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10 CFR 50.4
10 CFR 52.79

April 30, 2013

UN#13-053

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 337, Initial Plant Test Program - Design Certification and New License
Applicants

References: 1) Surinder Arora (NRC) to Paul Infanger (UniStar Nuclear Energy), "Final
RAI 337 CQVP 6235," email dated February 9, 2012

2) UniStar Nuclear Energy Letter UN#12-157, 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 337, Initial Plant Test Program - Design Certification and New License
Applicants, 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 February 9, 2012 (Reference 1). This RAI addresses the Initial Plant Test Program - Design Certification and New License Applicants, 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 9.

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Reference 2, dated December 20, 2012, provided the UNE original response to RAI 337, Question 14.02-58. The Reference 2 response addressed the CCNPP Unit 3 Ultimate Heat Sink (UHS) Makeup Water System.

This supplement is motivated by feedback on the Reference 2 response provided at a public meeting on March 18, 2013. Relative to the response to RAI 337, Question 14.02-58, Item 3, "Verify no evidence of water hammer during the manual fill and automatic fill sequence of the UHS Makeup Water System (FSAR 14.2.14.2)," it was requested that FSAR Chapter 14 include testing and verification that there is no evidence of significant water hammer during system manual startup, manual system testing, or auto keep-fill of the UHS.

Enclosure 1 provides our supplemental response to RAI 337, Question 14.02-58, 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.

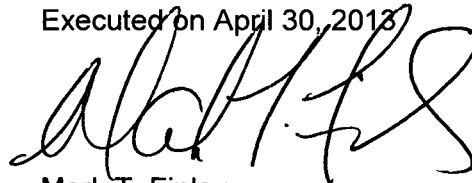
Enclosure 2 provides an updated table of changes to the CCNPP Unit 3 COLA associated with the RAI 337, Question 14.02-58 response.

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 337, Question 14.02-58, Initial Plant Test Program - Design Certification and New License Applicants, Calvert Cliffs Nuclear Power Plant, Unit 3
 - 2) Table of Changes to CCNPP Unit 3 COLA Associated with the Supplemental Response to RAI 337, Question 14.02-58, 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,
David Lew, Deputy Regional Administrator, NRC Region I (w/o enclosures)

Enclosure 1

**Supplemental Response to NRC Request for Additional Information,
RAI 337, Question 14.02-58,
Initial Plant Test Program - Design Certification and New License Applicants,
Calvert Cliffs Nuclear Power Plant, Unit 3**

NRC Feedback on UNE's Response to RAI 337, Question 14.02-58

UniStar Nuclear Energy (UNE) submitted the response to RAI 337, Question 14.02-58 in UNE letter UN#12-157¹. The NRC provided feedback on this response at a public meeting on March 18, 2013, as noted below.

Feedback on RAI 337, Question 14.02-58, Item 3, "Verify no evidence of water hammer during the manual fill and automatic fill sequence of the UHS Makeup Water System (FSAR 14.2.14.2)":

In reference to response Item 3, FSAR Chapter 14 needs to include testing and verification that there is no evidence of significant water hammer during system manual startup, manual system testing, or auto keep-fill of the Ultimate Heat Sink (UHS).

Response to Feedback on RAI 337, Question 14.02-58, Item 3:

The RAI 337, Question 14.02-58, Item 3 response in UNE letter UN#12-157¹ included a sentence which read, "Thus, CCNPP Unit 3 COLA FSAR Subsection 14.2.14.2 for the UHS Makeup Water System will not require a Test Method and Acceptance Criteria for the manual and automatic fill of the system to verify that water hammer does not occur during the process." However, in response to the feedback received, the CCNPP Unit 3 COLA FSAR Subsection 14.2.14.2 has been updated to verify that there is no water hammer indication during the initial plant testing.

COLA Impact

CCNPP Unit 3 COLA Part 2, FSAR, Section 14.2.14.2 has been updated as follows:

14.2.14.2 Ultimate Heat Sink (UHS) Makeup Water System

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3. TEST METHOD

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q. Verify that makeup flow through the UHS Makeup Keep-Fill line demonstrates the system can deliver the minimum system flow rate to the UHS Makeup Water system due to leakage specified by the owner.

r. Verify that makeup flow through the Post-DBA UHS Makeup Keep-Fill line demonstrates the system can deliver the minimum system flow rate to the UHS Makeup Water system due to leakage specified by the owner.

s. Verify that there is no water hammer indication effects such as noise, pipe movement, pipe support or restraint damage, leakage, damaged valves or equipment, present during manual startup, manual system testing and auto keep-fill of the UHS Makeup Water system.

¹ UniStar Nuclear Energy Letter UN#12-157, 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 337, Initial Plant Test Program - Design Certification and New License Applicants, dated December 20, 2012

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5. ACCEPTANCE CRITERIA

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q. The makeup flow through the UHS Makeup Keep-Fill line demonstrates the system can deliver the minimum system makeup flow rate to the UHS Makeup Water system due to leakage specified by the owner.

r. The makeup flow through the Post-DBA UHS Makeup Keep-Fill line demonstrates the system can deliver the minimum system makeup flow rate to the UHS Makeup Water System due to leakage, as specified by the owner.

s. There is no water hammer indication effects such as noise, pipe movement, pipe support or restraint damage, leakage, damaged valves or equipment, present during manual startup, manual system testing and auto keep-fill of the UHS Makeup Water system.

