ArevaEPRDCPEm Resource

From: BRYAN Martin (EXTERNAL AREVA) [Martin.Bryan.ext@areva.com]
Sent: Thursday, August 26, 2010 11:59 AM
To: Tesfaye, Getachew
Cc: DELANO Karen (AREVA); ROMINE Judy (AREVA); BENNETT Kathy (AREVA); SALAS Pedro (AREVA)
Subject: Response to U.S. EPR Design Certification Application RAI No. 425 (4799), FSARCh. 13, OPEN ITEM
Attachments: RAI 425 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 425 Response US EPR DC.pdf" provides the schedule for technically correct and complete responses to these questions.

The following table indicates the respective pages in the response document, "RAI 425 Response US EPR DC.pdf," that contain AREVA NP's response to the subject questions.

Question #	Start Page	End Page
RAI 425 — 13.06.02-1	2	4
RAI 425 — 13.06.02-2	5	5
RAI 425 — 13.06.02-4	6	6

The schedule for technically correct and complete responses to these questions is provided below.

Question #	Response Date
RAI 425 — 13.06.02-1	October 28, 2010
RAI 425 — 13.06.02-2	October 28, 2010
RAI 425 — 13.06.02-4	October 28, 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: Tuesday, July 27, 2010 1:09 PM
To: ZZ-DL-A-USEPR-DL
Cc: Lee, Pete; Huyck, Doug; Miernicki, Michael; Patel, Jay; Colaccino, Joseph; ArevaEPRDCPEm Resource
Subject: U.S. EPR Design Certification Application RAI No. 425 (4799), FSARCh. 13, OPEN ITEM

Attached please find the subject requests for additional information (RAI). A draft of the RAI was provided to you on June 22, 2010, and discussed with your staff on July 20, 2010. Draft RAI Question 13.06.02-3 was deleted as a result of that discussion. The questions in this RAI are OPEN ITEMS in the safety evaluation report for Chapter 13 for Phases 2 and 3 reviews. As such, the schedule we have established for your application assumes technically correct and complete responses prior to the start of Phase 4 review. For any

RAI that cannot be answered prior to the start of Phase 4 review, it is expected that a date for receipt of this information will be provided 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: 1894

Mail Envelope Properties (BC417D9255991046A37DD56CF597DB7107580A3B)

Subject: Response to U.S. EPR Design Certification Application RAI No. 425 (4799), FSARCh. 13, OPEN ITEM
Sent Date: 8/26/2010 11:58:49 AM
Received Date: 8/26/2010 11:58:52 AM
From: BRYAN Martin (EXTERNAL AREVA)

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

Recipients:
"DELANO Karen (AREVA)" <Karen.Delano@areva.com>
Tracking Status: None
"ROMINE Judy (AREVA)" <Judy.Romine@areva.com>
Tracking Status: None
"BENNETT Kathy (AREVA)" <Kathy.Bennett@areva.com>
Tracking Status: None
"SALAS Pedro (AREVA)" <Pedro.Salas@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	2300	8/26/2010 11:58:52 AM
RAI 425 Response US EPR DC.pdf	91082	

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

Response to

Request for Additional Information No. 425(4799), Revision 1

7/27/2010

U.S. EPR Standard Design Certification
AREVA NP Inc.
Docket No. 52-020
SRP Section: 13.06.02 - Physical Security - Design Certification
Application Section: Tier 2 FSAR Chapter 13.6 Referenced AREVA TR ANP-10295 (Rev. 1)

QUESTIONS for Reactor Security and Programs Branch (NSIR/DRP/RSPLB)

Question 13.06.02-1:

OPEN ITEM

(U) AREVA TR ANP-10295 (Revision 1), Section 1.0, Vital Equipment and Vital Area (Pages 1-2 and 1-3) and Appendix A, Vital Equipment List (Pages A-2 through A-37): Revise vital equipment identification process (i.e., assumptions) to provide adequate assurance for identifying complete and accurate list of vital equipment as defined by 10 CFR 73.2 and provide a complete and accurate list of vital equipment that include the following:

a. **(U)** The identification of vital equipment based on the nuclear power reactor plant design and the structures, systems, and components that have been designated as safety-related.

b. **(U)** Vital equipment includes all reactor designed SSCs providing safety functions that prevent or protect against the release of radioactive material that could endanger the public health and safety by exposure to radiation, as stated in 10 CFR 73.2.

