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10 CFR 50.4
10 CFR 52.79

July 30, 2010

UN#10-210

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. 242, Emergency Planning

- References:
- 1) Surinder Arora (NRC) to Robert Poche (UniStar Nuclear Energy), "FINAL RAI 242 NSIR EP 4637" email dated May 18, 2010
 - 2) UniStar Nuclear Energy Letter UN#10-168, from Greg Gibson to Document Control Desk, U.S. NRC, RAI 242, Emergency Planning, dated June 17, 2010

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 May 18, 2010 (Reference 1). This RAI addresses Emergency Planning, as submitted in Part 5 of the Calvert Cliffs Nuclear Power Plant (CCNPP) Unit 3 Combined License Application (COLA), Revision 6.

Reference 2 provided a July 30, 2010 schedule for the response to Question 13.03-40. The enclosure provides our response to No. 242, Question 13.03-40. There is no revised COLA content required.

Our response does not include any new regulatory commitments. This letter does not contain any sensitive or proprietary information.

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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 July 30, 2010

A handwritten signature in black ink, appearing to read 'Greg Gibson', with a stylized, cursive script.

Greg Gibson

Enclosure: Response to NRC Request for Additional Information RAI No. 242, Question 13.03-40, Emergency Planning, 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)
Loren Plisco, 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

GTG/RM/jdc

Enclosure

**Response to NRC Request for Additional Information, RAI No. 242
Question 13.03-40, Emergency Planning,
Calvert Cliffs Nuclear Power Plant, Unit 3**

RAI 242

Question 13.03-40 (A) Supplemental RAI: EXPLAIN DEVIATIONS from NEI 99-01 REV 5

Basis: 10 CFR 52.79(a)(21), 10 CFR 50.47(b)(4); Section IV.B of Appendix E to 10 CFR 50;

NUREG-0654, FEMA-REP-1, Rev. 1, November 1980:

SRP ACCEPTANCE CRITERIA: Requirements A and B; Acceptance Criterion 3.

The COL application discussed two deviations from NEI 99-01 REV 5 and the response to RAI 13.03-10 dated November 19, 2009 discussed three deviations. The deviation regarding containment depressurization is not discussed in the RAI response but was part of the COL.

- a. Discuss the rationale for deleting the deviations regarding containment depressurization.
- b. Discuss why Initiating Conditions for the EPR digital instrumentation and control design for SU, SA and SS Emergency Action Levels (EALs) have not been developed.
- c. Discuss why Initiating Conditions for the EPR digital instrumentation and control design for CU and CA EALs have not been developed.

Provide justification to support a reasonable assurance finding as to the acceptability of all deviations to the endorsed EAL guidance applicable to the design. Provide this justification in sufficient detail to allow the staff to reach an independent conclusion as to the effectiveness of the proposed EAL scheme to bound all credible failure mechanisms as applicable to the EPR design as documented in the endorsed guidance.

Response

- a. The response provided to RAI 13.03-10 discusses two deviations. The first bullet discusses the design based deviation from NEI 99-01 Rev 5 SU3, SA4 and SS6. The second bullet discusses how the U.S. EPR will replace the loss of annunciator emergency action levels (EALs) with digital instrumentation and control (DI&C) EALs based on NEI 07-01 Rev 0. (The second bullet was not intended to describe a deviation.) The third bullet discusses the deviation from the NEI 99-01 Rev 5 PWR containment potential loss fission product barrier 2.C. This EAL involves the automatic containment depressurization signal, which is not in the design of the U.S. EPR.
- b. Initiating conditions for the U.S. EPR DI&C design EALs have been developed based on NEI 07-01 and submitted through NEI as formal EAL frequently asked questions (FAQs) for incorporation into NEI 99-01. The FAQs for the U.S. EPR DI&C EALs were received favorably during the June 2, 2010 public meeting to discuss NEI proposed FAQs related to EALs.
- c. Initiating conditions for the U.S. EPR DI&C for CU and CA EALs were not developed at the time of the response to RAI 13.03-10 as they did not exist in either NEI 99-01 Rev 5 or the proposed NEI 07-01 Rev 0. Subsequently, cold mode DI&C EALs have been developed by the NEI EAL task force, included in NEI 07-01 Rev 0, and endorsed by the NRC. UniStar Nuclear Energy intends to utilize the NEI 07-01 Rev 0 cold mode DI&C EALs in the same manner it uses the NEI 07-01 Rev 0 hot mode DI&C EALs. UniStar Nuclear Energy submitted to NEI a statement, accepted by NEI during the public comment period, to revise

the NEI 99-01 Rev 5 EAL FAQ on DI&C to include cold mode threshold conditions consistent with NEI 07-01 Rev 0.

Justification for the two design deviations from NEI 99-01 Rev 5 is provided in NEI 07-01 Rev 0 and the FAQs were received favorably during the public meeting held on June 2, 2010.

COLA Impact

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

Question 13.03-40 (B) Supplemental RAI: DIGITAL I&C

In RAI 13.03-08(C), staff requested that the applicant explain how the Emergency Response Organization (ERO) staffing levels are adequate to respond to issues related to the use of digital instrument & control (I&C) and information technology in the plant including those in the initial stage of an accident that require expertise to deal with issues related to the Instrumentation and Control Service Center (I&CSC). In response, the applicant stated that current requirements and/or guidance developed for ERO staffing levels does not address additional on-shift I&C positions (normal or emergency) or ERO I&C positions to address restoration activities involving digital I&C events.

The staff notes that the regulations (10 CFR 50, Appendix E IV.A.5) require that the duties of individuals assigned to the emergency response organization shall be described including "Identification, by position and function to be performed, of other employees of the licensee with special qualifications for coping with emergency conditions that may arise."

Discuss how the plant will be operated safely without digital I&C skills either on-shift or on-call? Include an engineering and safety basis for an emergency response without expertise of digital I&C either on-shift or on-call, or supplement the response staffing tables to show that expertise is available.

Response

UniStar Nuclear Energy has determined that the on-shift individual filling the on-shift ERO position for Electrical / Instrument & Control (NUREG-0654 Table B-1 major function and task of Repair and Corrective Actions) will be task qualified to perform emergency related work on digital I&C equipment.

COLA Impact

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