Vogtle PEmails

From: Habib, Donald
Sent: Wednesday, July 05, 2017 3:26 PM
To: ptapscot@southernco.com; Chamberlain, Amy Christine
Cc: neil.haggerty@excelservices.com; Patel, Chandu; Vogtle PEmails; Le, Hien; Dias, Antonio; Chien, Nan; Jackson, Diane
Subject: RAI Transmittal for Vogtle 3 & 4 LAR 17-015 (RAI LAR 17-015-1)
Attachments: Final RAI_8912 for LAR 17-015-1.docx

To All:

By letter dated April 27, 2017, Southern Nuclear Company submitted License Amendment Request No. 17-015 to the U. S. Nuclear Regulatory Commission (NRC) for Vogtle Electric Generating Plant Units 3 and 4, Combined License Nos. NPF-91 and NPF-92 (ADAMS Accession No. ML17118A049). The NRC staff is reviewing the request to enable the staff to reach a conclusion on the safety of the proposed changes.

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

To support the review schedule, you are requested to respond within 30 days of the date of this email. 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 301-415-1035.

Sincerely,

Donald Habib, Project Manager
Licensing Branch 4
Division of New Reactor Licensing
Office of New Reactors
301-415-1035

Hearing Identifier: Vogtle_COL_Docs_Public
Email Number: 120

Mail Envelope Properties (d9f6ab885f514256a4364d37422b0a42)

Subject: RAI Transmittal for Vogtle 3 & 4 LAR 17-015 (RAI LAR 17-015-1)
Sent Date: 7/5/2017 3:25:38 PM
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From: Habib, Donald

Created By: Donald.Habib@nrc.gov

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Files	**Size**	**Date & Time**
MESSAGE	1219	7/5/2017 3:25:39 PM
Final RAI_8912 for LAR 17-015-1.docx	37982	

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

Request for Additional Information LAR 17-015-1

Issue Date: 07/05/2017
Application Title: VEGP Units 3 and 4 - LARs
Operating Company: Southern Nuclear Operating Co.
Docket No. 52-025 and 52-026
Review Section: 09.02.02 - Reactor Auxiliary Cooling Water Systems
Application Section: LAR 17-015

QUESTIONS

09.02.02-1

10 CFR 52.98(c) delineates the change process for information on a certified design that was referenced by a combined license, and 10 CRF 50.90 delineates the process for amending a combined license.

Pursuant to 10 CFR 52.98(c) and in accordance with 10 CFR 50.90, Southern Nuclear Operating Company (SNC) in a letter dated April 27, 2017 requested a license amendment (LAR 17-015) to change cooling load requirements for the low-capacity (air-cooled) chillers of the central chilled water system in the AP1000 design. The proposed change would depart from plant-specific AP1000 Design Control Document (DCD) Tier 1 information with corresponding changes to the associated COL Appendix C information and Tier 2 information in the Updated Final Safety Analysis Report (UFSAR).

LAR Table 2-1 presents the proposed change to USFAR Table 9.2.7-1, “Component Data - Central Chilled Water System,” regarding flow rates through cooling coils in various plant HVAC subsystems served by the low-capacity (air-cooled) chillers. This table also contains a Note which states “[Heat loads used to determine cooling coil flow rates include 15% margin.” In addition, the capacity of the chillers is changed from “300 tons” to "230 tons” to reflect the reduced HVAC heat loads during their final detail design phase.

LAR Table 2-2 presents the proposed change to COL Appendix C (and plant-specific Tier 1) Table 2.7.2-2, “Inspections, Tests, Analyses and Acceptance Criteria,” Item 3.a, regarding flow rates through the above mentioned cooling coils. This table also contains a Note which states “[T]he 15% margin is not included in the heat loads used to calculate the flow rate identified in the ITAAC acceptance criteria” to account for the lower proposed flow rates as compared to those in USFAR Table 9.2.7-1.

The staff noted that Tier 1 Table 2.7.2-2 also includes ITAAC Item 3.b, which states, in part, “[A] report exists and concludes that the heat transfer rate of each air-cooled chiller is greater than or equal to 230 tons,“ and has not been changed under LAR 17-015.

The licensee is requested to explain why the total capacity of the air-cooled chiller in ITAAC Item 3.b is not changed as part of LAR 17-015, given the differences in the proposed flow rates through the cooling coils, as discussed above. In addition, since the specified chiller capacity in ITAAC Item 3.b should be derived from the detailed design information provided in the FSAR, the licensee is requested to revise USFAR Table 9.2.7-1 to clearly indicate the basis for such difference.

The licensee is also requested to provide reference to all detailed calculations used to support the proposed changes in LAR 17-015.

09.02.02-2

10 CFR 52.98(c) delineates the change process for information on a certified design that is referenced by a combined license, and 10 CFR 50.90 delineates the process for amending a combined license.

Pursuant to 10 CFR 52.98(c) and in accordance with 10 CFR 50.90, Southern Nuclear Operating Company (SNC) in a letter dated April 27, 2017 requested a license amendment (LAR 17-015) to change cooling load requirements for the low-capacity (air-cooled) chillers of the central chilled water system in the AP1000 design. The proposed change would depart from plant-specific AP1000 Design Control Document (DCD) Tier 1 information with corresponding changes to the associated COL Appendix C information and Tier 2 information in the Updated Final Safety Analysis Report (UFSAR).

LAR Table 2-6 presents the proposed change to USFAR Table 9.4.3-1 regarding cooling coil capacity for the normal residual Heat Removal (RNS) Pump Room Unit Coolers. The staff noted that in UFSAR Figure 9.4.3-1, unlike other room unit coolers, each RNS Pump Room Unit Cooler includes two cooling coils (VAS MY 06A/B and VAS MY 12A/B).

The licensee is requested to clarify if the proposed value of 75250 Btu/hr is applied to one or both coils in the RNS Pump Room Unit Cooler, and to revise UFSAR Table 9.4.3-1 accordingly to reflect the total heat load requirement for this cooler.

09.02.02-3

10 CFR 52.98(c) delineates the change process for information on a certified design that was referenced by a combined license, and 10 CFR 50.90 delineates the process for amending a combined license.

Pursuant to 10 CFR 52.98(c) and in accordance with 10 CFR 50.90, Southern Nuclear Operating Company (SNC) in a letter dated April 27, 2017 requested a license amendment (LAR 17-015) to change cooling load requirements for the low-capacity (air-cooled) chillers of the central chilled water system. The proposed change would depart from plant-specific AP1000 Design Control Document (DCD) Tier 1 information with corresponding changes to the associated COL Appendix C information and Tier 2 information in the Updated Final Safety Analysis Report (UFSAR).

LAR Tables 2-4, 2-5, 2-6 and 2-7 present the proposed changes to the required heat loads for selected HVAC components served by the low-capacity chillers, and LAR Table 2-1 presents the proposed changes to the corresponding design cooling loads by the chiller.

The staff noted that, although each design cooling coil flow rate in UFSAR Table 9.2.7-1 is properly allocated to cover the required heat load in the respective UFSAR Table 9.4.1-1 or

Table 9.4.3-1, and the chiller capacity of “230 tons” appears to be consistent with the total sum of required heat loads of “198 tons” (i.e., 15% higher for value in UFSAR Table 9.2.7-1), the cooling coil flow rates specified in ITAAC No. 2.7.02.03a (i.e., Tier 1 Table 2.7.2-2, Item 3.a) are inconsistent with the respective required heat load.

The licensee is requested to address the cited inconsistency between ITAAC Item 3.a and the UFSAR design information. The LAR should be modified accordingly.