

ArevaEPRDCPEm Resource

From: Tesfaye, Getachew
Sent: Friday, November 25, 2011 10:43 AM
To: 'usepr@areva.com'
Cc: Hernandez, Raul; Dreisbach, Jason; Segala, John; Hearn, Peter; Colaccino, Joseph
Subject: U.S. EPR Design Certification Application RAI No. 526 (6190, 6191), FSAR Ch. 9
Attachments: RAI_526_SBPA_6190_6191.doc

Attached please find the subject request for additional information (RAI). A draft of the RAI was provided to you on November 11, 2011, and on November 21, 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: 3668

Mail Envelope Properties (0A64B42AAA8FD4418CE1EB5240A6FED151674E20D2)

Subject: U.S. EPR Design Certification Application RAI No. 526 (6190, 6191), FSAR Ch. 9
Sent Date: 11/25/2011 10:42:41 AM
Received Date: 11/25/2011 10:42:00 AM
From: Tesfaye, Getachew

Created By: Getachew.Tesfaye@nrc.gov

Recipients:

"Hernandez, Raul" <Raul.Hernandez@nrc.gov>
Tracking Status: None
"Dreisbach, Jason" <Jason.Dreisbach@nrc.gov>
Tracking Status: None
"Segala, John" <John.Segala@nrc.gov>
Tracking Status: None
"Hearn, Peter" <Peter.Hearn@nrc.gov>
Tracking Status: None
"Colaccino, Joseph" <Joseph.Colaccino@nrc.gov>
Tracking Status: None
"usepr@areva.com" <usepr@areva.com>
Tracking Status: None

Post Office: HQCLSTR02.nrc.gov

Files	Size	Date & Time
MESSAGE	811	11/25/2011 10:42:00 AM
RAI_526_SBPA_6190_6191.doc		35838

Options

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

Request for Additional Information No. 526 (6190, 6191), Revision 0

11/25/2011

U. S. EPR Standard Design Certification

AREVA NP Inc.

Docket No. 52-020

SRP Section: 09.01.02 - New and Spent Fuel Storage

SRP Section: 09.01.03 - Spent Fuel Pool Cooling and Cleanup System

Application Section: 09.01

QUESTIONS for Balance of Plant Branch 1 (SBPA)

09.01.02-40

OPEN ITEM

In response to RAI 385, Question 9.1.4-17 the applicant provided a description of the design features relied upon to ensure that the SFCTF will remain leak-tight following an SSE. The staff reviewed FSAR Tier 2 Sections 9.1.2.2.2, "Spent Fuel Storage," and 9.1.2.3, "Safety Evaluation," and identified that the system description in the FSAR does not address the impact of seismic event while the SFCTF is in operation (all the gates open).

The staff requests the applicant to update FSAR Tier 2 Section 9.1.2 to include the description and justification by which the design of the SFCTF and all the pressure retaining components prevent a SFP drain-down (seismic classification).

09.01.02-41

OPEN ITEM

In its response to RAI 385, Question 9.1.4-17, the applicant stated that the swivel gate between the CLP and the SFP, and the SFCTF upper cover are prevented from opening simultaneously, without having a cask connected to the SFCTF by an interlock. The staff evaluated the applicant's design for the SFCTF and determined that the applicant has not proposed any regulatory control over the gates SFP gates or the SFCTF cover to prevent inadvertent opening of these gates while the SFCTF is not in operation, which would result in draining of the SFP below the minimum water level. The staff also identified that the applicant design relies on interlock to prevent the inadvertent opening of gates before the cask is secured and docked in the SFCTF, but the applicant has not specify which of the interlocks are safety related, which are procedural controlled or which are controlled by electronic switches.

The staff requests the applicant to

- a. justify not having a Technical Specification or a license condition that would require at least two of the seismic barriers to be in place while there is no cask attached to the SFCTF;

- b. describe in the FSAR the prevention of the inadvertent draining of the SFP by the interlocks (safety related and non-safety related), by providing which alarms are associated with the interlocks, which interlocks are automatically cleared once the conditions are met, and which interlock are manually cleared by operator actions.

09.01.03-14

OPEN ITEM

The staff also identified that the applicant's response to RAI 9.1.4-17 proposes to update FSAR Tier 2 Section 9.1.4 to address the design and safety evaluation of the SFCTF. The SFCTF relies on the FPCS for makeup water in order to prevent a SFP drain-down.

The staff requests the applicant to update FSAR Section 9.1.3 to reflect the new safety function of the FPCS (make up to the CLP if the SFCTF leaks). Furthermore, include the safety analysis discussion that addresses the impact of a seismic event while the SFCTF is in operation and the design features relied upon to minimize potential leakage and handle the event.

09.01.03-15

OPEN ITEM

In FSAR Tier 2 Section 9.1.3.4 "Safety Evaluation," Item 7, the applicant states that the safety-related FPCS pumps will automatically trip on a low SFP level of 16.9 m (55 ft 6 in). The FSAR further states that the SFP is provided with a low level and a low-low level alarms at elevations of 18.7 m (61 ft 6 in) and 17.8 m (58 ft 6 in) respectively. In Item 10, the application states that Seismic Category I piping and valves are provided to allow isolation of purification piping exiting the bottom of the FB pools. It is not clear to the staff that all the piping that exits and connects to the SFP at or below the elevation of 16.9 m (55 ft 6 in) is design to Seismic Category I criteria.

The staff requests the applicant to clarify in FSAR Tier 2 Section 9.1.3 that all the piping and valves that connects with the SFP at or below the elevation of 16.9 m (55 ft 6 in) are design to seismic criteria I, and to that any non-seismic pipe that extends below the elevation of 16.9 m (55 ft 6 in) are provided of an anti-siphon device.