

ArevaEPRDCPEm Resource

From: BRYAN Martin (EXT) [Martin.Bryan.ext@areva.com]
Sent: Tuesday, June 22, 2010 1:23 PM
To: Tesfaye, Getachew
Cc: DELANO Karen V (AREVA NP INC); ROMINE Judy (AREVA NP INC); BENNETT Kathy A (OFR) (AREVA NP INC); KOWALSKI David J (AREVA NP INC)
Subject: Response to U.S. EPR Design Certification Application RAI No. 345, FSAR Ch. 9, Supplement 2
Attachments: RAI 345 Supplement 2 Response US EPR DC.pdf

Getachew,

AREVA NP Inc. provided a schedule for technically correct and complete responses to the 25 questions in RAI No. 345 on April 2, 2010. Supplement 1 response to RAI No. 345 was sent on June 4, 2010 to provide a revised schedule.

The attached file, "RAI 345 Supplement 2 Response US EPR DC.pdf" provides technically correct and complete responses to two of the questions, as committed.

The following table indicates the respective pages in the response document, "RAI 345 Supplement 2 Response US EPR DC.pdf," that contain AREVA NP's response to the subject questions.

Question #	Start Page	End Page
RAI 345 — 09.02.01-37	2	3
RAI 345 — 09.02.01-40	4	4

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

Question #	Response Date
RAI 345 — 09.02.01-26	July 22, 2010
RAI 345 — 09.02.01-27	July 22, 2010
RAI 345 — 09.02.01-28	July 22, 2010
RAI 345 — 09.02.01-29	July 8, 2010
RAI 345 — 09.02.01-30	July 8, 2010
RAI 345 — 09.02.01-31	July 22, 2010
RAI 345 — 09.02.01-32	July 22, 2010
RAI 345 — 09.02.01-33	July 22, 2010
RAI 345 — 09.02.01-34	July 8, 2010
RAI 345 — 09.02.01-35	July 22, 2010
RAI 345 — 09.02.01-36	July 22, 2010
RAI 345 — 09.02.01-38	July 22, 2010
RAI 345 — 09.02.01-39	July 22, 2010
RAI 345 — 09.02.01-41	July 22, 2010
RAI 345 — 09.02.01-42	July 8, 2010
RAI 345 — 09.02.01-43	July 8, 2010
RAI 345 — 09.02.01-44	July 8, 2010
RAI 345 — 09.02.01-45	July 8, 2010
RAI 345 — 09.02.01-46	July 8, 2010
RAI 345 — 09.02.01-47	July 22, 2010
RAI 345 — 09.02.01-48	July 22, 2010
RAI 345 — 09.02.01-49	July 22, 2010

Sincerely,

Martin (Marty) C. Bryan
 U.S. EPR Design Certification Licensing Manager
 AREVA NP Inc.
 Tel: (434) 832-3016
 702 561-3528 cell
Martin.Bryan.ext@areva.com

From: BRYAN Martin (EXT)

Sent: Friday, June 04, 2010 2:04 PM

To: 'Tesyfaye, Getachew'

Cc: DELANO Karen V (AREVA NP INC); ROMINE Judy (AREVA NP INC); BENNETT Kathy A (OFR) (AREVA NP INC); KOWALSKI David J (AREVA NP INC)

Subject: Response to U.S. EPR Design Certification Application RAI No. 345, FSAR Ch. 9, Supplement 1

Getachew,

AREVA NP Inc. provided a schedule for technically correct and complete responses to the 25 questions in RAI No. 345 on April 2, 2010.

The responses to the questions in RAI 345 are in various stages of preparation or review with the NRC. The revised response dates below are relative to the where the question is in this process.

