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10 CFR 50.4  
10 CFR 52.79

January 8, 2009

UN#09-002

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. 37, Revision 0, Question 05.03.02-1, Pressure-Temperature Limits,  
Upper-Shelf Energy, and Pressurized Thermal Shock

Reference: John Rycyna (NRC) to George Wrobel (UniStar), "RAI No 37 CIB1 1540.doc  
(P)," email dated December 10, 2008

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, dated December 10, 2008 (Reference). This RAI addresses the Pressure-Temperature Limits, as discussed in Section 5.3.2 of the Final Safety Analysis Report (FSAR), as submitted in Part 2 of the CCNPP Unit 3 Combined License Application (COLA), Revision 3.

The enclosure provides our response to RAI No. 37, Revision 0, Question 05.03.02-1. Our response to RAI Question 05.03.02-1 does not include any new regulatory commitments and does not require revised COLA content.

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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 January 8, 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. 37, Revision 0, Question 05.03.02-1, Pressure-Temperature Limits, Upper-Shelf Energy, and Pressurized Thermal Shock, Calvert Cliffs Nuclear Power Plant, Unit 3

cc: U.S. NRC Region I  
U.S. NRC Resident Inspector, Calvert Cliffs Nuclear Power Plant, Units 1 and 2  
NRC Environmental Project Manager, U.S. EPR Combined License Application  
NRC Project Manager, U.S. EPR Combined License Application  
NRC Project Manager, U.S. EPR Design Certification Application (w/o enclosure)

**Enclosure**

**Response to NRC Request for Additional Information, RAI No. 37, Revision 0,  
Question 05.03.02-1, Pressure-Temperature Limits, Upper-Shelf Energy, and Pressurized  
Thermal Shock, Calvert Cliffs Nuclear Power Plant, Unit 3**

## **RAI No. 37, Revision 0**

### **Question 05.03.02-1**

Based on a conference call with AREVA, it is the NRC staff's understanding that (a) AREVA will submit for NRC staff review and approval a generic Pressure-Temperature Limit Report (PTLR) for the U.S. EPR reactor vessel using bounding properties, and (b) AREVA will update its U.S. EPR FSAR to include the use of the generic U.S. EPR PTLR by all COL applicants. Assuming this is the case, the NRC staff requests that Part 10 of the Calvert Cliffs 3 Nuclear Project COL application, Appendix A "Proposed License Conditions", COL Item# 5.3-2 be revised by adding the following statement:

The COL Holder shall update the Pressure-Temperature (P/T) limits using the Pressure-Temperature Limit Report methodologies approved in the U.S. EPR FSAR, and using the plant-specific material properties. The COL Holder will inform the NRC of the updated P/T limits.

This approach is consistent with the NRC Generic Letter 96-03 (January 31, 1996) which provides a method for a licensee to inform the NRC staff of any subsequent change in P-T limits without a requirement for NRC approval if there are no changes to the approved PTLR methodology.

### **Response**

AREVA, in their response to U.S. EPR Design Certification Application (DCD) RAI No. 64, Supplement 1, Question 05.03.02-5 (reference) stated,

As stated in U.S. EPR FSAR, Tier 2, Section 5.3.2.1, the U.S. EPR Pressure-Temperature (P-T) Limits Methodology for RCS Heatup and Cooldown Technical Report, ANP-10283P, contains the detailed methodology for developing the P-T limit curves. This technical report will be revised to include the complete methodology for developing the P-T limit curves. This technical report will be revised to include the complete methodology to support the PTLR in compliance with Generic letter 96-03. The revised technical report will contain bounding P-T limit curves that are conservative based on relevant material properties in the design specifications, and will satisfy requirements for a PTLR in the Technical Specifications.

Based on this response it may be acceptable to utilize the bounding curves as the site-specific P-T limit curves. Therefore, UniStar will review any future changes to ANP-10283P and the U.S. EPR DCD and provide the necessary changes to the COLA. UniStar will provide the PTLR as required by CCNPP Unit 3 Tech Spec Reporting Requirement 5.6.4(c), which states, "The PTLR shall be provided to the applicable regulatory body upon issuance for each reactor vessel fluence period and for any revision or supplement thereto."

### **Reference:**

Email from Pederson, M Ronda (AREVA) to Getachew Tesfaye (NRC) dated November 19, 2008, Response to U.S. EPR Design Certification Application RAI No. 64, Supplement 1, including Attachment (RAI 64 Supplement 1 Response US EPR DC.pdf)

### **FSAR Impact**

The applicable sections of the CCNPP COLA will be modified after the technical report and U.S. EPR FSAR is modified.