

Greg Gibson
Vice President, Regulatory Affairs

750 East Pratt Street, Suite 1600
Baltimore, Maryland 21202



10 CFR 50.4
10 CFR 52.79

December 4, 2009

UN#09-496

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. 118, Inspections, Tests, Analyses and Acceptance Criteria (ITAAC)

- References:
- 1) John Rycyna (NRC) to Robert Poche (UniStar Nuclear Energy), "RAI No 118 SEB 2198.doc (PUBLIC)" email dated May 15, 2009
 - 2) UniStar Nuclear Energy Letter UN#09-460, from Greg Gibson to Document Control Desk, U.S. NRC, Submittal of Response to RAI No. 118, ITAAC, dated October 28, 2009
 - 3) UniStar Nuclear Energy Letter UN#09-472, from Greg Gibson to Document Control Desk, U.S. NRC, Submittal of Response to RAI No. 118, ITAAC, dated October 29, 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 May 15, 2009 (Reference 1). This RAI addresses Inspections, Tests, Analyses and Acceptance Criteria (ITAAC), as discussed in Part 10 of the Calvert Cliffs Nuclear Power Plant (CCNPP) Unit 3 Combined License Application (COLA), Revision 6.

DO96
NRO

Reference 2 and 3 provided a schedule for the response for Question 14.03.02-2. The enclosure provides our responses to RAI No. 118, Question 14.03.02-2, Parts C, D, I, J, L, and N, 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.

UniStar Nuclear Energy requires additional time to finalize the responses to Question 14.03.02-2, Parts A, B, E, F, G, H, K, M, and O. The responses to Parts F and M will be provided to the NRC by January 29, 2009. The responses to Parts A, B, E, G, H, K, and O will be provided to the NRC by March 31, 2010.

Our responses to Question 14.03.02-2, Parts C, D, I, J, L, and N do 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) 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 December 4, 2009



Greg Gibson

Enclosure: Response to NRC Request for Additional Information RAI No. 118, Question 14.03.02-2, Parts C, D, I, J, L, and N, ITAAC, Calvert Cliffs Nuclear Power Plant, Unit 3

cc: Surinder Arora, 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. 118, Question 14.03.02-2, Parts C, D, I, J, L, and N,
Inspections, Tests, Analyses and Acceptance Criteria (ITAAC),
Calvert Cliffs Nuclear Power Plant, Unit 3**

Question 14.03.02-2.C

Calvert Cliffs Unit 3 COL Application, Part 10 - ITAAC, Appendix A, Section 3 - "Operational Programs Implementation" references FSAR Table 13.4-1. In FSAR Table 13.4-1, entitled "Operational Programs Required by NRC Regulations and Program Implementation", Item 12 addresses the Maintenance Rule (10 CFR 50.65), and references FSAR Section 17.6. FSAR Section 17.6 incorporates by reference NEI 07-02 Rev. 3 (September 2007), entitled "Generic FSAR Template for Maintenance Rule Program Description for Plants Licensed under 10 CFR Part 52". The applicant is requested to discuss key elements of CCNPP3's approach for addressing the Maintenance Rule (10 CFR 50.65) compliance issue and the appropriateness of incorporating NEI 07-02 Rev. 3 by reference. Also indicate any precedent for "incorporating by reference" the NEI 07-02 Rev 3 report in a COL application.

Response

COLA Revision 6, FSAR Table 13.4-1, Item 17 describes Maintenance Rule implementation. FSAR Table 13.4-1, Item 17 references FSAR Section 17.7, and FSAR Section 17.7 incorporates the NEI maintenance rule program template by reference (NEI 07-02A, "Generic FSAR Template Guidance for Maintenance Rule Program Description for Plants Licensed Under 10 CFR Part 52," Revision 0, dated March 2008). NEI 07-02A provides a complete generic program description for use in developing combined license (COL) application final safety analysis reports. The document is consistent with Regulatory Guide 1.206, Combined License Applications for Nuclear Power Plants. A main objective of this program description is NRC-approved, standardized FSAR content that expedites NRC review and issuance of the combined license. The NEI template (NEI 07-2A, Revision 0) is incorporated by reference in Revision 1 of the Vogtle Electric Generating Plant, Units 3 & 4 COL Application.

