



ND-2012-0015
March 7, 2012

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. 47,
Emergency Planning

- References:
- 1) PSEG Power, LLC letter to USNRC, Application for Early Site Permit for the PSEG Site, dated May 25, 2010
 - 2) RAI No. 47, SRP Section: 13.03 – Emergency Planning, dated February 10, 2012 (eRAI 6241)
 - 3) PSEG Power, LLC Letter No. ND-2011-0052 to USNRC, Response to Request for Additional Information, RAI No. 22, Emergency Planning, dated July 21, 2011

The purpose of this letter is to respond to the request for additional information (RAI) identified in Reference 2 above. This RAI addresses Emergency Planning, as described in Subsection 13.3 of the Site Safety Analysis Report (SSAR), as submitted in Part 2 of the PSEG Site Early Site Permit Application, Revision 0.

Enclosure 1 provides our response for RAI No. 47, Question Nos. 13.03-24 through 13.03-28. Enclosure 2 provides the proposed revision to the SSAR. Enclosure 3 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.

AV45
DOT9
NR0

I declare under penalty of perjury that the foregoing is true and correct. Executed on the 7th day of March, 2012.

Sincerely,

A handwritten signature in black ink, appearing to read "James Mallon", with a long horizontal flourish extending to the right.

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

- Enclosure 1: Response to NRC Request for Additional Information, RAI No. 47, Question Nos. 13.03-24 through 13.03-28, SRP Section: 13.03 – Emergency Planning
- Enclosure 2: Proposed Revisions Part 2 - Site Safety Analysis Report (SSAR)
- Enclosure 3: Summary of Regulatory Commitments

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

PSEG Letter ND-2012-0015, dated March 7, 2012

ENCLOSURE 1

RESPONSE to RAI No. 47

QUESTION No.

13.03-24

13.03-25

13.03-26

13.03-27

13.03-28

Response to RAI No. 47, Question 13.03-24:

In Reference 2, the NRC staff asked PSEG for information regarding the Emergency Planning, as described in Subsection 13.3 of the Site Safety Analysis Report. The specific request for Question 13.03-24 was:

[Follow up to RAI 22, Question 13.03-12 [RAI E-1]]

Supplemental RAI 13.03-12S1:

In response to RAI 22, Question 13.03-12 [RAI E-1], the applicant stated that the Typical Initial Contact Message Form is for a Site Area Emergency (SAE) and no protective actions are recommended at that time. NUREG-0654/FEMA-REP-1, Rev. 1, Evaluation Criterion E.3 states that information about potentially affected population and areas be included in the initial Emergency Messages to be sent from the plant. Although a protective action recommendation may not be made at the SAE, offsite response organizations benefit from having this information at this time. In the Emergency Plan, include potentially affected population and areas in the initial contact message information, or explain why this is not necessary.

PSEG Response to NRC RAI:

Criterion E.3 notes, “the licensee in conjunction with state and local organizations shall establish the contents of the initial emergency messages to be sent from the plant.” The PSEG Nuclear Emergency Plan memoranda of understanding (MOU) with the States of Delaware and New Jersey identify that the content of the initial contact messages shall be agreed upon between the states and licensee. As per this agreement, PSEG does not define potentially affected population and areas in the initial contact message at the SAE.

The content of the initial contact message for the PSEG Site Emergency Plan will be agreed upon with the states per the associated MOU prior to fuel load. The Typical Initial Contact Message Form (Figure 6-4 of the Emergency Plan) includes relevant information on the current wind speed and direction. This information is provided to the states to allow them (and subsequently local authorities) to make an assessment of which population and areas may be affected.

The notification methods described in the PSEG Site Emergency Plan are consistent with the methods currently agreed upon with the states and described in the existing PSEG Nuclear Emergency Plan.

Associated PSEG Site ESP Application Revisions:

None.

Response to RAI No. 47, Question 13.03-25:

The specific request for Question 13.03-25 was:

[Follow up to RAI 22, Question 13.03-13 [RAI F-1]]

Supplemental RAI 13.03-13S1:

In response to RAI 22, Question 13.03-13 [RAI F-1], the applicant stated that the design of the Control Room and TSC are not complete, therefore, a description of the power supplies cannot be provided. The applicant referenced ITAAC 3.0, which requires a demonstration of primary and secondary communications to response facilities, but this ITAAC does not address guaranteed or backup power. In the Emergency Plan, describe whether guaranteed or backup power will be available for the emergency communications equipment in the Control Room and TSC.

PSEG Response to NRC RAI:

Paragraph 2.0 (including sub-paragraphs) of Section 7, Emergency Communications, of the PSEG Site Emergency Plan notes that both the Nuclear Emergency Telecommunications System (NETS) and Direct Inward Dial (DID) systems include uninterruptible power supplies or access to backup power supplies provided to the station, respectively. Implementing procedures for the PSEG Site Emergency Plan will be developed prior to the date that the Emergency Plan must be in place; these procedures will define the emergency communications equipment for each of the emergency facilities.

