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NUCLEAR ENERGY

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April 29, 2009

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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
Response to Request for Additional Information for the
Calvert Cliffs Nuclear Power Plant, Unit 3,
RAI No. 92, Initial Plant Test Program

Reference: John Rycyna (NRC) to Robert Poche (UniStar), "RAI No 92 CQVP 1693.doc (PUBLIC)" email dated March 30, 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 30, 2009 (Reference). 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.

The enclosure provides our response to RAI No. 92, Questions 14.02-35 and 14.02-36, which includes revised COLA content. A Licensing Basis Document Change Request has been initiated to incorporate this change in a future revision of the COLA.

Our response to Questions 14.02-35 and 14.02-36 do not include any new regulatory commitments.

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NRO

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 April 29, 2009

Christian Element
for Greg Gibson

Greg Gibson

Enclosure: Response to NRC Request for Additional Information, RAI No. 92, Questions 14.02-35 and 14.02-36, 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

Enclosure

**Response to NRC Request for Additional Information,
RAI No. 92, Questions 14.02-35 and 14.02-36, Initial Plant Test Program,
Calvert Cliffs Nuclear Power Plant, Unit 3**

RAI No. 92

Question 14.02-35

In an RAI to AREVA for the U.S. EPR FSAR, RAI 14.02-45, the staff recommended that AREVA remove the paragraph stating, "The first COL applicant that references the U.S. EPR certified design will commit to review results from European predecessors concerning the new, unique, or novel EPR features such as those previously noted and propose supplemental testing if necessary," from Section 14.2.8.1 of the U.S. EPR FSAR. The statement to commit only the first COL applicant to review the operating and testing experience is a redundant COL information item as this action item is already contained in the commitment in 14.2.8 which states that all plants will review all reactor operating and testing experiences. In response to the staff's request, AREVA submitted a proposed revision to the U.S. EPR FSAR, which deleted the paragraph and the associated COL Information Item from U.S EPR FSAR Tier 2, Table 1.8-2—U.S. EPR Combined License Information Items.

Consistent with the proposed change to the U.S. EPR FSAR, the staff requests that UniStar delete the following paragraphs from Section 14.2.8.1 of the CCNP3 COLA:

"The U.S. EPR FSAR includes the following COL Item in Section 14.2.8.1:

The first COL applicant that references the U.S. EPR certified design will commit to review results from European predecessors concerning the new, unique, or novel EPR features such as those previously noted and propose supplemental testing if necessary.

This COL item is addressed as follows:

{CCNPP Unit 3 is the first COL applicant that references the U.S. EPR certified design. The first COL applicant commits to review results from European predecessors concerning the new, unique, or novel EPR features such as those previously noted in U.S. EPR FSAR Section 14.2.8.1 and to propose supplemental testing if necessary. This information is shared with subsequent COL applicants.}"

In addition, the staff requests that UniStar remove the associated COL Information Item, COL Item 14.2-6, from Table 1.8-2—{FSAR Sections that Address COL Items} in Chapter 1 of the CCNP3 COLA.

Response

As described in AREVA's response to RAI 98 for the U.S. EPR Design Certification Application, submitted on November 14, 2008, the COL item committing the first COL applicant to review results from European predecessors will be removed. The Calvert Cliffs Nuclear Power Plant (CCNPP) Unit 3 COLA content will be revised to incorporate this change after release of the U.S. EPR Design Certification Application revision.

COLA Impact:

Section 14.2 in Part 2 of the CCNPP Unit 3 COLA will be revised as follows:

~~**14.2.8.1 First-of-a-Kind Testing**~~

~~The U.S. EPR FSAR includes the following COL Item in Section 14.2.8.1:~~

~~The first COL applicant that references the U.S. EPR certified design will commit to review results from European predecessors concerning the new, unique, or novel EPR features such as those previously noted and propose supplemental testing if necessary.~~

