PSEGESPeRAIPEm Resource

From: Chowdhury, Prosanta
Sent: Friday, February 25, 2011 8:17 AM
To: 'PSEGRAIResponses@pseg.com'
Cc: PSEGESP Resource; PSEGESPeRAIPEm Resource; 'David.Lewis2@pseg.com'; 'James.Mallon@pseg.com'; 'David.Robillard@pseg.com'; Colaccino, Joseph; Silvia, Andrea; Clark, Phyllis; McLellan, Judith; Quinlan, Kevin; Brown, David
Subject: PSEG Site ESPA DRAFT RAI 14 (eRAI 5483) SRP-02.03.01 (RSAC)
Attachments: PSEG Site ESPA Draft RAI 14 (eRAI 5483).doc

Please find attached DRAFT RAI No. 14 for the PSEG Site ESP application. You have ten working days to review this request and to decide whether you need a conference call to discuss it. Please notify me of your decision in this regard.

After the call, or after ten days, the RAI will be finalized and issued to you. You will then have 30 calendar days to respond. These durations are factored into your review schedule. If additional time is required to respond, please inform me of your proposed schedule to respond at your earliest opportunity.

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
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Subject: PSEG Site ESPA DRAFT RAI 14 (eRAI 5483) SRP-02.03.01 (RSAC)
Sent Date: 2/25/2011 8:17:04 AM
Received Date: 2/25/2011 8:17:05 AM
From: Chowdhury, Prosanta

Created By: Prosanta.Chowdhury@nrc.gov

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Request for Additional Information No. 14
Application Revision 0

DRAFT

2/25/2011

PSEG Site ESP
PSEG Power LLC, PSEG Nuclear LLC
Docket No. 52-043
SRP Section: 02.03.01 - Regional Climatology
Application Section: Regional Climatology

QUESTIONS for Siting and Accident Conseq Branch (RSAC)

02.03.01-1

10 CFR 52.17(a)(1)(vi) states, in part, that an application must contain the meteorological characteristics of the proposed site with appropriate consideration of the most severe of the natural phenomena that have been historically reported for the site and surrounding area and with sufficient margin for the limited accuracy, quantity, and time in which the historical data have been accumulated. NUREG-0800, Standard Review Plan (SRP), Section 2.3.1, Regional Climatology, establishes criteria that the NRC staff intends to use to evaluate whether an applicant meets the NRC's regulations.

PSEG ESP Application SSAR Subsection 2.3.1.5.2, “Tornadoes,” states that the “site design basis tornado (DBT) characteristics (Table 2.3-5) are from RG 1.76, Revision 1, March 2007.” The staff finds and maintains that the wind speeds provided in RG 1.76, Revision 1 are not design-basis tornado wind speeds. The design-basis tornado wind speeds for the reactor designs being considered are found in Tier 2, Section 3.3.2.1 of the respective DCDs.

Please update PSEG ESP Application SSAR Subsection 2.3.1.5.2 to correct this error, or provide justification to substantiate the statement in the application.

02.03.01-2

10 CFR 52.17(a)(1)(vi) states, in part, that an application must contain the meteorological characteristics of the proposed site with appropriate consideration of the most severe of the natural phenomena that have been historically reported for the site and surrounding area and with sufficient margin for the limited accuracy, quantity, and time in which the historical data have been accumulated. NUREG-0800, Standard Review Plan (SRP), Section 2.3.1, Regional Climatology, establishes criteria that the NRC staff intends to use to evaluate whether an applicant meets the NRC's regulations.

Address, in SSAR Section 2.3.1, the extreme frozen winter precipitation event in accordance with the Interim Staff Guidance (ISG) DC/COL-ISG-07, "Interim Staff Guidance on Assessment of Normal and Extreme Winter Precipitation Loads on the Roofs of Seismic Category I Structures" (ML081990438) and, provide a discussion for the site characteristic values chosen.