COLA Impact

None

Question 14.03.02-2.D

Calvert Cliffs Unit 3 COL Application, Part 10 - ITAAC, Appendix A, Section 3 - "Operational Programs Implementation" references FSAR Table 13.4-1. In FSAR Table 13.4-1, entitled "Operational Programs Required by NRC Regulations and Program Implementation", Item 1 addresses In-service Inspection Program (10 CFR 50.55a(g)), and references FSAR Sections 5.2.4 (ASME Class 1) and 6.6 (ASME Class 2 and 3). The staff notes that 10 CFR 50.55a also requires ISI of the containment structure, in accordance with ASME Section XI, Subsections IWE and IWL, and the special provisions for inaccessible areas defined in 10 CFR 50.55a.

The staff requests the applicant to explain why ISI of the containment structure is not included in FSAR Table 13.4-1. If this is an oversight, please revise FSAR Table 13.4-1 accordingly.

Response

U.S. EPR FSAR Tier 2 Section 3.8.1.7.2 addresses in-service inspection of the Reactor Containment Building in accordance with 10 CFR 50.55(a). This section is incorporated by reference in CCNPP Unit 3 COLA FSAR Section 3.8.1.7 with no departures or supplements.

For clarification, FSAR Table 13.4-1 will be revised to include a reference to FSAR Section 3.8.1.7.2 for Item 1, Inservice Inspection Program, and Item 4, Preservice Inspection Program. Additionally, the Code requirement references for these programs will be corrected.

COLA Impact

FSAR Table 13.4-1 will be updated as follows in a future COLA revision:

Table 13.4-1 – {Operational Programs Required by NRC Regulations and Program Implementation}

Item	Program Title	Source (Required By)	FSAR Section	Implementation	
				Milestones	Requirements
1	In-service Inspection Program	10 CFR 50.55a(g)	<u>3.8.1.7.2</u> 5.2.4 6.6 Note 1	Prior to commercial service	10 CFR 50.55a(g) ASME XI IWA 2430(b)
4	Preservice Inspection Program	10 CFR 50.55a(g)	<u>3.8.1.7.2</u> 5.2.4 6.6 Note 1	Completion prior to initial plant startup	10 CFR 50.55a(g) ASME Code Section XI <u>IWB-2200(a)</u> , <u>IWC-2200</u> , <u>IWD-2200</u> , <u>IWE-2200</u> , <u>IWF-2210</u> , and <u>IWL-2210</u>

Question 14.03.02-2.1

The staff has reviewed Calvert Cliffs Unit 3 COL Application, Part 10 – ITAAC, Appendix B Table 2.4-7 for the UHS Makeup Water Intake Structure and has identified the need for the following information. The ITAAC should be revised accordingly to address each issue or a technical explanation should be provided for not including this information in the ITAAC.

1. For safety-related structures, ITAAC should require an analysis for reconciling the as-built plant with all the structural design-basis loads and acceptance criteria. The analysis results are to be documented in a structural analysis report. Items 1, 2, 3, 6 and 9 should be revised to specifically address this requirement and each item should provide a reference to a report that will document that the acceptance criteria have been met. The ITAAC should also identify the location in the FSAR where the acceptance criteria can be found.
2. Item 1 refers to the “existing bulkhead” wall, but does not provide any reference to the structural design-basis loads and acceptance criteria. This information should be included in the ITAAC.
3. Items 1, 2, 6, and 9 refer to flood and wave forces. The ITAAC should address all loads (e.g., earthquake, flood, wind, tornado, rain, and snow) on the structures referenced in these items.
4. Item 3 refers to the consideration of seismic loads on the retaining wall surrounding the CCNPP Unit 3 Intake Channel (i.e., Fore bay). The ITAAC should address all loads (e.g., earthquake, flood, wind, tornado, rain, and snow) on the structure referenced in this item.

