



ND-2011-0003
February 14, 2011

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

Subject: **PSEG Early Site Permit Application**
Docket No. 52-043
Response to Request for Additional Information, RAI No. 3, Physical
Security – Early Site Permit Application Section: 13.6

- References:
- 1) PSEG Power, LLC letter to USNRC, Application for Early Site Permit for the PSEG Site, dated May 25, 2010
 - 2) RAI No. 3, Physical Security, dated January 28, 2011 (eRAI 5321)

The purpose of this letter is to respond to the request for additional information (RAI) identified in Reference 2 above. This RAI addresses Physical Security, as described in Section 13.6 of the SSAR, as submitted in Part 2 of the PSEG Site Early Site Permit Application, Revision 0.

Enclosure 1 provides our response for RAI No. 3, Question Nos. 13.06.03-1, 13.06.03-2, 13.06.03-4, and 13.06.03-5. Note that draft Question No. 13.06.03-3 was formally withdrawn as a result of the RAI clarification discussion held January 28, 2011. Our response to RAI No. 3, Question Nos. 13.06.03-1 and 13.06.03-2, includes revised ESPA content in Enclosure 2. The revision clarifies PSEG's commitment to the regulatory requirements for security and additional text describing the proposed new site access causeway.

Regulatory commitments established in this submittal are identified in Enclosure 3. If any additional information is needed, please contact David Robillard, PSEG Nuclear Development Licensing Engineer, at (856) 339-7914.

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I declare under penalty of perjury that the foregoing is true and correct. Executed on the 14th day of February, 2011.

Sincerely,



David P. Lewis
Nuclear Development Project Director
PSEG Power, LLC

- Enclosure 1: Response to NRC Request for Additional Information, RAI No. 3, Question Nos. 13.06.03-1, 13.06.03-2, 13.06.03-4 and 13.06.03-5, Physical Security, PSEG Site
- Enclosure 2: Proposed Revision, Part 2, SSAR
- Enclosure 3: Summary of Regulatory Commitments
-
- C: USNRC, Director, Office of New Reactors / NRLPO (w/enclosures)
USNRC, Project Manager, Division of New Reactor Licensing, PSEG Site (w/enclosures)
USNRC, Region I, Regional Administrator (w/enclosures)

ENCLOSURE 1

RESPONSE to RAI No. 3

QUESTIONS:

13.06.03-1

13.06.03-2

13.06.03-4

13.06.03-5

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In Reference 2, the NRC staff asked PSEG for clarification regarding the description of Physical Security requirements provided in Part 2 of the ESP application. The specific requests were:

Question 13.06.03-1:

"In Part 2, Chapter 13.6, the SSAR states in part: "The characteristics of the new plant footprint are such that the applicable requirements of the following are met;" and additional text further states, "it will meet above referenced security requirements." The applicant is to clarify which requirements they are referring to."

PSEG Response to NRC RAI:

The original text within Section 13.6 of the SSAR – "Industrial Security" stated:

"The characteristics of the new plant footprint are such that the applicable requirements of the following are met:

- 10 CFR 73.55, *Requirements for physical protection of licensed activities in nuclear power reactors against radiological sabotage*
- NRC Regulatory Guide 4.7, *General Site Suitability Criteria for Nuclear Stations*, Revision 2, 1998
- NEI 03-12, *Template for Security Plan and Training and Qualification Plan*
- EA-03-086, *Revised Design Basis Threat Order*
- Post-9/11 NRC Orders"

The above list includes industry guidance documents relative to Security Plan development that do not constitute formal NRC requirements. The above SSAR text will be revised to identify 10 CFR 73.55, *Requirements for physical protection of licensed activities in nuclear power reactors against radiological sabotage*, as the only formal staff requirement. The remaining bulleted list will be identified as industry guidance to which PSEG will conform. The last bulleted item, *Post-911 NRC Orders*, will be deleted since Post-9/11 NRC Orders are incorporated into 10 CFR 73.55.

Enclosure 2 provides a mark up of the proposed SSAR revision.

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Question 13.06.03-2:

"In Part 2, Section 2.2.2.5 of the SSAR, the applicant discusses existing approaches or roadways to the proposed PSEG facility. The applicant needs to address any proposed information regarding construction or planning of proposed roadways or approaches to the proposed facility. "

PSEG Response to NRC RAI:

As part of the site development for the new reactor, PSEG has proposed the construction of a second vehicular access road in the form of a causeway that extends for approximately 4.7 miles in a northeasterly direction from the site along or adjacent to the existing Red Lion 500 kV transmission right of way. The causeway is conceptually designed as a 48 foot wide elevated structure to traverse the adjoining salt marsh wetland system and connect the new plant site to local roads in Elsinboro Township. Depictions of the proposed causeway route and connection to local roads are respectively shown in Figures 2.2-1 and 2.5-7 of Part 3 of the ESPA. Figure 1.2-3 of the SSAR depicts the proposed on-site landing location of the causeway.