c. **(U)** Vital equipment includes all reactor SSCs designed to function to prevent release of radioactive material that would exceed the radiological exposure stated in 10 CFR 52.47(a)(2), are identified as vital equipment. In addition, all safety-related SSCs that function to protect against radiological exposure exceeding the threshold of 10 CFR 52.47(a)(2), after the loss of SSCs that prevent the release of radioactive material, are also identified as vital equipment, in accordance with the 10 CFR 73.2.

d. **(U)** Vital equipment includes, in accordance with the 10 CFR 73.2, “any equipment, system, device, or material,” for all modes of nuclear operations (i.e., power operations, hot stand-by, cold shutdown, refueling) is identified.

e. **(U)** Vital equipment includes all designed reactor SSCs in all redundant safety divisions that provide safety functions to prevent radiological release are identified as vital equipment.

f. **(U)** Vital equipment includes all equipment, systems, devices, or materials (i.e., supporting systems) that are relied on for control or motor forces (e.g., control systems, digital signals, electrical power, mechanical, compressed air, water, etc.) and function to prevent radiological release and protect against radiological exposure are identified as vital equipment (i.e., in accordance with the 10 CFR 73.2 definition that any equipment, system, device or material, the failure, destruction, or release of which could indirectly endanger public health and safety is vital equipment).

(U) Regulatory Basis: Subpart B of Title 10 CFR (10 CFR) 52, § 52.47, requires that information submitted for a design certification (DC) must include performance requirements and design information sufficiently detailed to permit the preparation of acceptance and inspection requirements by the NRC, and procurement specifications and construction and installation specifications by an applicant. Title 10 CFR 52.48 requires the applications filed will be reviewed for compliance with the standards set out in 10 CFR Part 73. Title 10 CFR 73.55(e)(9)(i) requires that “vital equipment must be located only within vital areas, which must be located within a protected area so that access to vital equipment requires

passage through at least two physical barriers, except as otherwise approved by the Commission and identified in the security plans" and 10 CFR 73.2 defines vital equipment.

(U) The applicant has not provided an adequate process, based on assumptions stated in the TR ANP-10295, to identify a complete and accurate list of vital equipment as defined in 73.2. The NRC requested addition information related to vital equipment in RAI No. 246, RAI No. 247, and RAI No. 92. The staff has identified the inadequacies of applying the assumptions identified in NRC NUREG-1178, "Vital Equipment/Area Guideline Study: Vital Area Committee Report," (1988) as acceptable regulatory guidance in RAI 246. The study documented in NUREG-1178 was an attempt, in the pre-9/11 environment, by the NRC staff to establish an approach for determining what safety functions and associated SSCs should be protected against the DBT for radiological sabotage in the 1980s. For example, Assumptions Nos. 3, 5, and 9 in NUREG-1178 are contrary to regulation of 10 CFR 73.2 that defines vital equipment. The remaining assumptions are related to systems and plant configurations such as core damage, protection of control room, unavailability of off-site power, conditions leading to 10 CFR Part 100 release, use of explosives by saboteurs in the pre-9/11 environment, equipment not located in vital areas, protection of spent fuel pool, backup power, and operator or adversarial actions, not specifically applicable to identifying vital equipment of a standard design. The NRC RAI 246 includes a number of questions on the process and assumptions for identifying a complete and accurate list of vital equipment (e.g., RAI 246, Questions 13.06-83 through 13.06-86, and Questions 13.06-105, through 13.06-119). The NRC RAI 246 follows up on previously issued RAI 92, (e.g., RAI 92, Questions 13.06-09 through 13.06-19 and Questions 13.06-21 through 13.06-25), which initially raised the staff concerns regarding the process applying NUREG-1178 assumptions. As a result of inadequacies of a process, a complete and accurate list of vital equipment has not been identified. In addition, the NRC staff cannot confirm that the applicant has met the requirement that all vital equipment for the US- EPR standard design are located within the vital areas in accordance with requirements of 10 CFR 73.55(e)(9)(i).

