

## CCNPP3COLA NPEmails

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**From:** Arora, Surinder  
**Sent:** Friday, January 22, 2010 2:27 PM  
**To:** 'Poche, Robert'; 'cc3project@constellation.com'  
**Cc:** CCNPP3COL Resource; Dehmel, Jean-Claude; Roach, Edward; Colaccino, Joseph; Jennings, Jason; Biggins, James; Vrahoretis, Susan; Hair, Christopher  
**Subject:** DRAFT RAI No. 210 CHPB 4194  
**Attachments:** DRAFT RAI 210 CHPB 4194.doc

Rob,

Attached is DRAFT RAI No. 210 (eRAI No. 4194). You have until February 5, 2010 to review it and decide whether you need a conference call to discuss any questions in the RAI before the final issuance. After the phone call or after February 5, 2009, the RAI will be finalized and sent to you for response. You will then have 30 days to provide a technically complete response or an expected response date for the RAI.

Thanks.

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

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**Hearing Identifier:** CalvertCliffs\_Unit3Cola\_NonPublic\_EX  
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**Received Date:** 1/22/2010 2:29:12 PM  
**From:** Arora, Surinder

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

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**Options**

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Request for Additional Information No. 210 (eRAI 4194)  
DRAFT  
1/22/2010

Calvert Cliffs Unit 3  
UniStar  
Docket No. 52-016  
SRP Section: 11.03 - Gaseous Waste Management System  
Application Section: 11.3

QUESTIONS for Health Physics Branch (CHPB)

11.03-1

CCNPP-3 FSAR Tier 2, Rev. 6, Section 11.3.3 presents information on gaseous effluent releases and doses to members of the public by incorporating by reference the corresponding FSAR sections of the U.S. EPR design certification. A comparison of the information presented in CCNPP-3 FSAR Tier 2, Rev. 6, Sections 11.3.2, 2.3.5, and 2.1.1.3, and FSAR Figure 2.1-1 indicates that the information presented in the corresponding sections of the U.S. EPR is different and inconsistent with the characteristics of the Calvert Cliffs site used in confirming compliance with NRC regulations. Specifically, the following observations were noted:

- a. CCNPP-3 FSAR Tier 2, Section 11.3.3 does not address site-specific conditions in confirming that routine gaseous effluent releases will comply with Part 20 (App. B, Table 2, Col. 1) gaseous effluents concentration limits. The CCNPP-3 FSAR should compare all assumptions used in Section 11.3 of the U.S. EPR Tier 2 FSAR and identify conditions and assumptions that are applicable to the Calvert Cliffs site and, for those that are not, provide site specific parameters with appropriate justifications. A review of U.S. EPR, Rev. 1, FSAR Tier 2, Section 11.3.3 and Tables 11.3-4 and 11.3-7 indicates that dose results are based on different assumptions. Such differences include locations and distances for the nearest garden, nearest animal (milk and meat), and nearest resident; different EAB atmospheric dispersion and deposition parameters; different annual vegetable and grain production rates within 50 miles of the site; different 50-mile population projections; and U.S EPR FSAR Tier 2, Section 11.3.3 does not provide atmospheric dispersion and deposition parameters for population within 50 miles of the site.
- b. In CCNPP-3 FSAR Tier 2, Section 11.3.3, the applicant has not included a comparative analysis to confirm that the assumptions and parameters used in dose modeling described in the U.S. EPR Rev. 1, FSAR, Tier 2, Section 11.3.3 apply to the specific conditions of the Calvert Cliffs site, including confirmation of offsite dose receptors based on the current land-use census. In addition, Sections 5.4.1 and 5.4.2 of the CCNPP-3 ER presents assumptions and parameters that are different than that describe in Section 11.3.3 of the U.S. EPR FSAR. As a result, the description of the gaseous effluent discharges and site-specific conditions are different for CCNPP-3 than that described in the U.S. EPR FSAR and, consequently, the staff concludes that the regulatory compliance analyses

presented in U.S. EPR FSAR Rev. 1, Section 11.3 cannot be incorporated by reference in CCNPP-3 FSAR Tier 2, Section 11.3.3 as a substitute assessment of radiological impacts associated with gaseous effluent releases and compliance with NRC regulations.

In light of the above, the applicant is requested to evaluate the following and revise the CCNPP-3 COLA by:

1. presenting in FSAR Tier 2, Section 11.3.3 descriptions of Calvert Cliffs site-specific features used to estimate doses to members of the public and populations, including descriptions of offsite dose receptors and exposure pathways based on the current land-use census; locations and distances of dose receptors and exposure pathways from CCNPP-3; sources and estimates of direct radiation exposures from CCNPP-3 building and facilities and materials to members of the public; annual average atmospheric dispersion and deposition parameters for all identified offsite dose receptors and population within a 50-mile radius of CCNPP-3; assumptions used in calculating doses to maximally exposed individuals and collective population doses; and site-specific and default parameters used to calculate doses using Regulatory Guides 1.109 and 1.111 and the GASPAR II computer code (NUREG/CR-4653).
2. using Calvert Cliffs site-specific information, revise CCNPP-3 FSAR Tier 2, Section 11.3.3 and describe the evaluation and present results demonstrating compliance with the effluent concentration limits of Part 20 (App. B, Table 2, Col. 1); and dose limits to members of the public under Parts 20.1301 and 20.1302; Part 20.1301(e) in complying with 40 CFR Part 190 for all exposure pathways; design objectives of Sections II.B and II.C of Appendix I to Part 50 for dose receptors based on the current land-use census; and cost-benefit analysis of Section II.D of Appendix I to Part 50 and COL Information Item 11.3-1 using updated collective population doses. The applicant is requested to provide sufficient information for the staff to conduct an independent evaluation of the applicant's analyses in complying with NRC regulations and confirm consistency with the corresponding results presented in Section 5.4 of the CCNPP Unit 3 ER. The information should include assumptions used in calculating doses to maximally exposed individuals and collective population doses, and site-specific information on dose receptors and exposure pathways and default parameters used to calculate doses using Regulatory Guides 1.109 and 1.111 and the GASPAR II computer code (NUREG/CR-4653).