



ND-2015-0009
June 5, 2015

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

Subject: **PSEG Early Site Permit Application**
Docket Number 52-043
Submittal of Revision 4 of the Early Site Permit Application for the
PSEG Site

Reference: 1) PSEG Power, LLC Letter No. ND-2010-0073 to U.S. NRC, Application
for Early Site Permit for the PSEG Site, dated May 25, 2010

2) PSEG Power, LLC Letter No. ND-2014-0010 to U.S. NRC, Submittal of
Revision 3 of the Early Site Permit Application for the PSEG Site,
dated March 31, 2014

By letter dated May 25, 2010, PSEG Power, LLC and PSEG Nuclear, LLC (PSEG) (Reference 1) submitted an application to the U.S. Nuclear Regulatory Commission (NRC) requesting an Early Site Permit (ESP) for the PSEG Site, located on the southern part of Artificial Island on the east bank of the Delaware River in Lower Alloways Creek Township, Salem County, New Jersey. The application was submitted in accordance with the requirements contained in 10 CFR Part 52, "Licenses, Certifications and Approvals for Nuclear Power Plants". PSEG submitted Revision 3 to the ESP Application on March 31, 2014 (Reference 2).

Applicants have not yet selected a specific reactor design for any future plant that may be built at the ESP Site. Therefore, technical information from various certified and proposed designs has been used to develop a plant parameter envelope for facility characterization necessary to evaluate the suitability of the site for any future construction and operation of a nuclear power plant.

DO79
NRD

This submittal includes changes identified by PSEG previous correspondence, including responses to NRC Requests for Additional Information (RAIs), through May 28, 2015. This application revision is composed of six parts. Each of these Parts is identified below along with indication of any revision contained in this document update.

- Part 1, Administrative Information – (Revision 4, included)
- Part 2, Site Safety Analysis Report – (Revision 4, included)
- Part 3, Environmental Report – (Revision 4, included)
- Part 4, Limited Work Authorization – Not used - a Limited Work Authorization is not being requested at this time
- Part 5, Emergency Plan – (Revision 4, included)
- Part 6, Withheld Information – At this time, no information is being withheld under 10 CFR 2.390. Emergency Plans for the states of New Jersey, Delaware, Maryland, and Pennsylvania were previously submitted in hard copy in PSEG Power, LLC letter ND-2010-0075 and were requested to be withheld under 10 CFR 2.390. The revised Emergency Plans for the states of New Jersey and Delaware were submitted in hard copy in PSEG Power, LLC letter ND-2011-0054.

Part 1 of this application revision has been revised to reflect changes in the identification of personnel serving as Directors and Principal Officers of PSEG Power, LLC.

Part 2 has been revised to reflect changes due to responses to NRC RAIs, changes due to applicant identified corrective action program items, and to correct minor editorial errors. No changes have been made to the PSEG Nuclear Development Quality Assurance Program Description since Revision 1 was submitted on May 22, 2012.

Part 3 has been revised to reflect changes due to responses to NRC RAIs and to correct minor editorial errors.

Part 5 has been revised to reflect changes due to PSEG's response to drill cycle duration changes.

A document identifying each change, as well as its source or basis, is provided in Enclosure 3, as an aid to the NRC reviewers. This document clearly identifies the basis for each change made in Revision 4 for the Parts specifically included in this submittal.

Changes to the documents from Revision 3 are annotated by revision bars in the right-hand margin. Revision numbering on ESPA Figures is incrementally indexed each time the figure is revised and is not intended to align with the overall Part revision level.

This ESP Application revision contains no Restricted Data or other defense information requiring separation in accordance with 10 CFR 50.33, Contents of applications; general information, paragraph (j).

Consistent with common licensing practice, most of the application text is written in the present tense, including discussions of facilities and programs not yet built or implemented. Exceptions to this approach are the discussions of completed studies and evaluations, which are written in the past tense. It should be understood, however, that statements regarding facilities (e.g., structures, systems, and components), and pre-construction, pre-operational, and operational activities (e.g., procedures and programs) typically address activities that have not yet been performed, and will not be performed until it is reasonable and appropriate to do so.