Response

Calvert Cliffs Unit 3 COL Application, Part 10, ITAAC, Appendix B, Table 2.4-7 for the UHS Makeup Water Intake Structure has been revised and updated to address the issues as explained below:

1. The contents of Item 1 a, b, & c in the three columns of the ITAAC Table will be deleted as they are no longer applicable due to relocation of UHS Makeup Water Intake, Forebay and CW Makeup Intake Structures per UniStar Nuclear Energy Letter UN#09-005¹. The contents of Item 2 in the second and third columns of the ITAAC Table have been revised to update the analysis and acceptance criteria requirements. The contents of Item 3 (Forebay) have been deleted from this ITAAC Table and are included in a new ITAAC Table 2.4-33. Due to similarity between the contents of Items 2 and 6, contents of Item 6 have been deleted and combined with those of Item 2. For Item 9, the second and third columns in the ITAAC Table have been revised to include analysis and acceptance criteria for as-built reconciliation. In addition, for Items 2 and 9 the contents of the second and third columns have been divided into two parts; one covering analysis and the other inspection.
2. Item 1, which refers to “existing bulkhead” wall, no longer applies due to relocation of Intake Structures. This item will be deleted from the ITAAC Table (See response to Part 1 above).

¹ UniStar Nuclear Energy Letter UN#09-005, from Greg Gibson to Document Control Desk, U.S. NRC, Intake Structure Relocation Changes for Environmental Report, dated January 14, 2009

3. The first column of Items 2 & 9 in the ITAAC Table will be revised to address design basis loads. As stated earlier, Items 1 and 6 will be deleted.
4. The contents of Item 3 will be revised and updated in Item 1 of new ITAAC Table 2.4-33 (See response to 1 above). The first column of the new Table will provide reference to the structural design basis loads. The contents of the second and third columns have been divided into two parts; one covering analysis and the other inspection.

COLA Impact

COLA, Part 10, Appendix B, Table 2.4-7 will be revised as follows in a future COLA revision:

Table 2.4-7—{Ultimate Heat Sink Makeup Water Intake Structure Inspections, Tests, Analyses, and Acceptance Criteria}

	Commitment Wording	Inspection, Test, or Analysis	Acceptance Criteria
1	<p>a. The existing bulkhead retaining wall will be extended along the northeast side of the UHS Makeup Water Intake Structure.</p> <p>b. The new bulkhead retaining wall will extend below the bottom of the CCNPP Unit 3 intake channel at Elevation 20.5 ft.</p> <p>c. The new bulkhead retaining wall can resist the impact of wave forces. Deleted.</p>	<p>a. An inspection of the as-built structure will be conducted.</p> <p>b. An inspection of the as-built structure will be conducted.</p> <p>c. An inspection and/or analysis of the as-built structure will be conducted.</p>	<p>a. The as-built bulkhead retaining wall is located along the northeast side of the UHS Makeup Water Intake Structure.</p> <p>b. The as-built bulkhead retaining wall conforms to the approved design will extend below the bottom of the CCNPP Unit 3 intake channel at Elevation 20.5 ft.</p> <p>c. The as-built bulkhead retaining wall conforms to the approved design and can resist the impact of wave forces.</p>
2	<p>The UHS Makeup Water Intake Structure is Seismic Category I and can withstand design basis loads, including the static and dynamic forces associated with a flood, without a loss of structural integrity.</p> <p><u>The UHS Makeup Water Intake Structure, including the interior structures, is Seismic Category I and is designed to withstand design basis loads and load combinations without a loss of structural integrity.</u></p>	<p>An inspection and/or analysis of the as-built structure will be conducted.</p> <p>a. An analysis will be performed to determine that the UHS Makeup Water Intake Structure, including the interior structures, is designed to withstand design basis loads and load combinations without loss of structural integrity.</p> <p>b. An inspection will be conducted of the as-built UHS Makeup Water Intake Structure.</p>	<p>The as-built UHS Makeup Water Intake Structure conforms to the approved design and is capable of withstanding the design basis loads, including static and dynamic flood forces, without loss of integrity.</p> <p>a. A report exists that concludes the as-built UHS Makeup Water Intake Structure is capable of withstanding the structural design basis loads in accordance with the Structural Acceptance Criteria in FSAR Section 3.8.4.5.</p> <p>b. A report exists that concludes the as-built UHS Makeup Water Intake Structure, including the interior</p>

Table 2.4-7—{Ultimate Heat Sink Makeup Water Intake Structure Inspections, Tests, Analyses, and Acceptance Criteria}

