ArevaEPRDCPEm Resource

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Sent: Friday, August 23, 2013 10:20 AM
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Subject: U.S. EPR Design Certification Application DRAFT RAI 601, Review Section: 09.02.01 - Station Service Water System
Attachments: DRAFT RAI_601_BPTS_7225.docx

Attached please find Draft RAI No. 601 regarding your application for standard design certification of the U.S. EPR. If you have any questions or need clarification regarding this Draft RAI, please let me know as soon as possible, I will have our technical Staff available to discuss them with you.

Please also review the draft RAI to ensure that we have not inadvertently included proprietary information. If there is any proprietary information, please let me know within the next ten days. If I do not hear from you within the next ten days, I will assume there are none and will make the Draft RAI publicly available.

Amy

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Request for Additional Information 601
Issue Date: 08/23/2013
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Operating Company: AREVA NP Inc.
Docket No. 52-020
Review Section: 09.02.01 - Station Service Water System
Application Section: 9.2.1

QUESTION

09.02.01-52

In accordance with 10 CFR50 Appendix A and GDC 44, cooling water must have the capability to transfer heat from systems, structures, systems, and components (SSCs) important to safety to an ultimate heat sink during both normal and accident conditions, with suitable redundancy, assuming a single active component failure coincident with either the loss of offsite power or loss of onsite power.
Based on the staff's review of US-EPR FSAR Revision 5, the following questions are needed related to the essential service water system (ESWS) and SSCs important to safety.

1. RAI 345/4021 Question 09.02.01-32 previously addressed EPR Tier 2 FSAR Section 9.2.1.3.1 and describes the ESWS pump design flow margin of 12%. The addition of the emergency power generating building ventilation system (EPGBVS) cooler is not specifically addressed in the flow margin of the ESWS pump and should be added to the FSAR**.**
2. The EPGBVS cooler is not listed in Tier 2 FSAR Table 9.2.5-1. The flow rate and heat load should be added to the FSAR.
3. FSAR Tier 2 Table 9.2.1-3, Alarm Summary, does not address pressure or temperature alarms for flow through the EPGBVS. In addition, there is no ESW flow instrumentation associated with the EPGBVS.
4. Relief valve is not shown on FSAR Tier 2 Figure 9.2.1-1 or described in Section 9.2.1 downstream of the EPGBVS cooler (similar to the CCWS or EDG coolers). This section of pipe appears to not have ASME III overpressure protection if the piping system is isolated via manual valves. The relief valve discussion should be added to the FSAR.
5. FSAR Tier 1 Section 2.7.11, item 7.11 (page 2.7-78) is in error and should be related to the cooling tower basin sizing (see page 2.7-111 for differences). This should be corrected in Tier 1.

FSAR Tier 2 Section 14.2.12.5.7 does not have a step to verify flow though the EPGBVS cooler. The should be added to the FSAR.