

September 08, 2011

MEMORANDUM TO: Joseph Colaccino, Chief
EPR Projects Branch
Division of New Reactor Licensing
Office of New Reactors

FROM: Prosanta Chowdhury, Project Manager */RA/*
EPR Projects Branch
Division of New Reactor Licensing
Office of New Reactors

SUBJECT: SEPTEMBER 29 AND 30, 2011, GEOSCIENCES AND
GEOTECHNICAL ENGINEERING SITE AUDIT RELATED TO
PSEG POWER, LLC AND PSEG NUCLEAR, LLC EARLY SITE
PERMIT APPLICATION

By letter dated May 25, 2010, PSEG Power, LLC and PSEG Nuclear, LLC submitted the PSEG Site Early Site Permit (PSEG Site ESP) application to the U.S. Nuclear Regulatory Commission (NRC) (Agencywide Documents Access and Management System (ADAMS) Accession No. ML101480484). The staff has begun reviewing the application and has identified the need to conduct an audit related to the geology, seismology and geotechnical characteristics of the proposed plant site. The audit will also include a field trip to view and observe outcrops, soil, and rock formation of the Site Area, in addition to other geological features unique to the proposed plant site. The audit, to be conducted on September 29 and 30, 2011, is necessary in support of the review of Section 2.5 (Geology, Seismology, and Geotechnical Information) of the PSEG Site ESP application. The field trip portion of the audit, which involves observing the Turkey Point beds and local geologic features of the Site Area, will begin at the Turkey Point Lighthouse, and the onsite portion of the audit will take place at the PSEG's Energy and Environmental Resource Center in Salem, New Jersey. A copy of the audit plan is enclosed.

Docket No.: 52-043

Enclosure:
As stated

CONTACT: Prosanta Chowdhury, NRO/DNRL
301-415-1647

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ADAMS Accession No.: ML112450051 *via email NRO-002

OFFICE	DNRL/NARP:PM	DNRL/NARP:LA*	DSER/RGS1	DSER/RGS:BC	DNRL/NARP:PM
NAME	PChowdhury	JMcLellan	MPlaza-Toledo	CCook	PChowdhury(s)
DATE	09/06/11	09/06/11	09/06/11	09/06/11	09/08/11

OFFICIAL RECORD COPY

PSEG SITE EARLY SITE PERMIT APPLICATION GEOSCIENCES AND GEOTECHNICAL ENGINEERING SITE AUDIT PLAN

A. Background

PSEG Power, LLC and PSEG Nuclear, LLC submitted to the U.S. Nuclear Regulatory Commission (NRC) information on the geology, seismology, and geotechnical characteristics of the PSEG Site as a part of their PSEG Site Early Site Permit (ESP) application. The staff reviewed documentation in Section 2.5 of the Site Safety Analysis Report (SSAR), Revision 0, and identified the need for an audit of the information related to selected areas of the geology, seismology and geotechnical sections of the SSAR. The audit will promote a better understanding of the detailed analyses and bases underlying the information in the formal application.

The purpose of this audit is for the staff to review the geology, seismology and geotechnical modeling and calculations, as well as analyses and results of selected soil samples. The audit will also include a field trip to view and observe outcrops, soil, and rock formation of the Site Area, possible faults extending to the Site Area, evidence of lineaments in the Site Area, and elliptical patches northeast of the Site, and other geological features unique to the proposed plant site. This audit will allow the staff to better understand the modeling results in order to make accurate safety conclusions concerning the site characteristics. Further, the audit will also assist the staff in identifying any additional information that the staff may need during its review of PSEG Site ESP application.

