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NUCLEAR ENERGY

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June 12, 2009

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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. 116, AC Power Systems (Onsite)

Reference: John Rycyna (NRC) to Robert Poche (UniStar Nuclear Energy), "RAI No 116 EEB 2241.doc (PUBLIC)" email dated May 13, 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 May 13, 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 4.

The enclosure provides our response to RAI No. 116, Question 08.03.01-11. Our response to Question 08.03.01-11 does not include any new regulatory commitments and does not impact COLA content.

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NRO

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 June 12, 2009

Greg Gibson

Enclosure: Response to NRC Request for Additional Information RAI No. 116, Question 08.03.01-11, AC Power Systems (Onsite), Calvert Cliffs Nuclear Power Plant, Unit 3

cc: John Rycyna, NRC Project Manager, U.S. EPR COL Application
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
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GTG/JMR/kat

Enclosure

Response to NRC Request for Additional Information
RAI No. 116, Question 08.03.01-11, AC Power Systems (Onsite)
Calvert Cliffs Nuclear Power Plant, Unit 3

RAI No. 116

Question 08.03.01-11

FSAR Section 8.3.1.1.3, "Electric Circuit Protection and Coordination," indicates that there are no departures or supplements from the US EPR DCD. However, FSAR Section 8.2.2.4, "Compliance with GDC 17," page 8-17, refers to FSAR Section 8.3.1.1.3 for the design of the system degraded voltage protection (DVP) scheme and specifies that a site-specific system calculation that will be performed to confirm the design. Identify this site-specific information in FSAR Section 8.3.1.1.3 as a site-specific supplemental information item.

CCNPP unit 3 Technical Specification Section 3.3.1 Table 2 (Items 10.a and 10.b) on page 5 of 6 provides site-specific DVP setpoints and time delays for emergency diesel generator start on Degraded Grid Voltage and loss of offsite power. Please provide details how the DVP setpoint range and time delays were selected, describe how these (setpoint and time delays) are consistent with Branch Technical Position (BTP) 8-6, or justify any inconsistencies with BTP 8-6 for instrument setpoint determination.

Response

CCNPP Unit 3 FSAR Section 8.2.2.4 states that the tap range and bus regulation voltage setting of the on-load tap changers for each emergency auxiliary transformer will ensure that the downstream emergency power supply system 6.9 kV buses will have sufficient voltage to preclude the degraded voltage protection scheme from separating the buses from the preferred power source as described in FSAR Section 8.3.1.1.3. U.S. EPR FSAR, Section 8.3.1.1.3, which is incorporated by reference, provides the basis for the degraded and loss of voltage protection setpoints and time delays consistent with Branch Technical Position 8-6.

FSAR Part 4, Technical Specifications, Revision 4 incorporated the U.S. EPR FSAR Chapter 16, Technical Specifications, by reference. U.S. EPR FSAR Technical Specification Table 3.3.1-2 provides setpoint values for engineered safety features actuation system (ESFAS) signals, including Function 10a, and 10b for degraded and loss of voltage protection. Development of the degraded and loss of voltage protection setpoints and time delay settings is described in the response to U.S. EPR Standard Design Certification Request for Additional Information No. 216, Question 08.03.01-24 (dated May 11, 2009). This response addressed how the Degraded Voltage Protection setpoint range and time delays were selected, and how these setpoints and time delays are consistent with Branch Technical Position 8-6.

The site-specific calculation described in FSAR Section 8.2.2.4 will be addressed by the site-specific Technical Specification setpoint control program. The sentence following the statement about the site-specific calculation in FSAR Section 8.2.2.4 refers to Chapter 16, Technical Specifications, in reference to this calculation. Therefore, Section 8.3.1.1.3 does not require revision. This calculation is addressed as follows in the Chapter 16, Technical Specifications setpoint control program.

The setpoint control program, described in the site-specific Technical Specification, is the subject of CCNPP Unit 3 FSAR RAI 95, Question 16-1 (Response to RAI 95 is scheduled for August 15, 2009). The setpoint control program calculates and controls the degraded and loss of voltage protection settings as well as the reactor trip and other ESFAS setpoints. The degraded and loss of voltage protection setpoints and time delays are consistent with the

recommendations of NRC Regulatory Guide 1.105, Revision 3, Setpoints for Safety-Related Instrumentation, December 1999, as implemented by the U.S. EPR Instrument Setpoint Methodology Topical Report, Document No. 43-10275PA-000.

COLA Impact

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