A complete set of the application documents (identified above) is provided in electronic file format on the enclosed disc (Enclosure 1), except for the offsite emergency plans which were previously submitted in hard copy under separate cover letters. Enclosure 1 contains a publicly-available version of the ESP Application, Revision 4. Appropriate pre-submission checks have been performed on the files contained in the Enclosure 1 disc to ensure compliance with the guidelines regarding electronic submissions provided on the NRC web site to ensure that the files are acceptable for electronic submittal. The disc includes a "packing slip" describing its contents, pursuant to NRC instructions for electronic submittals. A preflight report identifying files with embedded font or figure resolution issues for Enclosure 1 is provided as Enclosure 2.

This submittal contains PDF files, one or more of which contains hyperlinks to other files or to the Internet. These hyperlinks are either inoperable or are not essential to the use of the filing. Any material referenced by hyperlinks to the Internet that was essential for use of this filing has been submitted as part of the filing. Any material referenced by a hyperlink to another PDF that was essential for the use of this filing has either been included by reference or submitted as part of this filing.

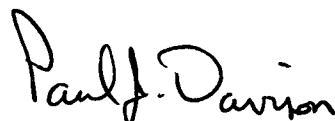
If any additional information is needed, please contact David Robillard, PSEG Nuclear Development Licensing Engineer at (856) 339-7914.

I declare under penalty of perjury that the foregoing is true and correct. Executed on the 5th day of June, 2015.

Respectfully,



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



Paul J. Davison
Vice President
Hope Creek Generating Station,
PSEG Nuclear, LLC

Enclosure 1: PSEG ESP Application DVD

Enclosure 2: ESP Application Pre-Flight Report

Enclosure 3: Road Maps for Changes to the PSEG Early Site Permit Application,
Revision 4

cc: USNRC, Director, Office of New Reactors/DNRL (w/enclosures)
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)
Oak Ridge National Laboratory

PSEG Letter ND-2015-0009, dated June 5, 2015

ENCLOSURE 1

PSEG ESP Application DVD

PSEG Site
Early Site Permit Application
Revision 4
Submittal 5



PSEG
Power LLC

Sargent & Lundy LLC

PSEG Letter ND-2015-0009, dated June 5, 2015

ENCLOSURE 2

ESP Application Pre-Flight Report

2 pages

PSEG Site ESPA Rev. 4 Submittal 5 Pre-flight Report

This document serves as a pre-flight report for the PSEG Site ESPA Revision 4 Submittal 5. The following files (mostly individual figure files) do not pass pre-flight, but text is word searchable and clarity/legibility is of high quality.

