ArevaEPRDCPEm Resource

From: Pederson Ronda M (AREVA NP INC) [Ronda.Pederson@areva.com]
Sent: Wednesday, March 11, 2009 3:07 PM
To: Getachew Tesfaye
Cc: DELANO Karen V (AREVA NP INC); BENNETT Kathy A (OFR) (AREVA NP INC); DUNCAN Leslie E (AREVA NP INC)
Subject: Response to U.S. EPR Design Certification Application RAI No. 186 (2017), FSARCh. 5
Attachments: RAI 186 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 186 Response US EPR DC.pdf" provides a technically correct and complete response to the one question.

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 186 Question 05.02.04-4.

The following table indicates the respective page in the response document, "RAI 186 Response US EPR DC.pdf," that contains AREVA NP's response to the subject question.

Question #	Start Page	End Page
RAI 186 — 05.02.04-4	2	2

This concludes the formal AREVA NP response to RAI 186, 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: Getachew Tesfaye [mailto:Getachew.Tesfaye@nrc.gov]
Sent: Wednesday, February 11, 2009 6:20 PM
To: ZZ-DL-A-USEPR-DL
Cc: Timothy Steingass; David Terao; Tarun Roy; Joseph Colaccino; ArevaEPRDCPEm Resource
Subject: U.S. EPR Design Certification Application RAI No. 186 (2017), FSARCh. 5

Attached please find the subject requests for additional information (RAI). A draft of the RAI was provided to you on February 5, 2009, and on February 11, 2009, 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: 305

Mail Envelope Properties (5CEC4184E98FFE49A383961FAD402D31BBFD94)

Subject: Response to U.S. EPR Design Certification Application RAI No. 186 (2017), FSARCh. 5
Sent Date: 3/11/2009 3:06:46 PM
Received Date: 3/11/2009 3:06:49 PM
From: Pederson Ronda M (AREVA NP INC)

Created By: Ronda.Pederson@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
"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	2268	3/11/2009 3:06:49 PM
RAI 186 Response US EPR DC.pdf	107797	

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

Response to

Request for Additional Information No. 186 (2017), Revision 0

02/11/2009

U. S. EPR Standard Design Certification
AREVA NP Inc.
Docket No. 52-020
SRP Section: 05.02.04 - Reactor Coolant Pressure Boundary Inservice Inspection and Testing
Application Section: Section 5.2.4.1.10

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

Question 05.02.04-4:

The U.S. EPR FSAR, Section 5.2.4.1.10 states, "The ISI program includes provisions to detect and correct potential RCPB corrosion caused by boric acid leaks, as described in Generic Letter 88-05." Please expand the information in the FSAR to provide a sufficient level of detail describing your specific provisions and how they detect and correct potential RCPB corrosion caused by boric acid leaks in order for the staff to make a reasonable assurance finding of the acceptability of this aspect of the operational program.

Response to Question 05.02.04-4:

As specified in U.S. EPR FSAR Tier 2, Section 5.2.4.1.1, “The U.S. EPR design provides ready access to systems, structures and components (SSC) to accommodate comprehensive inspection using currently available inspection equipment and techniques. The accessibility incorporated into the design conforms with IWA-1500 and the requirements of 10 CFR 50.55a (g)(3)(i).”

The components and welds requiring inservice inspection (ISI) have design features that allow ready inspection, as specified in U.S. EPR FSAR Tier 2, Section 5.2.4.1.1. Removable insulation is used on piping and components requiring volumetric and surface inspection (for example areas that may be sensitive to reactor coolant pressure boundary (RCPB) corrosion due to boric acid leaks). These design features permit inspection of the RCPB in accordance with GDC 32.

From U.S. EPR FSAR Tier 2, Section 5.2.4.1.3, ISI is intended to be performed during normal plant outages, such as refueling or maintenance shutdowns. Inspection scheduling for Class 1 components is in accordance with requirements of Section XI of the ASME code. Resolution of unacceptable results will be answered by supplemental examination, repair, replacement or acceptance by analytical evaluation (U.S. EPR FSAR Tier 2, Section 5.2.4.1.4).

U.S. EPR FSAR Tier 2, Section 5.2.5 describes the RCPB leakage detection systems. These systems are used in the frame of detection of potential RCPB corrosion caused by boric acid leakage. The RCPB leakage detection systems conform to the guidance of RG 1.45 regarding detection, monitoring quantifying and identification of reactor coolant leakage (GDC 30) and are designed to conform to RG 1.29.

U.S. EPR FSAR Tier 2, Section 5.2.4.1.10 will be revised to add the following statements:

“The ISI program for the U.S. EPR regarding potential RCPB corrosion due to boric acid leaks includes regular visual inspections as specified in Sections 5.2.4.1.1 through 5.2.4.1.4 and use of the RCPB leakage detection systems as described in Section 5.2.5.”

FSAR Impact:

U.S. EPR FSAR Tier 2, Section 5.2 will be revised as described in the response and indicated on the enclosed markup.

U.S. EPR Final Safety Analysis Report Markups

5.2.4.1.9 Augmented ISI to Protect Against Postulated Piping Failures

No Class 1 piping penetrates the Reactor Building. Therefore, augmented ISI to protect against postulated failures of Class 1 piping between containment isolation valves is not required for the U.S. EPR. Refer to Section 6.6 for a description of augmented ISI for Class 2 high energy piping.

05.02.04-4

5.2.4.1.10 Other Inspection Programs

The ISI program includes provisions to detect and correct potential RCPB corrosion caused by boric acid leaks, as described in NRC generic letter 88-05. The ISI program for the U.S. EPR regarding potential RCPB corrosion due to boric acid leaks includes regular visual inspections as specified in Sections 5.2.4.1.1 through 5.2.4.1.4 and use of RCPB leakage detection systems as described in Section 5.2.5.

The ISI program includes supplemental inservice inspections for the reactor pressure vessel head consistent with those inspections required by NRC order EA-03-009 and first revised order EA-03-009.

5.2.4.2 Preservice Inspection and Testing Program

The PSI program for Class 1 components conforms to the guidelines of Article NB-5280 of Section III, Division I, of the ASME code. The program consists of inspecting Class 1 components initially selected for the ISI program described in Section 5.2.4.1, with the exceptions of pressure testing the pressure retaining components (examination category B-P of Table IWB-2500-1) and visual VT-3 examination of the internal surfaces of the pump casings and valve bodies (examination categories B-L-2 and B-M-2 of Table IWB-2500-1).

In accordance with the provisions of IWB-3112(b), a component whose preservice volumetric or surface examination (in accordance with IWB-2200) detects flaws that meet the nondestructive examination standards of NB-2500 and NB-5300 is acceptable for service. A component whose preservice volumetric or surface examination (in accordance with IWB-2200) detects flaws, other than those determined acceptable by the provisions of IWB-3112(b), that exceed the standards of Table IWB-3410-1 must be corrected by a repair/replacement activity to the extent necessary to meet the acceptance standards prior to placing the component in service.

A component whose preservice visual examination detects the relevant conditions described in the standards of Table IWB-3410-1, unless such components are shown by supplemental volumetric or surface examinations to meet the requirements for those supplemental examinations (IWB-3110), must be corrected by a repair/ replacement activity or by corrective measures to the extent necessary to meet the acceptance standards of Table IWB-3410-1.