ArevaEPRDCPEm Resource

From: Snyder, Amy
Sent: Wednesday, May 08, 2013 11:19 AM
To: usepr@areva.com
Cc: ODriscoll, James; McKirgan, John; Gleaves, Bill; Segala, John
Subject: U.S. EPR Design Certification Application FINAL RAI No. 584, Chapter 6
Attachments: FINAL RAI_584_SCVB_7096.doc

Attached please find the subject request for additional information (RAI). A draft RAI was provided to you on April 24, 2013. On May 7, 2013, you informed us that the draft RAI does not contain proprietary information and that the draft RAI is clear and no further clarification is needed. As result, the RAI was not changed..

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 or June 10, 2013**, 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.

Thank You,

Amy

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From: Snyder, Amy

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Request for Additional Information 584

Issue Date: 5/8/2013
Application Title: U. S. EPR Standard Design Certification - Docket Number 52-020
Operating Company: AREVA NP Inc.
Docket No. 52-020
Review Section: 06.02.03 - Secondary Containment Functional Design
Application Section: 6.2.3

QUESTIONS

06.02.03-9

This RAI documents staff questions arising from the following RAI Question responses:

1) The revised final response to RAI 462, Question 06.02.03-8, (Supplement 6) received on February 22, 2013, and discussed with you in a public teleconference on 3/11/2013.
2) Your advanced response to RAI 511, Questions 06.04-9 and 06.04-10 received on February 14, 2013, and discussed with you in a public teleconferences on 3/19/13 and 4/8/13.

1. Regarding your advanced response to RAI 511, Question 06.04-9 received on February 14,2013, RAI 511:

a. Clarify the mechanical design features of the SBVS shown in FSAR Tier 1 Revision 4, Section 2.6.6 (page 2.6-63 Item 3.2). The staff understands that operation of the SBVS dampers is required in both accident and normal operation condition to fulfill all listed system functions in Tier 1. Therefore, clarify how the Class 1 E dampers listed in Table 2.6.6.-2 will function to change position as listed in table 2.6.6-1 under both normal and accident conditions.

b. Clarify the FSAR to indicate if the leak-off system is included amongst those SSCs that serve a secondary containment function. Reference comments from the 3/11/13 NRC and AREVA public teleconference on RAI 462 (Supplement 2), Question 06.02.03-8:

i. It remains unclear what components this leak-off system now collects from. Some of the FSAR changes in the revised final RAI response relate to components that are inside the containment building (e.g. the RCDT-see section 5.2.5.5.1). Although the revised final response was meant to address FSAR changes need due to a changed valve design, the FSAR changes within it makes it unclear to the staff if the leak-off system collects and diverts to the annulus, leakage from systems inside containment. In your superseded response to this question (Supplement 4), you indicated that information provided in RAI 89 (supplement 1) Question 06.02.03-5, submitted October 2008 would be incorporated into the FSAR. In this response, you stated, “During design basis accidents all valves in the CLES are open. Leaks from the devices (e.g., valves, hatch seals) are collected and drained to the Annulus by the pressure differential created by the accident trains of the annulus ventilation system.” From this statement, the staff understands that the leak-off system is a passive design, with no isolation capability, and all lines are open in a DBA. This arrangement could be a concern for GDC 16 conformance if the leak-off collects from sources inside containment. In order to fully understand this system and complete its evaluation, the staff requires that the description of the leak-off system in the FSAR be revised comprehensively, to include a discussion on the general description of the leak-off system, and subsystems, the design basis, system design, design evaluation, inspection and testing requirements and instrument requirements. Include piping and instrumentation drawings on the leak-off system and subsystems, as necessary.

ii. Conforming changes may be needed to the markup of Tier 2 FSAR Section 6.2.6.5 to be consistent with the RAI response- i.e. that it does not collect from CIVs, if appropriate.

iii. Update or clarify FSAR Section 14.2.12.9.1, (Start up test #091), which states that the

Leak-off system collects from personnel air locks and equipment hatch seals, to align with the revised response.

c. Based on your response to RAI 511, Question 06.04-9, and the accompanying Tier 1 markups, the staff has reviewed the Tier 2 Description of the response to a fuel handling accident in the Fuel Building and Reactor building as described in Tier 2, Section 9.4.3.2.3 (page 9.3-37). The system response as described in this section does not conform to the description of system response described elsewhere. Review and revise as necessary Tier 2, Section 9.4.3.2.3, and Tier 2 Section 9.4.7.2.3 to specify manual and automatic actions, and specify which iodine filtration trains are used to clean up the Fuel Building and Containment Building atmosphere as necessary to ensure all FSAR sections align.