The schedule for technically correct and complete responses to the questions has been changed as provided below:

Question #	Response Date
RAI 345 — 09.02.01-26	July 22, 2010
RAI 345 — 09.02.01-27	July 22, 2010
RAI 345 — 09.02.01-28	July 22, 2010
RAI 345 — 09.02.01-29	July 8, 2010
RAI 345 — 09.02.01-30	July 8, 2010
RAI 345 — 09.02.01-31	July 22, 2010
RAI 345 — 09.02.01-32	July 22, 2010
RAI 345 — 09.02.01-33	July 22, 2010
RAI 345 — 09.02.01-34	July 8, 2010
RAI 345 — 09.02.01-35	July 22, 2010
RAI 345 — 09.02.01-36	July 22, 2010
RAI 345 — 09.02.01-37	June 22, 2010
RAI 345 — 09.02.01-38	July 22, 2010
RAI 345 — 09.02.01-39	July 22, 2010
RAI 345 — 09.02.01-40	June 22, 2010
RAI 345 — 09.02.01-41	July 22, 2010
RAI 345 — 09.02.01-42	July 8, 2010
RAI 345 — 09.02.01-43	July 8, 2010
RAI 345 — 09.02.01-44	July 8, 2010
RAI 345 — 09.02.01-45	July 8, 2010
RAI 345 — 09.02.01-46	July 8, 2010
RAI 345 — 09.02.01-47	July 22, 2010
RAI 345 — 09.02.01-48	July 22, 2010

RAI 345 — 09.02.01-49	July 22, 2010
RAI 345 — 09.02.01-50	July 8, 2010

Sincerely,

Martin (Marty) C. Bryan
U.S. EPR Design Certification Licensing Manager
AREVA NP Inc.
Tel: (434) 832-3016
702 561-3528 cell
Martin.Bryan.ext@areva.com

From: BRYAN Martin (EXT)
Sent: Friday, April 02, 2010 5:34 PM
To: 'Tefaye, Getachew'
Cc: DELANO Karen V (AREVA NP INC); ROMINE Judy (AREVA NP INC); BENNETT Kathy A (OFR) (AREVA NP INC); KOWALSKI David J (AREVA NP INC); WILLIFORD Dennis C (AREVA NP INC)
Subject: Response to U.S. EPR Design Certification Application RAI No. 345 (4021), FSAR Ch. 9

Getachew,

Attached please find AREVA NP Inc.'s response to the subject request for additional information (RAI). The attached file, "RAI 345 Response US EPR DC," provides a schedule since technically correct and complete responses to the twenty five questions are not provided.

The following table indicates the respective pages in the response document, "RAI 345 Response US EPR DC.pdf," that contain AREVA NP's response to the subject questions.

Question #	Start Page	End Page
RAI 345 — 09.02.01-26	2	3
RAI 345 — 09.02.01-27	4	4
RAI 345 — 09.02.01-28	5	6
RAI 345 — 09.02.01-29	7	7
RAI 345 — 09.02.01-30	8	8
RAI 345 — 09.02.01-31	9	9
RAI 345 — 09.02.01-32	10	10
RAI 345 — 09.02.01-33	11	11
RAI 345 — 09.02.01-34	12	13
RAI 345 — 09.02.01-35	14	15
RAI 345 — 09.02.01-36	16	17
RAI 345 — 09.02.01-37	18	18
RAI 345 — 09.02.01-38	19	19
RAI 345 — 09.02.01-39	20	20
RAI 345 — 09.02.01-40	21	21
RAI 345 — 09.02.01-41	22	22
RAI 345 — 09.02.01-42	23	23
RAI 345 — 09.02.01-43	24	24
RAI 345 — 09.02.01-44	25	25
RAI 345 — 09.02.01-45	26	26
RAI 345 — 09.02.01-46	27	27
RAI 345 — 09.02.01-47	28	28
RAI 345 — 09.02.01-48	29	29

RAI 345 — 09.02.01-49	30	31
RAI 345 — 09.02.01-50	32	32

The schedule for a technically correct and complete response to these questions is provided below.

