

ArevaEPRDCPEm Resource

From: WILLIFORD Dennis (AREVA) [Dennis.Williford@areva.com]
Sent: Wednesday, June 22, 2011 3:14 PM
To: Tesfaye, Getachew
Cc: BENNETT Kathy (AREVA); DELANO Karen (AREVA); ROMINE Judy (AREVA); RYAN Tom (AREVA); NOXON David (AREVA)
Subject: Response to U.S. EPR Design Certification Application RAI No. 47, FSAR Ch 18, Supplement 2
Attachments: RAI 47 Supplement 2 Response US EPR DC.pdf
Importance: High

Getachew,

AREVA NP Inc. provided responses to 24 of the 25 questions of RAI No. 47 on September 22, 2008. AREVA NP submitted RAI 47 Supplement 1 to provide a technically correct and complete response to the one remaining question on October 3, 2008.

Based on NRC staff feedback to revise the response to Question 18-29 and that an exemption request is not needed, the attached file, "RAI 47 Supplement 2 Response US EPR DC.pdf" provides a revised technically correct and complete FINAL response to Question 18-29. A letter will follow to formally withdraw the request for an exemption from 10 CFR 50.34(f)(2)(iv).

The following table indicates the respective pages in the response document, RAI 47 Supplement 2 Response US EPR DC.pdf," that contains AREVA NP's response to the subject question.

Question #	Start Page	End Page
RAI 47 — 18-29	2	3

This concludes the formal AREVA NP response to RAI 47, and there are no questions from this RAI for which AREVA NP has not provided responses.

Sincerely,

Dennis Williford, P.E.
U.S. EPR Design Certification Licensing Manager
AREVA NP Inc.

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From: Pederson Ronda M (AREVA NP INC)
Sent: Friday, October 03, 2008 6:42 PM
To: 'Getachew Tesfaye'
Cc: DUNCAN Leslie E (AREVA NP INC); WELLS Russell D (AREVA NP INC); DELANO Karen V (AREVA NP INC); BENNETT Kathy A (OFR) (AREVA NP INC)
Subject: Response to U.S. EPR Design Certification Application RAI No. 47, FSAR Ch 18, Supplement 1

Getachew,

AREVA NP Inc. provided responses to 24 of the 25 questions of RAI No. 47 on September 22, 2008. The attached file, "RAI 47 Supplement 1 Response US EPR DC.pdf" provides a technically correct and complete response to the remaining 1 question, as committed. The U.S. EPR Final Safety Analysis Report will not be changed as a result of this question.

The following table provides the pages in the response document containing the response to the question.

Question #	Start Page	End Page
RAI 47 — 18-30	2	3

Sincerely,

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: WELLS Russell D (AREVA NP INC)

Sent: Monday, September 22, 2008 4:29 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. 47, FSAR Ch 18

Getachew,

Attached please find AREVA NP Inc.'s response to the subject request for additional information (RAI). The attached file, "RAI 47 Response US EPR DC.pdf" provides technically correct and complete responses to 24 of the 25 questions.

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 47 Questions 18-11,18-13, 18-16, 18-21, 18-22,18-23, 18-26 and 18-27.

The following table provides the page(s) in the response document, "RAI 47 Response US EPR DC.pdf" containing the response to each question.

Question #	Start Page	End Page
RAI 47 - 18-7	2	2
RAI 47 - 18-8	3	3
RAI 47 - 18-9	4	4
RAI 47 - 18-10	5	5
RAI 47 - 18-11	6	6
RAI 47 - 18-12	7	7

RAI 47 - 18-13	8	9
RAI 47 - 18-14	10	11
RAI 47 - 18-15	12	12
RAI 47 - 18-16	13	13
RAI 47 - 18-17	14	14
RAI 47 - 18-18	15	16
RAI 47 - 18-19	17	17
RAI 47 - 18-20	18	19
RAI 47 - 18-21	20	21
RAI 47 - 18-22	22	23
RAI 47 - 18-23	24	24
RAI 47 - 18-24	25	26
RAI 47 - 18-25	27	27
RAI 47 - 18-26	28	29
RAI 47 - 18-27	30	30
RAI 47 - 18-28	31	32
RAI 47 - 18-29	33	34
RAI 47 - 18-30	35	35
RAI 47 - 18-31	36	36

A complete answer is not provided for 1 of the 25 questions. The schedule for a technically correct and complete response to this question is provided below.

