CCNPP3eRAIPEm Resource

From: Arora, Surinder
Sent: Thursday, January 13, 2011 8:21 AM
To: 'Poche, Robert'; 'cc3project@constellation.com'
Cc: CCNPP3eRAIPEm Resource; Dehmel, Jean-Claude; Colaccino, Joseph; Patel, Jay; Wilson, Anthony; Vrahoretis, Susan; Roach, Edward
Subject: FINAL RAI 290 CHPB 5320
Attachments: FINAL RAI 290 CHPB 5320.doc

Rob,

Attached please find the subject request for additional information (RAI). The draft of this RAI was sent to you on January 7, 2011. In your email dated January 11, 2011, you informed us that UniStar does not need a clarification phone call for this RAI and the RAI can be issued 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.

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

Phone: 301 415-1421
FAX: 301 415-6406
Email: Surinder.Arora@nrc.gov

Hearing Identifier: CalvertCliffs_Unit3Col_RAI
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From: Arora, Surinder

Created By: Surinder.Arora@nrc.gov

Recipients:
"CCNPP3eRAIPEm Resource" <CCNPP3eRAIPEm.Resource@nrc.gov>
Tracking Status: None
"Dehmel, Jean-Claude" <Jean-Claude.Dehmel@nrc.gov>
Tracking Status: None
"Colaccino, Joseph" <Joseph.Colaccino@nrc.gov>
Tracking Status: None
"Patel, Jay" <Jay.Patel@nrc.gov>
Tracking Status: None
"Wilson, Anthony" <Anthony.Wilson@nrc.gov>
Tracking Status: None
"Vrahoretis, Susan" <Susan.Vrahoretis@nrc.gov>
Tracking Status: None
"Roach, Edward" <Edward.Roach@nrc.gov>
Tracking Status: None
"'Poche, Robert'" <Robert.Poche@constellation.com>
Tracking Status: None
"'cc3project@constellation.com'" <cc3project@constellation.com>
Tracking Status: None

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Request for Additional Information No. 290 (eRAI 5320)

1/13/2011

Calvert Cliffs Unit 3
UniStar
Docket No. 52-016
SRP Section: 11.02 - Liquid Waste Management System
Application Section: 11.2

QUESTIONS for Health Physics Branch (CHPB)

11.02-5

Supplemental question to the response of RAI 254, Question 11.02-3

THIS RAI CONSTITUTES AN OPEN ITEM FOR CHAPTER 11

In the response dated Nov. 16, 2010, the applicant provides a revision of FSAR Section 11.2 addressing the staff's concerns on the approach used in determining doses to the members of the public due to liquid effluents and confirming compliance with NRC regulations and guidance. The response presents a complete revision of FSAR Section 11.2 and includes information supporting a revised site-specific dose assessment for liquid effluent releases to the Chesapeake Bay, a cost-benefit analysis, and a deletion of previously proposed revisions to the departures and exemption reports (Part 7 of the application).

In part, the staff finds the revision adequate, as it was able to independently confirm the dose results to the maximally exposed individual and population, and cost-benefit analysis, and removal of prior departures. However, the staff noted a number of inconsistencies in the presentation of the revised results, statements of compliance with NRC regulations and guidance, and proposed revisions to the FSAR given the concerns identified in RAI 254, Questions 11.02-3. Based on the staff's review of responses to RAI 254, Question 11.02-3, the applicant is requested to address the following items in the proposed revision of FSAR Section 11.2.

A. FSAR Section 11.2.3.3

Regarding the total discharge rate to the Chesapeake, the staff notes that there are three sets of data for the same parameter:

1. ER Table 5.4-1: 19,426 gpm

2. ER Table 3.3-1: 21,019 gpm

3. FSAR Table 10.4-1: 19,696 gpm

4. FSAR Table 11.2-1: 21,019 gpm or 46.8 ft^3/sec

The applicant is requested to confirm which value is the proper one to use in assessing offsite doses, confirm its basis given the system description of FSAR Section 10.4.5 and Table 10.4-1, and properly qualify the chosen value in the text and/or FSAR Table 11.2-1.

