



ND-2014-0010
March 31, 2014

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

Subject: **PSEG Early Site Permit Application**
Docket Number 52-043
Submission of Revision 3 of the Early Site Permit Application for the
PSEG Site

- Reference: 1) PSEG Power, LLC Letter 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-2013-0006 to U.S. NRC, Submission of Revision 2 of the Early Site Permit Application for the PSEG Site, dated March 27, 2013

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 2 to the ESP Application on March 27, 2013 (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.

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This submittal includes changes identified by PSEG previous correspondence, including responses to NRC Requests for Additional Information (RAIs), through February 28, 2014. 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 3, included)
- Part 2, Site Safety Analysis Report – (Revision 3, included)
- Part 3, Environmental Report – (Revision 3, included)
- Part 4, Limited Work Authorization – Not used - a Limited Work Authorization is not being requested at this time
- Part 5, Emergency Plan – (Revision 3, 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. On November 27, 2013, PSEG submitted the response to RAI No. 67, Probable Maximum Surge and Seiche Flooding, (eRAI 6615) providing a revised flood and storm surge analysis using the Joint Probability Methodology (JPM) as described in NUREG-7134, *The Estimation of Very-Low Probability Hurricane Storm Surges for Design and Licensing of Nuclear Power Plants in Coastal Areas*. NRC conducted an on-site audit of PSEG's response to RAI No. 67 from February 4–6, 2014. On March 5, 2014, NRC transmitted a letter to PSEG stating in part:

“... The staff recognizes that the PSEG-proposed probabilistic approach may represent an improvement in the state-of-the art and may be more widely applicable. However, approval of this approach will require more time and technical activity by both PSEG and the NRC staff. In light of the above, the staff is presently unable to issue a revised review schedule to complete its safety evaluation of the “Hydrology” portions of the PSEG Site ESP application...”.

Due to the indeterminate delay in the ESP review schedule communicated in the NRC's March 5, 2014 letter, PSEG is evaluating its options in resolving the NRC's concerns regarding the ESPA flood and storm surge analysis. Based on this reevaluation, PSEG expects to withdraw its November 27, 2013 response to RAI No. 67 in the near future. The withdrawal of the RAI No. 67 response will effectively remove any discussion of the flood and storm surge analysis using the JPM methodology from the Site Safety Analysis Report (SSAR) Section 2.4.5. Therefore, Revision 3 of the SSAR includes the description of the previously performed one-dimensional probable maximum surge and seiche flooding analysis with updates that were current at the time SSAR Revision 2 was submitted. When PSEG has completed the revised flood and storm surge analysis, and NRC staff has accepted the revised analysis, PSEG will submit a revised SSAR to include the updated Section 2.4.5.

Part 3 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.

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, will be provided as an aid to the NRC reviewers under separate cover. This document clearly identifies the basis for each change made in Revision 3 for the Parts specifically included in this submittal.

Changes to the documents from Revision 2 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.

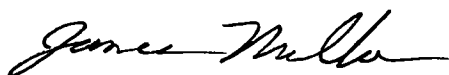
A complete set of the application documents (identified above) is provided in electronic file format on the enclosed disc (Enclosure 1), except for the offsite emergency plans which were previously submitted in hard copy under separate cover letters. Enclosure 1 contains a publicly-available version of the ESP Application, Revision 3. 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 31st day of March, 2014.

Respectfully,



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



Robert C. Braun
Senior Vice President and
Chief Operating Officer,
PSEG Nuclear, LLC