Question #	Response Date
RAI 47 - 18-30	October 3 , 2008

Sincerely,

(Russ Wells on behalf of)

Ronda Pederson

ronda.pederson@areva.com

Licensing Manager, U.S. EPR Design Certification

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From: Getachew Tesfaye [mailto:Getachew.Tesfaye@nrc.gov]

Sent: Friday, August 22, 2008 3:12 PM

To: ZZ-DL-A-USEPR-DL

Cc: Paul Pieringer; Michael Canova; Michael Junge; Joseph Colaccino; John Rycyna

Subject: U.S. EPR Design Certification Application RAI No. 47 (829, 842,880), FSAR Ch 18

Attached please find the subject requests for additional information (RAI). A draft of the RAI was provided to you on August 5, 2008, and discussed with your staff on August 22, 2008. Draft RAI Questions 18-10 and 18-22 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: 3136

Mail Envelope Properties (2FBE1051AEB2E748A0F98DF9EEE5A5D47AED10)

Subject: Response to U.S. EPR Design Certification Application RAI No. 47, FSAR Ch
18, Supplement 2
Sent Date: 6/22/2011 3:13:56 PM
Received Date: 6/22/2011 3:14:51 PM
From: WILLIFORD Dennis (AREVA)

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Files	Size	Date & Time
MESSAGE	6055	6/22/2011 3:14:51 PM
RAI 47 Supplement 2 Response US EPR DC.pdf		89165

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

Response to
Request for Additional Information No. 47 (829, 842, 880), Revision 0,
Supplement 2

8/22/2008

U. S. EPR Standard Design Certification
AREVA NP Inc.
Docket No. 52-020
SRP Section: 18 - Human Factors Engineering
Application Section: FSAR Ch 18

Question 18-29:

10 CFR 50.34(f)(2)(iv): Provide a plant safety parameter display console that will display to operators a minimum set of parameters defining the safety status of the plant, important plant parameter and data trends on demand, and capable of indication when process limits are being approached or exceeded.

As described in DC FSAR, Tier 2, Section 18.7.1.3.3, "Safety Parameter Display System," the applicant addressed the SPDS requirement with an integrated design, rather than a stand-alone, add-on system as is used at most currently operating plants. The EPR design will address the regulatory requirements by integrating the SPDS requirements into the design requirements for the Plant Information Control and Safety Information Control systems. In NUREG-0800, the staff indicated that for applicants who are in the early stages of the control room design, the "function of a separate SPDS may be integrated into the overall control room design."

However, because the 10 CFR 50.34 regulation specifies a safety parameter display console, the staff has determined that an exemption must be processed. The exemption must conform to the special circumstances described in 10 CFR 50.12(a)(2)(ii).

To support the staff's review of an exemption from the requirements of 10 CFR 50.34(f)(2)(iv) for an SPDS console and instead the accomplishment of the SPDS console by integration of its functions into the overall design, the following information is requested.

Please explain how the SPDS related criteria contained in 50.34(f)(2)(iv), NUREG-0737 supplement 1, and NUREG-1342 are addressed within the integrated control room design.

Response to Question 18-29:

The U.S. EPR design integrates the SPDS requirements into the design requirements for the PICS rather than a stand-alone, add-on system as is used at most currently operating plants. The language of the rule does not require that the console be standalone. The design of the U.S. EPR PICS is credited to satisfy the SPDS requirements of 10 CFR 50.34(f)(2)(iv) as stated in U.S. EPR FSAR Section 7.5.1.3.

The SPDS criteria contained in 50.34(f)(2)(iv) to display to operators a minimum set of parameters defining the safety status of the plant, a full range of important plant parameters and data trends on demand, and indicate when process limits are being approached or exceeded are provided as a specially designed display on the PICS. Additionally, the SPDS information is made available for display on the SICS in the Main Control Room (MCR) and the PICS workstations in the Technical Support Center and the Remote Shutdown Station.

The display navigation and hierarchy is designed such that the operator does not have to search through plant operating displays to find the SPDS display. By integrating the SPDS display into the PICS, a convenient location is provided for personnel to readily view the SPDS display. Having the SPDS implemented in this manner makes it an integral part of day to day plant safety oversight and operations. AREVA NP is confident that an integrated approach is more effective and is consistent with new digital technologies and human factors best practices.

The U.S. EPR human system interface provides the status of the SPDS functions. The SPDS functions include:

- Reactivity control
- Reactor core cooling and heat removal from the primary system
- Reactor coolant system integrity
- Radioactivity control
- Containment conditions

The integrated U.S. EPR alarm system provides overview alarms addressing the five SPDS functions.

In the MCR, the SPDS display is provided on the PICS and is also made available to the SICS qualified display system. The guidance provided by NUREG-1342 is considered when designing the SPDS

FSAR Impact:

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