ArevaEPRDCPEm Resource

From: BRYAN Martin (EXT) [Martin.Bryan.ext@areva.com]
Sent: Tuesday, March 16, 2010 11:41 AM
To: Tesfaye, Getachew
Cc: DELANO Karen V (AREVA NP INC); BENNETT Kathy A (OFR) (AREVA NP INC); ROMINE Judy (AREVA NP INC); GUCWA Len T (EXT)
Subject: Response to U.S. EPR Design Certification Application RAI No. 297, FSAR Ch 6, Supplement 3
Attachments: RAI 297 Supplement 3 Response US EPR DC.pdf

Getachew,

AREVA NP Inc. (AREVA NP) provided a response to 1 of the 10 questions of RAI No. 297 on November 16, 2009. AREVA NP submitted Supplement 1 to the response on December 17, 2009 to address 1 of the remaining 9 questions. AREVA NP submitted Supplement 2 to the response on February 16, 2010 to address 5 of the remaining 8 questions.

The response to Question 06.02.01-51 is dependent upon certain activities which have been rescheduled as reported in the response to RAI 266, Supplement 4. Therefore, the schedule for a technically correct and complete response to Question 06.02.01-51 is revised and provided below. The schedule for providing responses to the other two RAI questions is unchanged.

The schedule for technically correct and complete responses to the remaining 3 questions is provided below.

Question #	Response Date
RAI 297 — 06.02.01-51	May 5, 2010
RAI 297 — 06.02.02-39	April 22, 2010
RAI 297 — 06.02.02-40	April 22, 2010

Sincerely,

Martin (Marty) C. Bryan
Licensing Advisory Engineer
AREVA NP Inc.
Tel: (434) 832-3016
Martin.Bryan.ext@areva.com

From: DUNCAN Leslie E (AREVA NP INC)
Sent: Tuesday, February 16, 2010 5:20 PM
To: 'Tesfaye, Getachew'
Cc: DELANO Karen V (AREVA NP INC); BENNETT Kathy A (OFR) (AREVA NP INC); ROMINE Judy (AREVA NP INC); GUCWA Len T (EXT)
Subject: Response to U.S. EPR Design Certification Application RAI No. 297, FSAR Ch 6, Supplement 2

Getachew,

AREVA NP Inc. (AREVA NP) provided a response to 1 of the 10 questions of RAI No. 297 on November 16, 2009. AREVA NP submitted Supplement 1 to the response on December 17, 2009 to address 1 of the remaining 9 questions. The attached file, "RAI 297 Supplement 2 Response US EPR DC.pdf," provides a technically correct and complete response to 5 of the remaining 8 questions.

The following table indicates the respective pages in the response document, "RAI 297 Supplement 2 Response US EPR DC.pdf," that contain AREVA NP's response to the subject questions.

Question #	Start Page	End Page
RAI 297 — 06.02.01-49	2	3
RAI 297 — 06.02.01-50	4	22
RAI 297 — 06.02.02-37	23	23
RAI 297 — 06.02.02-38	24	24
RAI 297 — 06.02.02-39	25	25
RAI 297 — 06.02.02-40	26	26
RAI 297 — 06.02.02-41	27	27

The schedule for a technically correct and complete response to Question 06.02.01-51 is unchanged and provided below. Responses to Questions 06.02.02-39 and 06.02.02-40 are dependent upon the results of ongoing GSI-191 head loss testing, which will demonstrate sump strainer performance. Because additional testing is planned, AREVA NP is not providing a response at this time. The schedule for technically correct and complete responses to Questions 06.02.02-39 and 06.02.02-40 has been revised and is provided below.