The ISG states that the extreme frozen winter precipitation event should be the higher ground-level weight (in lb/ft^2) between: (1) the 100-year return period snowfall event; and (2) the historical maximum snowfall event in the site region.

Please update Subsection 2.3.1.5.4 of the PSEG ESP SSAR to include this information, or provide justification as to why it is not necessary.

02.03.01-3

10 CFR 52.17(a)(1)(vi) states, in part, that an application must contain the meteorological characteristics of the proposed site with appropriate consideration of the most severe of the natural phenomena that have been historically reported for the site and surrounding area and with sufficient margin for the limited accuracy, quantity, and time in which the historical data have been accumulated. NUREG-0800, Standard Review Plan (SRP), Section 2.3.1, Regional Climatology, establishes criteria that the NRC staff intends to use to evaluate whether an applicant meets the NRC's regulations.

PSEG ESP Application SSAR Subsection 2.3.1.7 states that “Philadelphia is excluded for the same reasons as discussed above in Subsection 2.3.1.6." Please clarify the following inconsistencies:

1. The staff did not find a description in Subsection 2.3.1.6 as to why the Philadelphia IAP observation station was not included as part of the analysis provided in Subsection 2.3.1.6 or 2.3.1.7.
   In order to resolve this discrepancy, please include a description as to why this station was dismissed in the SSAR.
2. Explain why data from Philadelphia IAP was acceptable to be used in determining site characteristic temperatures using the EWD CD in Subsection 2.3.1.7 (third paragraph), but was deemed not acceptable for use in the ASHRAE method.
3. If Philadelphia IAP was excluded from the calculations to determine the site characteristic temperatures, please explain why the data was used in PSEG ESP Application SSAR Table 2.3-14 and Table 2.0-1
4. Explain why Philadelphia IAP data was used in PSEG ESP Application SSAR Table 2.3-14 to determine the annual exceedance temperature site characteristics, but was not included in the evaluation of the 100-year return period temperatures provided in PSEG ESP SSAR Table 2.3-13

02.03.01-4

10 CFR 52.17(a)(1)(vi) states, in part, that an application must contain the meteorological characteristics of the proposed site with appropriate consideration of the most severe of the natural phenomena that have been historically reported for the site and surrounding area and with sufficient margin for the limited accuracy, quantity, and time in which the historical data have been accumulated.
NUREG-0800, Section 2.3.1(I)(6)(a) states that the 100-year maximum dry bulb temperature and coincident wet bulb temperature should be provided.

PSEG ESP Application SSAR Table 2.0-1 does not present the 100-year return period coincident wet bulb temperature.

Please provide the 100-year maximum dry bulb temperature and coincident wet bulb temperature in PSEG ESP Application SSAR Table 2.0-1, and a discussion on the derivation of this site characteristic temperature in PSEG ESP Application SSAR Section 2.3.1.

02.03.01-5

10 CFR 52.17(a)(1)(vi) states, in part, that an application must contain the meteorological characteristics of the proposed site with appropriate consideration of the most severe of the natural phenomena that have been historically reported for the site and surrounding area and with sufficient margin for the limited accuracy, quantity, and time in which the historical data have been accumulated. NUREG-0800, Standard Review Plan (SRP), Section 2.3.1, Regional Climatology, establishes criteria that the NRC staff intends to use to evaluate whether an applicant meets the NRC's regulations.

PSEG ESP Application SSAR Subsection 2.3.1.7 and SSAR Table 2.3-15 identify a recorded dry bulb temperature of 108 °F. However, this dry bulb temperature was not included in the site characteristic temperature discussion on SSAR page 2.3-16. This temperature was then used to determine a MCWB temperature of 79 °F.

Explain in SSAR Subsection 2.3.1.7 why this dry bulb temperature was used to determine a MCWB temperature, but was not used as part of the analysis of the site characteristic maximum dry bulb temperature.