	Commitment Wording	Inspection, Test, or Analysis	Acceptance Criteria
		<u>including the interior structures.</u>	<u>structures, agrees with construction drawings and deviations from the approved design are reconciled.</u>
3	The retaining wall surrounding the CCNPP Unit 3 Intake Channel (i.e., Forebay) is designated as Seismic Category II, and can withstand design basis seismic load without a loss of structural integrity. Deleted.	An inspection of the as-built structure will be conducted.	The as-built retaining wall surrounding the CCNPP Unit 3 Intake Channel conforms to the approved design and withstands the design basis seismic load without loss of integrity.
6	The interior structures housing each mechanical division of the UHS Makeup Water Supply System in the UHS Makeup Water Intake Structure can withstand the static and dynamic forces associated with a flood, without a loss of structural integrity. Deleted.	An inspection and/or analysis of the as-built structure will be conducted.	The interior structures housing each mechanical division of the UHS Makeup Water Supply System in the as-built UHS Makeup Water Structure conform to the approved design and is capable of withstanding the static and dynamic forces associated with a flood, without a loss of structural integrity.

Table 2.4-7—{Ultimate Heat Sink Makeup Water Intake Structure Inspections, Tests, Analyses, and Acceptance Criteria}

	Commitment Wording	Inspection, Test, or Analysis	Acceptance Criteria
9	<p>The water tight measures (i.e., water stops, fittings, submarine doors, and hatches) for the UHS Makeup Water Intake Structure will also be designed for the static and dynamic flood forces resulting from the PMH water levels and wave forces.</p> <p><u>The water tight measures (i.e., water stops, fittings, submarine doors, and hatches) for the UHS Makeup Water Intake Structure are designed to withstand the structural design basis loads and load combinations per FSAR Section 3.8.4.3.</u></p>	<p>Type tests or analyses will be performed to establish that the water tight measures are capable of withstanding the static and dynamic flood forces.</p> <p>a. <u>Analyses will be performed to determine that the water tight measures (i.e., water stops, fittings, submarine doors, and hatches) for the UHS Makeup Water Intake Structure are designed to withstand the structural design basis loads and load combinations per FSAR Section 3.8.4.3.</u></p> <p>b. <u>An inspection of the water tight measures (i.e., water stops, fittings, submarine doors, and hatches) for the UHS Makeup Water Intake Structure will be conducted.</u></p>	<p>A report exists that establishes that the water tight measures (i.e., water stops, fittings, submarine doors, and hatches) for the UHS Makeup Water Intake Structure can withstand the static and dynamic flood forces.</p> <p>a. <u>A report exists that concludes the as-built water tight measures (i.e., water stops, fittings, submarine doors, and hatches) for the UHS Makeup Water Intake Structure can withstand the structural design basis loads and meet the Structural Acceptance Criteria referenced in FSAR 3.8.4.5.</u></p> <p>b. <u>A report exists that concludes the as-built water tight measures (i.e., water stops, fittings, submarine doors, and hatches) for the UHS Makeup Water Intake Structure agrees with construction drawings and deviations from the approved design are reconciled.</u></p>

COLA, Part 10, Appendix B will be supplemented by the addition of Table 2.4-33 as shown below in a future COLA revision:

Table 2.4-33—{Forebay Structure Inspections, Tests, Analyses, and Acceptance Criteria}

	Commitment Wording	Inspection, Test, or Analysis	Acceptance Criteria
1	<p><u>The Forebay Structure is Seismic Category II and is designed to withstand structural design basis loads and load combinations per FSAR Section 3.8.4.3.</u></p>	<p>a. <u>An analysis will be performed to determine that the Forebay Structure is Seismic Category II and is designed to withstand structural design basis loads and load combinations per FSAR Section 3.8.4.3.</u></p>	<p>a. <u>A report exists that concludes the as-built Forebay Structure is capable of withstanding the structural design basis loads in accordance with the Structural Acceptance Criteria referenced in FSAR Section 3.8.4.5.</u></p>

Table 2.4-33—{Forebay Structure Inspections, Tests, Analyses, and Acceptance Criteria}

