PMVogtleCOLPEm Resource

From: Tanya Simms
Sent: Tuesday, September 30, 2008 12:33 PM
To: 'wasparkm@southernco.com'; 'AGAUGHTM@SOUTHERNCO.COM'
Cc: Christian Araguas; PMVogtleCOLPEm Resource
Subject: RESEND: Draft RAIs 1241, 1242 and 1247 Related SRP Section 9.2.5, 9.2.2 and 9.2.1 for Vogtle Units 3 and 4
Attachments: RAI 1247 draft.pdf; RAI 1241 draft.pdf; RAI 1242 draft.pdf

To All,

Attached is Draft RAI 1241, 1242 and 1247 related to SRP Sections 9.2.5, 9.2.2 and 9.2.1 for Vogtle Units 3 and 4. Please contact me if you desire a phone conference regarding these RAIs. If no response is heard by close of business October 3, 2008, the final RAI will be issued.

Thank you,
Tanya

Hearing Identifier: Vogtle_COL_Public
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Subject: RESEND: Draft RAIs 1241, 1242 and 1247 Related SRP Section 9.2.5, 9.2.2 and 9.2.1 for Vogtle Units 3 and 4
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MESSAGE	333	9/30/2008 12:34:34 PM
RAI 1247 draft.pdf	20700	
RAI 1241 draft.pdf	14300	
RAI 1242 draft.pdf	14223	

Options
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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-***

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-***

As discussed in the Regulatory Basis Section, 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.

Because the applicant did not adequately describe the RWS well water subsystem design basis and address other review considerations specified in Section III of Standard Review Plan (SRP) Sections 9.2.1 and 9.2.5 that are relevant for assuring defense-in-depth and RTNSS functional capabilities, the staff is unable to confirm compliance with defense-in-depth and RTNSS policy considerations. The staff requested that the applicant provide additional information to fully describe the RWS well water subsystem design basis and to address relevant considerations specified by SRP Sections 9.2.1 and 9.2.5, such as minimum net positive suction head requirements, materials considerations, design provisions, and measures being implemented to assure the functional capability of the RWS well water makeup system over time, including plant-specific ITAAC, test program, technical specification, and availability control considerations as appropriate. Additional guidance for addressing these SRP areas of review is provided in Sections CI.9.2.1 and CI.9.2.5 of Regulatory Guide (RG) 1.206. The staff also requests that the applicant provide markups of the FSAR and other parts of the application as applicable to facilitate the staff's evaluation.

09.02.01-***

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.

Request for Additional Information No. 1241 Revision 0
Vogtle
Southern Nuclear Operating Co.
Docket No. 52-0025 and 52-0026
SRP Section: 09.02.05 - Ultimate Heat Sink
Application Section: 9.2.1

QUESTIONS for Balance of Plant Branch 1 (SBPA)

09.02.05-***

The cooling capability of the SWS mechanical draft cooling towers for the Vogtle units can be adversely affected by interactions that exist between the two mechanical draft cooling towers. Adverse interactions can occur due to localized atmospheric influences caused by siting considerations, the locations of major structures, the locations of the mechanical draft cooling towers, mechanical draft cooling tower fan speed, and wind effects. Because AP1000 utilizes only one mechanical draft cooling tower in its design, interaction effects between the mechanical draft cooling towers of multi-unit sites was not evaluated by the staff for AP1000. Therefore, additional information is needed to address potential adverse interactions between the mechanical draft cooling towers for the two Vogtle units and the FSAR needs to be revised accordingly to reflect this additional information.

Request for Additional Information No. 1242 Revision 0
Vogtle
Southern Nuclear Operating Co.
Docket No. 52-0025 and 52-0026
SRP Section: 09.02.02 - Reactor Auxiliary Cooling Water Systems
Application Section: 9.2.8

QUESTIONS for Balance of Plant Branch 1 (SBPA)

09.02.02-***

FSAR Section 9.2.8.2.3, “Startup,” was revised to eliminate the provision that the circulating water system (CWS) be placed in operation prior to placing the turbine building closed cooling water system (TCS) in operation. This is an apparent departure from the description that was provided for the standard plant, but it was not recognized and evaluated as such in the Vogtle COL application. Therefore, the FSAR needs to be revised to properly recognize and evaluate this change to Tier 2 of the DCD, Section 9.2.8.2.3.