

ArevaEPRDCPEm Resource

From: WELLS Russell (AREVA) [Russell.Wells@areva.com]
Sent: Thursday, April 07, 2011 8:12 AM
To: Tesfaye, Getachew
Cc: GUCWA Len (EXTERNAL AREVA); Miernicki, Michael; BENNETT Kathy (AREVA); DELANO Karen (AREVA); ROMINE Judy (AREVA); RYAN Tom (AREVA)
Subject: Response to U.S. EPR Design Certification Application RAI No. 474 (5550), FSAR Ch. 6
Attachments: RAI 474 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 474 Response US EPR DC.pdf" provides a schedule since a technically correct and complete response to the 1 question is not provided.

The following table indicates the respective page in the response document, "RAI 474 Response US EPR DC.pdf," that contains AREVA NP's response to the subject question.

Question #	Start Page	End Page
RAI 474 — 06.02.05-25	2	2

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

Question #	Response Date
RAI 474 — 06.02.05-25	June 22, 2011

Sincerely,

Russ Wells

U.S. EPR Design Certification Licensing Manager

AREVA NP, Inc.

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Russell.Wells@Areva.com

From: Tesfaye, Getachew [<mailto:Getachew.Tesfaye@nrc.gov>]

Sent: Tuesday, March 08, 2011 2:35 PM

To: ZZ-DL-A-USEPR-DL

Cc: Grady, Anne-Marie; Jackson, Christopher; McKirgan, John; Carneal, Jason; Colaccino, Joseph; ArevaEPRDCPEm

Resource

Subject: U.S. EPR Design Certification Application RAI No. 474 (5550), FSAR Ch. 6

Attached please find the subject request for additional information (RAI). A draft of the RAI was provided to you on February 17, 2011, and on March 4, 2011, 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: 2820

Mail Envelope Properties (1F1CC1BBDC66B842A46CAC03D6B1CD4104330374)

Subject: Response to U.S. EPR Design Certification Application RAI No. 474 (5550),
FSAR Ch. 6
Sent Date: 4/7/2011 8:12:14 AM
Received Date: 4/7/2011 8:12:16 AM
From: WELLS Russell (AREVA)

Created By: Russell.Wells@areva.com

Recipients:

"GUCWA Len (EXTERNAL AREVA)" <Len.Gucwa.ext@areva.com>
Tracking Status: None
"Miernicki, Michael" <Michael.Miernicki@nrc.gov>
Tracking Status: None
"BENNETT Kathy (AREVA)" <Kathy.Bennett@areva.com>
Tracking Status: None
"DELANO Karen (AREVA)" <Karen.Delano@areva.com>
Tracking Status: None
"ROMINE Judy (AREVA)" <Judy.Romine@areva.com>
Tracking Status: None
"RYAN Tom (AREVA)" <Tom.Ryan@areva.com>
Tracking Status: None
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Tracking Status: None

Post Office: AUSLYNCMX02.adom.ad.corp

Files	Size	Date & Time
MESSAGE	2290	4/7/2011 8:12:16 AM
RAI 474 Response US EPR DC.PDF		8531

Options

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

Response to

Request for Additional Information No. 474(5550), Revision 0

3/08/2011

U. S. EPR Standard Design Certification

AREVA NP Inc.

Docket No. 52-020

SRP Section: 06.02.05 - Combustible Gas Control in Containment

Application Section: 6.2.5

**QUESTIONS for Containment and Ventilation Branch 1 (AP1000/EPR Projects)
(SPCV)**

Question 06.02.05-25:

OPEN ITEM

This is related to responses to RAI 410, Questions 06.02.05-16 through 6.2.5-19 and RAI 323.

- a. In order for a COL applicant to select a PAR design which achieves the PAR performance in a severe accident environment described in the US EPR FSAR, Tier 2, sections 6.2.5 and 19.2, provide information which will specify the experimental tests or analyses and acceptable results which will verify PAR performance, considering the impact of:
 - ◆ severe accident temperatures and pressures in containment,
 - ◆ the effect of steam or nitrogen as inert gases,
 - ◆ the effects of dome spray and direct spray on PAR start-up and performance,
 - ◆ the effects of realistic aerosol exposure generated by a molten core, including poisons such as iodine, tellurium, cesium and antimony. Show how these potential poisons affect PAR performance
- b. Coking occurs when elemental carbon in carbon bearing gases is deposited on the surface of a catalyst, blocking the reaction of the recombinants. The sources in a reactor containment severe accident are: (1) molten core/concrete interaction (MCCI) and (2) a fire, in particular the smoke and soot from electrical cable fires. Address the potential of carbon to poison the catalyst in the PARs.
- c. The PARs could be subjected to borated water in the IRWST containing trisodium phosphate, HNO₃ from the radiolysis of water, and HCl from the radiolysis of the PVC and Hypalon jackets on the electrical cables following a severe accident. Show how these chemicals could affect PAR performance.
- d. Discuss the functionality of the PARs after H₂ ignition and deflagration.
- e. Address the effects of radiation, operational vibrations, welding fumes and solvent fumes.

Response to Question 06.02.05-25:

A response to this question will be provided by June 22, 2011.