	<u>Commitment Wording</u>	<u>Inspection, Test, or Analysis</u>	<u>Acceptance Criteria</u>
		b. <u>An inspection of the as-built Forebay Structure will be conducted.</u>	b. <u>A report exists that concludes the as-built Forebay Structure agrees with construction drawings and deviations from the approved design are reconciled</u>
2	<u>For the Forebay Structure below grade concrete foundation and walls, a low water to cement ratio concrete mixture will be utilized.</u>	<u>Tests will be conducted to ensure the concrete meets the low water to cement ratio limit.</u>	<u>A report exists that concludes the concrete utilized to construct the as-built Forebay Structure below grade concrete foundation and walls have a maximum water to cementitious materials ratio of 0.45.</u>

COLA, Part 2, FSAR Table 14.3-2 will be revised as follows in a future COLA revision:

Table 14.3-3—{Site Specific SSC ITAAC Screening Summary}

Site-Specific Structure, System, or Component	U.S. EPR Interface	Selected for ITAAC
Structure		
<u>UHS Makeup Water Intake Structure, including CCNPP Unit 3 Intake Channel Forebay Structure</u>	Yes	Yes

Question 14.03.02-2.J

The staff has reviewed Calvert Cliffs Unit 3 COL Application, Part 10 – ITAAC, Appendix B Table 2.4-8 for the UHS Electrical Building and has identified the need for the following information. The ITAAC should be revised accordingly to address each issue or a technical explanation should be provided for not including this information in the ITAAC.

1. For safety-related structures, ITAAC should require an analysis for reconciling the as-built plant with all the structural design-basis loads and acceptance criteria. The analysis results are to be documented in a structural analysis report. Items 1, 4 and 7 should be revised to specifically address this requirement and should provide a reference to a report that will document that the acceptance criteria have been met. The ITAAC should also identify the location in the FSAR where the acceptance criteria can be found.
2. Items 1, 4, and 7 refer to flood and wave forces. The ITAAC should address all loads (e.g., earthquake, flood, wind, tornado, rain, and snow) on the structures referenced in these items.

Response

1. The contents of COLA Part 10, Appendix B, Table 2.4-8, Items 1 and 7 in the second and third columns will be revised to update the analysis and acceptance criteria requirements. The second and third columns have been divided into two parts; one covering analysis and the other inspection. Due to similarity between the contents of Items 4 and 1, the contents of Item 4 have been deleted and combined with those of Item 1.
2. The contents of Table 2.4-8, Items 1 and 7 will be revised to address design basis loads and the applicable section reference.

COLA Impact

COLA, Part 10, Appendix B, Table 2.4-8 will be revised as follows in a future COLA revision:

Table 2.4-8—{Ultimate Heat Sink Electrical Building Inspections, Tests, Analyses, and Acceptance Criteria}

	Commitment Wording	Inspection, Test, or Analysis	Acceptance Criteria
1	<p>The UHS Electrical Building is Seismic Category I, and can withstand design basis loads, including the static and dynamic forces associated with a flood, without a loss of structural integrity.</p> <p><u>The UHS Electrical Building, including its interior structures, is Seismic Category I, and is designed to withstand design basis loads and load combinations without a loss of structural integrity per FSAR Section 3.8.4.3.</u></p>	<p>An inspection and/or analysis of the as-built structure will be conducted.</p> <p><u>a. An analysis will be performed to determine that the UHS Electrical Building, including its interior structures, is designed to withstand design basis loads and</u></p>	<p>The as-built UHS Electrical Building conforms to the approved design and is capable of withstanding the design-basis loads, including static and dynamic flood forces, without loss of integrity.</p> <p><u>a. A report exists that concludes the as-built UHS Electrical Building is capable of withstanding all the structural design basis loads in accordance with the Structural Acceptance Criteria per FSAR</u></p>

Table 2.4-8—{Ultimate Heat Sink Electrical Building Inspections, Tests, Analyses, and Acceptance Criteria}

