

CCNPP3COLA PEmails

From: Arora, Surinder
Sent: Monday, January 04, 2010 9:18 AM
To: 'Poche, Robert'; 'cc3project@constellation.com'
Cc: CCNPP3COL Resource; Mrowca, Lynn; Phan, Hanh; Colaccino, Joseph; Chowdhury, Prosanta; Biggins, James; Vrahoretis, Susan; Hair, Christopher
Subject: FINAL RAI No. 198 SPLA 3946
Attachments: FINAL RAI 198 SPLA 3946.doc

Rob,

Attached please find the subject request for additional information (RAI). The draft of this RAI was sent to you on December 9, 2009. No clarification phone call on the draft RAI was requested by UniStar during the review period.

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
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Subject: FINAL RAI No. 198 SPLA 3946
Sent Date: 1/4/2010 9:18:10 AM
Received Date: 1/4/2010 9:18:12 AM
From: Arora, Surinder

Created By: Surinder.Arora@nrc.gov

Recipients:

"CCNPP3COL Resource" <CCNPP3COL.Resource@nrc.gov>
Tracking Status: None
"Mrowca, Lynn" <Lynn.Mrowca@nrc.gov>
Tracking Status: None
"Phan, Hanh" <Hanh.Phan@nrc.gov>
Tracking Status: None
"Colaccino, Joseph" <Joseph.Colaccino@nrc.gov>
Tracking Status:: Response: None : 12/2/2009 8:06:00 AM
"Chowdhury, Prosanta" <Prosanta.Chowdhury@nrc.gov>
Tracking Status: None
"Biggins, James" <James.Biggins@nrc.gov>
Tracking Status: None
"Vrahoretis, Susan" <Susan.Vrahoretis@nrc.gov>
Tracking Status: None
"Hair, Christopher" <Christopher.Hair@nrc.gov>
Tracking Status:: Response: None : 12/2/2009 8:06:00 AM
"Poche, Robert" <Robert.Poche@constellation.com>
Tracking Status: None
"cc3project@constellation.com" <cc3project@constellation.com>
Tracking Status: None

Post Office: HQCLSTR01.nrc.gov

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Options

Priority: Standard
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Request for Additional Information No. 198 (eRAI 3946)

1/4/2010

Calvert Cliffs Unit 3
UniStar

Docket No. 52-016

SRP Section: 19 - Probabilistic Risk Assessment and Severe Accident Evaluation
Application Section: 19

QUESTIONS for PRA Licensing, Operations Support and Maintenance Branch 1 (AP1000/EPR Projects) (SPLA)

19-20

(Follow-up to RAI 93, Question 19-13) The most recent version of RG 1.200, Revision 2, Section C.1.2.5 states that "It is recognized that for those new reactor designs with substantially lower risk profiles (e.g., internal events CDF below 1E-6/year), the quantitative screening value should be adjusted according to the relative baseline risk value." Thus, please reassess the external events using an appropriate PRA screening value, or quantitatively justify that when all conservatisms are removed from the analysis, the resulting CDF and LRF would be significantly lower than the total baseline U.S. EPR CDF and LRF of 5.3E-7/yr and 2.6E-8/yr, respectively.

19-21

(Follow-up to RAI 93, Question 19-15) The staff observes that, as mentioned in the response to RAI 93, Question 19-13, UniStar has screened out the airplane crash events based on the conservative risk assessment performed in accordance with RG 1.200 guidance. However, the resulting CDF of 1.1E-7/yr does not conform to the RG 1.200 screening criteria which describe that the screening value should be reasonably lower than the baseline risks. Without a more detailed assessment, the staff cannot conclude that the risk posed by aircraft crash events is insignificant and can be screened from the PRA. Thus,

- a) Please provide the analysis which demonstrates that the more realistic CDF is reasonably lower than the baseline U.S. EPR CDF, otherwise, include the calculated aircraft crash CDF of 1.1E-7/yr in the CCNPP Unit 3 baseline risk profile.
- b) CCNPP Unit 3 COLA, FSAR, Section 19.1.5.4.4 "Aircraft Crash Hazard Risk Evaluation", indicates that UniStar has modeled a scenario representing an airplane crash into the turbine building, which disables all the equipment within the turbine building, but provides no discussion on the result. Please provide the resulting CDF from this scenario.
- c) Please provide the large release frequencies (LRFs) from the analyzed scenarios in Section 19.1.5.4.4 and/or justify that these LRFs are reasonably lower than the baseline LRF and can be screened from the PRA.

19-22

(Follow-up to RAI 93, Question 19-16) According to RG 1.200, Revision 2, Section C.1.2.5, for new reactor designs, all external natural hazards and man-made events can be screened out if they can be shown using a demonstrably conservative analysis that

the resulting CDF is less than the baseline risk value. Thus, please reassess all industrial and transportation accidents and nearby facilities hazards according to the RG 1.200 screening criteria.

19-23

The discussion of the tornado strike frequency calculation in CCNPP Unit 3 COLA, FSAR, Section 19.1.5.4.1, is not detailed enough for the staff to draw conclusions about the calculated frequency. Please describe in detail how the CCNPP Unit 3 site-specific tornado strike frequency of $6.1E-5/\text{yr}$ was derived.

19-24

CCNPP Unit 3 COLA, FSAR, Table 19.1-1 states that "hurricane winds are bounded by the analysis in Section 19.1.5.4.1;" however, no discussion of the hurricane winds could be found in this section or elsewhere in the FSAR, Chapter 19. Therefore, please validate the above statement and also provide the frequencies and potential consequences of hurricanes at the CCNPP Unit 3 site.