...

Enclosure 2

**Table of Changes to CCNPP Unit 3 COLA
Associated with the Supplemental Response to RAI No. 337,
Question 14.02-58
Calvert Cliffs Nuclear Power Plant, Unit 3**

Table of Changes to CCNPP Unit 3 COLA
Associated with the Supplemental Response to RAI No. 337

Change ID #	Subsection	Type of Change	Description of Change
Part 2 – FSAR			
CC3-09-0082	14.2.14.2, 14.2.14.4	Incorporate COLA markups associated with the responses to RAI 15, Question 14.02-3 ² , RAI 28, Question 14.02-24 ³ , and RAI 52, Question 14.02-31 ⁴ .	RAI 15 response deleted one and added multiple Acceptance Criteria to 14.2.14.2 and 14.2.14.4. RAI 28 response added an explanation for Prerequisites to 14.2.14.2 and 14.2.14.4. RAI 52 response added an Objective, modified one and added another Prerequisite, added an Acceptance Criteria, and deleted specific Test Methods, Data Required, Acceptance Criteria.
CC3-09-0164	14.2.14.2	Incorporate COLA markups associated with the response to RAI 90 Question 14.02-34 ⁵ .	RAI 90 response added two items to the Prerequisites, and one item each to the 14.2.14.2 Test Method, Data Required, and Acceptance Criteria.
CC3-09-0392	14.2.14.2	Incorporate COLA markups associated with the response to RAI 173 Question 14.02-51 ⁶ .	RAI 173 response modified one item and added two items to both the 14.2.14.2 Test Method and Acceptance Criteria.

² UniStar Nuclear Energy Letter UN#08-057, from Greg Gibson to Document Control Desk, U.S. NRC, Response to Request for Additional Information for the Calvert Cliffs Nuclear Power Plant, Unit 3, RAIs Nos. 14.02-1, 14.02-2, 14.02-3, 14.02-4, and 14.02-5, FSAR Ch 14.02, Initial Plant Test Program, dated October 31, 2008

³ UniStar Nuclear Energy Letter UN#08-095, from Greg Gibson to Document Control Desk, U.S. NRC, Response to Request for Additional Information for the Calvert Cliffs Nuclear Power Plant, Unit 3, RAI No. 28, Revision 2, Questions 14.02-14 through 14.02-24, Initial Plant Test Program – Design Certification and New License Applicants, dated December 22, 2008

⁴ UniStar Nuclear Energy Letter UN#09-120, from Greg Gibson to Document Control Desk, U.S. NRC, Response to Request for Additional Information for the Calvert Cliffs Nuclear Power Plant, Unit 3, RAI No. 52, Initial Plant Test Program – Design Certification and New License Applicants, dated March 6, 2009

⁵ UniStar Nuclear Energy Letter UN#09-231, from Greg Gibson to Document Control Desk, U.S. NRC, Response to Request for Additional Information for the Calvert Cliffs Nuclear Power Plant, Unit 3, RAI No. 90, Initial Plant Test Program, dated May 20, 2009

⁶ UniStar Nuclear Energy Letter UN#09-511, from Greg Gibson to Document Control Desk, U.S. NRC, Response to Request for Additional Information for the Calvert Cliffs Nuclear Power Plant, Unit 3, RAI No. 173, Initial Plant Test Program, dated December 8, 2009

Change ID #	Subsection	Type of Change	Description of Change
CC3-10-0302	14.2.14.2	Incorporate COLA markups associated with the response to RAI 253 Questions 03.07.02-42, 43, 44, 47, 48, 52, and 53 ⁷ .	RAI 253 response added one item to the 14.2.14.2 Objectives, deleted two items from the Prerequisites, deleted three items from and added one item to Test Method, deleted one item from Data Required, and deleted three items from and added two items to Acceptance Criteria.
CC3-12-0231	14.2.14.2, 14.2.14.4	Incorporate COLA markups associated with the response to RAI 337 Question 14.02-58 ¹ .	RAI 337 response ¹ added three items to 14.2.14.2 Test Method, modified one and added one item to Data Required, deleted one, modified one, and added three items to Acceptance Criteria, and modified one item each in 14.02.14.04 Test Method and Acceptance Criteria.
CC3-13-0078	14.2.14.2	Incorporate COLA markups associated with the supplemental response to RAI 337 Question 14.02-58 (this response).	A new Item s addressing water hammer is added under the TEST METHOD heading and under the ACCEPTANCE CRITERIA heading of Section 14.2.14.2 as part of the Supplemental RAI 337 Question 14.02-58 response (this response). This COLA change supplements the COLA changes provided by the response to RAI 337 Question 14.02-58 ¹ , dated December 20, 2012.

⁷ UniStar Nuclear Energy Letter UN#10-285, from Greg Gibson to Document Control Desk, U.S. NRC, Response to Request for Additional Information for the Calvert Cliffs Nuclear Power Plant, Unit 3, RAI No. 253, Seismic System Analysis, dated November 16, 2010