ArevaEPRDCPEm Resource

From: WILLIFORD Dennis (AREVA) [Dennis.Williford@areva.com]
Sent: Tuesday, November 29, 2011 4:27 PM
To: Tesfaye, Getachew
Cc: BENNETT Kathy (AREVA); DELANO Karen (AREVA); ROMINE Judy (AREVA); RYAN Tom (AREVA); GUCWA Len (EXTERNAL AREVA)
Subject: Response to U.S. EPR Design Certification Application RAI No. 521 (6147), FSAR Ch. 15
Attachments: RAI 521 Response US EPR DC.pdf

Getachew,

Attached please find AREVA NP Inc.'s response to the subject request for additional information (RAI). The attached file, "RAI 521 Response US EPR DC.pdf," provides a schedule since a technically correct and complete response to the one question cannot be provided at this time.

The following table indicates the respective pages in the response document, "RAI 521 Response US EPR DC.pdf," that contain AREVA NP's response to the subject question.

Question #	Start Page	End Page
RAI 521 — 15.00.03-39	2	2

A complete answer is not provided for the one question in RAI 521. The schedule for a technically correct and complete final response to this question is provided below.

Question #	Response Date
RAI 521 — 15.00.03-39	February 29, 2012

Sincerely,

Dennis Williford, P.E.
U.S. EPR Design Certification Licensing Manager
AREVA NP Inc.
7207 IBM Drive, Mail Code CLT 2B
Charlotte, NC 28262
Phone: 704-805-2223
Email: Dennis.Williford@areva.com

From: Tesfaye, Getachew [mailto:Getachew.Tesfaye@nrc.gov]
Sent: Thursday, November 03, 2011 7:06 PM
To: ZZ-DL-A-USEPR-DL
Cc: Makar, Gregory; Terao, David; Colaccino, Joseph; ArevaEPRDCPEm Resource
Subject: U.S. EPR Design Certification Application RAI No. 521 (6147), FSAR Ch. 15

Attached please find the subject request for additional information (RAI). A draft of the RAI was provided to you on October 26, 2011, and on November 2, 2011, 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,
Getachew Tesfaye
Sr. Project Manager
NRO/DNRL/NARP
(301) 415-3361

Hearing Identifier: AREVA_EPR_DC_RAIs
Email Number: 3592

Mail Envelope Properties (2FBE1051AEB2E748A0F98DF9EEE5A5D49B5ECC)

Subject: Response to U.S. EPR Design Certification Application RAI No. 521 (6147), FSAR Ch. 15
Sent Date: 11/29/2011 4:27:29 PM
Received Date: 11/29/2011 4:27:47 PM
From: WILLIFORD Dennis (AREVA)

Created By: Dennis.Williford@areva.com

Recipients:
"BENNETT Kathy (AREVA)" <Kathy.Bennett@areva.com>
Tracking Status: None
"DELANO Karen (AREVA)" <Karen.Delano@areva.com>
Tracking Status: None
"ROMINE Judy (AREVA)" <Judy.Romine@areva.com>
Tracking Status: None
"RYAN Tom (AREVA)" <Tom.Ryan@areva.com>
Tracking Status: None
"GUCWA Len (EXTERNAL AREVA)" <Len.Gucwa.ext@areva.com>
Tracking Status: None
"Tesfaye, Getachew" <Getachew.Tesfaye@nrc.gov>
Tracking Status: None

Post Office: auscharmx02.adom.ad.corp

Files	**Size**	**Date & Time**
MESSAGE	2255	11/29/2011 4:27:47 PM
RAI 521 Response US EPR DC.pdf	60190	

Options
Priority: Standard
Return Notification: No
Reply Requested: No
Sensitivity: Normal
Expiration Date:
Recipients Received:

Response to

Request for Additional Information No. 521

11/03/2011

U. S. EPR Standard Design Certification
AREVA NP Inc.
Docket No. 52-020
SRP Section: 15.00.03 - Design Basis Accidents Radiological Consequence Analyses for Advanced Light Water Reactors
Application Section: 15.0.3.12

QUESTIONS for Component Integrity, Performance, and Testing Branch 1 (AP1000/EPR Projects) (CIB1)

Question 15.00.03-39:

OPEN ITEM

Follow-up to RAI 242, Question 06.02.02-31

The staff requests that the applicant provide a discussion of the following items related to water retained on annular space floors and other floors in the U.S. EPR containment following a postulated LOCA:

1. The location and amount of any unbuffered pools of water, or, if all retained pools are expected to be buffered, clarification of how the pH buffer will reach these areas. The June 15, 2009, response to question 06.02.02-31 provided estimated quantities of water retained on annular space floors and walls. The response stated all of this water would eventually mix with the buffered water, and therefore the pH would remain above 7 for 30 days. It is not clear to the staff how buffered water will get to these areas.
2. The impact of any unbuffered water pools on the iodine source term, including an assessment of iodine re-evolution from the pools, and,
3. The impact of any unbuffered water pools on the design basis LOCA radiological consequences at the offsite receptors and also on control room and technical support center habitability.

RG 1.183 guidance on LOCA fission product release to the containment, including the assumptions on iodine speciation, is based on the water pools in containment maintaining a pH of 7 or higher to prevent re-evolution of iodine which has been washed out or settled in the pool (see also NUREG-1465 for the source term basis). If the pool water is not buffered, iodine would re-volatilize and would be expected to increase the amount of gaseous iodine in the containment atmosphere over what was assumed in the U.S. EPR LOCA analysis, which is based on RG 1.183. The response to RAI 242, Question 06.02.02-31 indicated all pools are eventually mixed with buffered IRWST water, but it is not clear to the staff how this mixing occurs for certain locations (such as the floors in the annular space).

Response to Question 15.00.03-39:

A response to this question will be provided by February 29, 2012.