No.	File Name	Preflight Status	Reason
Part 2 – Site Safety Analysis Report			
1	PSEG_SSAR_APP_2AA.pdf	Error/Failed	Fonts not embedded
2	PSEG_SSAR_FIG01_02_003.pdf	Error/Failed	Fonts not embedded
3	PSEG_SSAR_FIG02_01_023.pdf	Error/Failed	Fonts not embedded
4	PSEG_SSAR_FIG02_04_01_004.pdf	Error/Failed	Fonts not embedded
5	PSEG_SSAR_FIG02_04_05_008.pdf	Error/Failed	Fonts not embedded
6	PSEG_SSAR_FIG02_04_05_009.pdf	Error/Failed	Fonts not embedded
7	PSEG_SSAR_FIG02_04_05_010.pdf	Error/Failed	Fonts not embedded
8	PSEG_SSAR_FIG02_04_12_004.pdf	Error/Failed	Fonts not embedded
9	PSEG_SSAR_FIG02_05_01_037.pdf	Error/Failed	Fonts not embedded
10	PSEG_SSAR_FIG02_05_01_038.pdf	Error/Failed	Fonts not embedded
11	PSEG_SSAR_FIG02_05_01_039.pdf	Error/Failed	Fonts not embedded
12	PSEG_SSAR_FIG02_05_04_01_002.pdf	Error/Failed	Fonts not embedded
13	PSEG_SSAR_FIG02_05_04_01_003.pdf	Error/Failed	Fonts not embedded
14	PSEG_SSAR_FIG02_05_04_01_004.pdf	Error/Failed	Fonts not embedded
15	PSEG_SSAR_FIG02_05_04_01_005.pdf	Error/Failed	Fonts not embedded
16	PSEG_SSAR_FIG02_05_04_01_007.pdf	Error/Failed	Fonts not embedded
17	PSEG_SSAR_FIG02_05_04_01_008.pdf	Error/Failed	Fonts not embedded
18	PSEG_SSAR_FIG02_05_04_01_009.pdf	Error/Failed	Fonts not embedded
19	PSEG_SSAR_FIG02_05_04_01_010.pdf	Error/Failed	Fonts not embedded
20	PSEG_SSAR_FIG02_05_04_02_001.pdf	Error/Failed	Fonts not embedded
21	PSEG_SSAR_FIG02_05_04_02_002.pdf	Error/Failed	Fonts not embedded
22	PSEG_SSAR_FIG02_05_04_02_003.pdf	Error/Failed	Fonts not embedded
23	PSEG_SSAR_FIG02_05_04_02_004.pdf	Error/Failed	Fonts not embedded
24	PSEG_SSAR_FIG02_05_04_02_005.pdf	Error/Failed	Fonts not embedded
25	PSEG_SSAR_FIG02_05_04_02_006.pdf	Error/Failed	Fonts not embedded
26	PSEG_SSAR_FIG02_05_04_02_007.pdf	Error/Failed	Fonts not embedded
27	PSEG_SSAR_FIG02_05_04_03_001.pdf	Error/Failed	Fonts not embedded
28	PSEG_SSAR_FIG02_05_04_03_002.pdf	Error/Failed	Fonts not embedded
29	PSEG_SSAR_FIG02_05_04_03_003.pdf	Error/Failed	Fonts not embedded
30	PSEG_SSAR_FIG02_05_04_03_004.pdf	Error/Failed	Fonts not embedded
31	PSEG_SSAR_FIG02_05_04_04_006.pdf	Error/Failed	Fonts not embedded
32	PSEG_SSAR_FIG02_05_04_04_007.pdf	Error/Failed	Fonts not embedded
33	PSEG_SSAR_FIG02_05_04_04_008.pdf	Error/Failed	Fonts not embedded
34	PSEG_SSAR_FIG02_05_04_05_001.pdf	Error/Failed	Fonts not embedded
35	PSEG_SSAR_FIG02_05_04_05_002.pdf	Error/Failed	Fonts not embedded
36	PSEG_SSAR_FIG02_05_04_06_001.pdf	Error/Failed	Fonts not embedded
37	PSEG_SSAR_FIG02_05_04_07_005A.pdf	Error/Failed	Fonts not embedded
38	PSEG_SSAR_FIG02_05_04_07_005B.pdf	Error/Failed	Fonts not embedded
39	PSEG_SSAR_FIG02_05_04_07_005C.pdf	Error/Failed	Fonts not embedded
40	PSEG_SSAR_FIG02_05_04_07_005D.pdf	Error/Failed	Fonts not embedded