Question #	Response Date
RAI 345 — 09.02.01-26	June 4, 2010
RAI 345 — 09.02.01-27	June 4, 2010
RAI 345 — 09.02.01-28	June 4, 2010
RAI 345 — 09.02.01-29	June 4, 2010
RAI 345 — 09.02.01-30	June 4, 2010
RAI 345 — 09.02.01-31	June 4, 2010
RAI 345 — 09.02.01-32	June 4, 2010
RAI 345 — 09.02.01-33	June 4, 2010
RAI 345 — 09.02.01-34	June 4, 2010
RAI 345 — 09.02.01-35	June 4, 2010
RAI 345 — 09.02.01-36	June 4, 2010
RAI 345 — 09.02.01-37	June 4, 2010
RAI 345 — 09.02.01-38	June 4, 2010
RAI 345 — 09.02.01-39	June 4, 2010
RAI 345 — 09.02.01-40	June 4, 2010
RAI 345 — 09.02.01-41	June 4, 2010
RAI 345 — 09.02.01-42	June 4, 2010
RAI 345 — 09.02.01-43	June 4, 2010
RAI 345 — 09.02.01-44	June 4, 2010
RAI 345 — 09.02.01-45	June 4, 2010
RAI 345 — 09.02.01-46	June 4, 2010
RAI 345 — 09.02.01-47	June 4, 2010
RAI 345 — 09.02.01-48	June 4, 2010
RAI 345 — 09.02.01-49	June 4, 2010
RAI 345 — 09.02.01-50	June 4, 2010

Sincerely,

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

From: Tesfaye, Getachew [mailto:Getachew.Tesfaye@nrc.gov]
Sent: Thursday, March 04, 2010 2:49 PM
To: ZZ-DL-A-USEPR-DL
Cc: Wheeler, Larry; Lee, Samuel; Segala, John; Hearn, Peter; Colaccino, Joseph; ArevaEPRDCPEm Resource
Subject: U.S. EPR Design Certification Application RAI No. 345 (4021), FSAR Ch. 9

Attached please find the subject requests for additional information (RAI). A draft of the RAI was provided to you on December 10, 2009, and discussed with your staff on March 4, 2010. Draft RAI Questions 09.02.01-31, 09.02.01-47, and 09.02.01-48 were 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: 1585

Mail Envelope Properties (BC417D9255991046A37DD56CF597DB71069C7A3A)

Subject: Response to U.S. EPR Design Certification Application RAI No. 345, FSAR Ch. 9, Supplement 2
Sent Date: 6/22/2010 1:22:59 PM
Received Date: 6/22/2010 1:23:47 PM
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

"ROMINE Judy (AREVA NP INC)" <Judy.Romine@areva.com>

Tracking Status: None

"BENNETT Kathy A (OFR) (AREVA NP INC)" <Kathy.Bennett@areva.com>

Tracking Status: None

"KOWALSKI David J (AREVA NP INC)" <David.Kowalski@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	8446	6/22/2010 1:23:47 PM
RAI 345 Supplement 2 Response US EPR DC.pdf		65421

Options

Priority: Standard

Return Notification: No

Reply Requested: No

Sensitivity: Normal

Expiration Date:

Recipients Received:

Response to

Request for Additional Information No. 345, Supplement 2

3/04/2010

U.S. EPR Standard Design Certification

AREVA NP Inc.

Docket No. 52-020

SRP Section: 09.02.01 - Station Service Water System

Application Section: 9.2.1

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

Question 09.02.01-37:

Follow-up to RAI 119, Question 9.2.1-11

The ESWS must be capable of removing heat from SSCs important to safety during normal operating and accident conditions over the life of the plant in accordance with GDC 44 requirements. Also, 10 CFR 52.47(a)(22) requires that information demonstrating the incorporation of operating experience insights into the plant design be included in the FSAR. During a recent review of industry operating experience, the staff found that some licensees were experiencing significant wall thinning of pipe downstream of butterfly valves that were being used to throttle service water flow. In order to assure that this will not occur in the ESWS for the EPR design, the applicant needs to provide additional information in Tier 2 FSAR Section 9.2.1 to describe the extent to which the butterfly valves will be used to throttle ESWS flow and the design provisions that will be implemented to prevent consequential pipe wall thinning from occurring.