B. Regulatory Audit Bases

This regulatory audit is based on the following:

- NUREG 0800, "Standard Review Plan:"
 - Section 2.5.1, "Basic Geologic and Seismic Information"
 - Section 2.5.2, "Vibratory Ground Motion"
 - Section 2.5.3, "Surface Faulting"
 - Section 2.5.4, "Stability of Subsurface Materials and Foundations"
 - Section 2.5.5, "Stability of Slopes"
- Review Standard (RS)-002, "Guidance for Processing Applications for Early Site Permits"
- Regulatory Guide (RG) 1.206, "Combined License Applications for Nuclear Power Plants"

C. Regulatory Audit Scope or Methodology

- The area of focus for the audit is the PSEG Site ESP application and supporting documentation.

D. Information and Other Material Necessary for the Regulatory Audit

- PSEG Site ESP Application, Revision. 0, Section 2.5, "GEOLOGY, SEISMOLOGY, AND GEOTECHNICAL INFORMATION"

ENCLOSURE

E. Audit Team

The following are the audit team members:

Meralis Plaza-Toledo, NRC Audit Team Lead
Christopher Cook, NRC Audit Team, Branch Chief
Gerry Stirewalt, NRC Audit Team Member
Luisette Candelario, NRC Audit Team Member
Frankie Vega, NRC Audit Team Member
Dogan Seber, NRC Audit Team Member
Laurel Bauer, NRC Audit Team Member
Stephanie Devlin, NRC Audit Team Member
Prosanta Chowdhury, NRO Licensing Project Manager
Phyllis Clark, NRO Licensing Project Manager

F. Logistics

Date/Time: September 29, 2011; 8:00 A.M. – 4:30 P.M.
September 30, 2011; 8:00 A.M. – 1:30 P.M.

Location: Field Trip - Turkey Point Lighthouse

Onsite Audit

PSEG Nuclear Development
Energy and Environmental Resource Center
244 Chestnut St.
Salem, New Jersey 08079

G. Agenda (see Attachment)

H. Deliverables

The audit team will issue a regulatory audit summary within 90 days after completing the audit.

PSEG Site ESPA - Geosciences and Geotechnical Engineering Site Audit

September 29 and 30, 2011
Salem, New Jersey

Agenda

Thursday, September 29, 2011

Lead by

- | | | |
|------------|--|----------|
| 8:00 A.M. | Introduction/Opening of Audit (via Conference Call) | NRC/PSEG |
| 10:30 A.M. | Field Trip to Turkey Point Lighthouse; Observe the Turkey Point Beds and Local Geologic Features | NRC/PSEG |
| 2:00 P.M. | Presentation on PSEG Site Characteristics | PSEG |
| 3:00 P.M. | Observation of Core Intervals in Boreholes of Undisturbed/Disturbed Samples of Borings Located at and Near the Foundation Footprint in the Vincentown Formation: <ul style="list-style-type: none">Multiple Cores Representing the Local Stratigraphy, and Lateral and Vertical Variation in the Units | NRC |
| 4:30 P.M. | Adjourn | |

Friday, September 30, 2011

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|------------|--|-----|
| 8:00 A.M. | Review of: <ul style="list-style-type: none">Geotechnical Engineering Calculation Packages (Bearing Capacity, Settlement, Lateral Earth Pressure, and other packages, as necessary)Liquefaction Calculation PackagesMACTEC Engineering Geotechnical Exploration and Testing Site Report (SSAR Reference 2.5.4.2-15)Site Response Analysis Calculation PackagesProbabilistic Seismic Hazard Analysis (PSHA) Implementation Related Calculation PackagesPlots (or Electronic Copies) of all Individual Seismic Sources' Hazard Curves (for all Ground Motion Frequencies) Used in the PSHA StudyAerial Photographs of the Site Area and RegionMaps of the SSAR Reconnaissance RoutesAdditional documents, as appropriate | NRC |
| 11:30 A.M. | Lunch Break | |
| 12:30 P.M. | Audit Exit - Public Meeting (Conference call format) | NRC |
| 1:30 P.M. | Closing of Audit | NRC |

ATTACHMENT

ESP - PSEG Mailing List

(Revised 08/25/2011)

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