Associated PSEG Site ESP Application Revisions:

None.

Response to RAI No. 47, Question 13.03-26:

The specific request for Question 13.03-26 was:

[Follow up to RAI 22, Question 13.03-13 [RAI F-2]]

Supplemental RAI 13.03-13S2:

In response to RAI 22, Question 13.03-13 [RAI F-2], the applicant stated that the design of the Federal Telecommunications System (FTS) is not complete. Therefore, a description of the FTS emergency communications equipment power supplies cannot be provided. RAI 22, Question 13.03-13 [RAI F-2] requested a discussion of availability of specific communication paths (not design details). The applicant referenced ITAAC 3.0, which requires a demonstration of primary and secondary communications to response facilities, but this ITAAC does not identify communication paths. In the Emergency Plan, discuss the availability of the Reactor Safety Counterpart Link (RSCL), Protective Measures Counterpart Link (PMCL), Management Counterpart Link (MCL), and Local Area Network (LAN).

PSEG Response to NRC RAI:

Paragraph 5.0 of Section 7, Emergency Communications, of the PSEG Site Emergency Plan notes:

A dedicated communications system with the NRC, the Federal Telecommunications System (FTS), consists of direct lines to the NRC. FTS lines are used to provide general accident information. These telephones are installed in the Control Room, TSC, and the EOF.

In the PSEG Nuclear Emergency Plan supporting documentation, specific FTS lines are identified and tested monthly in accordance with Communications Checklist Procedure EP-AA-124-1001-F12, F13 and F14, and include testing of the RSCL lines, PMCL lines, Health Physics Network (HPN) lines, Emergency Notification System (ENS) lines, MCL line and LAN line.

(Reference PSEG Procedures EP-AA-124-1001-F12, F13 and F14.)

Associated PSEG Site ESP Application Revisions:

None.

Response to RAI No. 47, Question 13.03-27:

The specific request for Question 13.03-27 was:

[Follow up to RAI 22, Question 13.03-14 [RAI H-1]]

Supplemental RAI 13.03-14S1:

In response to RAI 22, Question 13.03-14 [RAI H-1], the applicant stated that Section 5.5 of the PSEG Site Emergency Plan states that the Radiation Monitoring System (RMS) computer and/or Safety Parameter Display System (SPDS) computer systems provide monitoring capability for the radiological parameters identified in Regulatory Guide 1.97. Although the staff reviewed Part 5, Section 9, "Emergency Facilities and Equipment" (Subsections 5.5 and 5.6) and Section 10, "Accident Assessment" (Subsection 5.0), the Section 5.5 language could not be found. However, the staff does note that Subsection 5.0, "Dose Assessment From Plant Effluent Monitors," includes the following in the second paragraph:

"The PSEG Site Radiation Monitoring System computer and/or Safety Parameter Display System provide early indication of abnormal radiological conditions from both process and area monitors. The computer systems provide monitoring capability for the radiological parameters identified in Regulatory Guide 1.97, including high range monitoring capability for effluent release paths. This data is input to the dose assessment computers at the PSEG site."

The computer systems - and its associated plant parameter variables - available in the TSC is not clear. Clarify and describe in the Emergency Plan, the availability in the TSC of the RMS and SPDS plant parameter variables, including those identified in Regulatory Guide 1.97. Please explain how the identification of these specific plant parameter variables is dependent upon selection of a reactor technology. If appropriate, identify this as a combined license (COL) action item.

PSEG Response to NRC RAI:

Paragraph 4.3 of Section 9, Emergency Facilities and Equipment, of the PSEG Site Emergency Plan notes that the TSC has access to both the SPDS parameters and Computerized Dose Assessment information.

The identification of specific plant parameter variables is dependent on the type of Light Water Reactor selected for the site. The PSEG ESPA is developed based on a Plant Parameter Envelope that includes both boiling and pressurized water reactors. At COL, the specific post-accident parameters for the selected technology will be fully defined and PSEG will update the Emergency Plan to identify specific monitoring capability for the radiological parameters identified in Regulatory Guide 1.97.

Associated PSEG Site ESP Application Revisions:

SSAR Section 13.3 is updated to add a COL action item as shown in Enclosure 2.

Response to RAI No. 47, Question 13.03-28:

The specific request for Question 13.03-28 was:

[Follow up to RAI 22, Question 13.03-14 [RAI H-4]]

Supplemental RAI 13.03-14S2:

In response to RAI 22, Question 13.03-14 [RAI H-4], the applicant stated that facilities for emergency first aid treatment are identified in PSEG ESP Emergency Plan Section 13, "Medical Support." However, Section 13 does not address onsite facilities for emergency first aid. Please describe the emergency first aid treatment facilities onsite that will support the new plant.

