

## CCNPP3eRAIPEm Resource

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**From:** Arora, Surinder  
**Sent:** Monday, October 17, 2011 1:07 PM  
**To:** Infanger, Paul  
**Cc:** CCNPP3eRAIPEm Resource; Colaccino, Joseph; Hearn, Peter; Wilson, Anthony; Vrahoretis, Susan; McCann, Edward; Dehmel, Jean-Claude; Dreisbach, Jason; Segala, John  
**Subject:** Final RAI 324 SBPA 6053  
**Attachments:** FINAL RAI 324 SBPA 6053.doc

Paul,

Attached please find the subject request for additional information (RAI). The draft of this RAI was sent to you on September 28, 2011. A clarification phone call to discuss the two draft questions was held on October 17, 2011; however, no changes were required to 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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Request for Additional Information No. 324 (eRAI 6053)  
10/17/2011

Calvert Cliffs Unit 3  
UniStar  
Docket No. 52-016  
SRP Section: 09.05.01 - Fire Protection Program  
Application Section: 9.5.1

QUESTIONS for Balance of Plant Branch 1 (AP1000/EPR Projects) (SBPA)

09.05.01-19

The response to U.S. EPR RAI 433 Question 09.05.01-6 stated that "NEI 00-01, Rev. 1, "Guidance for Post-Fire Safe Shutdown Circuit Analysis," is the only formal NRC endorsed guideline currently available to the industry that addresses spurious actuations. Preparation of NEI 00-01, Rev. 2 is in progress and has not yet been finalized or endorsed by the NRC. Until such time it is endorsed by the NRC, utilization of NEI 00-01, Rev. 2 is not considered appropriate. It is also not considered appropriate to independently develop assumptions and guidelines for the design of the U.S. EPR, as those developed may be inconsistent with the final industry/NRC product. It is the intent of the U.S. EPR design to follow the NRC endorsed/issued spurious actuation guidance in effect when the U.S. EPR post-fire safe shutdown analysis is formally initiated." RG 1.189 Rev. 2 and NEI 00-01 Rev. 2 have since been issued. RG 1.189 Rev. 2 contains the updated methodology for Post-Fire Safe Shutdown Circuit Analysis including multiple spurious actuations and also endorses certain sections of NEI 00-01 Rev. 2. The applicant is directed to update the methodology for Post-Fire Safe Shutdown Circuit Analysis. The applicant is directed to document the use of RG 1.189 Rev. 2 and the endorsed sections of NEI 00-01 Rev.2 in the FSAR for Post-Fire Safe Shutdown Circuit Analysis Methodology.

09.05.01-20

In the response dated June 21, 2011 about RAI No. 311, Question 09.05.01-17, the applicant states that no changes are needed to the CCNPP3 COLA because U.S. EPR FSAR Rev. 2, Table 9A-2 (footnote 15) addresses the fire hazard analyses and such analyses are outside of the scope of the CCNPP3 COLA. The response states that if alternate storage locations were to be used at a later time, CCNPP3 would use the 10 CFR 50.59 change process to evaluate the impacts of placing potentially combustible radioactive materials in other areas of the plant. The response also relies on CCNPP3 FSAR Table 1.8-2 COL information Item 9.5-17 to evaluate differences between the as-designed and as-built plant configurations in confirming that the fire protection analyses presented in U.S. EPR FSAR Rev. 2, Section 9A remain bounding. This evaluation will be performed, as indicated in CCNPP3 FSAR Table 13.4-1 (item 8), prior to fuel loading and will consider combustible loading and ignition sources, among other concerns.

1. A review of U.S. EPR FSAR Rev. 2, Section 9A.3.8 (Radioactive Waste Processing Building, RWPB) and FSAR Table 9A-2 indicates that the U.S. EPR FSAR does not present a complete detailed fire protection analysis. For those areas of the RWPB listed in U.S. EPR FSAR Table 9A-2 with potential radiological consequences, the entries state that no engineering evaluations were made. In addition, the assignment of

Footnote 15 to those areas places the responsibility on the COL applicant. Footnote 15 states: *"This indicates the potential presence of radiological sources in a fire area. Possible radiological effects from a fire and the need for additional in-depth fire protection features to mitigate the consequences of a fire will be evaluated by the COL applicant as a part of the final FHA (refer to Section 9.5.1.3)."* As a result, the applicant is directed to explain as to why the conduct of fire hazard analyses is outside of the scope of the CCNPP3 COLA.

2. While the response to the staff RAI states that, under CCNPP3 FSAR COL information Item 9.5-17, the COL applicant will evaluate differences between the as-designed and as-built plant configurations and confirm that the fire protection analyses presented in U.S. EPR FSAR Rev. 2, Section 9A remain bounding. Since the U.S. EPR FSAR Rev. 2, Section 9A.3.8 and FSAR Table 9A-2 do not provide the results of fire protection analyses for all plant areas identified with potential radiological effects, the applicant is directed to explain how it plans to conduct such a comparison and assess whether as-designed CCNPP3 plant configurations remain bounded and identify any deviations.

3. The applicant is requested to review all plants areas identified in U.S. EPR FSAR Rev. 2, Section 9A.3 and FSAR Table 9A-2 with potential radiological effects flagged with Footnote 15 and present either the results of fire protection analyses for all such plant areas, or commit to conduct such analyses as part of the development of the plant's fire protection program identified in CCNPP3 FSAR Table 13.4-1 (item 8) prior to fuel load. In either case, the applicant is directed to the make the appropriate corresponding changes in presenting the supporting information in CCNPP3 FSAR Sections 9.5.1, 11.4, and 13.4.

For all of the above, the COL applicant is directed to provide sufficient information to enable the staff to conduct an independent evaluation and confirm the applicant's conclusions of regulatory compliance with Part 20 as noted Regulatory Guides 1.189 and 1.206 and NUREG-0800, SRP Sections 9.5.1, 11.3, and 11.4 in the event of a fire.