~~This COL item is addressed as follows:~~

~~{CCNPP Unit 3 is the first COL applicant that references the U.S. EPR certified design. The first COL applicant commits to review results from European predecessors concerning the new, unique, or novel EPR features such as those previously noted in U.S. EPR FSAR Section 14.2.8.1 and to propose supplemental testing if necessary. This information is shared with subsequent COL applicants.}~~

Table 1.8-2 in Part 2 of the CCNPP Unit 3 COLA will be revised as follows:

Item No.	Description	Section
~~14.2-6~~	~~The first COL applicant that references the U.S. EPR certified design will commit to review results from European predecessors concerning the new, unique, or novel EPR features (such as reactor internals (vibration measurement), natural circulation of the reactor coolant system, reactor coolant pump standstill seal, pressurizer surge line (thermal stratification)) and propose supplemental testing if necessary.~~	~~14.2.8.1~~
14.2-6	Reserved	Not Applicable

Appendix A in Part 10 of the CCNPP Unit 3 COLA will be revised as follows:

~~COL Item 14.2-6 in Section 14.2.8.1~~
~~Calvert Cliffs 3 Nuclear Project and UniStar Nuclear Operating Services, shall review the results from European predecessors concerning the new, unique, or novel EPR features such as those previously noted in U.S. EPR FSAR Subsection 14.2.8.1 and propose supplemental testing for the initial plant test program if necessary prior to performance of the initial plant test program. This information shall be shared with subsequent U.S. EPR COL applicants.~~

Question 14.02-36

In an RAI to AREVA for the U.S. EPR FSAR, RAI 14.02-15, the staff requested that AREVA revise Section 14.2.11 of the U.S. EPR FSAR to clarify that plant safety will not be dependent on the performance of untested SSCs during any phase of the startup test program. In a follow-up RAI to AREVA for the U.S. EPR FSAR, RAI 14.02-16, the staff requested that AREVA revise Section 14.2.11 of the U.S. EPR FSAR to state that test requirements will be completed in accordance with plant Technical Specification requirements for SSC operability before changing plant modes. In response to the staff's requests, AREVA proposed to revise section 14.2.11 and the COL Item contained in that section to state:

"A COL applicant that references the U.S. EPR certified design will develop a test program that considers the following seven guidance components:

- The applicant should allow at least nine months to conduct preoperational testing.
- The applicant should allow at least three months to conduct startup testing, including fuel loading, low-power tests, and power-ascension tests.
- Plant safety will not be dependent on the performance of untested SSCs during any phase of the startup test program.
- Surveillance test requirements will be completed in accordance with plant Technical Specification requirements for SSC operability before changing plant modes.
- Overlapping test program schedules (for multiunit sites) should not result in significant divisions of responsibilities or dilutions of the staff provided to implement the test program.
- The sequential schedule for individual startup tests should establish, insofar as practicable, that test requirements should be completed prior to exceeding 25 percent power for SSC that are relied on to prevent, limit, or mitigate the consequences of postulated accidents.
- Approved test procedures should be in a form suitable for review by regulatory inspectors at least 60 days prior to their intended use or at least 60 days prior to fuel loading for fuel loading and startup test procedures."

Consistent with the proposed revision to the U.S. EPR FSAR, the staff requests that UniStar revise section 14.2.11 of the CCNPP3 FSAR to include the additional two guidance components for developing the site-specific test program. In addition, the staff requests that UniStar revise the associated COL Information Item, COL Item 14.2-2, in Table 1.8-2—{FSAR Sections that Address COL Items} in Chapter 1 of the CCNPP3 COLA.

Response

As described in AREVA's response RAI 16 of the U.S. EPR Design Certification Application submitted on August 4, 2008, the COL item in FSAR Section 14.2.11 was revised to include the following two additional guidance components:

- Plant safety will not be dependent on the performance of untested SSCs during any phase of the startup test program.
- Surveillance test requirements will be completed in accordance with plant Technical Specification requirements for SSC operability before changing plant modes

The COL item in the CCNPP Unit 3 FSAR Section 14.2.11 will be revised to include the two items specified in this RAI. The CCNPP Unit 3 COLA content will be revised to incorporate this change after release of the U.S. EPR Design Certification Application revision.

