

VoglecolRAIsPEm Resource

From: Tanya Simms
Sent: Monday, October 06, 2008 12:24 PM
To: VoglecolRAIsPEm Resource
Subject: Request for Additional Information Letter No. 003 Related to SRP Section 09.02.01 for the Vogle Units 3 and 4 Combined License Application
Attachments: VOG-RAI-LTR-003.doc

Hearing Identifier: Vogtle_COL_eRAIs
Email Number: 6

Mail Envelope Properties (C4A4C9A16294FB4CBA5A36312D05FFAC0AC0436ED2)

Subject: Request for Additional Information Letter No. 003 Related to SRP Section 09.02.01 for the Vogtle Units 3 and 4 Combined License Application
Sent Date: 10/6/2008 12:24:23 PM
Received Date: 10/6/2008 12:24:24 PM
From: Tanya Simms

Created By: Tanya.Simms@nrc.gov

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

Post Office: HQCLSTR02.nrc.gov

Files	Size	Date & Time
MESSAGE	3	10/6/2008 12:24:24 PM
VOG-RAI-LTR-003.doc	56314	

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

October 6, 2008

Mr. Joseph A. (Buzz) Miller
Senior Vice President
Southern Nuclear Operating Company
P.O. Box 1295
Birmingham, AL 35201

SUBJECT: REQUEST FOR ADDITIONAL INFORMATION LETTER NO. 003 RELATED TO
SRP SECTION 09.02.01 FOR THE VOGTLE ELECTRIC GENERATING PLANT
UNITS 3 AND 4 COMBINED LICENSE APPLICATION

Dear Mr. Miller:

By letter dated March 28, 2008, Southern Nuclear Operating Company (SNC), 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 301-415-1387 or you may contact Christian Araguas, the lead project manager for the Vogtle Electric Generating Plan combined license at 301-415-3637.

Sincerely,

/RA/

Tanya Simms, Project Manager
AP1000 Projects Branch 1
Division of New Reactor Licensing
Office of New Reactors

Docket Nos. 52-025
52-026

Enclosure:
Request for Additional Information

CC: see next page

If you have any questions or comments concerning this matter, you may contact me at 301-415-1387 or you may contact Christian Araguas, the lead project manager for the Vogtle Electric Generating Plan combined license at 301-415-3637.

Sincerely,

/RA/

Tanya Simms, Project Manager
 AP1000 Projects Branch 1
 Division of New Reactor Licensing
 Office of New Reactors

Docket Nos. 52-025
 52-026
 eRAI Tracking No. 1247

Enclosure:
 Request for Additional Information

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NAME	JSegala*	TSimms*	AHodgdon*	CAraguas*
DATE	9/23/08	9/23/08	9/25/08	10/6/08

*Approval captured electronically in the electronic RAI system.

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Request for Additional Information No. 1247 Revision 0
Vogtle
Southern Nuclear Operating Co.
Docket No. 52-0025 and 52-0026
SRP Section: 09.02.01 - Station Service Water System
Application Section: 9.2.11 - Raw Water System

QUESTIONS for Balance of Plant Branch 1 (SBPA)

09.02.01-1

Although the RWS is not safety-related, failures of this system and related components could result in severe and unacceptable flooding consequences. As discussed above in the Regulatory Evaluation Section, the staff's evaluation includes a review of the impact that RWS-related flooding has on structures, systems and components (SSCs) that are either designated as safety-related or subject to regulatory treatment of non-safety systems (RTNSS). If SSCs important to safety can be adversely affected by RWS failures, the staff confirms that design provisions have been included to address vulnerabilities that have been identified in this regard and to minimize hydraulic transients and their effects upon the functional capability and the integrity of these systems. Because the applicant did not identify and address the potential consequences of RWS-related failures on safety-related and RTNSS equipment, the staff is unable to confirm compliance with GDC 4 and RTNSS policy considerations. The staff requests that the applicant provide additional information to address the impact of flooding on safety-related and RTNSS equipment, including plant-specific inspections, tests, analyses, and acceptance criteria (ITAAC), test program, technical specification, and availability control considerations as appropriate. Provide additional information in the FSAR. Provide any markups of the Final Safety Analysis Report (FSAR) and other parts of the application as applicable to facilitate the staff's evaluation.

09.02.01-2

The RWS well water subsystem is relied upon for providing defense-in-depth heat removal for the reactor and spent fuel by supplying makeup water for the service water system (SWS) cooling tower basins via the RWS well water subsystem. Likewise, the RWS well water subsystem may also be needed for RTNSS considerations during reduced reactor coolant system inventory conditions. The staff's evaluation confirms that the RWS well water subsystem is capable of performing its defense-in-depth and RTNSS functions (as applicable). While Tier 2 FSAR Section 9.2.11 generally discusses the RWS well water subsystem and contingencies that exist for providing makeup for the SWS cooling tower basins, a clearly defined RWS well water subsystem design basis for assuring the defense-in-depth and RTNSS capabilities for the most limiting situations was not provided and measures were not described for assuring the functional capability of the RWS well water subsystem over time, with and without offsite power available. For example:

- The minimum RWS well water subsystem flow rate, water inventory, temperature limitations, and corresponding bases for providing SWS makeup for the two Vogtle units need to be described, and backup power sources for all components need to be identified.

- The suitability of RWS materials for the plant-specific application and measures being implemented to resolve vulnerabilities and degradation mechanisms to assure RWS functionality over time need to be addressed.
- The reliability and capability of the RWS well water subsystem to provide sufficient makeup for the SWS over the life of the plant, including monitoring and periodic surveillance tests that will be performed in this regard, need to be addressed.
- The lack of redundancy for the single well water tank needs to be justified.
- Periodic surveillance testing of the secondary firewater tank clearwell SWS makeup gravity drain valve needs to be described.

09.02.01-3

As specified by 10 CFR 20.1406, COL applicants are required to describe how facility design and procedures for operation will minimize the generation of radioactive waste and contamination of the facility and environment, and facilitate eventual plant decommissioning. Although the RWS has no interconnections with any systems that contain radioactive fluids, industry experience has shown that this alone may not be sufficient to prevent the RWS from becoming contaminated. For example, unplanned leaks or release of contaminated fluids as a result of component failures or transport, drainage problems in contaminated areas, and the migration of contamination through soils and other porous barriers over time have caused systems and areas of the plant that are not directly connected with contaminated systems to become contaminated. Therefore, additional information is needed to describe design provisions and other measures that will be implemented to satisfy the requirements specified by 10 CFR 20.1406 requirements, including measures that will be implemented to monitor the RWS for contamination and corrective actions that will be taken to eliminate any radioactive contamination that is identified. Regulatory Guide (RG) 4.21, "Minimization of Contamination and Radioactive Waste Generation: Life-Cycle Planning," provides guidance that may be used for addressing the requirements specified by 10 CFR 20.1406.