research (RES), and supporting contractor personnel conducted an audit of seismological-and geological-related information in the application by Exelon Generation Company, LLC for an ESP for its Clinton ESP site. This trip included a visit to the Clinton ESP site. Attached are the trip report and the applicant's speakers' notes from this activity.

cc w/o atts: D. Matthews
F. Gillespie
W. Beckner
G. Imbro

Docket No. 52-007

Attachments: As stated

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DATE	08/15/04	08/16/04	08/19/04	08/20/04

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**TRIP REPORT
AUDIT AND SITE VISIT
CLINTON EARLY SITE PERMIT APPLICATION REVIEW
May 18-19, 2004**

Subject

Audit and site visit in support of review of seismological and geological sections of Clinton early site permit (ESP) application

Dates of Travel

May 18-19, 2004

NRC staff participants

- Clifford Munson, Division of Engineering, Office of Nuclear Reactor Regulation
- Andrew Murphy, Office of Nuclear Regulatory Research
- Yong Li, Division of Engineering, Office of Nuclear Reactor Regulation
- Eugene Schweig, U.S. Geological Survey (consultant)
- Charles Mueller, U.S. Geological Survey (consultant)
- Russell Wheeler, U.S. Geological Survey (consultant)

Applicant staff participants

Exelon:

- Tom Mundy
- Eddie Grant

CH2MHILL:

- Amy Lientz
- Don Anderson
- Matt Gavin

Other:

- Bob Youngs, Geomatrix
- Kathryn Hanson, Geomatrix
- Carl Stepp, Seismic Board of Review
- Allin Cornell, Seismic Board of Review
- Bob Kennedy, Seismic Board of Review

Background/Purpose

By letter dated September 25, 2003, Exelon Generation Company, LLC (Exelon) submitted an early site permit (ESP) application to the NRC for the Clinton ESP site. By letter dated October 27, 2003, and by *Federal Register* Notice (68 FR 61835, October 30, 2003), the NRC accepted Exelon's application for review.

As part of the NRC staff's review of the Exelon ESP application, the staff assesses compliance of the applicant's site safety analysis report (SSAR) with applicable regulations. In support of the staff's review of the applicant's SSAR, staff reviewers visit the ESP site to observe relevant onsite and local area conditions. The staff also audits information in the SSAR and its references. These audits may include visits to the applicant's offices to obtain a better understanding of the application's contents through technical discussions with knowledgeable applicant staff.

This trip report documents the staff's site visit in the seismology and geology areas, as well as an audit conducted at offices at the Clinton Power Station of seismological-and geological-related information provided in the ESP application.

Discussion

On May 18, 2004, the NRC staff and its consultants from the U.S. Geological Survey conducted an audit of the geological and seismological information contained in Sections 2.5.1 through 2.5.3 of the ESP application submitted by Exelon for the Clinton ESP site. The staff focused on the geological and seismological aspects of the application in an audit held at the offices of CH2MHILL located in Chicago, Illinois (CH2MHILL is the applicant's prime contractor supporting the development of the ESP application.) On May 19, 2004, the staff visited the proposed ESP site to discuss the information contained in Section 2.5.4 through 2.5.5 of the ESP application.

During the seismic audit at CH2MHILL's offices, the staff and its consultant sought to better understand the applicant's characterization of potential seismic sources in the site region as well as the method used by the applicant to develop the Safe Shutdown Earthquake (SSE) for the proposed ESP site. The applicant and its contractors made informal presentations on these subjects (copies attached to this trip report), and the staff discussed the information presented with the cognizant applicant and contractor staff.

The applicant provided explanations of the:

- Seismic source characterizations that were updated for the ESP application
- New ground motion attenuation models used for the ESP application
- Use of an alternative methodology to develop the SSE for the ESP site

During the site visit, the staff and its consultants viewed the proposed ESP site area, including locations where geotechnical and geophysical investigations were conducted. In addition, the applicant presented information on its regional investigation of paleoliquefaction features conducted in support of the ESP application findings.

No documents were provided to the staff during the audit or site visit other than the materials attached to this trip report.

Attachments

Applicant's speakers' notes from audit

Exelon ESP

cc:

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