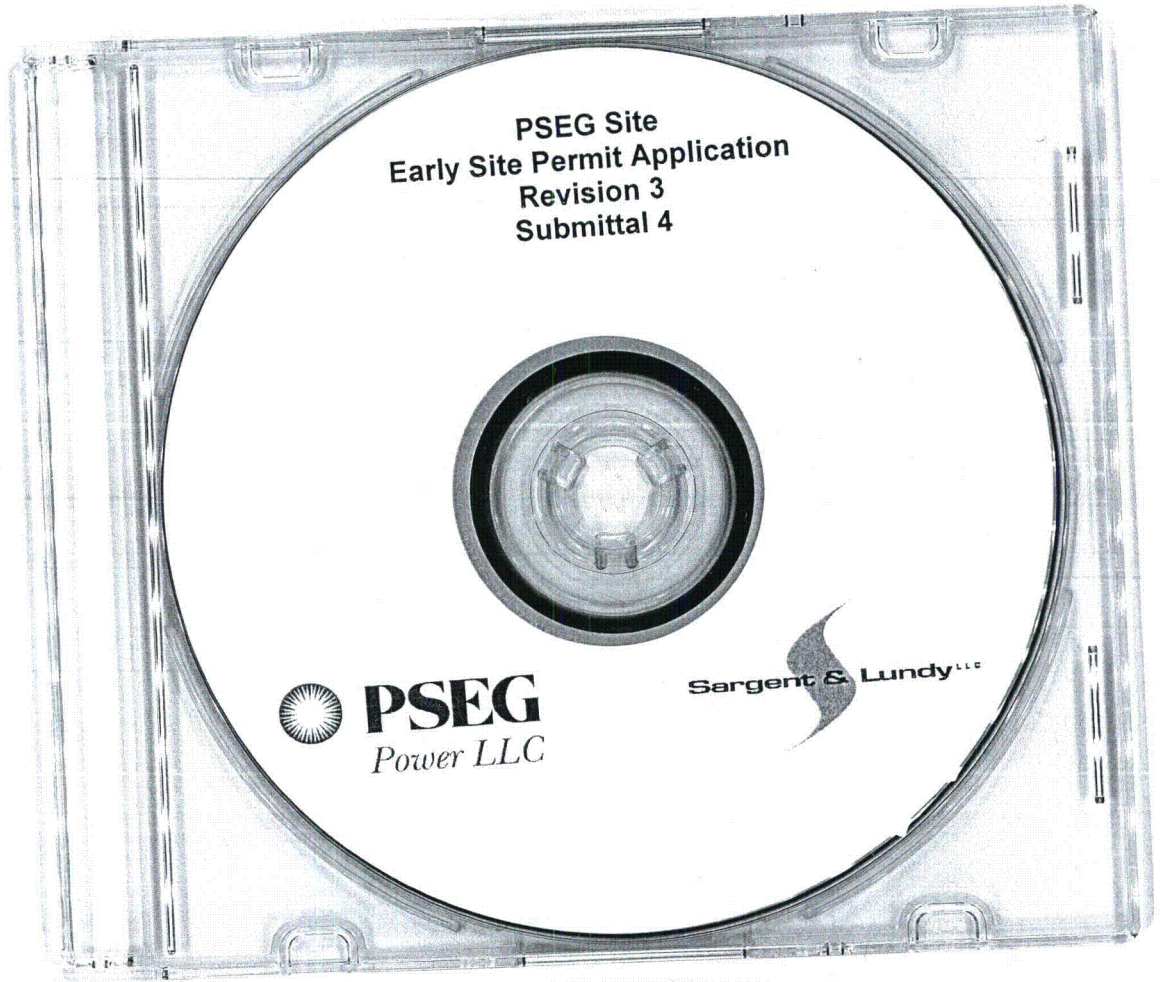
Enclosure 1: PSEG ESP Application DVD
Enclosure 2: ESP Application Pre-Flight Report

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-2014-0010, dated March 31, 2014