PSEG Site ESPA Rev. 4 Submittal 5 Pre-flight Report

No.	File Name	Preflight Status	Reason
41	PSEG_SSAR_FIG02_05_04_07_006A.pdf	Error/Failed	Fonts not embedded
42	PSEG_SSAR_FIG02_05_04_07_006B.pdf	Error/Failed	Fonts not embedded
43	PSEG_SSAR_FIG02_05_04_07_006C.pdf	Error/Failed	Fonts not embedded
44	PSEG_SSAR_FIG02_05_04_07_006D.pdf	Error/Failed	Fonts not embedded
45	PSEG_SSAR_FIG02_05_04_07_007.pdf	Error/Failed	Fonts not embedded
46	PSEG_SSAR_FIG02_05_04_07_008a.pdf	Error/Failed	Fonts not embedded
47	PSEG_SSAR_FIG02_05_04_07_008b.pdf	Error/Failed	Fonts not embedded
48	PSEG_SSAR_FIG02_05_04_07_017.pdf	Error/Failed	Fonts not embedded
49	PSEG_SSAR_FIG02_05_04_07_018.pdf	Error/Failed	Fonts not embedded
50	PSEG_SSAR_FIG02_05_04_07_019.pdf	Error/Failed	Fonts not embedded
51	PSEG_SSAR_FIG02_05_04_07_020.pdf	Error/Failed	Fonts not embedded
52	PSEG_SSAR_FIG02_05_04_08_001.pdf	Error/Failed	Fonts not embedded
53	PSEG_SSAR_FIG02_05_05_001.pdf	Error/Failed	Fonts not embedded
Part 3 – Environmental Report			
1	PSEG_ER_CHAP07.pdf	Error/Failed	< 300 ppi due to images in section
2	PSEG_ER_FIG02_06_005.pdf	Error/Failed	Fonts not embedded
3	PSEG_ER_FIG02_06_006.pdf	Error/Failed	Fonts not embedded
4	PSEG_ER_FIG02_06_007.pdf	Error/Failed	Fonts not embedded
5	PSEG_ER_FIG02_06_008.pdf	Error/Failed	Fonts not embedded
6	PSEG_ER_FIG02_06_009.pdf	Error/Failed	Fonts not embedded
7	PSEG_ER_FIG03_01_002.pdf	Error/Failed	Fonts not embedded
Part 5 - Emergency Plan			
1	PSEG_EP_ATT02.pdf	Error/Failed	Fonts not embedded
2	PSEG_EP_ATT03.pdf	Error/Failed	Fonts not embedded
3	PSEG_EP_ATT11.pdf	Error/Failed	< 300 ppi due to images in attachment and Fonts not embedded
4	PSEG_EP_SEC01.pdf	Error/Failed	< 300 ppi due to 4 figures (maps) in section

PSEG Letter ND-2015-0009, dated June 5, 2015

ENCLOSURE 3

**Road Maps for Changes to the PSEG
Early Site Permit Application, Revision 4**

2 pages

**PSEG Site Early Site Permit Application Revision 4
Request for Additional Information Roadmap**

RAI Number	eRAI	Question Number	Document to be Revised	PSEG LTR NO
67	6615	02.04.05-12 02.04.05-15	SSAR Subsections 2.4.1.1, 2.4.2.2, 2.4.4.2, 2.4.4.5, 2.4.5, 2.4.6.5, 2.4.7.5, 2.4.10, and 2.5.4.3.2 are revised. SSAR Figures 2.4.5-8 through 2.4.5-11 are added. SSAR Figures 2.4.2-7 and 2.4.5-7 are revised. SSAR Tables 2.4.5-4 and 2.4.5-5 are added. SSAR Tables 2.0-1, 2.4.2-4, 2.4.4-5 and 2.4.5-1 are revised. ER Subsection 2.3.1 is revised.	ND-2015-0006

**PSEG Site Early Site Permit Application Revision 4
CAP/Supplemental Items Roadmap**

CR NO	Description of Issue	Action / ESPA Document Revised	Prior NRC Correspondence
Corrective Action Process			
2014-98	The response to RAI No. 69 (PSEG Letter No. ND-2013-0008) included a revision to SSAR Table 2.5.4.8-2 to update the liquefaction safety factors. The SSAR markup provided in Letter No. ND-2013-0008 indicates seven rows of data should be updated, while it only provides six rows of replacement data.	SSAR Table 2.5.4.8-2	None
Supplemental Information			
N/A	PSEG will revise SSAR Subsection 2.1.2 to resolve the NRC concerns related to PSEG control of the Exclusion Area for the PSEG Site.	SSAR Subsection 2.1.2	ND-2014-0011
N/A	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.	SSAR Subsection 2.5.4.11	ND-2014-0015
N/A	During NRC review of Revision 3 to Part 5, Emergency Plan, the staff noted that the frequency for the conduct of a full accountability drill is stated as "at least once every six (6) years". This is incorrect; the frequency requirement for conducting a full accountability drill is as least once every eight (8) years.	Emergency Plan Table 15-1	ND-2014-0019
N/A	Updates to personnel listed in Part 1 - Administrative Information were made.	Part 1	None
N/A	Remove JFT from Acronyms and Abbreviations used in the SSAR Table 1.1-1 as it is no longer used in the SSAR.	SSAR Table 1.1-1	None
N/A	SSAR Figure 2.4.12-30 (Ref. RAI No. 29, PSEG Letter No. HD-2011-0043) was identified as missing from the previous ESPA submittals.	Added SSAR Figure 2.4.12-30	None