(U) The staff, based on current information available on the docket, has concluded that the applicant has not established an adequate process to identify and demonstrated that all vital equipment, in accordance with the definition of 10 CFR 73.2, are identified. Therefore, the staff has determined that the TR ANP-10295, Appendix A, Section A.6, "Vital Equipment List," listing of vital equipment based on stated assumptions is not complete or accurate. Therefore, the staff has identified the subject as an open item requiring resolution and requested that the applicant provide a process with assumptions that provide assurance and result in a complete and accurate list of vital equipment that is in accordance with the definition of vital equipment as stated in 10 CFR 73.2 (and their associated locations) for the US- EPR standard design that.

(U) ***Note*: *The information addressing specific details related to security features or providing security functions will be safeguards information (SGI) and should be marked and protected in accordance with 10 CFR 73.21. The applicant should portion mark text in the response to request for information (RAI) as appropriate to identify SGI (or security-related information) that reveals the specific details of security features incorporated in the US-EPR design. The RAI responses supplementing the DC Tier 1 document must be publicly available.***

Response to Question 13.06.02-1:

A response to this question will be provided by October 28, 2010

Question 13.06.02-2:

OPEN ITEM

(U) TR ANP-10295 (Revision 1), Section 1.0, Vital Equipment and Vital Area (Pages 1-1 and 1-6, Figures 1-1 and 1-2) and Appendix A, Vital Equipment List (Pages A-2 through A-37): Provide locations for all vital equipment as defined by 10 CFR 73.2, and confirm that the designated vital areas on Page 1-1 and Figure 1-1, "Vital Area Perimeters," contain all vital equipment for the US-EPR standard design.

(U) Regulatory Basis: Subpart B of Title 10 CFR (10 CFR) 52, § 52.47, requires that information submitted for a design certification (DC) must include performance requirements and design information sufficiently detailed to permit the preparation of acceptance and inspection requirements by the NRC, and procurement specifications and construction and installation specifications by an applicant. Title 10 CFR 52.48 requires the applications filed will be reviewed for compliance with the standards set out in 10 CFR Part 73. Title 10 CFR 73.55(e)(9)(i) requires vital equipment must be located only within vital areas, such that the designated vital areas include all the vital equipment as defined by 10 CFR 73.2..

(U) The staff RAI has requested the applicant to provide a complete and accurate list of vital equipment for the US-EPR standard design. Additional information has not been provide to the staff for determining:: (a) whether designated vital areas currently identified contain all vital equipment for the U.S. EPR standard design; (b) whether vital equipment not currently identified is located within or outside of the areas currently designated as vital areas; and (c) whether the applicant has appropriately identified for Commission consideration any vital equipment that will be located outside of designated vital areas. Since the list of vital equipment is not sufficient complete and accurate, the staff cannot determine whether the requirements of 10 CFR 73.55(e)(9)(i), which states, "vital equipment must be located only within vital areas, which must be located within a protected area so that access to vital equipment requires passage through at least two physical barriers, except as otherwise approved by the Commission and identified in the security plans."

(U) ***Note*: *The information addressing specific details related to security features or providing security functions will be safeguards information (SGI) and should be marked and protected in accordance with 10 CFR 73.21. The applicant should portion mark text in the response to request for information (RAI) as appropriate to identify SGI (or security-related information) that reveals the specific details of security features incorporated in the US-EPR design. The RAI responses supplementing the DC Tier 1 document must be publicly available.***

Response to Question 13.06.02-2:

A response to this question will be provided by October 28, 2010.

Question 13.06.02-4:

OPEN ITEM

(U) TR ANP-10295, Section 2.1.3, "Reliability," (Page 2-1): Provide the appropriate reference to US-EPR FSAR Tier 2 sections for backup power to security systems.

(U) Regulatory Basis: Subpart B of Title 10 CFR (10 CFR) 52, § 52.47, requires that information submitted for a design certification (DC) must include performance requirements and design information sufficiently detailed to permit the preparation of acceptance and inspection requirements by the NRC, and procurement specifications and construction and installation specifications by an applicant. Title 10 CFR 52.6 requires information provided to the Commission shall be complete and accurate. An editorial change is need to correct and provide the appropriate reference to Tier 2 FSAR chapter and sections related to secondary power in the TR ANP-10295, Section 2.1.3. The text currently in Section 2.1.3 has erroneously referenced Section 2.5.1, "Basic Geologic and Seismic Information," or 2.5.3, "Surface Faulting," for describing the backup power systems for security.

Response to Question 13.06.02-4:

A response to this question will be provided by October 28, 2010.