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10 CFR 50.4 10 CFR 52.79

February 26, 2009

UN#09-115

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. 47, Reactor Coolant Pressure Boundary Materials

References: 1) John Rycyna (NRC) to Robert Poche (UniStar), "RAI No 47 CIB1 1534.doc," email dated January 27, 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, dated January 27, 2009 (Reference 1). This RAI addresses Reactor Coolant Pressure Boundary Materials, as discussed in Section 5.2.3 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 3.

The enclosure provides our response to RAI No. 47, Questions 05.02.03-1, 05.02.03-2, and 05.02.03-3. Our response includes revised COLA content. A Licensing Basis Document Change Request has been initiated to incorporate the change in a future revision of the COLA. Our response to these RAI questions 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.

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

Executed on February 26, 2009

Greg Gibson

Enclosure: Response to NRC Request for Additional Information, RAI No. 47, Reactor Coolant Pressure Boundary Materials, Calvert Cliffs Nuclear Power Plant, Unit 3

cc: John Rycyna, NRC Project Manager, U.S. EPR COL Application Thomas Fredrichs, NRC Environmental Project Manager, U.S. EPR COL Application Getachew Tesfaye, NRC Project Manager, U.S. EPR DC Application (w/o enclosure) Joseph Colaccino, Chief, EPR Projects Branch, Division of New Reactor Licensing 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. 47, Reactor Coolant Pressure Boundary Materials

Calvert Cliffs Nuclear Power Plant, Unit 3

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RAI No. 47

Question 05.02.03-1

CCNPP Unit 3 FSAR Section 5.2.3.1 states the following: The as-procured/as-built grade, type and final metallurgical conditions for reactor coolant pressure boundary components were not available at the time of this application. Any departures or differences between the as-procured/as-built grade, type and final metallurgical conditions for the reactor coolant pressure boundary materials from those listed in Table 5.2-2 of the U.S. EPR FSAR will be provided as an update to this document following procurement and fabrication of the reactor coolant pressure boundary components, and prior to fuel load.

The staff expects the COL applicant and COL holder to use those materials listed in the incorporated US EPR FSAR Table 5.2-2, which is reviewed by the NRC as part of the staff's review of the EPR design.

Please clarify the FSAR to show the applicant's intent to conform to the US EPR DCD without departures, or, if the applicant wishes to depart from the US EPR DCD, please fully detail those departures consistent with the provisions of 10 CFR Part 52.

Response

CCNPP Unit 3 FSAR Section 5.2.3 states there are no departures from or supplements to the U.S. EPR FSAR in Section 5.2.3. By implication, none of the subsections to FSAR Section 5.2.3 include departures or supplements. Therefore, CCNPP Unit 3 FSAR Section 5.2.3 will be revised to indicate there are no departures or supplements for the entire section.

COLA Impact

The CCNPP Unit 3 FSAR will be updated in a future COLA revision to incorporate the changes to FSAR Section 5.2.3 that are identified below:

5.2.3 REACTOR COOLANT PRESSURE BOUNDARY MATERIALS

No departures or supplements.

5.2.3.1 Material Specifications

The as-procured/as-built grade, type and final metallurgical conditions for reactor coolant pressure boundary components were not available at the time of this application. Any departures or differences between the as-procured/as-built grade, type and final metallurgical conditions for the reactor coolant pressure boundary materials from those listed in Table 5.2-2 of the U.S. EPR FSAR will be provided as an update to this document following procurement and fabrication of the reactor coolant pressure boundary components, and prior to fuel load.

5.2.3.2 Compatibility with Reactor Coolant

No departures or supplements.

5.2.3.3 Fabrication and Processing of Ferritic Materials

As-procured fracture toughness data for reactor coolant pressure boundary components (e.g., vessels, piping, pumps and valves) composed of ferritic materials was not available at the time of this application and will be provided as an update to this document following procurement of the reactor coolant pressure boundary components, and prior to fuel load.

5.2.3.4 Fabrication and Processing of Austenitic Stainless Steels

As-procured yield strength data for reactor coolant pressure boundary components (e.g., vessels, piping, pumps and valves) composed of austenitic stainless steel materials was not available at the time of this application and will be provided as an update to this document following procurement of the reactor coolant pressure boundary components, and prior to fuel load.

5.2.3.5 Prevention of Primary Water Stress-Corrosion Cracking for Nickel-Base Alloys

No departures or supplements.

5.2.3.6 Threaded Fasteners

No departures or supplements.

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RAI No. 47

Question 05.02.03-2

CCNPP Unit 3 FSAR Section 5.2.3.3 states the following: As-procured fracture toughness data for reactor coolant pressure boundary components (e.g., vessels, piping, pumps and valves) composed of ferritic materials was not available at the time of this application and will be provided as an update to this document following procurement of the reactor coolant pressure boundary components and prior to fuel load.

The fracture toughness requirements for Reactor Coolant Pressure Boundary components are listed in the US EPR FSAR Section 5.2.3. "Verification." Compliance with these requirements is addressed as part of ITAAC. The staff is not aware of any requirement in the US EPR DCD or NRC regulations or guidance for COL applicants or holders to provide additional information in Section 5.2.3 related to fracture toughness for applications that reference a certified design and do not intend to take any departures from the DCD in this area. Please explain the application's apparent inconsistency with the US EPR DCD, or clarify the FSAR to comport with the US EPR DCD without departure.

Response

CCNPP Unit 3 FSAR Section 5.2.3 states there are no departures from or supplements to the U.S. EPR FSAR. Accordingly, CCNPP Unit 3 FSAR Section 5.2.3.3 also contains "No departures or supplements." As a result of this change and similar changes made to FSAR Sections 5.2.3.1 and 5.2.3.4, none of the subsections to FSAR Section 5.2.3 include departures or supplements. Therefore, CCNPP Unit 3 FSAR Section 5.2.3 will be revised to indicate there are no departures or supplements for the entire section.

COLA Impact

The CCNPP Unit 3 FSAR will be updated in a future COLA revision to incorporate the changes to FSAR Section 5.2.3 as indicated in the response to Question 05.02.03-1.

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RAI No. 47

Question 05.02.03-3

CCNPP Unit 3 FSAR Section 5.2.3.4 states the following: "As-procured yield strength data for reactor coolant pressure boundary components (e.g., vessels, piping, pumps and valves) composed of austenitic stainless steel materials was not available at the time of this application and will be provided as an update to this document following procurement of the reactor coolant pressure boundary components, and prior to fuel load."

The staff is not aware of any requirement in the US EPR DCD or NRC regulations or guidance for COL applicants or holders to provide additional information in Section 5.2.3 for applications that reference a certified design and do not intend to take any departures from the DCD in this area. Please explain the application's apparent inconsistency with the US EPR DCD, or clarify the FSAR to comport with the US EPR DCD without departure.

Response

CCNPP Unit 3 FSAR Section 5.2.3 states there are no departures from or supplements to the U.S. EPR FSAR. Accordingly, CCNPP Unit 3 FSAR Section 5.2.3.4 also contains "No departures or supplements." As a result of this change and similar changes made to FSAR Sections 5.2.3.1 and 5.2.3.3, none of the subsections to FSAR Section 5.2.3 include departures or supplements. Therefore, CCNPP Unit 3 FSAR Section 5.2.3 will be revised to indicate there are no departures or supplements for the entire section.

COLA Impact

The CCNPP Unit 3 FSAR will be updated in a future COLA revision to incorporate the changes to FSAR Section 5.2.3 as indicated in the response to Question 05.02.03-1.