



ND-2014-0015  
June 24, 2014

U.S. Nuclear Regulatory Commission  
ATTN: Document Control Desk  
Washington, DC 20555-0001

Subject: **PSEG Early Site Permit Application**  
**Docket No. 52-043**  
**Documents in Support of Application Early Site Permit for PSEG Site**

References: 1) PSEG Power, LLC Letter No, ND-2014-0010 to USNRC, Submittal of Revision 3 of the Early Site Permit Application for the PSEG Site, dated March 31, 2014

The purpose of this letter is to provide a proposed revision to the Site Safety Analysis Report (SSAR), as submitted in Part 2 of the PSEG Site Early Site Permit Application (ESPA), Revision 3 (Reference 1).

NRC staff indicated a desire to consistently identify the Installation, Tests, Analyses and Acceptance Criteria (ITAAC) associated with backfill material to be submitted during the combined operating license application.

Enclosure 1 contains the proposed revisions to SSAR Subsection 2.5.4. Enclosure 2 includes the new regulatory commitment established in this submittal.

If any additional information is needed, please contact David Robillard, PSEG Nuclear Development Licensing Engineer, at (856) 339-7914.

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NR0

I declare under penalty of perjury that the foregoing is true and correct. Executed on the 24th day of June, 2014.

Sincerely,



James Mallon  
Early Site Permit Manager  
Nuclear Development  
PSEG Power, LLC

Enclosure 1: Proposed Revisions Part 2 – Site Safety Analysis Report (SSAR),  
Subsection 2.5.4 - Stability of Subsurface Materials and Foundations  
Enclosure 2: Summary of Regulatory Commitments

cc: USNRC Project Manager, Division of New Reactor Licensing, PSEG Site  
(w/enclosures)  
USNRC Environmental Project Manager, Division of New Reactor Licensing  
(w/enclosures)  
USNRC Region I, Regional Administrator (w/enclosures)

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**ENCLOSURE 1**

**Proposed Revisions**

**Part 2 – Site Safety Analysis Report (SSAR)  
Subsection 2.5.4 – Stability of Subsurface Materials and Foundations**

**Marked-up Pages  
2.5-305**

**PSEG Site  
ESP Application  
Part 2, Site Safety Analysis Report**

2.5.4.11 Design Criteria

The following geotechnical characteristics are evaluated in Subsection 2.5.4 and described in the cited subsections:

- Capable tectonic structures or sources – 2.5.4.9
- Groundwater level – 2.5.4.6
- Liquefaction potential – 2.5.4.8
- Static bearing capacity – 2.5.4.10
- Shear wave velocity – 2.5.4.7
- Soil angle of internal friction – 2.5.4.10

Consideration of settlement and construction groundwater control will be addressed in the COLA.

The design of the safety-related foundations for the nuclear island is based on the foundation mats being supported on backfill material. The backfill may consist of compacted granular fill, lean concrete fill, or roller-compacted concrete fill placed between the mat base and the competent sands of the Vincentown Formation. Removal of unsuitable soils below the nominal top elevation of the competent sands is expected locally, as required by the foundation inspection program described in Subsection 2.5.4.5.4. The backfill is placed between the suitable bearing soils and the foundation mat. The material requirements for backfill materials are discussed in Subsection 2.5.4.5. Quality control measures related to foundation material acceptance, and to backfill material placement and compaction, are described in Subsection 2.5.4.5. *An Inspections, Test, Analyses and Acceptant Criteria (ITAAC) for Operational Programs report will be prepared at the combined license application stage to set out the inspection, testing and acceptance criteria for backfill.*

Discussion of assumptions and conservatism in static stability analyses is included in Subsection 2.5.4.10. Refer to Subsection 2.5.5 for slope stability design criteria. Computer analysis and methods of verification are discussed in the subsections in which they are used.

Replace with "Inspections, Test, Analyses, and Acceptance Criteria (ITAAC) for the backfill will be presented in the COLA."

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**ENCLOSURE 2**

**Summary of Regulatory Commitments**

## ENCLOSURE 2

### SUMMARY OF REGULATORY COMMITMENTS

The following table identifies commitments made in this document. (Any other actions discussed in the submittal represent intended or planned actions. They are described to the NRC for the NRC's information and are not regulatory commitments.)

COMMITMENT	COMMITTED DATE	COMMITMENT TYPE	
		ONE-TIME ACTION (Yes/No)	Programmatic (Yes/No)
PSEG will revise SSAR Subsection 2.5.4.11 to incorporate the changes in Enclosure 1.	This revision will be included in a future update of the PSEG ESP application.	Yes	No