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10 CFR 50.4
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February 18, 2011

UN#11-088

ATTN: Document Control Desk
U.S. Nuclear Regulatory Commission
Washington, DC 20555-0001

Subject: UniStar Nuclear Energy, NRC Docket No. 52-016
Response to Request for Additional Information for the
Calvert Cliffs Nuclear Power Plant, Unit 3,
RAI No. 275, Structural ITAAC

Reference: Surinder Arora (NRC) to Robert Poche (UniStar Nuclear Energy), "FINAL RAI
275 SEB2 5205" email dated January 21, 2011

The purpose of this letter is to respond to the request for additional information (RAI) identified in the NRC e-mail correspondence to UniStar Nuclear Energy, dated January 21, 2011 (Reference). This RAI addresses Structural ITAAC as discussed in Section 14.3 of the Final Safety Analysis Report (FSAR), as submitted in Part 2 of the Calvert Cliffs Nuclear Power Plant (CCNPP) Unit 3 Combined License Application (COLA), Revision 7.

The enclosure provides our response to RAI No. 275, Questions 14.03.02-15 and 14.03.02-16. Our response does not include any new regulatory commitments and does not impact COLA content. This letter does not contain any sensitive or proprietary information.

UniStar Nuclear Energy requires additional time to finalize the responses RAI 275, Questions 14.03.02-13 and 14.03.02-14. The response to question 14.03.02-13 will be provided to the NRC by July 17, 2011 and the response to question 14.03.02-14 will be provided to the NRC by April 29, 2011.

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NRD

If there are any questions regarding this transmittal, please contact me at (410) 470-4205, or Mr. Wayne A. Massie at (410) 470-5503.

I declare under penalty of perjury that the foregoing is true and correct.

Executed on February 18, 2011

A handwritten signature in black ink, appearing to read 'Greg Gibson', with a long horizontal line extending to the right.

Greg Gibson

Enclosure: Response to NRC Request for Additional Information RAI No. 275, Questions 14.03.02-15 and 14.03.02-16, Structural and Systems Engineering - Inspections, Tests, Analyses, and Acceptance Criteria, Calvert Cliffs Nuclear Power Plant, Unit 3

cc: Surinder Arora, NRC Project Manager, U.S. EPR Projects Branch
Laura Quinn, NRC Environmental Project Manager, U.S. EPR COL Application
Getachew Tesfaye, NRC Project Manager, U.S. EPR DC Application (w/o enclosure)
Charles Casto, Deputy Regional Administrator, NRC Region II (w/o enclosure)
Silas Kennedy, U.S. NRC Resident Inspector, CCNPP, Units 1 and 2
U.S. NRC Region I Office

UN#11-088

Enclosure

Response to NRC Request for Additional Information

**RAI No. 275, Questions 14.03.02-15 and 14.03.02-16, Structural and Systems Engineering
- Inspections, Tests, Analyses, and Acceptance Criteria,**

Calvert Cliffs Nuclear Power Plant, Unit 3

RAI No. 275

Question 14.03.02-15

The staff reviewed the RAI response to Question 14.03.02-2 G (Partial) provided in UniStar Letter UN#10-071 dated March 31, 2010 (ML100950110) and found that the response to Items 1, 2a, 3a and 4 of the RAI is adequate, however, the following information is needed to address Items 2c and 3c of the RAI:

Regarding Item 2c of the RAI, for the structures listed in ITAAC Tables 2.4-2 through 2.4-6, the RAI response described two specific parameters that must be met: the maximum water-to-cementitious materials ratio and the maximum limit on supplemental cementitious materials. However, only one parameter, the maximum water-to-cementitious material ratio, was included in the markup to updated ITAAC Tables 2.4-2 through 2.4-6, and ITAAC information on supplementary cementitious material was removed from these tables.

Regarding Item 3c of the RAI, for the structures listed in ITAAC Tables 2.4-7 through 2.4-10, the response described one specific parameter that must be met: the maximum water-to-cementitious materials ratio. This parameter was included in the markup to updated ITAAC Tables 2.4-7 through 2.4-10, and ITAAC information on supplementary cementitious material was removed from these tables.

The staff requests that the applicant provide a technical justification for the removal of ITAAC information on supplementary cementitious material from the ITAAC Tables 2.4-2 through 2.4-10, or revise these tables to include the maximum limit on supplemental cementitious materials.

Response

Technical justification for removing information on supplementary cementitious material from the ITAAC Tables was provided in the response to RAI 274, Question 14.03.02-12 in letter UN#11-001¹.

The appropriate quantity of supplementary cementitious material will be determined using ACI 349 as described in CCNPP Unit 3 COLA FSAR 3.8.4.6.1. Compliance with the ACI 349 requirements as described in the U.S. EPR FSAR and CCNPP unit 3 COLA FSAR will provide the appropriate quantity of supplementary cementitious material.

COLA Impact

The COLA FSAR will not be revised as a result of this response.

¹ G. Gibson (UniStar Nuclear Energy) to Document Control Desk (U.S. NRC), "Response to Request for Additional Information for the Calvert Cliffs Nuclear Power Plant, Unit 3, RAI 269, RAI 270, and RAI 274, Structural and Systems Engineering -Inspections, Tests, Analyses, and Acceptance Criteria," Letter UN#11-001, dated January 13, 2011.

RAI No. 275

Question 14.03.02-16

The staff reviewed the response to Question 14.03.02-2 K 1-4 provided in UniStar Letter UN#10-160 dated June 18, 2010 (ML101740227) and found that the response to Items 1, 2 and 4 of the RAI is adequate, however, the following additional information is needed regarding Item 3 of the RAI:

Item 3 of the RAI is related to the need for ITAAC to require an analysis for reconciling the as-built plant with all the structural design-basis loads and acceptance criteria, and a report documenting the analysis results. The response indicated that COLA Part 10 - ITAAC, Appendix B Table 2.4-9 Items 3 and 4 had been revised to include separate analysis and inspection ITAAC, and Table 2.4-9 Item 5 was also revised. The revised Table 2.4-9 shows that all of the Items 3, 4 and 5 in the table include an inspection that verifies deviations from the approved design will be reconciled and a report that concludes deviations from the approved design are reconciled. The staff's review of the response and the revised table found that neither the response nor the revised table clearly indicate whether an analysis for reconciling the as-built plant with the structural design-basis loads would be performed. Therefore, the staff requests that the applicant clarify whether an analysis for reconciling the as-built plant with structural design-basis loads will be performed. If not, explain why not. If yes, revise the response and Table 2.4-9 to clearly state that the analysis will be performed. If the analysis is performed only under certain conditions, provide the criteria for determining when the analysis has to be performed. Such criteria should be indicated in the revised ITAAC Table 2.4-9. The staff needs the above noted clarification to ensure that adequate ITAAC is proposed and there is reasonable assurance that adequate ITAAC, including reconciliation of as-built plant with the structural design-basis loads and acceptance criteria by analysis, as appropriate, will be implemented pursuant to 10 CFR 52.80(a).

Response

An analysis for reconciling the as-built plant with structural design-basis loads will be performed.

Letter UN#11-001¹ addressed this issue in response to RAI 274, Question 14.03.02-12 and provided conforming changes to multiple ITAAC tables, including this table. Note, the ITAAC table identified in this question as Table 2.4-9 was renumbered as Table 2.4-8 in COLA Revision 7.

COLA Impact

The COLA FSAR will not be revised as a result of this response.

ITAAC Table 2.4-8 was revised in UN#11-001¹.