

## CCNPP3eRAIPEm Resource

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**From:** Arora, Surinder  
**Sent:** Wednesday, October 12, 2011 2:28 PM  
**To:** Infanger, Paul  
**Cc:** CCNPP3eRAIPEm Resource; Colaccino, Joseph; Canova, Michael; Wilson, Anthony; Vrahoretis, Susan; Jackson, Terry  
**Subject:** Final RAI 325 ICE1 6066  
**Attachments:** FINAL RAI 325 ICE1 6066.doc

Paul,

Attached please find the subject request for additional information (RAI). The draft of this RAI was sent to you on September 26, 2011. As stated in your email of October 11, 2011, UniStar does not require a clarification phone call to discuss any of the draft questions. The RAI is, therefore, being issued as "Final".

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 schedule date for submitting your technically correct and complete response will be provided to the staff within the 30 day period so that the staff can assess how this information will impact the review schedule of the applicable FSAR Chapter.

Your response letter should also include a statement confirming that the response does or does not contain any sensitive or proprietary information.

Thanks.

**SURINDER ARORA, PE**  
**PROJECT MANAGER,**  
**Office of New Reactors**  
**US Nuclear Regulatory Commission**

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**From:** Arora, Surinder

**Created By:** Surinder.Arora@nrc.gov

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**Options**

**Priority:** Standard

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**Recipients Received:**

Request for Additional Information No. 325 (eRAI 6066)

10/12/2011

Calvert Cliffs Unit 3

UniStar

Docket No. 52-016

SRP Section: 07.05 - Information Systems Important to Safety

Application Section: 7.5

QUESTIONS for Instrumentation, Controls and Electrical Engineering 1 (AP1000/EPR Projects) (ICE1)

07.05-1

Provide additional information that describes and explains how the safety-related instrumentation and control (I&C) systems for site-specific systems, such as the Ultimate Heat Sink (UHS), address NRC requirements.

10 CFR Part 50, Appendix A, General Design Criteria 13 requires, in part, that instrumentation be provided to monitor variables and systems over their anticipated ranges for normal operation, for anticipated operational occurrences, and for accident conditions. While the UHS is safety-related, the staff was not able to identify information in Chapter 7 of the Calvert Cliffs Nuclear Power Plant Unit 3 (CCNPP Unit 3) Final Safety Analysis report (FSAR) that describes the UHS I&C. From information located in the ITAAC, and Chapter 9 of the CCNPP Unit 3 FSAR, the staff identified the following site-specific systems, for which related I&C design information was not found in Chapter 7 of the CCNPP Unit 3 FSAR. These systems include: UHS makeup water intake structure ventilation system (initiated automatically), UHS makeup water system (each division can be initiated manually), essential service water system (ESWS) normal makeup system, ESWS emergency makeup water system, ESWS makeup water bypass system, ESWS blowdown system, and ESWS alternate blowdown system.

Provide the following information for each of the CCNPP Unit 3 systems: (1) I&C systems that control the site-specific system (for example, the Protection System, Safety Automation System, or a stand-alone I&C system); (2) If control is by a safety-related, stand-alone system, describe how it meets applicable I&C requirements; (3) A description of the types of control (automatic and/or manual control) provided to each of the site-specific systems. Additionally, provide further clarification of how the I&C functions (such as auto initiation signal, manual initiation signal, and display) are designed for the UHS makeup water system and the UHS Makeup Water Intake Structure Ventilation System. The additional information should be incorporated into Chapter 7 of the application and be sufficient to support the site-specific ITAAC for the UHS Makeup Water System located in Tables 2.4-20, 2.4-22, and 2.4-28 of the CCNPP Unit 3 COL, Part 10, Inspections, Tests, Analyses Criteria (ITAAC) and ITAAC Closure, Revision 7. Additionally, if there are any responses to requests for additional information (RAI) that have been provided for other chapters which impact the previously provided Chapter 7 responses, then provide updated and supplemental information to the response to RAI 45 and RAI 66, dated April 6, 2010. RAI 45 addressed the associated component control and indication necessary for safe shutdown as related to the ultimate heat sink (UHS). RAI 66

addressed the site-specific post-accident (PAM) variables related to the UHS, metrology, and radiation monitoring.

07.05-2

Revise Section 7.5 of the CCNPP Unit 3 FSAR accordingly based upon resolution of the U.S. EPR COL Item post-accident monitoring issue.

10 CFR 52.47 states that a description shall be sufficient to permit understanding of the system design. During the review of the U.S. EPR design certification and the Calvert Cliffs Unit 3 COL application, the staff noted that the Calvert Cliffs COL application addressed a COL Item associated with updating the PAMS instrument list. However, the staff issued request for additional information (RAI) 505, Question 07.05-11, pertaining to Section 7.5 of the U.S. EPR FSAR that questioned the necessity for the COL Item. The staff finds the post-accident monitoring instrumentation in Section 7.5 of the U.S. EPR FSAR needs to be a complete list with the exception of site-specific instrumentation. Therefore, there does not appear to be a need to update the post-accident monitoring instrumentation list. Section 7.5 of the U.S. EPR FSAR is being reviewed by the staff under Docket No. 52-020. The staff requests the Calvert Cliffs Unit 3 COL applicant to modify the COL application accordingly following resolution of the U.S. EPR RAI.