PMSummerColpEM Resource

From: Simms, Tanya
Sent: Monday, August 10, 2009 1:51 PM
To: 'Amy M. Monroe'; 'April R. Rice'; 'Jerry P. Harrison'; 'Julie M. Giles'
Cc: Patel, Chandu; PMSummerColpEM Resource
Subject: Draft RAI 3290 Related SRP Section 9.2.11 for Summer Units 2 and 3
Attachments: RAI 3290 draft.doc

To All,

Attached is Draft RAI 3290 related to SRP Section 9.2.11 for Summer Units 2 and 3. Please contact me if you desire a phone conference regarding this RAI. If no response is heard by close of business August 13, 2009, the final RAI will be issued.

Thank you,
Tanya

Hearing Identifier: VCSummer_COL_Public
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Subject: Draft RAI 3290 Related SRP Section 9.2.11 for Summer Units 2 and 3
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Options
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Request for Additional Information No. 3290 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: 09.02.01 - Station Service Water System
Application Section: 9.2.11

QUESTIONS from Balance of Plant Branch 1 (SBPA)

09.02.01-***

The raw water system (RWS) is relied upon for achieving and maintaining cold shutdown conditions which is necessary for satisfying Technical Specification requirements. In accordance with NRC policy considerations for passive plant designs, non-safety related active systems that are relied upon for achieving and maintaining cold shutdown conditions (i.e., transitioning from Mode 4 to Mode 5) should be highly reliable and able to accommodate single active failures without a loss of the cooldown capability that is needed. The staff found that Section 9.2.11 of the Final Safety Analysis Report (FSAR) does not provide a clearly defined design basis with respect to the RWS cooldown function, and the reliability and capability of the RWS to perform this function for the most limiting situations were not adequately described and addressed. For example, the minimum RWS flow rate, water inventory, temperature limitations, and corresponding bases for providing SWS makeup for the two V.C. Summer units were not described. Also, 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 were not addressed. Consequently, Section 9.2.11 of the FSAR needs to be revised to properly describe and address the RWS design bases in this regard and to include design specifications that are necessary to ensure the reliability and capability of the RWS to perform its cooldown function.

The applicant's response dated March 4, 2009 provided adequate details for most of the RAI 09.02.01-2 and RAI 09.02.01-4. A complete description is not provided to demonstrate that the RWS is designed to be a highly reliable and robust system capable of operating during a loss of normal ac power to provide RWS makeup flow under normal and abnormal conditions for support of cold shutdown conditions for up to seven (7) days. The staff requests clarification on the following items;

- The service water system (SWS) normal water makeup is from the water treatment (Figure 9.2-201) which is shown as a "black box" on the drawing. The staff needs additional details related to what is inside the "black box". Specifically, major equipment such as tanks, strainers and screens, pumps, piping arrangement and flow distribution need to be shown in FSAR Figure 9.2-201 and described in FSAR Section 9.2.11.
- The staff could not determine if the flooding discussion in the RAI response includes the Ancillary RWS and water treatment facility; reference GDCs 2 and 4. This should be clarified.

09.02.01-***

The applicant's response dated March 4, 2009 provided adequate detail for most of RAI 09.02.01-3. A complete description is not provided to demonstrate that the RWS is designed to be a highly reliable and robust system capable of operating during a loss of normal ac power to provide RWS makeup flow under normal and abnormal conditions for support of cold shutdown conditions for up to seven (7) days. The staff requests the following items;

1. The Ancillary RWS system is mentioned once in the above noted RAI responses and provided FSAR markup, but no drawings or detailed text are described in the FSAR. More details concerning the Ancillary RWS need to be provided in the FSAR.
2. In FSAR Section 14.2.9.4.24, "Raw Water System," testing does not included the water treatment facility or Ancillary RWS which is the primary water supply to the SWS cooling towers. Provide a description of the type of testing planned for the water treatment facility.
3. The RAI response stated that the RWS piping and structures are designed and constructed in accordance with nationally recognized codes and standards (such as ASME B31.1, AWWA and IBC). The COL FSAR, however, did not include any recognized codes and standards such as ASME B31.1, "Power Piping," for the RWS including underground piping. The COL FSAR needs to contain such standards.

09.02.01-***

The applicant's response dated March 4, 2009 provided adequate detail for most of RAI 09.02.01-5. However, a complete description is not provided to demonstrate that the RWS is designed to be a highly reliable and robust system capable of operating during a loss of normal ac power to provide RWS makeup flow under normal and abnormal conditions for support of cold shutdown conditions for up to seven (7) days. The staff requests the following:

- A complete description is not provided for backup electrical power to the water treatment facility and screenwash and travelling screens to demonstrate that the RWS is highly reliable. Please provide this description. In addition, provide a detailed description on the effects of the water treatment facility during a loss of offsite power (LOOP).