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10 CFR 50.4  
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March 3, 2010

UN#10-051

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. 205, Turbine Area Ventilation System

Reference: Surinder Arora (NRC) to Robert Poche (UniStar Nuclear Energy), "FINAL RAI  
No. 205 CHPB 4189" email dated February 1, 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 February 1, 2010 (Reference). This RAI addresses Turbine Area Ventilation System, as discussed in Section 9.4.4 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. 205, Question 09.04.04-2, 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 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 March 3, 2010

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 NRC Request for Additional Information RAI No. 205, Question 09.04.04-2, Turbine Area Ventilation System, 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  
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GTG/RDS/mdf

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**Enclosure**

**Response to NRC Request for Additional Information  
RAI No. 205, Question 09.04.04-2, Turbine Area Ventilation System,  
Calvert Cliffs Nuclear Power Plant, Unit 3**

**RAI No. 205**

**Question 09.04.04-2**

CCNPP-3 FSAR Tier 2, Rev. 6, Section 9.4.4 and Figure 9.4-1 present information on the Turbine Building Ventilation System (TBVS). This information is new in the context that U.S. EPR FSAR Tier 2, Rev. 1, Section 9.4.4 does not present specific details; it only presents general operational functions. A review of CCNPP-3 FSAR Tier 2, Rev. 6, Section 9.4.4.2 indicates that the TBVS does not necessitate a "... realignment or operator action ... in response to radiation or other safety actuation signals from the TBVS." CCNPP-3 FSAR Tier 2, Rev. 6, Section 9.4.4.3 states that the "TBVS is not exposed to any radiological contamination; therefore the requirements of GDC 60 are not applicable." Given that the exhaust from the turbine gland seal exhausters is directed and discharged via the Nuclear Auxiliary Building Exhaust, it is not clear as to what is meant by the statement that no realignment is needed in response to a radiation or other safety actuation signals from the TBVS. The applicant is requested to address this inconsistency and revise affected FSAR Tier 2, Sections to:

1. identify sources of airborne radioactivity that would trip a TBVS actuation signal and revise FSAR Tier 2, Sections 9.4.4 and 11.3;
2. describe the radiation monitoring system used to trip TBVS actuation signals and revise FSAR Tier 2, Sections 9.4.4 and 11.5;
3. describe measures to prevent TB roof exhaust ventilators and TB relief vents shown in CCNPP-3 FSAR Tier 2, Figure 9.4-1 from becoming potential sources of unmonitored and uncontrolled discharge points of radioactive materials into the environment, and revise FSAR Tier 2, Sections 9.4.4 and 11.5; and
4. provide an assessment of radiological impacts associated with airborne effluent releases from the TB roof exhaust ventilators and TB relief vents and compliance with Parts 20.1301 and 20.1302 and Part 50 Appendix I and guidance of RG 1.206 and acceptance criteria of SRP Sections 9.4, 10.4, and 11.3, and revise FSAR Tier 2, Section 11.3.

**Response**

The exhausts from the main condenser evacuation system and the turbine gland seal exhausters are directed to, and discharged via, the Nuclear Auxiliary Building Exhaust. The Turbine Building Ventilation System (TBVS) is not exposed to any radiological contamination. Therefore, the Turbine Building (TB) roof exhaust ventilators and TB relief vents are not a source of unmonitored and uncontrolled discharge points of radioactive materials. FSAR Section 9.4.4.2 will be revised to more clearly state that there are no radiation or safety actuations associated with TBVS.

## **COLA Impact**

FSAR Section 9.4.4.2 will be updated as follows in a future COLA revision:

### **9.4.4 TURBINE BUILDING VENTILATION SYSTEM**

#### **9.4.4.2 System Description**

The Turbine Building Ventilation System is shown in Figure 9.4-2.

Outside air is supplied to the Turbine Building by fans via intake louvers and exhausted to the atmosphere by roof exhaust ventilators. During normal operation outside air is mixed with recirculated air to maintain a positive pressure in the Turbine Building.

The Turbine Building Ventilation System removes heat generated by equipment and from the environment to maintain acceptable indoor ambient conditions. Unit heaters are used to maintain the minimum room temperatures within the Turbine Building.

An air conditioning unit in the sampling room located on the basement floor maintains the sample lab equipment at a design minimum temperature of 50°F, and a design maximum temperature of 95°F.

~~There is no realignment or operator action required in response to radiation or other safety actuation signals for the Turbine Building Ventilation System. There are no radiation or safety actuation signals associated with the Turbine Building Ventilation System. No Turbine Building Ventilation System realignment or operator action is required in response to plant radiation or safety actuation signals.~~

The Turbine Building Ventilation System is designed as a non seismic system since there are no seismic Category I SSCs inside the Turbine Building.