ArevaEPRDCPEm Resource

From: BRYAN Martin (EXTERNAL AREVA) [Martin.Bryan.ext@areva.com]
Sent: Tuesday, October 05, 2010 9:28 AM
To: Tesfaye, Getachew
Cc: RYAN Tom (AREVA)
Subject: FW: DRAFT Response to U.S. EPR Design Certification Application RAI No. 398, FSARCh. 9
Attachments: RAI 398 Supplement 2 Response US EPR DC - DRAFT.pdf

Getachew,

The final response for 398 is due Thursday. Do we need an interaction or can this response be sent as a final response? I know we had some minor changes we needed to make regarding how we were referring to the part 72 licensing action. Just wanted to know if it could be sent as final or if we needed to process a deferral.

Thanks,

Martin (Marty) C. Bryan
U.S. EPR Design Certification Licensing Manager
AREVA NP Inc.
Tel: (434) 832-3016
702 561-3528 cell
Martin.Bryan.ext@areva.com

From: BRYAN Martin (External RS/NB)
Sent: Friday, September 24, 2010 3:43 PM
To: 'Getachew.Tesfaye@nrc.gov'
Cc: DELANO Karen (RS/NB); ROMINE Judy (RS/NB); BENNETT Kathy (RS/NB); RYAN Tom (RS/NB); KOWALSKI David (RS/NB); HALLINGER Pat (EXT); HOTTLE Nathan (EP/PE); PANDYA Nitin (EP/PE); PEREZ Pedro (EP/PE); GARDNER Darrell (RS/NB)
Subject: DRAFT Response to U.S. EPR Design Certification Application RAI No. 398, FSARCh. 9

Getachew,

To support a final response date of Oct 7, 2010, a draft response of RAI 398 Question 09.01.04-18 is provided in the attached file, “RAI 398 Supplement 2 Response US EPR DC - DRAFT.pdf”. Let me know if the staff has questions or if this response can be sent as final.

Thanks,

Martin (Marty) C. Bryan
U.S. EPR Design Certification Licensing Manager
AREVA NP Inc.
Tel: (434) 832-3016
702 561-3528 cell
Martin.Bryan.ext@areva.com

From: BRYAN Martin (External RS/NB)
Sent: Tuesday, August 31, 2010 9:44 AM
To: 'Tesfaye, Getachew'

Cc: DELANO Karen (RS/NB); ROMINE Judy (RS/NB); BENNETT Kathy (RS/NB); KOWALSKI David (RS/NB)
Subject: Response to U.S. EPR Design Certification Application RAI No. 398, FSARCh. 9, Supplement 1

Getachew,

AREVA NP Inc. provided a schedule for a technically correct and complete response to the question in RAI No. 398 on July 21, 2010.

Since the response is still being processed, a revised schedule is provided in this e-mail. To facilitate the staff review, a draft is expected to be provided within two weeks.

The schedule for a technically correct and complete response to the question is provided below.

Question #	Response Date
RAI 398 — 09.01.04-18	October 7, 2010

Sincerely,

Martin (Marty) C. Bryan
U.S. EPR Design Certification Licensing Manager
AREVA NP Inc.
Tel: (434) 832-3016
702 561-3528 cell
Martin.Bryan.ext@areva.com

From: BRYAN Martin (EXT)
Sent: Wednesday, July 21, 2010 1:23 PM
To: 'Tesfaye, Getachew'
Cc: DELANO Karen V (AREVA NP INC); ROMINE Judy (AREVA NP INC); BENNETT Kathy A (OFR) (AREVA NP INC); KOWALSKI David J (AREVA NP INC)
Subject: Response to U.S. EPR Design Certification Application RAI No. 398, FSARCh. 9

Getachew,

Attached please find AREVA NP Inc.'s response to the subject request for additional information (RAI). The attached file, "RAI 398 Response US EPR DC," provides a schedule since a technically correct and complete response to the question is not provided.

The following table indicates the respective pages in the response document, "RAI 398 Response US EPR DC.pdf," that contain AREVA NP's response to the subject question.

Question #	Start Page	End Page
RAI 398 — 09.01.04-18	2	2

The schedule for a technically correct and complete response to this question is provided below.

Question #	Response Date
RAI 398 — 09.01.04-18	August 31, 2010

Sincerely,

Martin (Marty) C. Bryan
U.S. EPR Design Certification Licensing Manager
AREVA NP Inc.
Tel: (434) 832-3016
702 561-3528 cell
Martin.Bryan.ext@areva.com

From: Tesfaye, Getachew [mailto:Getachew.Tesfaye@nrc.gov]
Sent: Thursday, June 24, 2010 4:50 PM
To: ZZ-DL-A-USEPR-DL
Cc: Bernal, Sara; Roach, Edward; Hearn, Peter; Colaccino, Joseph; ArevaEPRDCPEm Resource
Subject: U.S. EPR Design Certification Application RAI No. 398 (4660), FSARCh. 9

Attached please find the subject requests for additional information (RAI). A draft of the RAI was provided to you on May 4, 2010, and on June 24, 2010, 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: 2090

Mail Envelope Properties (BC417D9255991046A37DD56CF597DB7107CB8542)

Subject: FW: DRAFT Response to U.S. EPR Design Certification Application RAI No. 398, FSARCh. 9
Sent Date: 10/5/2010 9:27:46 AM
Received Date: 10/5/2010 9:27:51 AM
From: BRYAN Martin (EXTERNAL AREVA)

Created By: Martin.Bryan.ext@areva.com

Recipients:
"RYAN Tom (AREVA)" <Tom.Ryan@areva.com>
Tracking Status: None
"Tesfaye, Getachew" <Getachew.Tesfaye@nrc.gov>
Tracking Status: None

