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UniStar
NUCLEAR ENERGY

10 CFR 50.4
10 CFR 52.79

April 30, 2013

UN#13-059

ATTN: Document Control Desk
U.S. Nuclear Regulatory Commission
Washington, DC 20555-0001

Subject: UniStar Nuclear Energy, NRC Docket No. 52-016
Supplemental Response to Request for Additional Information for the Calvert Cliffs Nuclear Power Plant, Unit 3,
RAI 336, Ultimate Heat Sink

References:
1) Surinder Arora (NRC) to Paul Infanger (UniStar Nuclear Energy), "Final RAI 336 SBPA 6230," email dated January 20, 2012

2) UniStar Nuclear Energy Letter UN#12-156, from Mark T. Finley to Document Control Desk, U.S. NRC, Response to Request for Additional Information for the Calvert Cliffs Nuclear Power Plant, Unit 3, RAI 336, Ultimate Heat Sink, dated December 20, 2012

The purpose of this letter is to provide a supplemental response to the request for additional information (RAI) identified in the NRC e-mail correspondence to UniStar Nuclear Energy (UNE), dated January 20, 2012 (Reference 1). This RAI addresses the Ultimate Heat Sink, as discussed in Section 9.2.5 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 9.

Reference 2, dated December 20, 2012, provided the UNE response to RAI 336, Question 09.02.05-23. The Reference 2 response addressed the CCNPP Unit 3 Ultimate Heat Sink (UHS) Makeup Water System related Technical Specifications.

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This supplement is motivated by feedback on the Reference 2 response provided at a public meeting on March 18, 2013. Relative to the UNE response, the NRC requested additional information on the UHS Makeup Water System forebay water level instruments.

Enclosure 1 provides our supplemental response to RAI 336, Question 09.02.05-23, 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.

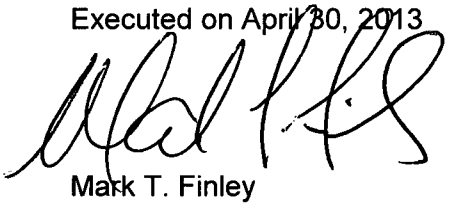
Enclosure 2 provides an updated table of changes to the CCNPP Unit 3 COLA associated with the RAI 336, Question 09.02.05-23 supplemental response.

This supplemental response does not include any new regulatory commitments. This letter does not contain any sensitive or proprietary information.

If there are any questions regarding this transmittal, please contact me at (410) 369-1907 or Mr. Wayne A. Massie at (410) 369-1910.

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

Executed on April 30, 2013



Mark T. Finley

Enclosures: 1) Supplemental Response to NRC Request for Additional Information, RAI, RAI 336, Question 09.02.05-23, Ultimate Heat Sink Calvert Cliffs Nuclear Power Plant, Unit 3

2) Table of Changes to CCNPP Unit 3 COLA Associated with the Supplemental Response to RAI 336, Question 09.02.05-23, Ultimate Heat Sink, Calvert Cliffs Nuclear Power Plant, Unit 3

cc: Surinder Arora, NRC Project Manager, U.S. EPR Projects Branch
Laura Quinn-Willingham, NRC Environmental Project Manager, U.S. EPR COL Application
Amy Snyder, NRC Project Manager, U.S. EPR DC Application, (w/o enclosures)
Patricia Holahan, Acting Deputy Regional Administrator, NRC Region II, (w/o enclosures)
Silas Kennedy, U.S. NRC Resident Inspector, CCNPP, Units 1 and 2, (w/o enclosures)
David Lew, Deputy Regional Administrator, NRC Region I (w/o enclosures)

Enclosure 1

**Supplemental Response to NRC Request for Additional Information,
RAI 336, Question 09.02.05-23,
Ultimate Heat Sink,
Calvert Cliffs Nuclear Power Plant, Unit 3**

NRC Feedback on UNE's Response to RAI 336, Question 09.02.05-23

Response to RAI 336, Q09.02-05-23 was submitted to NRC by UniStar letter UN#12-156 dated December 20, 2012. Subsequently, during a public meeting on March 18, 2013, NRC provided feedback on the initial response to the RAI. This revised response to RAI 336, Q09.02.05-23 addresses the NRC feedback denoted below:

- **Page 4/23** – Part 2, consider adding the forebay water level instruments that will be used to verify TS related to Table 9.2-2. This table only has delta level instruments. Is there a low water level alarm for the UHS makeup pump basin? If yes, include in the description. If not, provide justification.