The following text describing the proposed causeway will be added to Part-2 Section 2.2.2.5:

A new second access road is proposed for vehicular access to the site. The proposed causeway is conceptually designed as a 48 foot wide elevated structure that extends from the PSEG site towards the northeast along, or adjacent to, the existing Red Lion 500 kV transmission right-of-way to the intersection of Money Island Road and Mason Point Road in Elsinboro Township. The proposed causeway's land approach to the PSEG site is depicted in SSAR Figure 1.2-3.

Enclosure 2 provides a mark up of the proposed SSAR revision.

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Question 13.06.03-4:

*“Section 13.6 of the SSAR discusses a modification of the current HGS, and HCGS Coast Guard agreement to include the PSEG site. The applicant is to provide information which covers all primary and secondary waterways navigable or accessible, which provide access to the PSEG facility.
“*

The only navigable waterway that provides water access to the PSEG site is the Delaware River which runs along the western border of the proposed site. In addition to the Delaware River, a coastal salt marsh complex comprised of small creeks and tributaries borders the northern and eastern edge of the proposed PSEG site. These creeks and tributaries are depicted in the aerial photograph in SSAR Figure 2.5.1-30. There are approximately eleven defined creeks within the 0.6 mile radius depicted in SSAR Figure 2.5.1-30. The creeks generally decrease in width as they approach the vicinity of the proposed 70 acre power block area shown on SSAR Figure 1.2-3. The creeks range in width from approximately 30 feet at the outer radius of SSAR Figure 2.5.1-30 to a width of approximately two to five feet for the streams closest to the vicinity of the proposed power block. All of these creeks are tidally influenced and most are less than two to three feet deep at high tide and at low tide they are essentially mudflats. The characteristics of these creeks and streams are such that traditional navigability is highly limited or non-existent and accessibility to most of these disbursed channels and creeks would be tidally dependent.

No changes to the SSAR are required as a result of this RAI response.

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Question 13.06.03-5:

“The staff evaluated the SSAR’s Figure 1.2-3 and ER’s aerial photograph 2.1-3 and bounding locations for the power block and other facilities in an area comprising 70 acres, within which all safety-related structures and unattended openings would be located if a reactor were to be constructed within this location. The SSAR does not identify any existing or proposed, unattended openings. The applicant is to define descriptions and locations of planned or existing culverts or unattended openings.”

PSEG has not yet chosen a reactor technology for the proposed plant at the PSEG site. As such, the Early Site Permit Application submitted by PSEG is based on a Plant Parameter Envelope (PPE) approach that bounds all impacts associated with the proposed plant. The location and design details regarding planned culverts and openings associated with the stormwater management systems have not yet been determined. Once a reactor technology is selected, detailed engineering associated with any designed culverts or openings as part of the site drainage plan will be developed and security attributes of these openings will be addressed in the formal Security Plan developed and submitted as part of the combined license application.

Pre-existing culverts and openings relative to the new site that are delineated in SSAR figure 1.2-3 and Environmental Report (ER) aerial photograph 2.1-3 will be altered or eliminated as part of the excavation process for the new plant. A significant portion of the 70 acre power block area delineated in the Site Utilization Plan shown on SSAR Figure 1.2-3, will be excavated to a depth of 60 to 75 feet. The depth of excavation will depend on the selected reactor technology and the final location of safety related structures within the power block boundary. This excavation will then be backfilled with structural fill or lean concrete. The scale of this excavation, which is described in SSAR subsection 2.5.4.5 and depicted in SSAR Figures 2.5.4.5-1 and 2.5.4.5-2, will significantly alter or eliminate any pre-existing culverts or openings.

No changes to the SSAR are required as a result of this RAI response.

PSEG Letter to USNRC, ND-2011-XXXX

ENCLOSURE 2

PROPOSED REVISIONS

PART 2

SITE SAFETY ANALYSIS REPORT

MARKED-UP PAGES

RAI 13.06.03-1
Proposed SSAR Revision

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

13.6 INDUSTRIAL SECURITY

The area to be developed for the new plant at the PSEG Site is located to the north of HCGS. There will be a protected area encompassing the new plant. The physical protection of the new plant, as with the existing units, is based on:

- Controlling access to the PSEG Site and all units
- Screening plant personnel
- Monitoring security equipment
- Designing and arranging station features
- Obtaining assistance from local law enforcement personnel

Prior to taking possession of nuclear fuel at the new plant, a vehicle barrier system will be implemented at the appropriate stand-off distance.