COLA Impact:

Section 14.2 in Part 2 of the CCNPP Unit 3 COLA will be revised as follows:

14.2.11 TEST PROGRAM SCHEDULE

The U.S. EPR FSAR includes the following COL Item in Section 14.2.11:

A COL applicant that references the U.S. EPR certified design will develop a test program that considers the following ~~five~~ seven guidance components:

- The applicant should allow at least nine months to conduct preoperational testing.
- The applicant should allow at least three months to conduct startup testing, including fuel loading, low-power tests, and power-ascension tests.
- Plant safety will not be dependent on the performance of untested SSCs during any phase of the startup test program.
- Surveillance test requirements will be completed in accordance with plant Technical Specification requirements for SSC operability before changing plant modes.
- Overlapping test program schedules (for multiunit sites) should not result in significant divisions of responsibilities or dilutions of the staff provided to implement the test program.
- The sequential schedule for individual startup tests should establish, insofar as practicable, that test requirements should be completed prior to exceeding 25 percent power for SSC that are relied on to prevent, limit, or mitigate the consequences of postulated accidents.
- Approved test procedures should be in a form suitable for review by regulatory inspectors at least 60 days prior to their intended use or at least 60 days prior to fuel loading for fuel loading and startup test procedures.

This COL item is addressed as follows:

A site-specific test program shall be developed that considers the ~~five guidance~~ components listed above and shall provide copies of approved test procedures to the NRC at least 60 days prior to their scheduled performance date.

Table 1.8-2 in Part 2 of the CCNPP Unit 3 COLA will be revised as follows:

Item No.	Description	Section
~~14.2-2~~	~~A COL applicant that references the U.S. EPR certified design will develop a test program that considers the following five guidance components: 1. The applicant should allow at least 9 months to conduct preoperational testing. 2. The applicant should allow at least 3 months to conduct startup testing, including fuel loading, low power tests, and power ascension tests. 3. Overlapping test program schedules (for multi-unit sites) should not result in significant divisions of responsibilities or dilutions of the staff provided to implement the test program. 4. The sequential schedule for individual startup tests should establish, insofar as practicable, that test requirements should be completed prior to exceeding 25 percent power for SSCs that are relied upon to prevent, limit, or mitigate the consequences of postulated accidents. 5. Approved test procedures should be in a form suitable for review by regulatory inspectors at least 60 days prior to their intended use or at least 60 days prior to fuel loading for fuel loading and startup test procedures.~~	~~14.2.11~~
14.2-2	A COL applicant that references the U.S. EPR certified design will develop a test program that considers the following seven guidance components: 1) The applicant should allow at least 9 months to conduct preoperational testing. 2) The applicant should allow at least 3 months to conduct startup testing, including fuel loading, low-power tests, and power-ascension tests. 3) Plant safety will not be dependent on the performance of untested SSCs during any phase of the startup test program. 4) Surveillance test requirements will be completed in accordance with plant Technical Specification requirements for SSC operability before changing plant modes. 5) Overlapping test program schedules (for multiunit sites) should not result in significant divisions of responsibilities or dilutions of the staff provided to implement the test program. 6) The sequential schedule for individual startup tests should establish, insofar as practicable, that test requirements should be completed prior to exceeding 25 percent power for SSC that are relied on to prevent, limit, or mitigate the consequences of postulated accidents. 7) Approved test procedures should be in a form suitable for review by regulatory inspectors at least 60 days prior to their intended use or at least 60 days prior to fuel loading for fuel loading and startup test procedures.	14.2.11

Appendix A in Part 10 of the CCNPP Unit 3 COLA will be revised as follows:

COL Item 14.2-2 in Section 14.2.11

{Calvert Cliffs Nuclear Project and UniStar Operating Services} shall develop an initial plant test program that considers the ~~five guidance~~ components identified in FSAR Section 14.2.11 and shall provide copies of approved test procedures to the NRC at least 60 days prior to their scheduled performance date.