

## PSEGSPeRAIPEm Resource

---

**From:** Clark, Phyllis  
**Sent:** Thursday, February 23, 2012 5:27 PM  
**To:** 'PSEGRAIResponses@pseg.com'  
**Cc:** PSEGSPeRAIPEm Resource; 'James.Mallon@pseg.com'; 'David.Robillard@pseg.com'; Segala, John; Silvia, Andrea; Roach, Kevin; Chowdhury, Prosanta; McLellan, Judith; Tammara, Seshagiri; Tammara, Seshagiri; Schaaf, Robert  
**Subject:** PSEG Site ESPA FINAL RAI 52 (eRAI 6285) SRP-02.02.03 (RPAC-RSAC)  
**Attachments:** PSEG Site ESPA Final RAI 52 (eRAI 6285).pdf

Please find attached RAI 52 for the PSEG Site ESP Application. A draft of the RAI was provided to you on February 3, 2012. You informed via email on February 22, 2012, that based on the results of a clarification call on RAI 52 (eRAI 6285), conducted on February 21, 2012 no changes were needed to the draft RAI. Therefore, we are issuing this RAI as final with no changes made to it.

The schedule we have established for review of your application assumes technically correct and complete responses within 30 calendar days of receipt of RAIs. For any RAIs that cannot be responded to within 30 calendar days, it is expected that a date for receipt of this information will be provided to the staff within the 30-calendar day period so that the staff can assess how this information will impact the published schedule.

If you have any questions, please contact me.

*P. Clark*

Project Manager  
U.S. Nuclear Regulatory Commission  
Office of New Reactors, DNRL  
Room T-6C10  
Washington, DC 20555  
301-415-6447  
[Phyllis.Clark@nrc.gov](mailto:Phyllis.Clark@nrc.gov)

**Hearing Identifier:** PSEG\_Site\_EarlySitePermit\_RAI  
**Email Number:** 116

**Mail Envelope Properties** (320204600EA7B9408FE833FF15E4FF7D7F5DA4B715)

**Subject:** PSEG Site ESPA FINAL RAI 52 (eRAI 6285) SRP-02.02.03 (RPAC-RSAC)  
**Sent Date:** 2/23/2012 5:26:31 PM  
**Received Date:** 2/23/2012 5:25:48 PM  
**From:** Clark, Phyllis

**Created By:** Phyllis.Clark@nrc.gov

**Recipients:**

"PSEGESPeRAIPEm Resource" <PSEGESPeRAIPEm.Resource@nrc.gov>

Tracking Status: None

"James.Mallon@pseg.com" <'James.Mallon@pseg.com'>

Tracking Status: None

"David.Robillard@pseg.com" <'David.Robillard@pseg.com'>

Tracking Status: None

"Segala, John" <John.Segala@nrc.gov>

Tracking Status: None

"Silvia, Andrea" <Andrea.Silvia@nrc.gov>

Tracking Status: None

"Roach, Kevin" <Kevin.Roach@nrc.gov>

Tracking Status: None

"Chowdhury, Prosanta" <Prosanta.Chowdhury@nrc.gov>

Tracking Status: None

"McLellan, Judith" <Judith.McLellan@nrc.gov>

Tracking Status: None

"Tammara, Seshagiri" <Seshagiri.Tammara@nrc.gov>

Tracking Status: None

"Tammara, Seshagiri" <Seshagiri.Tammara@nrc.gov>

Tracking Status: None

"Schaaf, Robert" <Robert.Schaaf@nrc.gov>

Tracking Status: None

"PSEGRAIResponses@pseg.com" <'PSEGRAIResponses@pseg.com'>

Tracking Status: None

**Post Office:** HQCLSTR01.nrc.gov

<b>Files</b>	<b>Size</b>	<b>Date &amp; Time</b>
MESSAGE	1080	2/23/2012 5:25:48 PM
PSEG Site ESPA Final RAI 52 (eRAI 6285).pdf		47019

**Options**

**Priority:** Standard

**Return Notification:** No

**Reply Requested:** No

**Sensitivity:** Normal

**Expiration Date:**

**Recipients Received:**

Request for Additional Information No. 52

Application Revision 0

FINAL

2/23/2012

PSEG Site ESP  
PSEG Power LLC, PSEG Nuclear LLC  
Docket No. 52-043  
SRP Section: 02.02.03 - Evaluation of Potential Accidents  
Application Section: 2.2.3

QUESTIONS for Siting and Accident Conseq Branch (RSAC)

02.02.03-5

RS-002 and RG 1.206 provide guidance regarding the information that is needed to ensure that the potential hazards in the site vicinity are identified and evaluated in order to meet the siting criteria in 10 CFR 100.20 and 10 CFR 100.21.

The applicant performed an evaluation of explosions in SSAR Section 2.2.3.2.2, and flammable vapor cloud explosions in SSAR Section 2.2.3.2.3, and presented the results in SSAR Tables 2.2-18 and 2.2-19, respectively.

- a) The hydrogen considered in the analyses is not listed either in SSAR Table 2.2-2a or 2.2-2b. SSAR Table 2.2-3 indicates the location of hydrogen storage as "facility wide;" however, SSAR Tables 2.2-18 and 2.2-19 provide a distance to safety-related buildings of 0.44 miles for hydrogen. Please provide clarification regarding hydrogen storage on the site and its relationship to the distance to safety-related structures provided in SSAR Tables 2.2-18 and 2.2-19.
- b) The applicant calculated a safe distance of 0.24 mile for the hydrogen vapor cloud explosion; however, staff confirmatory analysis for the hydrogen vapor cloud explosion resulted in a higher value than that of 0.24 mile. Please provide the assumptions, data, and methodology used in calculating the minimum safe distance of 0.24 mile to conclude that it is within the distance of the applicant-identified safety related buildings of 0.44 mile.

The staff notes that for propane, the applicant calculated a safe distance due to a flammable vapor cloud explosion of 0.814 mile, while the staff confirmatory analysis calculated a safe distance of 0.31 mile. However, the staff notes that for propane, both calculated distances do not exceed the distance of 3 miles to safety related buildings.