The characteristics of the new plant footprint are such that the applicable requirements of the following 10 CFR 73.55, *Requirements for physical protection of licensed activities in nuclear power reactors against radiological sabotage*, are met. In addition, PSEG will conform to the applicable industry guidance in the following documents:

- ~~10 CFR 73.55, *Requirements for physical protection of licensed activities in nuclear power reactors against radiological sabotage*~~
- NRC Regulatory Guide 4.7, *General Site Suitability Criteria for Nuclear Stations*, Revision 2, 1998
- NEI 03-12, *Template for Security Plan and Training and Qualification Plan*
- EA-03-086, *Revised Design Basis Threat Order*
- ~~Post 9/11 NRC Orders~~

The PSEG Site is sufficiently large to provide adequate distances between structures and the probable location of the security boundaries. The layout of the PSEG Site is provided in Figure 1.2-3. The PSEG Site is bordered on the west and the south by the Delaware River. There is an approved comprehensive security plan in place for the SGS and HCGS that is in compliance with the post-9/11 NRC Orders. When PSEG proceeds with construction and operation of a new plant, the existing security boundary will be extended to include the new plant. The security plan and defensive strategy will be updated to incorporate the new plant and ensure that the above referenced security requirements are met.

Rev. 0

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

2.2.2.5 Highways

Alloways Creek Neck Road is a secondary road that provides access to the PSEG Site, Mad Horse Creek Wildlife Management Area, and several farms. Starting at the PSEG Site access road, Alloway Creek Neck Road runs east to the town of Hancock's Bridge, where it connects to Quinton-Hancock's Bridge Road. New Jersey Route 49 is the closest highway east of the site; its closest approach is 7.5 mi. northeast of the new plant power block area.

A new second road is proposed to be constructed for dedicated vehicular access to the site. The proposed causeway is conceptually designed as a 48 foot wide elevated structure that extends from the PSEG site towards the northeast along, or adjacent to, the existing Red Lion 500 kV transmission right-of-way ending at the intersection of Money Island Road and Mason Point Road in Elsinboro Township. The proposed causeway's land approach to the PSEG site is depicted in SSAR Figure 1.2-3.

Delaware Route 9 is the only highway within 5 miles of the PSEG Site. The closest approach is 3.1 miles west of the new plant power block area. Route 9 runs along the Delaware River coast including the region near the PSEG Site from Taylors Bridge through the town of Port Penn. The road is designated as a scenic route. A maximum weight of 80,000 pounds (lb.) is used to conservatively estimate chemical transportation. Table 2.2-10 provides a description of Delaware Route 9 and the other highways within 10 mi., including the closest approach to the PSEG Site.

Information is not available about the materials transported on the roads within 5 mi. of the PSEG Site; therefore, Superfund Amendments and Reauthorization Act (SARA) Title III, Tier II reports for facilities within 10 mi. and the results of a survey completed to obtain data for the early site permit application (ESPA) were reviewed to determine chemicals that may be transported on roads within 5 mi. It is assumed that any of the chemicals listed for the industrial facilities in Table 2.2-1 could be transported on Delaware Route 9 or New Jersey Route 49. However, when considering the locations of the facilities that receive chemical shipments, it is apparent that normal delivery routes are away from the PSEG Site.

2.2.2.6 Railroads

There are no railroads within 5 mi. of the PSEG Site. The closest railroad line is the Southern Railroad Company of New Jersey, which connects Salem to Alloway, and has its closest approach at 8.2 mi. to the northeast. The company transports primarily freight and does not have any current plans for track expansion.

ENCLOSURE 3

SUMMARY OF REGULATORY COMMITMENTS

(PSEG Letter to USNRC, ND-2011-0003, dated February 14, 2011)

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 Section 13.6 of Part 2, <i>Industrial Security</i> , to incorporate the changes in Enclosure 2 in response to NRC RAI 13.06.03-1	This revision will be included in the next periodic update of the PSEG Site ESP SSAR	Yes	No
PSEG will revise Section of Part 2, Sub Section 2.2.2.5, <i>Highways</i> , to incorporate the changes in Enclosure 2 in response to NRC RAI 13.06.03-2	This revision will be included in the next periodic update of the PSEG Site ESP SSAR	Yes	No