AP1000DCDFileNPEm Resource

From: Adams II, Samuel L. [adamssl@westinghouse.com]
Sent: Wednesday, April 30, 2008 3:01 PM
To: Michael Miernicki
Cc: Perry Buckberg; Rhonda Carmon
Subject: FW: RAIs-SRP3.9.5-EMB1-01-04
Attachments: RAI-SRP3.9.5-EMB1-01-04.doc

Hi Mike,

I acknowledge receipt of the attached RAIs on SRP Section 3.9.5.

I will let you know as soon as possible if a clarification call is necessary.

Thanks.

Sam

From: Michael Miernicki [mailto:Michael.Miernicki@nrc.gov]
Sent: Wednesday, April 30, 2008 1:40 PM
To: Adams II, Samuel L.
Cc: Perry Buckberg; Rhonda Carmon
Subject: RAIs-SRP3.9.5-EMB1-01-04

Sam, please see attached RAIs and let me know as soon as possible whether Westinghouse understands these questions or if a conference call is necessary for any clarifications. Thanks.

Mike

Michael J. Miernicki
Project Manager
NRC/NRO/DNRL/NWE2
301-415-2304

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Subject: FW: RAIs-SRP3.9.5-EMB1-01-04
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Received Date: 4/30/2008 3:01:55 PM
From: Adams II, Samuel L.

Created By: adamssl@westinghouse.com

Recipients:
"Perry Buckberg" <Perry.Buckberg@nrc.gov>
Tracking Status: None
"Rhonda Carmon" <Rhonda.Carmon@nrc.gov>
Tracking Status: None
"Michael Miernicki" <Michael.Miernicki@nrc.gov>
Tracking Status: None

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MESSAGE	698	4/30/2008 3:01:55 PM
RAI-SRP3.9.5-EMB1-01-04.doc	25152	

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

Request for Additional Information
Review of AP1000 DCD, Rev. 16, Section 3.9.5

RAI-SRP3.9.5-EMB1-01.

DCD Section 3.9.5.1.4 re: addition of the flow skirt:

a. In accordance with ASME III, Subsection NG-1120, is the flow skirt classified as a core support structure or as an internal structure?
b. If classified as an internal structure, what design criteria are specified as the basis for design and construction of the flow skirt?
c. Explain how flow-induced vibratory loadings have been incorporated in the design of the flow skirt.
d. Is a stress report or design report summary available to document the design stress margins for the flow skirt?

RAI-SRP3.9.5-EMB1-02.

The last sentence of DCD Section 3.9.5.1.4 states, “The flow skirt provides a more uniform core inlet flow distribution.”

a. Explain further how this conclusion is established.
b. Are analytical and/or test data available as reference material to verify the conclusion that the addition of the flow skirt improves flow distribution to the lower core support plate, and subsequently through the reactor core?

RAI-SRP3.9.5-EMB1-03

DCD Fig. 3.9-8 illustrates the flow skirt as a solid beam-like structure which is not representative of either its function or its description. Further clarification of Fig. 3.9-8, or additional figure details, should be provided to facilitate understanding of the form and function of this newly added component.

RAI-SRP3.9.5-EMB1-04

DCD Section 3.9.5.1.1 re: addition of neutron panels:

a. In accordance with ASME III, Subsection NG-1120, are the neutron panels classified as core support structures or as internal structures?
b. The design basis for the components described in DCD Section 3.9.5.1.1 is unclear. The description of the lower core support assembly, which includes the neutron panels, suggests that this assembly may provide a core support function which defines the ASME Code classification and design basis for the components. Identify the design basis for this assembly, and the design basis of individual components, if different from the assembly.
c. If the neutron panels are classified as internal structures, what specific design criteria are used as the basis for their design and construction?
d. Describe how the neutron panels are fastened to the core barrel, and how this connection is designed to resist vibratory loading.
e. Describe how the addition of the neutron panels affects the fluid flow in the reactor downcomer annulus, especially with respect to the potential for adverse flow-induced vibration loading.