PSEG Response to NRC RAI:

The existing Salem and Hope Creek Generating Stations have a common First Aid room in the Nuclear Operating Services Facility (NOSF) for minor treatable injuries. The NOSF is the central location for the PSEG Fire Department staff. There is also an onsite Medical Facility in the Processing Center which has a full time doctor and nursing staff during day shift. The Medical Facility in the Processing Center facility would be available during low level (UE and Alert) emergencies that would occur during weekdays. The NOSF and Processing Center are shown on SSAR Figure 1.2.3.

The new unit(s) at the PSEG Site will use either the existing site emergency first aid facilities or those described in the Design Certification Document for the selected reactor technology. Personnel decontamination locations for the new plant at the PSEG Site will be as described in the Design Certification Document for the selected reactor technology, typically near the radiological control point. PSEG Nuclear also maintains a separate personnel decontamination facility near the Emergency Operations Facility (EOF) at the Energy and Environmental Resources Center (EERC) for emergency workers. The description of the onsite medical facilities will be described in the PSEG Site Emergency Plan implementing procedures developed prior to first fuel load.

Associated PSEG Site ESP Application Revisions:

None.

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ENCLOSURE 2

Proposed Revisions

Part 2 – Site Safety Analysis Report (SSAR)

Marked Up Page

13.3-1

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

CHAPTER 13

CONDUCT OF OPERATIONS

13.3 EMERGENCY PLAN

This section, in conjunction with Part 5, Emergency Plan, of the early site permit application (ESPA), describes emergency planning for the addition of a new plant at the PSEG Site. PSEG is submitting a complete and integrated emergency plan for approval by the U.S. Nuclear Regulatory Commission (NRC) in accordance with 10 CFR 52.17(b)(2)(ii). This section contains the information required by 10 CFR 52.17, *Contents of applications; technical information*, or provides a reference to Part 5 of the ESPA for additional information. The Emergency Plan complies with 10 CFR 50.47(b) and 10 CFR 50 Appendix E. The PSEG Site Emergency Plan is based on the existing Salem Generating Station (SGS) and Hope Creek Generating Station (HCGS) Emergency Plan.

PSEG has not selected a reactor technology to be built at the PSEG Site. Therefore, attachments to the Emergency Plan are developed to address information specific to the four (4) proposed technologies

- U.S. Evolutionary Power Reactor (U.S. EPR)
- Advanced Boiling-Water Reactor (ABWR)
- U.S. Advanced Pressurized-Water Reactor (US-APWR)
- Advanced Passive 1000 (AP1000)

The Emergency Plan will be revised following the selection of the reactor technology.

The demonstration of Emergency Plan performance cannot be completed until portions of the facility have been constructed. To support demonstration, Inspections, Tests, Analyses, and Acceptance Criteria (ITAAC) are included as an attachment to the Emergency Plan (Part 5) per 10 CFR 52.17(b)(3).

ADD per Question 13.03-27:

"At COL, PSEG will update the Emergency Plan to identify specific monitoring capability for the radiological parameters identified in Regulatory Guide 1.97."

on Levels (EALs) required by 10 CFR 52.17(b)(3). EALs cannot be completed until actual as-built conditions are finalized. PSEG will adopt an EAL of NEI 99-01, Rev. 5 and NEI 07-01, Addendum 1 of the unit.

NUREG-0654/FEMA-REP-1, *Criteria for Preparation and Evaluation of Radiological Emergency Response Plans and Preparedness in Support of Nuclear Power Plants*, Revision 1, November 1980, Criterion II.B.5 and Table B-1 define augmentation times for the on-site emergency organization of 30 and 60 minutes upon declaration of an emergency. The existing Salem/Hope Creek Nuclear Generating Station's Emergency Plan describes an Emergency Response Organization (ERO) augmentation time of 90 minutes to augment the affected unit on-shift staff upon the declaration of an Alert or higher classification (Emergency Plan Section 3 Table 3-2). The existing on-shift staffing, as augmented by the capabilities for additions in 90 minutes, satisfies the staffing requirements of NUREG-0654, Table B-1. In the Safety Evaluation Report (SER) for the revision to the Emergency Plan that approved the on-shift ERO capabilities, as well as the 90 minute augmentation time capabilities, the NRC found that the ERO

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ENCLOSURE 3

SUMMARY OF REGULATORY COMMITMENTS

ENCLOSURE 3

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 13.3 to incorporate the changes in Enclosure 2 in response to NRC RAI No. 47, Question 13.03-27.	This revision will be included in the next update of the PSEG Site ESP application SSAR.	Yes	No