SummerRAIsPEm Resource

From: Chandu Patel
Sent: Tuesday, May 26, 2009 4:38 PM
To: SummerRAIsPEm Resource
Subject: REQUEST FOR ADDITIONAL INFORMATION LETTER NO. 048 RELATED TO SRP SECTION 02.03.01 FOR THE VIRGIL C. SUMMER NUCLEAR STATION UNITS 2 AND 3 COMBINED LICENSE APPLICATION
Attachments: SUM-RAI-LTR-048 (2).doc

Chandu Patel

Hearing Identifier: Summer_COL_eRAIs
Email Number: 52

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Subject: REQUEST FOR ADDITIONAL INFORMATION LETTER NO. 048 RELATED TO SRP SECTION 02.03.01 FOR THE VIRGIL C. SUMMER NUCLEAR STATION UNITS 2 AND 3 COMBINED LICENSE APPLICATION
Sent Date: 5/26/2009 4:37:37 PM
Received Date: 5/26/2009 4:37:38 PM
From: Chandu Patel

Created By: Chandu.Patel@nrc.gov

Recipients:
"SummerRAIsPEm Resource" <SummerRAIsPEm.Resource@nrc.gov>
Tracking Status: None

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MESSAGE	29	5/26/2009 4:37:38 PM
SUM-RAI-LTR-048 (2).doc	57850	

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

May 27, 2009

Mr. Alfred M. Paglia
Manager, Nuclear Licensing
MC P40
South Carolina Electric & Gas Company
PO Box 88
Jenkinsville, SC 29065

SUBJECT: REQUEST FOR ADDITIONAL INFORMATION LETTER NO. 048 RELATED TO SRP SECTION 02.03.01 FOR THE VIRGIL C. SUMMER NUCLEAR STATION UNITS 2 AND 3 COMBINED LICENSE APPLICATION

Dear Mr. Paglia:

By letter dated March 27, 2008, South Carolina Electric & Gas Company submitted its application to the U. S. Nuclear Regulatory Commission (NRC) for a combined license (COL) for two AP1000 advance passive pressurized water reactors pursuant to 10 CFR Part 52. The NRC staff is performing a detailed review of this application to enable the staff to reach a conclusion on the safety of the proposed application.

The NRC staff has identified that additional information is needed to continue portions of the review. The staff's request for additional information (RAI) is contained in the enclosure to this letter.

To support the review schedule, you are requested to respond within 30 days of the date of this letter. If changes are needed to the final safety analysis report, the staff requests that the RAI response include the proposed wording changes.

If you have any questions or comments concerning this matter, you may contact me at 301-415-3025 or at Chandu.Patel@nrc.gov via e-mail.

Sincerely,

/**RA**/

Chandu P. Patel, Senior Project Manager
AP1000 Projects Branch 1
Division of New Reactor Licensing
Office of New Reactors

Docket Nos. 52-027
52-028

Enclosure:
Request for Additional Information

CC: see next page

If you have any questions or comments concerning this matter, you may contact me at 301-415-3025 or at Chandu.Patel@nrc.gov via e-mail.

Sincerely,

/**RA**/

Chandu P. Patel, Senior Project Manager
AP1000 Projects Branch 1
Division of New Reactor Licensing
Office of New Reactors

Docket Nos. 52-027
52-028

eRAI Tracking No. 2608

Enclosure:
Request for Additional Information

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OFFICE	SPCV/BC	NWE1/PM	OGC	NWE1/L-PM
NAME	CCox*	CPatel*	MSpencer*	CPatel*
DATE	4/15/09	4/15/09	5/26/09	5/26/09

*Approval captured electronically in the electronic RAI system.

OFFICIAL RECORD COPY

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)

02.03.01-1
In accordance with NUREG-0800, Regulatory Guide 1.206, and Regulatory Guide 1.76:

Provide annual frequencies (and supporting data) of reported tornadoes in the vicinity (i.e., surrounding counties) of the proposed site. This data should include the magnitude (i.e., F1, F2, etc), date, and county in which the tornado was reported.

02.03.01-2
Please justify why the extreme wind basic wind speed site characteristic value for safety-related structures is not based on the most severe hurricanes that have been historically reported for the site and surrounding area.

10 CFR 52.79(a)(1)(iii) states, in part, that the COL 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.

FSAR Section 2.3.1.3.3 states that Hurricane Hugo (1989) was observed to have a maximum wind gust of 95 knots (109 mph). However, FSAR Table 2.0-201 shows that the Operating Basis Wind Speed is 102 mph (100-year return period 3-second gust). Please either correct this apparent discrepancy in the FSAR or explain why the recorded wind gust from Hurricane Hugo (1989) should not be considered to be the most severe wind speed recorded in the region surrounding VCSNS.

02.03.01-3
Address, in FSAR Section 2.3.1, the extreme frozen winter precipitation event and extreme liquid winter precipitation event as site characteristics 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.

02.03.01-4
This RAI refers to FSAR Section 2.3.1.5, “Air Temperature Site Characteristics”, and FSAR Table 2.0-201:

The VCSNS site characteristic values to be compared with the AP1000 maximum safety and minimum safety air temperature site parameter values should either be 100-year return period values or historic extreme values, whichever are bounding.

10 CFR 52.79(a)(1)(iii) states in part that COL applications must identify 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 with sufficient margin

for the limited accuracy, quantity, and period of time in which the historical data have been accumulated.

Temperatures based on a 100-year return period are considered 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.

1. FSAR Section 2.3.1.5 states, in the last paragraph, “Based on the linear regression analyses of these data sets for a 100-year return period, the maximum dry bulb temperature is estimated to be 112.4°F, the minimum dry bulb temperature is estimated to be approximately –8.9°F, and the maximum wet bulb temperature is estimated to be 87.3°F.”

    - Please explain why these results are not used for the site characteristic values in FSAR Table 2.0-201, considering that they are more extreme than the values currently shown. Update FSAR Table 2.0 and FSAR Section 2.3.1.5 as necessary.

2. FSAR Section 2.3.1.5 states that “This record low temperature … represents an overall, historical minimum temperature.”

Please update the FSAR to include the period of record for this observation site (Chester 1NW).

02.03.01-5

NUREG-0800, Section 2.3.1, Acceptance Criteria #2 states, in part, the applicability of severe weather phenomena data to represent site conditions during the expected period of reactor operation should be substantiated. SRP 2.3.1 Review Procedure #3 states, in part, current literature on possible changes in the weather in the site region should be reviewed to be confident that the methods used to predict weather extremes are reasonable.

Please include in FSAR Section 2.3.1.7, “Climate Changes”, a brief discussion on the potential effects of global climate change on the future regional conditions near the site. Include in this discussion any proposed site characteristics that may be altered or affected due to the potential of climate change.