

CCNPP3eRAIEm Resource

From: Arora, Surinder
Sent: Monday, April 08, 2013 2:01 PM
To: Infanger, Paul; UNECC3Project@unistarnuclear.com
Cc: CCNPP3eRAIEm Resource; Segala, John; Wilson, Anthony; Karas, Rebecca; Stieve, Alice; Ford, Tanya; McLellan, Judith; Seber, Dogan
Subject: CCNPP3 - Final RAI 387 SPRA 6937
Attachments: FINAL RAI 387 SPRA 6937.doc

Paul,

Attached to this email message is Final RAI No. 387 (eRAI No. 6937) pertaining to Chapter 19 of the FSAR for the Combined License Application for CCNPP3. The draft of this RAI was issued to UniStar on March 13, 2013. A clarification phone call, requested by UniStar, was held on April 4, 2013; however, no technical changes to the draft questions were required by this clarification phone call. This email, therefore, transmits the "final" version of the RAI. Note that the RAI number for the predecessor RAI has been corrected as discussed during the clarification phone call.

The schedule that we have established for review of your application assumes that your technically complete response to the RAI question or a schedule for providing the response must be received within 30 days of the final RAI. Please note that if you are providing a response schedule in lieu of the technically complete response, the staff will re-evaluate the completion schedule of the chapter based on your proposed response date.

Additionally, please make sure that your response letter includes a statement whether or not your response contains any sensitive or proprietary information.

Thanks.

SURINDER ARORA, PE
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Hearing Identifier: CalvertCliffs_Unit3Col_RAI
Email Number: 300

Mail Envelope Properties (B46615B367D1144982B324704E3BCEEDE53A0EA914)

Subject: CCNPP3 - Final RAI 387 SPRA 6937
Sent Date: 4/8/2013 2:00:45 PM
Received Date: 4/8/2013 2:00:49 PM
From: Arora, Surinder

Created By: Surinder.Arora@nrc.gov

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Post Office: HQCLSTR01.nrc.gov

Files	Size	Date & Time
MESSAGE	1458	4/8/2013 2:00:49 PM
FINAL RAI 387 SPRA 6937.doc		36346

Options

Priority: Standard
Return Notification: No
Reply Requested: No
Sensitivity: Normal
Expiration Date:
Recipients Received:

Request for Additional Information 387 (eRAI 6937)

Issue Date: 4/8/2013

Application Title: Calvert Cliffs Unit 3 - Docket Number 52-016

Operating Company: UniStar

Docket No. 52-016

Review Section: 19 - Probabilistic Risk Assessment and Severe Accident Evaluation

Application Section: 19

QUESTIONS

19-28

This RAI Question is a follow-up to RAI 198, Questions 19-20, 19-21, and 19-22 response.

The staff reviewed the applicant's response to RAI 198, Questions 19-20, 19-21, and 19-22, and requests additional information. Regulatory Guide (RG) 1.200, Section 1.2.5, "Screening and Conservative Analysis of Other External Hazards Technical Elements," states that screening methods can often be employed to show that the contribution of many external events to core damage frequency (CDF) and/or large early release frequency (LERF)/LRF (large release frequency) is insignificant. The fundamental criteria that have been recognized (Regulatory Guide 1.200) for screening-out events are the following: an event can be screened out either (1) if it meets the criteria in the NRC's 1975 Standard Review Plan (SRP) or a later revision; or (2) if it can be shown using a demonstrably conservative analysis that the mean value of the design-basis hazard used in the plant design is less than 10⁻⁵ per year and that the conditional core damage probability is less than 10⁻¹, given the occurrence of the design-basis-hazard event; or (3) if it can be shown using a demonstrably conservative analysis that the CDF is less than 10⁻⁶ per year. It is recognized that for those new reactor designs with substantially lower risk profiles (e.g., internal events CDF below 10⁻⁶/year), the quantitative screening value should be adjusted according to the relative baseline risk value.

Based on RG 1.200, please update the screening discussion in Section 19.1.5 of the CCNPP3 FSAR, Revision 8, to be consistent with RG 1.200 Section 1.2.5 or justify your current screening methodology.

19-29

This RAI Question is a follow-up to RAI 198, Questions 19-20, 19-21, 19-22, 19-23, and 19-24 response.

The staff reviewed the applicant's response to RAI 198, Questions 19-20, 19-21, 19-22, 19-23, and 19-24, and requests additional information. The staff also reviewed Section 3.3.1.1, "Design Wind Velocity," in the CCNPP3 FSAR, Revision 8. It states that the 100 year recurrence interval wind speed for CCNPP Unit 3 site is 101.65 mph, which is the wind speed for site-specific non safety-related structures. The staff also noted that high winds (other than tornadoes) were not evaluated in Section 19.1.5.4, "Other External Risk Evaluations," in the CCNPP FSAR, Revision 8. High winds were screened directly based on the CCNPP Unit 3 design basis.

Based on 10CFR52.79(d)(1), the applicant referencing a design certification "must use the PRA information for the design certification and must be updated to account for site-specific design information and any design changes or departures."

Considering that non-safety related SSCs (including the switchyard) may only be designed for a wind speed of 101.65 mph, please use the re-occurrence interval of 1/150 years to confirm that extreme winds (beyond the site specific wind speed) as discussed in Chapter 2 and Chapter 3 of the FSAR do not affect the full power core damage frequency (CDF) and shutdown CDF by more than 10% (positive or negative). Please report the CDF values and results if they exceed the 10% threshold.

