Greg Gibson
Vice President, Regulatory Affairs

750 East Pratt Street, Suite 1600
Baltimore, Maryland 21202

UniStar
NUCLEAR ENERGY

10 CFR 50.4
10 CFR 52.79

May 7, 2009

UN#09-212

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. 86, Question 14.02-33, Initial Plant Test Program

References:
1) John Rycyna (NRC) to Robert Poche (UniStar Nuclear Energy), "RAI No. 86 CQVP 1882.doc (PUBLIC)" email dated March 24, 2009

2) UniStar Nuclear Energy Letter UN#09-205, from Greg Gibson to Document Control Desk, U.S. NRC, Submittal of Response to RAI No. 86, Initial Plant Test Program, dated April 21, 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 March 24, 2009 (Reference 1). This RAI addresses the Initial Plant Test Program, as discussed in Section 14.2 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.

In the UniStar Nuclear Energy letter (Reference 2) it was stated that a response to RAI 86, Question 14.02-33 would be provided by May 8, 2009. The enclosure provides our response to RAI No. 86, Question 14.02-33. COLA impacts associated with this RAI response are noted with the question response.

D096
NRO

A Licensing Basis Document Change Request has been initiated to incorporate these changes into a future revision of the COLA. Our response to Question 14.02-33 does not include any new regulatory commitments.

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 May 7, 2009

Greg Gibson

Enclosure: Response to NRC Request for Additional Information, RAI No. 86, Question 14.02-33, Initial Plant Test Program, 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
U.S. NRC Region I Office

GTG/JKJ/jmm

**Enclosure**

**Response to NRC Request for Additional Information**
**RAI No. 86, Question 14.02-33, Initial Plant Test Program**
**Calvert Cliffs Nuclear Power Plant, Unit 3**

**RAI No. 86**

**Question 14.02-33**

Regulatory Guide 1.68, Appendix A, Section 1.k., states that "[a]ppropriate tests should be conducted to demonstrate the proper operation of the following types of systems and components used to monitor or measure radiation levels, provide for personnel protection, or control or limit the release of radioactivity: . . . (3) laboratory equipment used to analyze or measure radiation levels and radioactivity concentrations." This is one of the system types that should receive preoperational testing to demonstrate proper operation. As this equipment is used to ensure that the specified design conditions of the facility are not exceeded during any condition of normal operation, including anticipated operational occurrences, or as a result of postulated accident conditions, please include site-specific preoperational tests for laboratory equipment in CCNPP3 FSAR Section 14.2.14, or justify the absence of such testing.

**Response**

FSAR Section 14.2.14 will be revised by adding requirements for a plant laboratory equipment test.

**COLA Impact**

FSAR Section 14.2.14 will be updated as follows in a future COLA revision:

**14.2.14.11 Plant Laboratory Equipment**

1. OBJECTIVE

   a. To demonstrate proper operation of laboratory equipment used to analyze or measure radiation levels.

   b. To ensure proper operation of laboratory equipment used to analyze or measure isotopic concentrations (such as a mass spectrometer) of radioactive samples.

2. PREREQUISITES

   a. Construction activities on laboratory equipment support systems used to analyze or measure radiation levels are complete.

   b. Construction activities on laboratory equipment support systems used to analyze or measure isotopic concentrations of radioactive samples are complete.

   c. Construction activities related to the installation of vendor supplied laboratory equipment used to analyze or measure radiation levels are complete. The laboratory equipment has been installed per manufacturer recommendations.

d. Construction activities related to the installation of vendor supplied laboratory equipment used to analyze or measure isotopic concentrations of radioactive samples are complete. The laboratory equipment has been installed per manufacturer recommendations.

e. The laboratory equipment area radiological controls (such as postings, shielding, radioactive work permits) have been implemented or are capable of being implemented.

3. TEST METHOD

a. Ensure that drains from laboratory equipment that analyze or measure radiation levels are routed correctly and verifying that drains discharge as designed. This could be performed by pouring a liquid down the drain colored with food dye or by some other suitable means and ensure the presence of the food dye in the receiving tank.

b. Ensure that drains from laboratory equipment that analyze or measure isotopic concentrations of radioactive samples are routed correctly and verifying that drains discharge as designed. This could be performed by pouring a liquid down the drain colored with food dye or by some other suitable means and ensure the presence of the food dye in the receiving tank.

c. Ensure that ventilation hoods and other engineered radioactive containment devices are vented as designed. This could be accomplished by a tracer gas or some other suitable means.

d. Measure discharge flow rates for the ventilation hoods and other engineered radioactive containment devices.

e. Perform vendor supplied startup checks and calibrations for laboratory equipment that analyze or measure radiation levels.

f. Perform vendor supplied startup checks and calibrations for laboratory equipment that analyze or measure isotopic concentrations of radioactive samples.

4. DATA REQUIRED

a. Inspection report from verification of laboratory equipment drains.

b. Inspection report from verification of ventilation hood flow and routing.

c. Completed vendor specified laboratory equipment startup procedures.

5. ACCEPTANCE CRITERIA

a. The laboratory equipment drain interface with the plant systems performs as designed.

b. The laboratory equipment ventilation hood interface with the plant systems performs as designed.

c. The results of the vendor supplied startup checks and calibration procedures verify tested laboratory equipment meets design requirements.