Question #	Response Date
RAI 297 — 06.02.01-51	March 17, 2010
RAI 297 — 06.02.02-39	April 22, 2010
RAI 297 — 06.02.02-40	April 22, 2010

Sincerely,

Les Duncan
Licensing Engineer
AREVA NP Inc.
An AREVA and Siemens Company
Tel: (434) 832-2849
Leslie.Duncan@areva.com

From: WELLS Russell D (AREVA NP INC)
Sent: Thursday, December 17, 2009 10:51 AM
To: 'Getachew Tesfaye'
Cc: Pederson Ronda M (AREVA NP INC); BENNETT Kathy A (OFR) (AREVA NP INC); DELANO Karen V (AREVA NP INC)
Subject: Response to U.S. EPR Design Certification Application RAI No. 297, FSAR Ch 6, Supplement 1

Getachew,

AREVA NP Inc. (AREVA NP) provided a response to 1 of the 10 questions of RAI No. 297 on November 16, 2009. The attached file, "RAI 297 Supplement 1 Response US EPR DC.PDF" provides a technically correct and complete response to 1 of the remaining 9 questions, as committed.

The following table indicates the respective pages in the response document, "RAI 297 Supplement 1 Response US EPR DC.PDF," that contain AREVA NP's response to the subject question.

Question #	Start Page	End Page
RAI 297 — 06.02.01-52	2	6

The schedule for technically correct and complete responses to the remaining 8 questions is unchanged and provided below:

Question #	Response Date
RAI 297 — 06.02.01-49	February 16, 2010
RAI 297 — 06.02.01-50	February 16, 2010
RAI 297 — 06.02.01-51	March 17, 2010
RAI 297 — 06.02.02-37	February 16, 2010
RAI 297 — 06.02.02-38	February 16, 2010
RAI 297 — 06.02.02-39	February 16, 2010
RAI 297 — 06.02.02-40	February 16, 2010
RAI 297 — 06.02.02-41	February 16, 2010

Sincerely,

(Russ Wells on behalf of)

Ronda Pederson
ronda.pederson@areva.com
Licensing Manager, U.S. EPR Design Certification
New Plants Deployment
AREVA NP, Inc.
An AREVA and Siemens company
3315 Old Forest Road
Lynchburg, VA 24506-0935
Phone: 434-832-3694
Cell: 434-841-8788

From: Pederson Ronda M (AREVA NP INC)
Sent: Monday, November 16, 2009 5:58 PM
To: Tesfaye, Getachew
Cc: BENNETT Kathy A (OFR) (AREVA NP INC); DELANO Karen V (AREVA NP INC); GUCWA Len T (EXT)
Subject: Response to U.S. EPR Design Certification Application RAI No. 297, FSAR Ch. 6

Getachew,

Attached please find AREVA NP Inc.'s response to the subject request for additional information (RAI). The attached file, "RAI 297 Response US EPR DC.PDF" provides technically correct and complete responses to 1 of the 10 questions.

The following table indicates the respective page(s) in the response document, "RAI 297 Response US EPR DC.PDF," that contain AREVA NP's response to the subject questions.

Question #	Start Page	End Page
RAI 297 — 06.02.01-49	2	2
RAI 297 — 06.02.01-50	3	3
RAI 297 — 06.02.01-51	4	4
RAI 297 — 06.02.01-52	5	5
RAI 297 — 06.02.02-37	6	6
RAI 297 — 06.02.02-38	7	7
RAI 297 — 06.02.02-39	8	8

RAI 297 — 06.02.02-40	9	9
RAI 297 — 06.02.02-41	10	10
RAI 297 — 06.02.02-42	11	12

A complete answer is not provided for 9 of the 10 questions. The schedule for a technically correct and complete response to these questions is provided below.