Based on the staff's review of response to RAI 119, Question 9.2.1-11 and an audit by the staff conducted on October 27, 2009, this item remains open and requires further resolution and/or clarification by the applicant. The following description provides the results of the staff's evaluation of the applicant's initial response and justification for the item remaining open.

The applicant should consider the use of non-destructive examinations (NDE) in the determination of the pipe wall thinning condition during the life of the plant. The applicant should also consider treating this information as a COL information item.

Response to Question 09.02.01-37:

The ASME Code Class portions of the essential service water system (ESWS) piping are inspected and maintained in accordance with Section XI of the ASME Boiler and Pressure Vessel Code. The ASME Section XI Program for Class 2 and 3 components is described in U.S. EPR FSAR Tier 2, Section 6.6.

Implementation of the ASME Section XI Program is the responsibility of the COL applicant. This activity will be implemented by an existing COL information item, which is included in U.S. EPR FSAR Tier 2, Table 1.8-2—U.S. EPR Combined License Information Items as Combined License Information Item #6.6-1:

“A COL applicant that references the U.S. EPR design certification will identify the implementation milestones for the site-specific ASME Section XI preservice and inservice inspection program for the Class 2 and Class 3 components, consistent with the requirements of 10 CFR 50.55a (g). The program will identify the applicable edition and addenda of the ASME Code Section XI, and will identify additional relief requests and alternatives to Code requirements.”

Implementation of other piping inspection programs that may be required during operation due to regulatory or industry concerns, such as those cited in this question, are the responsibility of the plant licensee.

FSAR Impact:

The U.S. EPR FSAR will not be changed as a result of this question.

Question 09.02.01-40:

Follow-up to RAI 119, Question 9.2.1-15

Criteria are specified in 10 CFR 50.36 for establishing Technical Specification (TS) requirements. Proposed TS requirements are evaluated in part to confirm consistency with the Standard TS (STS) requirements that have been established as reflected in NUREG 1431 "Standard Technical Specifications Westinghouse Plants," Rev. 3. EPR TS 3.7.8, "Essential Service Water (ESW) System," provides limiting conditions for operation (LCO) and surveillance requirements (SR) for the ESWS and the UHS. The staff noted that TS 3.7.8 is misleading in that it includes requirements for both the ESWS and the UHS, while the TS title only refers to the ESWS. Therefore, the applicant should revise the title for TS 3.7.8 to also include the UHS.

Based on the staff's review of response to RAI 119, Question 9.2.1-15 and an audit by the staff conducted on October 27, 2009, this item remains open and requires further resolution and/or clarification by the applicant. The following description provides the results of the staff's evaluation of the applicant's initial response and justification for the item remaining open.

During the staff review of the applicant's response to RAI 119, it was determined that the applicant's response to RAI 119 conflicted with the applicant's response to RAI 166. The staff noted that the resulting FSAR markup in response to RAI 166 had split out T.S. 3.7.8 into two different sections, UHS (TS 3.7.19) and ESWS (TS 3.7.8). The staff considers the response to RAI 166 to sufficiently address the staff's question. Therefore, the applicant should revise its response to RAI 119 to be consistent with the response to RAI 166.

Response to Question 09.02.01-40:

In the Response to RAI 166, Supplement 1, Question 16-291, the essential service water system (ESWS) and ultimate heat sink (UHS) Technical Specifications were separated into two separate Limited Conditions for Operations (LCO). The ESWS retained the U.S. EPR FSAR Tier 2, Chapter 16, Technical Specification LCO 3.7.8 and the UHS was moved to U.S. EPR FSAR Tier 2, Chapter 16, Technical Specification LCO 3.7.19. The U.S. EPR FSAR Tier 2, Chapter 16 Bases sections for these LCOs were modified or added for the associated discussions.

The Response to RAI 166, Supplement 1, Question 16-291 supersedes the Response to RAI 119, Question 09.02.01-15.

FSAR Impact:

The U.S. EPR FSAR will not be changed as a result of this question.