

SummerRAIsPEm Resource

From: Patel, Chandu
Sent: Thursday, August 27, 2009 2:22 PM
To: 'MONROE, AMY'; 'Arice@scana.com'; 'jharrison2@scana.com'; 'jmgiles@scana.com'
Cc: SummerRAIsPEm Resource
Subject: Draft RAI 3573
Attachments: Draft RAI 3573.doc

To All,

Please see attached draft RAI 3573 related to SRP Section 2.3.1 for Summer Units 2 and 3. If you would like to schedule a conference call to discuss this RAI, please let me know before 5:00 PM on September 1, 2009. If no request for a conference call is received, this RAI will be issued as Final.

Chandu Patel

Hearing Identifier: Summer_COL_eRAIs
Email Number: 68

Mail Envelope Properties (DC2088DF7F51A8499309AA4A35D0C1E01EB2C96E9D)

Subject: Draft RAI 3573
Sent Date: 8/27/2009 2:21:58 PM
Received Date: 8/27/2009 2:22:00 PM
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Files	Size	Date & Time
MESSAGE	343	8/27/2009 2:22:00 PM
Draft RAI 3573.doc	31738	

Options

Priority: Standard
Return Notification: No
Reply Requested: No
Sensitivity: Normal
Expiration Date:
Recipients Received:

Request for Additional Information No. 3573 Revision 0

Virgil C. Summer Nuclear Station, Units 2 and 3
South Carolina Electric and Gas Company
Docket No. 52-027 and 52-028
SRP Section: 02.03.01 - Regional Climatology
Application Section: Regional Climatology

QUESTIONS for Siting and Accident Conseq Branch (RSAC)

02.03.01-***

This question is related to the applicant's response to RAI 02.03.01-4. The staff considered the response to RAI 02.03.01-4 and is concerned that the existing presentation of temperature data in FSAR Table 2.0-201 and Section 2.3.1.5, does not satisfy the requirements of 10 CFR 52.79(a)(1)(iii).

- a. Revise FSAR Table 2.0-201 to include the 0% exceedence maximum dry-bulb ambient design temperature site characteristic values based on the higher of either the maximum recorded dry-bulb value or the maximum 100-year return period dry-bulb value for Columbia, SC. Provide an estimate of the concurrent wet-bulb value based on the resulting dry-bulb value.
- b. Revise FSAR Table 2.0-201 to include the 0% exceedence maximum non-concurrent wet-bulb ambient design temperature site characteristic value based on the higher of the maximum recorded non-coincident wet-bulb value or the 100-year return period non-coincident wet-bulb value for Columbia, SC.

The applicant has chosen to list in FSAR Tier 2, Table 2.0-201, the maximum recorded data from Columbia, SC as the VCSNS Units 2 & 3 maximum dry-bulb and coincident wet-bulb 0% exceedence (historical limit) site characteristic values. Similarly, the applicant has chosen to list in FSAR Tier 2, Table 2.0-201, the minimum recorded datum from Columbia as the VCSNS 2 & 3 minimum dry-bulb 0% exceedence (historical limit) site characteristic value. The applicant states in response to RAI 02.03.01-4 that because Table 2-1 of the AP1000 DCD, defines the 0% exceedence as the historical limit, there is no requirement in the AP1000 DCD for the VCSNS COL application to use the 100-year return period temperatures as site characteristic values. The staff believes otherwise, for the reason cited below.

10 CFR 52.79(a)(1)(iii) states the COL FSAR shall include "the seismic, meteorological, hydrologic, and geologic 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." The AP1000 DCD defines the 0% exceedance ambient design temperature site parameters as historical limits. 10 CFR 52.79(a)(1)(iii) states that the most severe temperatures reported for the site and surrounding area as historical limits shall include sufficient margin for the limited accuracy, quantity, and time in which the historical data have been accumulated. The staff considers temperatures based on a 100-year return period to

provide sufficient margin for the limited accuracy, quantity, and period of time in which the historical data have been accumulated as required by the regulation. This is why SRP 2.3.1 states that 100-year return period ambient temperature and humidity statistics should be identified as site characteristics. Thus, the staff believes the higher of either the maximum recorded dry-bulb value or the maximum 100-year dry-bulb value should be listed as the 0% exceedance maximum dry-bulb site characteristic value. Similarly, the lower of either the minimum recorded dry-bulb value or the minimum 100-year dry-bulb value should be listed as the 0% exceedance minimum dry-bulb site characteristic value.