Question #	Response Date
RAI 297 — 06.02.01-49	February 16, 2010
RAI 297 — 06.02.01-50	February 16, 2010
RAI 297 — 06.02.01-51	March 17, 2010
RAI 297 — 06.02.01-52	January 7, 2010
RAI 297 — 06.02.02-37	February 16, 2010
RAI 297 — 06.02.02-38	February 16, 2010
RAI 297 — 06.02.02-39	February 16, 2010
RAI 297 — 06.02.02-40	February 16, 2010
RAI 297 — 06.02.02-41	February 16, 2010

Sincerely,

Ronda Pederson
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Licensing Manager, U.S. EPR Design Certification
AREVA NP Inc.
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3315 Old Forest Road
Lynchburg, VA 24506-0935
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From: Tesfaye, Getachew [mailto:Getachew.Tesfaye@nrc.gov]
Sent: Thursday, October 15, 2009 1:40 PM
To: ZZ-DL-A-USEPR-DL
Cc: Jensen, Walton; Ashley, Clinton; Jackson, Christopher; Hammer, Charles; Terao, David; Carneal, Jason; Colaccino, Joseph; ArevaEPRDCPEm Resource
Subject: U.S. EPR Design Certification Application RAI No. 297(3759,3719,3775), FSAR Ch. 6

Attached please find the subject requests for additional information (RAI). A draft of the RAI was provided to you on September 22, 2009, and discussed with your staff on October 13, 2009. Draft RAI Question 06.02.02-41 was modified as a result of that discussion. 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: 1235

Mail Envelope Properties (BC417D9255991046A37DD56CF597DB7105916089)

Subject: Response to U.S. EPR Design Certification Application RAI No. 297, FSAR Ch 6, Supplement 3
Sent Date: 3/16/2010 11:41:09 AM
Received Date: 3/16/2010 11:41:12 AM
From: BRYAN Martin (EXT)

Created By: Martin.Bryan.ext@areva.com

Recipients:
"DELANO Karen V (AREVA NP INC)" <Karen.Delano@areva.com>
Tracking Status: None
"BENNETT Kathy A (OFR) (AREVA NP INC)" <Kathy.Bennett@areva.com>
Tracking Status: None
"ROMINE Judy (AREVA NP INC)" <Judy.Romine@areva.com>
Tracking Status: None
"GUCWA Len T (EXT)" <Len.Gucwa.ext@areva.com>
Tracking Status: None
"Tesfaye, Getachew" <Getachew.Tesfaye@nrc.gov>
Tracking Status: None

Post Office: AUSLYNCMX02.adom.ad.corp

Files	**Size**	**Date & Time**
MESSAGE	8365	3/16/2010 11:41:12 AM
RAI 297 Supplement 3 Response US EPR DC.pdf	57290	

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

Response to

Request for Additional Information No. 297, Supplement 3

10/15/2009

U. S. EPR Standard Design Certification
AREVA NP Inc.
Docket No. 52-020
SRP Section: 06.02.01 - Containment Functional Design
SRP Section: 06.02.02 - Containment Heat Removal Systems
Application Section: FSAR Chapter 6

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

Question 06.02.01-51:

The U.S. EPR FSAR presents two sets of MSLB analyses, one in Chapter 6 and one in Chapter 15. The Chapter 6 calculations are part of containment analysis, while the Chapter 15 calculations are mainly to evaluate core performance and radioactive material release. Chapter 6 addresses a break inside containment, Chapter 15 a break outside containment. The assumed single failures are also different. The Chapter 15 analysis shows that the reactor returns to power due to more severe cooldown, since 2 steam generators are blowing down. No return to power was indicated in the Chapter 6 analysis.

With postulating failure of a Main Steam Relief Control Valve (MSRCV) as the single failure in case of a MSLB inside containment, the core would return to power increasing heat input to the containment. On the other hand, the MSRCV is outside containment, energy removed through the blowdown of the second steam generator would be transferred to the atmosphere, not the containment. This is a compensating effect. The combined effect on containment pressure is not known.

Perform a containment analysis for MSLB inside containment with an assumed MSRCV failure as the single failure. Run the case that resulted in the highest return to power in Chapter 15 but assuming that the break flow enters the containment. The calculations should be run until steam flow to the containment ceases. Show that the results meet all applicable containment related requirements.

Response to Question 06.02.01-51:

A response to this question will be provided by May 5, 2010.