ArevaEPRDCPEm Resource

From: Getachew Tesfaye
Sent: Friday, May 08, 2009 4:16 PM
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Cc: Raul Hernandez; John Segala; Steven Bloom; Peter Hearn; Joseph Colaccino; ArevaEPRDCPEm Resource
Subject: U.S. EPR Design Certification Application RAI No. 219 (2634, 2591), FSAR Ch. 9
Attachments: RAI_219_SBPA_2634_2591.doc

Attached please find the subject requests for additional information (RAI). A draft of the RAI was provided to you on April 27, 2009, and on May 6, 2009, you informed us that the RAI is clear and no further clarification is needed. As a result, no change is made to the draft RAI. The schedule we have established for review of your application assumes technically correct and complete responses within 30 days of receipt of RAIs. For any RAIs that cannot be answered within 30 days, it is expected that a date for receipt of this information will be provided to the staff within the 30 day period so that the staff can assess how this information will impact the published schedule.

Thanks,
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Hearing Identifier: AREVA_EPR_DC_RAIs
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Request for Additional Information No. 219 (2634, 2591), Revision 0

5/08/2009

U. S. EPR Standard Design Certification
AREVA NP Inc.
Docket No. 52-020
SRP Section: 09.01.03 - Spent Fuel Pool Cooling and Cleanup System
SRP Section: 09.03.01 - Compressed Air System
Application FSAR Ch. 9

QUESTIONS for Balance of Plant Branch 1 (AP1000/EPR Projects) (SBPA)

09.01.03-12

The applicant responded to RAI 9.1.3-6 in RAI #87 dated 10/9/2008. The applicant stated that the full core offload case is the normal refueling method. However, the staff noted that the FSAR Tier 2, Section 9.1.3.2.3, Fuel Pool Cooling System (FPCS), states a single failure is not considered during infrequent refueling operations that involve a full offload. This section will also need to be revised to be consistent with the RAI response.

The staff requests the applicant to update the FSAR to reflect the correct normal refueling method.

09.01.03-13

In it's response to RAI 9.1.3-6 the applicant stated that the calculated boil-off rate is approximately 530 l/m (140 gpm). The applicant also stated that other available make-up sources include the demineralized water distribution system, fire protection system, and internal refueling water storage tank (via the fuel pool purification system). Each of these sources can provide make-up to supplement SFP make-up. The applicant has not provided the available makeup water flow rates of these sources. The staff can not determine that sufficient sources of make-up water are available to maintain SFP level in the unlikely event of loss of both FPCS trains and subsequent SFP boiling.

The staff requests the applicant to provide the makeup water flow rates from the demineralized water distribution system, fire protection system, and internal refueling water storage tank to the spent fuel pool.

09.03.01-6

While reviewing the applicant's proposed FSAR, the staff identified some apparent editorial errors. These errors are:

1) FSAR Tier 2 Section 9.3.1.4 states “Refer to Section 14.2 (test abstract #054 and #179) for initial plant startup test program.” Test abstract #054 is for “fire water distribution” not the “compressed air system”, the reference to #054 should be deleted.
2) FSAR Tier 2 Section 9.3.1.4 states “Refer to Section 14.2 (test abstract #054 and #179) for initial plant startup test program.” Test abstract #179 is for “Initial fuel load,” the reference should be changed to #178 “Pre-Core loss of instrument air”
3) FSAR Tier 2 Table 14.3-8 indicates that the Compressed Air System is within the scope of Tier 1; however, the compressed air system is not included in Tier 1.

The staff requests the applicant to correct these items in the FSAR.

09.03.01-7

10 CFR 20.1406(b) requires that applicants for standard design certifications to describe the facility design features for minimizing, to the extent practicable, contamination of the facility and the environment, facilitate eventual decommissioning, and minimize to the extent practicable the generation of radioactive waste.

FSAR Tier 2 Section 9.3.1.1 indicates the instrument air system is used to provide air to components in the radioactive waste, decontamination and fuel handling systems for nonsafety-related functions. A review of the system P&ID (FSAR Tier 2 Figure 9.3-2) shows insufficient detail to determine if the CAS could be contaminated through interfaces with radioactive system or if provisions are provided for detection of activity and isolation of the system to prevent contamination or a release to the environment. SRP 9.3.1.I.5 "Areas of Review," states that the CAS design is reviewed for the following:

> **H. The potential for radiological contamination of the ICAS and, if applicable, provisions for detection of leakage from radioactive systems to the ICAS and preclusion of releases to the environment.**

In accordance with the requirements of 10 CFR 20.1406(b), the staff requests the applicant to provide an evaluation of whether the compressed air system could become contaminated through interfaces with radioactive systems. If the system could become contaminated provide methods for detection, collection and control of system leakage to preclude contamination of other systems and preclude its release to the environment.