	Commitment Wording	Inspection, Test, or Analysis	Acceptance Criteria
		<p><u>load combinations without a loss of structural integrity per FSAR Section 3.8.4.3.</u></p> <p>b. <u>An inspection will be conducted of the UHS Electrical Building, including its interior structures.</u></p>	<p><u>Section 3.8.4.5.</u></p> <p>b. <u>A report exists that concludes the as-built UHS Electrical Building, including its interior structures, agrees with construction drawings and deviations from the approved design are reconciled.</u></p>
4	<p>The interior structures housing the electrical divisions for the UHS Makeup Water System in the UHS Electrical Building can withstand the static and dynamic forces associated with a flood, without a loss of structural integrity. Deleted.</p>	<p>An inspection and/or analysis of the as-built structure will be conducted.</p>	<p>The interior structures housing the electrical divisions for the UHS Makeup Water System in the as-built UHS Electrical Building conform to the approved design and is capable of withstanding the static and dynamic forces associated with a flood, without a loss of structural integrity.</p>

Table 2.4-8—{Ultimate Heat Sink Electrical Building Inspections, Tests, Analyses, and Acceptance Criteria}

	Commitment Wording	Inspection, Test, or Analysis	Acceptance Criteria
7	<p>The water tight measures (i.e., water stops, fittings, submarine doors, and hatches) for the UHS Electrical Building will also be designed for the static and dynamic flood forces resulting from the PMH water levels and wave forces.</p> <p><u>The water tight measures (i.e., water stops, fittings, submarine doors, and hatches) for the UHS Electrical Building will be designed to withstand the structural design basis loads and load combinations per FSAR Section 3.8.4.3.</u></p>	<p>Type tests or analyses will be performed to establish that the water tight measures are capable of withstanding the static and dynamic flood forces.</p> <p>a. <u>Analyses will be performed to determine that the water tight measures (i.e., water stops, fittings, submarine doors, and hatches) for the UHS Electrical Building are designed to withstand the structural design basis loads and load combinations per FSAR Section 3.8.4.3.</u></p> <p>b. <u>An inspection of the water tight measures (i.e., water stops, fittings, submarine doors, and hatches) for the UHS Electrical Building will be conducted.</u></p>	<p>A report exists that establishes that the water tight measures (i.e., water stops, fittings, submarine doors, and hatches) for the UHS Electrical Building can withstand the static and dynamic flood forces.</p> <p>a. <u>A report exists for the UHS Electrical Building that concludes the as-built water tight measures (i.e., water stops, fittings, submarine doors, and hatches) can withstand the structural design basis loads and meets the Structural Acceptance Criteria referenced in FSAR Section 3.8.4.5.</u></p> <p>b. <u>A report exists that concludes the as-built water tight measures (i.e., water stops, fittings, submarine doors, and hatches) for the UHS Electrical Building agrees with construction drawings and deviations from the approved design are reconciled.</u></p>

Question 14.03.02-2.L

The staff has reviewed Calvert Cliffs Unit 3 COL Application, Part 10 – ITAAC, Appendix B Table 2.4-10 for the Fire Protection Building and noted that Item 2 does not require an analysis for reconciling the as-built plant with all the structural design-basis loads and acceptance criteria, as well as the documentation of the analysis results in a structural analysis report. This item should be revised to specifically address this requirement and should provide a reference to a report that will document that the acceptance criteria have been met. The ITAAC should also identify the location in the FSAR where the acceptance criteria can be found. The ITAAC should be revised accordingly to address this issue or a technical explanation should be provided for not including this information in the ITAAC.

Response

COLA, Part 10, Appendix B, Table 2.4-10, Item 2 will be revised as requested.

COLA Impact

COLA, Part 10, Appendix B, Table 2.4-10 COLA, Part 10, Appendix B, Table 2.4-8 will be revised as follows in a future COLA revision:

Table 2.4-10—{Fire Protection Building Inspections, Tests, Analyses, and Acceptance Criteria}

	Commitment Wording	Inspection, Test, or Analysis	Acceptance Criteria
2	The Fire Protection Building is classified as Seismic Category II-SSE, <u>and that can withstand the applicable structural seismic design basis loads without losing its structural integrity and will remain functional during and after an SSE.</u>	<p>An inspection and/or analysis of the as-built structure will be conducted.</p> <p>a. <u>An analysis of the Fire Protection Building will be performed to demonstrate it can withstand the applicable structural design basis loads without losing its structural integrity and will remain functional during and after an SSE.</u></p> <p>b. <u>An inspection will be conducted of the Fire Protection Building.</u></p>	<p>The as-built Fire Protection Building conforms to the approved design and can withstand seismic design basis loads without loss of structural integrity.</p> <p>a. <u>A report exists that concludes the design of the Fire Protection Building can withstand the applicable structural design basis loads without loss of structural integrity and will remain functional during and after an SSE. Acceptance criteria is provided in FSAR Section 3.7.2.8.</u></p> <p>b. <u>A report exists that concludes the as-built Fire Protection Building agrees with construction drawings and deviations from the approved design are reconciled.</u></p>

