

ArevaEPRDCPEm Resource

From: Getachew Tesfaye
Sent: Thursday, January 22, 2009 9:01 AM
To: 'usepr@areva.com'
Cc: Edward McCann; Robert Radlinski; Larry Wheeler; Peter Wilson; Peter Hearn; Joseph Colaccino; Meena Khanna; ArevaEPRDCPEm Resource
Subject: U.S. EPR Design Certification Application RAI No. 169 (1822, 1901), FSAR Ch. 9
Attachments: RAI_169_SBPA_1822_SFPT_1901.doc

Attached please find the subject requests for additional information (RAI). A draft of the RAI was provided to you on January 6, 2009, and discussed with your staff on January 15, 2009. No changes were made to the Draft RAI Questions 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
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Created By: Getachew.Tesfaye@nrc.gov

Recipients:

"Edward McCann" <Edward.McCann@nrc.gov>
Tracking Status: None
"Robert Radlinski" <Robert.Radlinski@nrc.gov>
Tracking Status: None
"Larry Wheeler" <Larry.Wheeler@nrc.gov>
Tracking Status: None
"Peter Wilson" <Peter.Wilson@nrc.gov>
Tracking Status: None
"Peter Hearn" <Peter.Hearn@nrc.gov>
Tracking Status: None
"Joseph Colaccino" <Joseph.Colaccino@nrc.gov>
Tracking Status: None
"Meena Khanna" <Meena.Khanna@nrc.gov>
Tracking Status: None
"ArevaEPRDCPEm Resource" <ArevaEPRDCPEm.Resource@nrc.gov>
Tracking Status: None
"usepr@areva.com" <usepr@areva.com>
Tracking Status: None

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Request for Additional Information No. 169 (1822, 1901), Revision 0

01/22/2009

U. S. EPR Standard Design Certification
AREVA NP Inc.
Docket No. 52-020
SRP Section: 09.02.05 - Ultimate Heat Sink
SRP Section: 09.05.01 - Fire Protection Program

Application Section: FSAR Ch. 9

QUESTIONS for Balance of Plant Branch 1 (AP1000/EPR Projects) (SBPA)
QUESTIONS for Fire Protection Team (SFPT)

09.02.05-2

The Final Safety Analysis Report needs to be revised to include a conceptual design for the Raw Water Supply System (RWSS) in accordance with 10 CFR 52.47(a)(24). The conceptual design should be described in sufficient detail to establish interface requirements that must be satisfied by combined license applicants.

09.05.01-66

The response to RAI No. 25 for Question 09.05.01-53 provided justification for using the fire protection system diesel fire pumps, water storage tanks, distribution piping, and associated equipment as the water supply for the standpipes and hose systems for manual fire suppression capability in all plant areas containing systems and components required for safe plant shutdown in the event of an SSE. This response stated that the U.S. EPR FPS is not Seismic Category I because it does not meet any of the criteria stated in RG 1.29, Regulatory Position 1. This response then states that "Pumps, water storage tanks, and distribution piping in the U.S. EPR FPS that provide fire protection capacity to areas of the U.S. EPR containing Seismic Category I equipment required for safe plant shutdown are classified as Seismic Category II because they meet the criteria in RG 1.29, Regulatory Position 2."

The above equipment is designated as Seismic Category II as per RG 1.29 but the system must remain functional and not just maintain structural integrity following an SSE. The above equipment could also be designed to meet the intent of RG 1.29 Seismic Category I and, therefore, be seismically qualified. This response states that the applicable FPS piping, piping supports, and valves are designed in accordance with ASME B31.1 and function following a SSE which is in accordance with RG 1.189 Regulatory Position 3.2.1 and Section B's Conditions of Fire Occurrence. Fire water storage tanks, diesel fire pumps, and associated equipment other than piping, piping supports, and valves are not within the scope of ASME B31.1.

Designate the fire water storage tanks, diesel fire pumps, and associated equipment other than piping, piping supports, and valves that are within the scope of ASME B31.1 as Seismic Category I or provide the method to seismically qualify the equipment. Ensure method

considers any internal vibrational effects that could render the equipment non-functional and explain how it is different from full seismic qualification.

09.05.01-67

Reg Guide 1.189, Rev. 1, "Fire Protection for Nuclear Power Plants" section 4.1.7 describes the performance requirements for fire brigade communications. Communication support is required for fire brigade members and plant operators performing safe shutdown tasks. Such communication is intended to connect fire brigade members and those safe shutdown operators with each other as well as connect the fire brigade members and those safe shutdown operators with the main control room. The fire brigade needs to use portable radio communications so their fire fighting capabilities are not adversely affected by any communication delays. Update the FSAR as follows to be in accordance with the guidance given in RG 1.189:

1) Indicate which of the communication systems described in Section 9.5.2.2 is the primary or normal communication system; which are the backup communication systems; and which is the fixed emergency communication system.

2) The response to RAI NO. 20 Question 09.05.01-14 stated that "The repeaters for the portable wireless communication system do not require dedicated fire protection. Due to the diversity of the plant communication systems, at least one method of communication is available in the event of a fire." This statement does satisfy the intent of having (See Item 4 below) independent communication systems. However, as stated above the fire brigade needs to use portable radio communications so their fire fighting capabilities are not adversely affected by any communication delays. State that the portable wireless communication system is provided with protection from fire exposure for the repeaters/antennas and related cables such that continuous and total radio coverage is maintained for all vital areas even during any one fire event. As an acceptable alternative to protecting repeaters/antennas, the applicant may choose to provide additional repeaters throughout the plant vital areas to ensure the loss of any repeater(s)/antenna(s) in any one fire area will not result in degradation to the continuous and total coverage required to all vital areas. A partial loss of the portable communication system is not acceptable inside or outside the area on fire. The applicant must clearly state they meet these requirements.

3) State that the portable wireless communication system does not interfere with security communications.

4) State that the fixed emergency communication system is independent of the normal communication system and located at pre-selected stations.

5) Section 9.5.2.2.1 states that the base station equipment for the portable wireless communication is physically separated from the other subsystems equipment such as digital telephone, PA and alarm system to increase protection against a single accident or fire. Describe this physical separation and state if it meets the criteria given in RG 1.189 Regulatory Position 5.3 or provide justification for not meeting these criteria.