ArevaEPRDCPEm Resource

From: Pederson Ronda M (AREVA NP INC) [Ronda.Pederson@areva.com]
Sent: Friday, March 20, 2009 5:40 PM
To: Getachew Tesfaye
Cc: BENNETT Kathy A (OFR) (AREVA NP INC); DELANO Karen V (AREVA NP INC); DUNCAN Leslie E (AREVA NP INC)
Subject: Response to U.S. EPR Design Certification Application RAI No. 124, Supplement 2
Attachments: RAI 124 Supplement 2 Response US EPR DC.pdf

Getachew,

AREVA NP Inc. (AREVA NP) provided a schedule for responding to the 3 questions of RAI No. 124 on December 9, 2008. AREVA NP submitted Supplement 1 to the response on February 11, 2009 to address 2 of the remaining 3 questions. The attached file, "RAI 124 Supplement 2 Response US EPR DC.pdf" provides a technically correct and complete response to the remaining question, as committed.

The following table indicates the respective pages in the response document, "RAI 124 Supplement 2 Response US EPR DC.pdf," that contain AREVA NP's response to the subject question.

Question #	Start Page	End Page
RAI 124 — 14.03.02-10	2	3

This concludes the formal AREVA NP response to RAI 124, and there are no questions from this RAI for which AREVA NP has not provided responses.

Sincerely,

Ronda Pederson
ronda.pederson@areva.com
Licensing Manager, U.S. EPR Design Certification
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: Wednesday, February 11, 2009 4:31 PM
To: 'Getachew Tesfaye'
Cc: DUNCAN Leslie E (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. 124, Supplement 1

Getachew,

AREVA NP Inc. provided a schedule for responding to the 3 questions of RAI No. 124 on December 9, 2008. The attached file, "RAI 124 Supplement 1 Response US EPR DC.pdf" provides technically correct and complete responses to 2 of the 3 questions, as committed.

Appended to this file are affected pages of the U.S. EPR Final Safety Analysis Report in redline-strikeout format which support the response to RAI 124 Question 14.03.04-1.

The following table indicates the respective pages in the response document, "RAI 124 Supplement 1 Response US EPR DC.pdf," that contain AREVA NP's response to the subject questions.

Question #	Start Page	End Page
RAI 124 — 14.03.04-1	2	3
RAI 124 — 14.03.11-3	4	4

The schedule for a technically correct and complete response to the remaining question is unchanged and provided below:

Question #	**Response Date**
RAI 124 — 14.03.02-10	March 20, 2009

Sincerely,

Ronda Pederson
ronda.pederson@areva.com
Licensing Manager, U.S. EPR Design Certification
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: WELLS Russell D (AREVA NP INC)
Sent: Tuesday, December 09, 2008 2:42 PM
To: 'Getachew Tesfaye'
Cc: 'John Rycyna'; 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. 124, FSAR Ch 14

Getachew,

Attached please find AREVA NP Inc.'s response to the subject request for additional information (RAI). The attached file, "RAI 124 Response US EPR DC.pdf" provides technically correct and complete responses to none of the 3 questions.

The following table indicates the respective pages in the response document, "RAI 124 Response US EPR DC.pdf," that contain AREVA NP's response to the subject questions.

Question #	**Start Page**	**End Page**
RAI 124 — 14.03.02-10	2	2
RAI 124 — 14.03.04-1	3	3
RAI 124 — 14.03.11-3	4	4

A complete answer is not provided for the 3 questions. The schedule for a technically correct and complete response to these questions is provided below.

Question #	Response Date
RAI 124 — 14.03.02-10	March 20, 2009
RAI 124 — 14.03.04-1	February 11, 2009
RAI 124 — 14.03.11-3	February 11, 2009

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: Getachew Tesfaye [mailto:Getachew.Tesfaye@nrc.gov]
Sent: Monday, November 10, 2008 4:06 PM
To: ZZ-DL-A-USEPR-DL
Cc: David Jeng; Sujit Samaddar; Allison Black; David Terao; Anne-Marie Grady; Christopher Jackson; Michael Miernicki; Joseph Colaccino; John Rycyna
Subject: U.S. EPR Design Certification Application RAI No. 124 (948, 1420,1509), FSAR Ch. 14

Attached please find the subject requests for additional information (RAI). A draft of the RAI was provided to you on October 24, 2008, and discussed with your staff on November 10, 2008. No change was made to the draft RAI 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: 323

Mail Envelope Properties (5CEC4184E98FFE49A383961FAD402D31C2ECD7)

Subject: Response to U.S. EPR Design Certification Application RAI No. 124, Supplement 2
Sent Date: 3/20/2009 5:40:29 PM
Received Date: 3/20/2009 5:40:30 PM
From: Pederson Ronda M (AREVA NP INC)

Created By: Ronda.Pederson@areva.com

Recipients:
"BENNETT Kathy A (OFR) (AREVA NP INC)" <Kathy.Bennett@areva.com>
Tracking Status: None
"DELANO Karen V (AREVA NP INC)" <Karen.Delano@areva.com>
Tracking Status: None
"DUNCAN Leslie E (AREVA NP INC)" <Leslie.Duncan@areva.com>
Tracking Status: None
"Getachew Tesfaye" <Getachew.Tesfaye@nrc.gov>
Tracking Status: None

Post Office: AUSLYNCMX02.adom.ad.corp

Files	**Size**	**Date & Time**
MESSAGE	5537	3/20/2009 5:40:30 PM
RAI 124 Supplement 2 Response US EPR DC.pdf	61523	