d. Based on your response to RAI 511 Question 06.04-9, and the accompanying Tier 1 markups, the staff reviewed Tier 2 (revision 4) Section 9.4.5. The staff believes that on Page 9.4-50 (Revision 4), the "Operational Air Exhaust Mode" bulleted Item, should be revised to reflect two potential modes of SBVS exhaust during normal operation. It is the staff's understanding that exhaust air is directed to NABVS filters in the normal operating mode. This mode has two configurations, when no radiation is detected, the SBVS directs the NABVS to processes exhaust only through a HEPA filter. When radioactivity is detected in areas serviced by the SBVS, the SBVS directs the NABVS to process exhaust through a HEPA and an iodine filter. Revise this section of the FSAR as necessary.

e. Based on your response to RAI 511 Question 06.04-9, and the accompanying Tier 1 markups, the staff reviewed Tier 2 (revision 4) Section 9.4.5. On page 9.4-50 (Revision 4), the "Accident Air Exhaust Mode" bulleted Item should be revised to reflect two different modes of SBVS exhaust during accidents. It is the staff's understanding that the system exhaust is configured differently depending on the accident. For fuel handling accidents in the FB, the SBVS draws from the Fuel handling area (a.k.a. the “FB Pool Hall,” only, while the NABVS draws from the remaining area of the FB. For Fuel handling accidents in The RB, the SBVS draws from the Reactor building via the AVS exhaust system, while the FB is isolated, and is served by the NABVS. For accidents that involve containment isolation, the SBVS draws from the safeguard components areas of the Safeguard Buildings and the entire Fuel Building. Revise this section of the FSAR as necessary.

f. Clarify the revised surveillance requirements associated with the SBVS shown in your advanced response to RAI 511 Question 06.04.09 markup of Tier 2, Section 3.7.12-3. In addition to SR 3.7.12.10 for inspection of Building structural integrity, another new SR and Action (similar to SR and action in 3.6.7.4 and action [b] in TS 3.6.7 for the AVS) is required for verification of response of various isolation dampers on actual or simulated Containment Isolation signal. Also add a discussion of this new SR and action to the TS bases. Also provide the basis for the change from SR 3.7.12.8 to SR 3.7.12.9 in the markup provided in the advanced response.

g. Clarify the revised bases associated with the SBVS Technical Specification shown in your advanced response to RAI 511 Question 06.04.09 markup of Tier 2, Section B 3.7.12-3. The discussion of LCO requirements from Paragraph [b.] is not consistent with previous FSAR revisions which delete the mention of the “Prefilter” component in the TS bases.

h. Clarify the revised bases associated with the SBVS Technical Specification shown in your advanced response to RAI 511 Question 06.04.09 markup of Tier 2, section on Page B 3.7.12-3. In the discussion of LCO requirements, clarify whether the words “controlled areas” after “Safeguard Building” have been omitted in the last sentence at the end of the discussion.

i. Clarify the advanced response to RAI 511 Question 06.04.09, Part d. AREVA indicated that a revised final response to RAI 233, Supplement 2, Question 06.05.03-1 is forthcoming, however you do not indicate when it will be submitted to the NRC staff for

review. Please provide information as to when the response is expected. The staff is tracking this RAI as “Closed/Resolved,” and will re-evaluate the response when the revision is received. The previous responses were received: 7/10/09 (Parts a, b and c) ML091940538; remaining response (Part d) was received on 9/1/09 ML092440834. (Supplement 1).

2. Regarding your advanced response to RAI 511, Question 06.04-10 received on February 14, 2013:

The staff has reviewed your advanced response to Question 06.04-10 item b II. The staff believes that the revised bases associated with the CRACS Technical Specification discussed in your Advanced Response to RAI 511 Question 06.04-10, on Page B 3.7.10-2, of FSAR Revision 4, Chapter 16 TS bases, still needs to be revised. Although bracketed information represents content that individual applicants may use as-is or modify, the staff would not approve, without further information, the bracketed text if a COL applicant chose to use it as-is. Please clarify the bracketed text in the third paragraph on page B 3.7.10-2.