Response to NRC Question 09.02.05-23:

RAI 336 Q09.02.05-23 identifies four considerations for TS LCO, Surveillance Requirements (SR) and associated TS Bases. The second of those parts is supplemented as follows (underlined text):

2. UHS Makeup Water (forebay) Level (required to support proper operations of the makeup water pumps):

The UHS Makeup Water forebay level is currently measured upstream and downstream of UHS Makeup Water traveling screens to determine the differential level across the screens for operation of the screen wash system. The downstream level location measures the water level at the UHS Makeup Water pump bay, which can be used to ensure proper water level is available for NPSH of the UHS Makeup Water pump. Therefore, this downstream UHS Makeup Water pump bay water level will be added to the CCNPP Unit 3 Technical Specification Surveillance Requirement to ensure adequate NPSH is available to maintain proper operation of the UHS Makeup Water pump and that the pump can perform its safety function of providing makeup water to the UHS cooling tower basin starting 72 hours post-DBA. CCNPP Unit 3 FSAR Subsection 9.2.5.3.2 under "UHS Makeup Water System Pumps" describe the excess margin (33.3 ft) between the NPSH-available and NPSH-required. CCNPP Unit 3 COLA Part 4 Technical Specifications and Bases are being updated to include the new surveillance requirement for UHS Makeup Water pump bay level. <u>In addition, Table 9.2-2, Alarm Summary, is updated to include the UHS Makeup Water Pump Forebay Level alarm.</u>

COLA Part 2, FSAR Revision:

9.2.5.7.2 System Alarms

- High differential level across traveling screen
- High pressure at UHS Makeup Water pump discharge
- Low pressure at UHS Makeup Water pump discharge
- Low flow at UHS Makeup Water pump discharge

- High differential pressure across the pump discharge strainer
- High bearing temperature of UHS Makeup Water pump
- Loss of UHS Makeup Water System heat tracing
- High Pressure of the UHS Makeup Water traveling screen wash system
- Low Pressure of the UHS Makeup Water traveling screen wash system
- High bearing temperature of the UHS Makeup Water traveling screen
- Low UHS Makeup Water Pump Forebay Level

Table 9.2-2— {UHS Makeup Water System Alarm Summary}

MCR/RSS Display	Division	Setpoint Name	Function
...	...	...	...
UHS Makeup Water traveling screen abnormal (bearing temperature Hi)	1/2/3/4	Max 2 Max 1	Max 2: Alarm and Traveling Screen Trip Max 1: Alarm
UHS Makeup Water System Heat Tracing Failure	1/2/3/4	Max 1	Max 1: Alarm (Alerts operator of equipment failure
UHS Makeup Water Pump Forebay Level	1/2/3/4	Min 1 Min 2	Min 1: Alarm (Alerts operator of low water level in UHS Makeup Water Forebay) Min 2: Alarm (Alerts operator that UHS Makeup Water Forebay is at or above Technical Specification Low Water Level)

Enclosure 2

Table of Changes to CCNPP Unit 3 COLA
Associated with the Supplemental Response RAI 336,
Question 09.02.05-23,
Ultimate Heat Sink,
Calvert Cliffs Nuclear Power Plant, Unit 3

Table of Changes to CCNPP Unit 3 COLA

Associated with the Supplemental Response to RAI No. 336

Change ID #	Subsection	Type of Change	Description of Change
Part 2 – FSAR			
12-0243	9.2.5.7.1, 9.2.5.7.2, Table 9.2-2	Incorporate COLA markups associated with the response to RAI 336 Question 09.02.05-24.	The response to RAI 336 Question 09.02.05-24[1] adds information concerning UHS Makeup Water System.
13-0081	9.2.5.7.2, Table 9.2-2	Incorporate COLA markups associated with the supplemental response to RAI 336 Question 09.02.05-23.	The supplemental response to RAI 336 Question 09.02.05-23 adds information concerning UHS Makeup Water System (this letter).

[1] UniStar Nuclear Energy Letter UN# UN#12-156, from Mark T. Finley to Document Control Desk, U.S. NRC, Response to Request for Additional Information for the Calvert Cliffs Nuclear Power Plant, Unit 3, RAI 336, Ultimate Heat Sink, dated December 20, 2012