ENCLOSURE 1

PSEG ESP Application DVD



PSEG Letter ND-2014-0010, dated March 31, 2014

ENCLOSURE 2

ESP Application Pre-Flight Report

PSEG Site ESPA Rev. 3 Submittal 4 Pre-flight Report

This document serves as a pre-flight report for the PSEG Site ESPA Revision 3 Submittal 4. 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_12_004.pdf	Error/Failed	Fonts not embedded
6	PSEG_SSAR_FIG02_05_01_037.pdf	Error/Failed	Fonts not embedded
7	PSEG_SSAR_FIG02_05_01_038.pdf	Error/Failed	Fonts not embedded
8	PSEG_SSAR_FIG02_05_01_039.pdf	Error/Failed	Fonts not embedded
9	PSEG_SSAR_FIG02_05_04_01_002.pdf	Error/Failed	Fonts not embedded
10	PSEG_SSAR_FIG02_05_04_01_003.pdf	Error/Failed	Fonts not embedded
11	PSEG_SSAR_FIG02_05_04_01_004.pdf	Error/Failed	Fonts not embedded
12	PSEG_SSAR_FIG02_05_04_01_005.pdf	Error/Failed	Fonts not embedded
13	PSEG_SSAR_FIG02_05_04_01_007.pdf	Error/Failed	Fonts not embedded
14	PSEG_SSAR_FIG02_05_04_01_008.pdf	Error/Failed	Fonts not embedded
15	PSEG_SSAR_FIG02_05_04_01_009.pdf	Error/Failed	Fonts not embedded
16	PSEG_SSAR_FIG02_05_04_01_010.pdf	Error/Failed	Fonts not embedded
17	PSEG_SSAR_FIG02_05_04_02_001.pdf	Error/Failed	Fonts not embedded
18	PSEG_SSAR_FIG02_05_04_02_002.pdf	Error/Failed	Fonts not embedded
19	PSEG_SSAR_FIG02_05_04_02_003.pdf	Error/Failed	Fonts not embedded
20	PSEG_SSAR_FIG02_05_04_02_004.pdf	Error/Failed	Fonts not embedded
21	PSEG_SSAR_FIG02_05_04_02_005.pdf	Error/Failed	Fonts not embedded
22	PSEG_SSAR_FIG02_05_04_02_006.pdf	Error/Failed	Fonts not embedded
23	PSEG_SSAR_FIG02_05_04_02_007.pdf	Error/Failed	Fonts not embedded
24	PSEG_SSAR_FIG02_05_04_03_001.pdf	Error/Failed	Fonts not embedded
25	PSEG_SSAR_FIG02_05_04_03_002.pdf	Error/Failed	Fonts not embedded
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27	PSEG_SSAR_FIG02_05_04_03_004.pdf	Error/Failed	Fonts not embedded
28	PSEG_SSAR_FIG02_05_04_04_006.pdf	Error/Failed	Fonts not embedded
29	PSEG_SSAR_FIG02_05_04_04_007.pdf	Error/Failed	Fonts not embedded
30	PSEG_SSAR_FIG02_05_04_04_008.pdf	Error/Failed	Fonts not embedded
31	PSEG_SSAR_FIG02_05_04_05_001.pdf	Error/Failed	Fonts not embedded
32	PSEG_SSAR_FIG02_05_04_05_002.pdf	Error/Failed	Fonts not embedded
33	PSEG_SSAR_FIG02_05_04_06_001.pdf	Error/Failed	Fonts not embedded
34	PSEG_SSAR_FIG02_05_04_07_005A.pdf	Error/Failed	Fonts not embedded
35	PSEG_SSAR_FIG02_05_04_07_005B.pdf	Error/Failed	Fonts not embedded
36	PSEG_SSAR_FIG02_05_04_07_005C.pdf	Error/Failed	Fonts not embedded
37	PSEG_SSAR_FIG02_05_04_07_005D.pdf	Error/Failed	Fonts not embedded
38	PSEG_SSAR_FIG02_05_04_07_006A.pdf	Error/Failed	Fonts not embedded
39	PSEG_SSAR_FIG02_05_04_07_006B.pdf	Error/Failed	Fonts not embedded
40	PSEG_SSAR_FIG02_05_04_07_006C.pdf	Error/Failed	Fonts not embedded

PSEG Site ESPA Rev. 3 Submittal 4 Pre-flight Report

No.	File Name	Preflight Status	Reason
41	PSEG_SSAR_FIG02_05_04_07_006D.pdf	Error/Failed	Fonts not embedded
42	PSEG_SSAR_FIG02_05_04_07_007.pdf	Error/Failed	Fonts not embedded
43	PSEG_SSAR_FIG02_05_04_07_008a.pdf	Error/Failed	Fonts not embedded
44	PSEG_SSAR_FIG02_05_04_07_008b.pdf	Error/Failed	Fonts not embedded
45	PSEG_SSAR_FIG02_05_04_07_017.pdf	Error/Failed	Fonts not embedded
46	PSEG_SSAR_FIG02_05_04_07_018.pdf	Error/Failed	Fonts not embedded
47	PSEG_SSAR_FIG02_05_04_07_019.pdf	Error/Failed	Fonts not embedded
48	PSEG_SSAR_FIG02_05_04_07_020.pdf	Error/Failed	Fonts not embedded
49	PSEG_SSAR_FIG02_05_04_08_001.pdf	Error/Failed	Fonts not embedded
50	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