

## PSEGSPeRAIPEm Resource

---

**From:** Chowdhury, Prosanta  
**Sent:** Friday, August 12, 2011 4:14 PM  
**To:** 'PSEGRAIResponses@pseg.com'  
**Cc:** PSEGSPeRAIPEm Resource; 'James.Mallon@pseg.com'; 'David.Robillard@pseg.com'; Colaccino, Joseph; Silvia, Andrea; Clark, Phyllis; McLellan, Judith; Quinlan, Kevin; Schaaf, Robert; Ford, Tanya  
**Subject:** PSEG Site ESPA FINAL RAI 35 (eRAI 5845) SRP-02.03.05 (RSAC)  
**Attachments:** PSEG Site ESPA Final RAI 35 (eRAI 5845).pdf

Please find attached RAI 35 for the PSEG Site ESP Application. A draft of the RAI was provided to you on August 2, 2011. On August 10, 2011, you informed via email that you believed the information being requested in Draft RAI 35, Question 02.03.05-4, was provided in your response to RAI 16, Question 02.03.05-2 (ML11111A075). We affirmed, and informed you on August 10, 2011, and you understood that the information being requested in Draft RAI 35, Question 02.03.05-4, is different, in that it is requesting PSEG to update SSAR Section 2.3.5 to include the  $\chi/Q$  and D/Q values at the site boundary for all 16 radial directions in your identification of site characteristic X/Q and D/Q values.

On August 11, 2011, you informed via email that you would not need further clarification involving this specific RAI. To emphasize the link of RAI 35 to RAI 16, we added the phrase "Follow up to RAI 16 (eRAI 5486), Question 02.03.05-1" at the beginning of Question 02.03.05-3 of RAI 35; no other changes were made to this RAI, and we are issuing it as final.

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.

Prosanta Chowdhury  
Project Manager  
EPR Projects Branch  
Division of New Reactor Licensing  
Office of New Reactors  
301-415-1647

**Hearing Identifier:** PSEG\_Site\_EarlySitePermit\_RAI  
**Email Number:** 71

**Mail Envelope Properties** (320204600EA7B9408FE833FF15E4FF7D7B3A123D9A)

**Subject:** PSEG Site ESPA FINAL RAI 35 (eRAI 5845) SRP-02.03.05 (RSAC)  
**Sent Date:** 8/12/2011 4:14:02 PM  
**Received Date:** 8/12/2011 4:14:03 PM  
**From:** Chowdhury, Prosanta

**Created By:** Prosanta.Chowdhury@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

"Colaccino, Joseph" <Joseph.Colaccino@nrc.gov>

Tracking Status: None

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

Tracking Status: None

"Clark, Phyllis" <Phyllis.Clark@nrc.gov>

Tracking Status: None

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

Tracking Status: None

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

Tracking Status: None

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

Tracking Status: None

"Ford, Tanya" <Tanya.Ford@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	1715	8/12/2011 4:14:03 PM
PSEG Site ESPA Final RAI 35 (eRAI 5845).pdf		44775

**Options**

**Priority:** Standard

**Return Notification:** No

**Reply Requested:** No

**Sensitivity:** Normal

**Expiration Date:**

**Recipients Received:**

Request for Additional Information No. 35

Application Revision 0

FINAL

8/12/2011

PSEG Site ESP  
PSEG Power LLC, PSEG Nuclear LLC  
Docket No. 52-043

SRP Section: 02.03.05 - Long-Term Atmospheric Dispersion Estimates for Routine Releases  
Application Section: Long-Term Atmospheric Dispersion Estimates for Routine Releases

QUESTIONS for Siting and Accident Conseq Branch (RSAC)

02.03.05-3

**Follow up to RAI 16 (eRAI 5486), Question 02.03.05-1:** 10 CFR 100.21(c)(1) requires that site atmospheric dispersion characteristics must be evaluated and dispersion parameters established such that radiological effluent release limits associated with normal operation from the type of facility proposed to be located at the site can be met for any individual located offsite. RG 1.111, Revision 1, states that spatial and temporal variations of airflow should be considered at sites along and near coasts with significant land-water boundary layer effects on airflow and sea-land breeze circulations. SSAR Section 2.3.2.2.1.2 describes the complex wind patterns at the PSEG site that are caused in part by Delaware Bay breezes and local shoreline breezes.

The staff notes that in the XOQDOQ input/output files that have been provided in an April 6, 2011, response (ML11111A075) to RAI 16, Question 02.03.05-1 (ML110950323), adjustments for the potential effects of land-water boundaries on airflow have not been addressed.

Update Section 2.3.5 of the SSAR to include the  $\chi/Q$  and  $D/Q$  values that consider and account for the potential effects of land-water boundaries, or provide justification as to why this is not necessary for the PSEG site.

02.03.05-4

10 CFR 100.21(c)(1) requires that site atmospheric dispersion characteristics must be evaluated and dispersion parameters established such that radiological effluent release limits associated with normal operation from the type of facility proposed to be located at the site can be met for any individual located offsite. NUREG-0800, Section 2.3.5 states that the ESP site characteristics should include the maximum  $\chi/Q$  and  $D/Q$  values calculated at the specific locations of potential receptors of interest.

SSAR Section 2.3.5.2 states that the site boundary  $\chi/Q$  values were disregarded for sectors SE to NW (clockwise direction) due to the site boundary being bordered by the Delaware River.

Update Section 2.3.5 of the SSAR to include the  $\chi/Q$  and  $D/Q$  values at the site boundary for all 16 radial directions, or provide a justification as to why this is not necessary for the PSEG site.

02.03.05-5

10 CFR 100.21(c)(1) requires that site atmospheric dispersion characteristics must be evaluated and dispersion parameters established such that radiological effluent release limits associated with normal operation from the type of facility proposed to be located at the site can be met for any individual located offsite.

SSAR Section 2.3.5.1 states that the downwind distances used to determine the  $\chi/Q$  and  $D/Q$  values at each of the receptors of interest were calculated from the center of the power block area.

Update Section 2.3.5 of the SSAR to include a justification as to why a “power block envelope” encompassing all the potential normal operation release pathways was not used for determining the distances to the receptors of interest.