

ArevaEPRDCPEm Resource

From: WELLS Russell D (AREVA NP INC) [Russell.Wells@areva.com]
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
Attachments: RAI 124 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 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: 22

Mail Envelope Properties (1F1CC1BBDC66B842A46CAC03D6B1CD41D57B16)

Subject: Response to U.S. EPR Design Certification Application RAI No. 124, FSAR Ch 14
Sent Date: 12/9/2008 2:42:14 PM
Received Date: 12/9/2008 2:42:21 PM
From: WELLS Russell D (AREVA NP INC)
Created By: Russell.Wells@areva.com

Recipients:

"John Rycyna" <John.Rycyna@nrc.gov>
Tracking Status: None
"Pederson Ronda M (AREVA NP INC)" <Ronda.Pederson@areva.com>
Tracking Status: None
"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
"Getachew Tesfaye" <Getachew.Tesfaye@nrc.gov>
Tracking Status: None

Post Office: AUSLYNCMX02.adom.ad.corp

Files	Size	Date & Time
MESSAGE	2449	12/9/2008 2:42:21 PM
RAI 124 Response US EPR DC.pdf		63785

Options

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

Response to

Request for Additional Information No. 124 (948, 1420, 1509), Revision 0

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:

A response to this question will be provided by March 20, 2009.

Question 14.03.04-1:

10 CFR 52.47(b)(1) requires that a DC application contain the proposed inspections, tests, analyses, and acceptance criteria (ITAAC) that are necessary and sufficient to provide reasonable assurance that, if the inspections, tests, and analyses are performed and the acceptance criteria met, a plant that incorporates the design certification is built and should operate in accordance with the design certification, the provisions of the Atomic Energy Act, and the NRC's regulations. Table 2.2.1-5 "RCS Inspections, Tests, Analyses, and Acceptance Criteria" of the U.S. EPR FSAR provides design commitments related to the reactor pressure vessel (RPV) system. However, the staff finds that additional design commitments are needed in order for the EPR DC to meet 10 CFR 52.47(b)(1) as it relates to the RPV system. Specifically, ITAAC relating to the following areas should be addressed in Table 2.2.1-5:

- a. Key dimensions of the as-built RPV
- b. ASME Code Section III requirements for pressure boundary welds in ASME Code Section III components
- c. Pressure boundary integrity under internal pressure during service of ASME Code Section III components
- d. RPV material surveillance program (i.e., material types of specimens and bracket locations)

Please provide ITAAC for the above design features to ensure that the reactor vessel is constructed in accordance with the design certification.

Response to Question 14.03.04-1:

A response to this question will be provided by February 11, 2009.

Question 14.03.11-3:

FSAR Tier 2, section 6.2.5.2.2, Hydrogen Monitoring System (HMS), describes both the low range HMS system and the high range HMS system which provide hydrogen concentration displays and alarms in the main control room (MCR). Hydrogen concentration in containment is identified as a safety significant feature in FSAR Table 14.3-7, indicating that there should be an associated ITAAC for this HMS instrumentation.

The low range and the high range HMS monitors in the MCR should be added to FSAR Tier 2, Table 18.7-1, Minimum Inventory of Main Control Room Fixed Alarms, Displays, and Controls, to both display and alarm. The low range and the high range HMS monitors should be added to FSAR Tier 1, Table 2.4.14-2, Hydrogen Monitoring System ITAAC, providing an ITAAC that will confirm that they both alarm and display in the MCR.

Response to Question 14.03.11-3:

A response to this question will be provided by February 11, 2009.