Based on the information presented in the body of the response (Part A, p.5 of 72) and revised FSAR Section 11.2.3.3, the applicant is requested to provide the appropriate references supporting the stated dilution factors used in assessing offsite doses.

B. FSAR Section 11.2.3.7

Regarding the radiological impacts of a postulated radioactive waste tank failure, the discussion states that the results presented in U.S. EPR FSAR Section 11.2.3.7 are bounding and the resulting conclusion of acceptability also applies to CCNPP Unit 3. The staff disagrees with this conclusion given that the applicant has presented a site-specific analysis for CCNPP Unit 3 in FSAR Section 2.4.13. The applicant is requested to revise the current conclusion in CCNPP Unit 3 FSAR Section 11.2.3.7 by referring to CCNPP Unit 3 FSAR Section 2.4.13 instead for the details of the analysis, and provide a summary conclusion of these results in FSAR Section 11.2.3.7 in confirming compliance with the acceptance criteria of SRP Section 11.2 and BTP 11-6 (NUREG-0800).

C. FSAR Section 11.2.4

While the discussion refers to Regulatory Guide 1.110 in structuring the cost-benefit analysis, the guidance is not listed in the reference section. The applicant is requested to add Regulatory Guide 1.110 as a full reference in FSAR Section 11.2.5.

D. FSAR Section 11.2.3.4.2 and Table 11.2-4

FSAR Table 11.2-4 presents the results demonstrating compliance with 40 CFR Part 190 (as implemented under Part 20.1301(e)) for CCNPP Units 1 and 2. This information is used to support the conclusion that all three plants would comply with 40 CFR Part 190. In reviewing the listed dose results, the applicant is requested to address and revise the tabulation by:

1. Including current results published by Constellation (May 14, 2010) for calendar year 2009 and update the related conclusions described in the text.

2. While the dose results of CCNPP Units 1 and 2 FSAR Table 11.2-4 have been rounded off, confirm that the tabulated doses represent the sum of doses from liquid and gaseous effluents and not liquid effluent releases only.

3. Adding another column to CCNPP Unit 3 FSAR Table 11.2-4 to include doses due to external radiation since 40 CFR Part 190 includes dose criteria for all sources of radioactivity, liquid and gaseous effluents and doses from external radiation. Revise the related discussion addressing compliance with 40 CFR Part 190 and Part 20.1301(e) accordingly in the text for CCNPP Unit 3.

E. FSAR Section 11.2.3.5

Regarding compliance with the effluent concentration limits of Part 20, Appendix B, Table 2, Column 2, the discussion notes that the results presented in U.S. EPR Table 11.2-7 are bounding and the resulting conclusion of acceptability also apply to CCNPP-3 Unit 3. The staff disagrees with this conclusion as the applicant must demonstrate compliance for the site-specific condition of CCNPP Unit 3. The applicant is requested to review and revise the current conclusions in FSAR Section 11.2.3.5 and confirm compliance with the requirements of Part 20.1301 and 20.1302, and Part 20, Appendix B (Table 2, Column 2) effluent concentration limits, and unity rule summed up over all

nuclides reported in liquid effluents contained in routine effluent releases and anticipated operational occurrences.

F. FSAR Table 11.2-5

FSAR Table 11.2-5 presents the results demonstrating compliance with 40 CFR Part 190. In reviewing the listed dose results, the applicant is requested to address and revise the tabulation by adding another column to this table to include CCNPP Unit 3 dose projections due to external radiation since 40 CFR Part 190 includes dose criteria from all sources of radioactivity, liquid and gaseous effluents and external radiation. While footnote 5 to Table 11.2-5 refers to dose projections based on information presented in U.S. EPR FSAR Section 12.3.5.3, this information is not specific to the CCNPP Unit 3 site. A more realistic estimate of bounding external radiation exposures and doses should be drawn from CCNPP Units 1 and 2 reports supporting the presentation of doses listed in CCNPP Unit 3 FSAR Table 11.2-4 (see footnote 1).