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October 27, 2009

UN#09-431

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. 169, AC Power Systems (Onsite)

Reference: Surinder Arora (NRC) to Robert Poche (UniStar Nuclear Energy),
"Final RAI No. 169 EEB 3419" email dated September 29, 2009

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 September 29, 2009 (Reference). This RAI addresses AC Power Systems (Onsite), as discussed in Section 8.3 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 6.

The enclosure provides our response to RAI No. 169, Question 08.03.01-15, and includes revised COLA content. A Licensing Basis Document Change Request has been initiated to incorporate these changes into a future revision of the COLA.

Our response to RAI No. 169, Question 08.03.01-15 does not include any new regulatory commitments and 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. Michael J. Yox at (410) 495-2436.

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

Executed on October 27, 2009

A handwritten signature in black ink, appearing to read 'Greg Gibson', with a stylized flourish at the end.

Greg Gibson

Enclosure: Response to NRC Request for Additional Information RAI No. 169,
Question 08.03.01-15, AC Power Systems (Onsite), 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/JMR/mdf

Enclosure

**Response to NRC Request for Additional Information
RAI No. 169, Question 08.03.01-15, AC Power Systems (Onsite),
Calvert Cliffs Nuclear Power Plant, Unit 3**

RAI No. 169

Question 08.03.01-15

Staff has reviewed UniStar's response to RAI 115 Question 8.3.1-9 and requests for the following additional clarifications:

1) The applicant's response stated that "CCNPP Unit 3 is incorporated by reference US EPR Tier 2, Section 8.3.1.3.8, Grounding, for the site specific UHS makeup water intake structure, UHS electrical building, circulating water system cooling tower area, desalination plant, and 500 kV switchyard. The Lightning protection design as described in U.S. EPR Tier 2, Section 8.3.1.3.5 is also incorporated by reference for these same structures/facilities."

The revised FSAR section of CCNPP3, 8.3.1.3 only mentions UHS Intake structure and electrical building but not the other facilities such as the circulating water system cooling tower area, and the desalination plant as per the response. Please clarify why these two facilities are not included in the revised FSAR section 8.3.1.3.

2) The applicant's response stated that "UniStar Nuclear Energy, in accordance with RG 1.206, has determined that only those portions needed to support the Class 1E functions are required to be addressed by an ITAAC."

RG 1.206, CII, 1.2.6, ITAAC for Electrical Systems (SRP Section 14.3.6) contains ITAACs that pertain to both Class 1E and non-Class 1E features of the electrical systems including ITAAC for offsite power to verify by inspection appropriate lightning protection and grounding features. SRP Section 14.3.6 also mentions that in addition to the Class 1E systems, other aspects of the electrical design that are deemed to be important to safety and the top-level design commitments are included in Tier 1. Please add an ITAAC for offsite power lightning protection and grounding or clarify why this was not considered necessary.

Response

- 1) CCNPP Unit 3 COLA FSAR Section 8.3.1.3 will be revised to include the circulating water system cooling tower area, the desalination plant and the 500 kV switchyard.
- 2) CCNPP Unit 3 COLA Part 10 Table 2.4-29 will be revised to include ITAACs for the 500 kV Switchyard lightning protection and grounding systems.

COLA Impact

- 1) The CCNPP Unit 3 FSAR Section 8.3.1.3 will be revised in a future revision of the COLA as shown below.

{The above U.S. EPR FSAR conceptual design information, including U.S. EPR FSAR Figure 8.3-4, is applicable to CCNPP Unit 3. Additionally, the site-specific UHS Intake Structure, and UHS Electrical Building, circulating water system cooling tower area, desalination plant and 500 kV switchyard ~~is are~~ are designed with lightning protection and grounding consistent with U.S. EPR FSAR Tier 2, Section 8.3.1.3.5 and 8.3.1.3.8.

- 2) The CCNPP Unit 3 Inspections, Tests, Analyses, and Acceptance Criteria (ITAAC) and ITAAC Closure Table 2.4-29 in Part 10 of the COLA will be updated as follows in a future COLA revision:

Table 2.4-29— {Offsite Power System Inspections, Tests, Analyses, and Acceptance Criteria}

Commitment Wording	Inspection, Test, or Analysis	Acceptance Criteria
<u>7</u> <u>Electrical grounding exists for the 500 kV switchyard.</u>	<u>Inspections will be conducted of the as-installed equipment.</u>	<u>A report exists and concludes that the as-built grounding for the 500 kV switchyard is in accordance with the design drawings and documentation.</u>
<u>8</u> <u>Lightning protection exists for the 500 kV switchyard.</u>	<u>Inspections will be conducted of the as-installed equipment.</u>	<u>A report exists and concludes that the as-built lightning protection for the 500 kV switchyard is in accordance with the design drawings and documentation.</u>