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

Response to

Request for Additional Information No. 124, Supplement 2

11/10/2008

U. S. EPR Standard Design Certification
AREVA NP Inc.
Docket No. 52-020
SRP Section: 14.03.02 - Structural and Systems Engineering - Inspections, Tests, Analyses, and Acceptance Criteria
SRP Section: 14.03.04 - Reactor Systems - Inspections, Tests, Analyses, and Acceptance Criteria
SRP Section: 14.03.11 - Containment Systems and Severe Accidents - Inspections, Tests, Analyses, and Acceptance Criteria
Application Section: EPR FSAR Section 14.3

QUESTIONS for Structural Engineering Branch 2 (ESBWR/ABWR Projects) (SEB2)
QUESTIONS for Component Integrity, Performance, and Testing Branch 1 (AP1000/EPR Projects) (CIB1)
QUESTIONS for Containment and Ventilation Branch 1 (AP1000/EPR Projects) (SPCV)

Question 14.03.02-10:

(1) In Tier 1, Table 2.1.1-7, item 4.2 under the column titled Commitment Wording it states that the NI structures are constructed to withstand design basis loads as specified in Section 2.1.1.The section referenced does not contain all design basis loads, such as earthquake and flood which are required under GDC 2. Section 2.1.1 should be revised to contain all design basis loads required for NI structures.

(2) In Tier 1, Table 2.1.1-7, item 4.2, under the column titled Inspection, Analysis or Test, it states that a verification inspection of the NI structures design analysis versus construction records will be performed. Please indicate what the design analysis includes and whether or not it includes all approved design basis documents such as design specifications, design drawings, and design reports. Also indicate if a comparison of these design basis documents with the construction records will include an inspection of the as-built condition.

(3) In Tier 1, Table 2.1.2-2, item 4.3 for the EPGB and Table 2.1.5-2, item 4.3 for the ESWB, under the column titled Inspection, Analysis, or Test, it states that a verification of the structures seismic design analysis versus construction records will be performed. In Tier 1, Section 2.1.2 for the EPGB and Tier 1, Section 2.1.5 for the ESWB each structure is to be designed for external loads including loads due to SSE earthquake, tornado, missiles, and flood. Please indicate what the seismic design analysis includes and whether or not all required design loads, approved design basis documents such as design specifications, design drawings, and design reports will be included in a comparison with the construction records. Also indicate if a comparison of these design basis documents with the construction records will include an inspection of the as-built condition.

Response to Question 14.03.02-10:

U.S. EPR FSAR Tier 1, Section 2.1 was significantly revised in the Response to RAI 132, Question 14.03.02-11. Also refer to the Response to RAI 115, Question 14.03.02-2 and RAI 109, Question 03.05.01-01.1g for previous revisions to U.S. EPR FSAR Tier 1, Section 2.1.

1) U.S. EPR FSAR Tier 2, Section 3.1.1.2 discusses the U.S. EPR compliance with GDC 2. As stated in this section, the U.S. EPR design envelopes the natural phenomena of expected sites.

   U.S. EPR FSAR Tier 1, Section 2.1.1.1, Section 2.1.1.2, Section 2.1.1.3, Section 2.1.2, and Section 2.1.5 that were revised in the Response to RAI 132, Question 14.03.02-11 list the U.S. EPR design basis loads (including earthquake and flood) as required under GDC 2. The U.S. EPR design does not explicitly consider loads due to hurricanes, tsunami, and seiches (as listed in GDC 2) for design certification purposes as they are either enveloped by design basis loads already considered in design or are not typical for expected sites. A COL applicant that references the U.S. EPR design certification will evaluate the potential for such natural phenomena and their potential impact on the design of the U.S. EPR as discussed in the U.S. EPR FSAR Tier 2, Section 2.5.

2) The previous U.S. EPR FSAR Tier 1, Table 2.1.1-7, Item 4.2 was revised in the Response to RAI 132, Question 14.03.02-11 and is now in U.S. EPR FSAR Tier 1, Table 2.1.1-8, Item 2.4, Table 2.1.1-10, Item 2.1, and Table 2.1.1-11, Item 2.1 (see the ITAAC mapping table in the Response to RAI 132, Question 14.03.02-11). The inspection, test, and analysis for these items have been split into two parts. The first part is an analysis of the structure for

design basis loads, which includes design basis documents such as design specifications, design drawings, and design reports. The second part is a reconciliation of deviations during construction to verify that the as-installed structures are designed and constructed to withstand design basis loads.

3) The previous U.S. EPR FSAR Tier 1, Table 2.1.2-2, Item 4.3 for the Emergency Power Generating Building (EPGB) and U.S. EPR FSAR Tier 1, Table 2.1.5-2, Item 4.3 for the Essential Service Water Building (ESWB) were revised in the Response to RAI 132, Question 14.03.02-11 and is now in U.S. EPR FSAR Tier 1, Table 2.1.2-3, Item 3.4 and Table 2.1.5-3, Item 3.5 respectively (see the ITAAC mapping table in the Response to RAI 132, Question 14.03.02-11). The inspection, test, and analysis for these items have been split into two parts. The first part is an analysis of the structure for design basis loads, which includes design basis documents such as design specifications, design drawings, and design reports. The second part is a reconciliation of deviations during construction to ensure that the as-installed structures are designed and constructed to withstand design basis loads.

FSAR Impact:

U.S. EPR FSAR Tier 1, Section 2.1 was significantly revised as described in the Response to RAI 132, Question 14.03.02-11.