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10 CFR 50.4  
10 CFR 52.79

October 6, 2008

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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  
Submittal of Response to Request for Additional Information for the  
Calvert Cliffs Nuclear Power Plant, Unit 3 – Design Basis Accidents  
Radiological Consequence Analyses for Advanced Light Water Reactors

Reference: John Rycyna (NRC) to G. Wrobel (UniStar), "RAI No 11 RSAC 1015.doc,"  
dated September 5, 2008

The purpose of this letter is to respond to a request for additional information (RAI) identified in the NRC e-mail correspondence to UniStar Nuclear, dated September 5, 2008 (Reference). This RAI addresses radiological consequence analyses of design basis accidents as addressed in Sections 15.0.3 of the Final Safety Analysis Report as submitted in the Calvert Cliffs Nuclear Power Plant (CCNPP), Unit 3 Combined License Application (COLA).

The enclosures provide responses to the RAI.

If there are any questions regarding this transmittal, please contact me or Mr. George Wrobel at (585) 771-3535.

DO79  
NRW

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

Executed on October 6, 2008

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 RAI Set Number 11 RSAC 1015

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 RAI Set Number 11 RSAC 1015**

**RAI Number 15.0.3-1                      FSAR Section 15.0.3**

FSAR Table 15.0-2 gives site-specific offsite design basis accident (DBA) doses calculated at the Low Population Zone (LPZ) boundary for CCNPP Unit 3, based on the site-specific LPZ atmospheric dispersion factors given in FSAR Table 15.0-1. Discuss the method used to calculate the site specific doses, and provide calculation inputs not included in either the EPR design FSAR or the CCNPP Unit 3 FSAR, such as time dependent isotopic activity releases for each DBA, if used in the calculation.

**Response:**

The CCNPP Unit 3 LPZ doses provided in the FSAR Table 15.0-2 were calculated following the same methodology described in the U.S. EPR FSAR Tier 2, Section 15.0.3.1. The U.S. EPR design basis accidents (DBA) radiological evaluations are based on the Alternative Source Term (AST) methodology following the guidance in Standard Review Plan (SRP) Section 15.0.3 and Regulatory Guide 1.183. Analysis guidance was also obtained from other SRP sections related to specific aspects of a given evaluation, and the event specific evaluations in the U.S. EPR FSAR Tier 2, Section 15.0.3 explain the application of other SRP sections. The DBA evaluations also address applicable interim acceptance criteria and guidance as well as related regulatory issue summaries included in Regulatory Issue Summary (RIS) 2006-04. The same cases from the U.S. EPR FSAR Tier 2, Section 15.0.3 EPR LPZ analyses were utilized and only the LPZ atmospheric dispersion factors were changed to correspond to the site specific dispersion factors found in CCNPP Unit 3 FSAR Table 15.0-1. The analyses did not use the interval releases to the atmosphere. The inputs for the LPZ doses may be obtained from the event specific evaluations in U.S. EPR FSAR Tier 2, Section 15.0.3 and the site specific LPP atmospheric dispersion factors in the CCNPP Unit 3 FSAR Table 15.0-1.

**FSAR Impact:**

No changes to the FSAR are required.