Post Office: AUSLYNCMX02.adom.ad.corp

Files	**Size**	**Date & Time**
MESSAGE	5029	10/5/2010 9:27:51 AM
RAI 398 Supplement 2 Response US EPR DC - DRAFT.pdf	425337	

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

Response to

Request for Additional Information No. 398(4660), Supplement 2

6/24/2010

U.S. EPR Standard Design Certification
AREVA NP Inc.
Docket No. 52-020
SRP Section: 09.01.04 - Light Load Handling System (Related to Refueling)
Application Section: 9.1.4, Fuel Handling System

QUESTIONS for Health Physics Branch (CHPB)

DRAFT

Question 09.01.04-18:

GDC 61 states, in part, that the design of the fuel storage and handling systems shall have suitable shielding for radiation protection and appropriate containment, confinement, and filtering systems. Sufficient shielding provides protection for workers from the spent fuel so that regulatory limits are not exceeded and overexposures do not occur.

Figure 9.1.4-7, Spent Fuel Cask Transfer Facility, shows the cask loading pit with a penetration at the bottom which has an upper plate cover (UPC) and a lower plate cover (LPC). Describe any design features/interlocks that would prevent a spent fuel assembly from being moved into the cask loading pit without a spent fuel cask being connected to the pit docking flange. If such design features/interlocks do not exist for this design, state the expected radiation dose rates to personnel located in the cask loading area below the lower plate cover in the event that a spent fuel assembly were located in the flooded cask loading pit with both the lower and upper plate covers in a closed position.

Historically operating plants have used submerged filtration units (e.g.,Tri-Nuclear Filter) to supplement SFP purification to improve SFP clarity during outages. If there are no design features (or license restrictions) which prevent the placement of these filtration units in the cask pit (or the placement of any other type of source in the cask pit) describe the dose rates consequences to the area below the LPC. If the dose rate analysis takes credit for water shielding between the LPC and the UPC, describe the water level alarms, drain valve interlocks or cover interlocks that would prevent removal of this shielding with both fuel and non-fuel sources present in the cask loading pit. What provisions are provided to shield or clean the penetration space drain lines and the ultimate end point of the drain lines? Cavity drain lines tend to collect debris and crud (activated corrosion products) that can result in areas where doses of 10-100 Roentgen per hour on contact are not unusual.

Because there is no available U.S. operating experience for this cask loading design, demonstrate compliance with the shielding requirements of GDC 61 by providing a dose assessment for the cask loading process, including the personnel doses associated with:

(1) The installation and removal of seismic restraints with spent fuel in the cask

(2) The installation of the LPC with spent fuel in the cask

(3) Installation of the biological cover closure with spent fuel in the cask

(4) Dewatering and sealing the cask.

10 CFR 20.1406 requires that each facility be designed so as to minimize contamination of the facility and the environment and to facilitate decommissioning. Section 9.1.4 of the FSAR states that the cask is attached to a leak tight flange, in order to prevent leakage from the cask pit. Provide more detail on the flange design, including where it is located on Figure 9.1.4-7. Please demonstrate compliance with 10 CFR 20.1406 by describing the design features that would prevent any leaks in the cask loading area from contaminating the facility, or from exiting the building to the outside environment.

Response to Question 09.01.04-18:

The Response to RAI 385, Question 09.01.04-15 states that the spent fuel cask transfer facility will be designed to support cask loading operations based on the specific requirements of a

DRAFT

cask certified in accordance with 10 CFR Part 72. Prior to a 10 CFR Part 72 general license, the 10 CFR Part 52 licensee will determine whether a change in the facility Technical Specifications or a license amendment is required pursuant to 10 CFR 50.59(c)(2), as required by 10 CFR 72.212(b)(4). The loading pit penetration upper cover will be maintained closed under administrative control until the plant license is amended to allow cask loading. The information provided in this response is limited to the upper cover of the penetration.

Under normal conditions, the two gates separating the loading pit from the spent fuel pool (SFP) are maintained closed. The spent fuel machine (SFM) access to the loading pit is mainly required for cask loading operations. The SFM is moved to the loading pit for specific maintenance on the machine. The swivel gate is required to be opened and the slot gate is required to be removed to allow the SFM access to the loading pit. Because no cask loading operations will be performed until the plant license is amended, the need for opening/removing these gates during this phase will be minimal. The fuel handling operations are performed per approved plant procedures and the SFM during operation remains under the control of the SFM operator. These features will avoid inadvertent access of the SFM to the loading pit and will prevent the SFM from inadvertently moving a spent fuel assembly into the loading pit.

There are no design features that prevent the use of submerged filtration units in the loading pit. Because cask loading operations will not be performed until the plant license is amended to allow cask loading, there is no need for submerged filtration units in the loading pit. If submerged filtration units are used, their use will be governed by the plant radiation protection program described in the U.S. EPR FSAR Tier 2, Section 12.5, “Operational Radiation Protection Program.”

The loading pit penetration has following features to minimize contamination:

- The upper cover of the penetration will be maintained closed under administrative controls, to avoid inadvertent opening of the upper cover and draining of the loading pit.
- The penetration is equipped with double-seals for the upper cover.
- The space between the two seals is monitored for leak tightness. A water leak sensor connected to the plant main control room (MCR) monitors a potential water leak caused by failure of a seal.

The geometry and the surface finish of the immersed parts of the penetration are selected to prevent the formation of radioactive particle retention area and to facilitate decontamination. The immersed parts, in particular the moving parts, are designed to be easily and efficiently rinsed.

The design of the penetration, including the upper cover, is described in the Response to RAI 385, Question 09.01.04-15.

FSAR Impact:

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

DRAFT