Question 14.03.02-2.N

The staff has reviewed Calvert Cliffs Unit 3 COL Application, Part 10 – ITAAC, Appendix B Table 2.4-26 for the Fire Water Distribution System and noted that Items 2, 3, and 5 do not require an analysis for reconciling the as-built plant with all the design-basis loads and acceptance criteria, as well as the documentation of the analysis results in an analysis report. This item should be revised to specifically address this requirement and should provide a reference to a report that will document that the acceptance criteria have been met. The ITAAC for each item should also identify the location in the FSAR where the acceptance criteria can be found. The ITAAC should be revised accordingly to address this issue or a technical explanation should be provided for not including this information in the ITAAC.

Response

COLA, Part 10, Appendix B, Table 2.4-26 Items 2 and 3 will be revised as requested.

Table 2.4-26, Item 5 will be deleted because it is not applicable to CCNPP Unit 3. Specifically, buried fire protection piping supplying Seismic Category I structures are required to perform during and after a safe shutdown earthquake. This piping is therefore designated Seismic Category II – SSE. Table 2.4-26, Item 3 provides commitment wording applicable to this buried Seismic Category II – SSE fire protection piping.

COLA Impact

COLA, Part 10, Table 2.4-26 will be revised as follows in a future COLA revision:

Table 2.4-26—{Fire Water Distribution System Inspections, Tests, Analyses, and Acceptance Criteria}

	Commitment Wording	Inspection, Test, or Analysisign	Acceptance Criteria
2	<p>The following Fire Water Distribution System equipment and piping <u>that</u> are designated as Seismic Category II-SSE, and can withstand seismic design basis loads without losing the capability to perform its <u>their</u> function.</p>	<p>a. Type tests, tests, analyses, or a combination of tests and analyses will be performed on the equipment and piping.</p> <p>b. Inspections will be conducted of the as-built equipment.</p> <p>c. Inspections will be conducted on the as-built equipment supports and restraints.</p> <p>a. <u>An analysis will be performed to determine that the Fire Water Distribution System equipment and piping that are designated Seismic Category II-SSE can withstand the seismic design basis loads without losing the capability to perform their function.</u></p> <p>b. <u>An inspection will be conducted of the Fire Water Distribution System equipment and piping that are designated Seismic Category II-SSE.</u></p>	<p>a. The as-built Fire Water Distribution System equipment and piping designated as Seismic Category II-SSE can withstand a design basis seismic load without loss of its ability to perform its function.</p> <p>b. The as-built Fire Water Distribution System equipment and piping designated as Seismic Category II-SSE are installed as designed.</p> <p>c. The as-built equipment supports and restraints are seismically bounded by tested or analyzed conditions.</p> <p>a. <u>A report exists that concludes the design of the Fire Water Distribution System equipment and piping designated as Seismic Category II-SSE can withstand a design basis seismic load in accordance with the design standards referenced in FSAR Section 9.5.1.2.1 of the U.S. EPR FSAR without loss of ability to perform their function.</u></p> <p>b. <u>A report exists that concludes the as-built Fire Water Distribution System equipment and piping that are designated Seismic Category II-SSE agrees with construction drawings and deviations from the approved design are reconciled.</u></p>

Table 2.4-26—{Fire Water Distribution System Inspections, Tests, Analyses, and Acceptance Criteria}

	Commitment Wording	Inspection, Test, or Analysisign	Acceptance Criteria
3	<p>Fire Water Distribution System equipment and piping that could impact the capability of Seismic Category 4 Structures to perform its safety function are designated as Seismic Category II or Seismic Category II-SSE, and can withstand design basis seismic loads without impacting the capability of equipment designated as Seismic Category 4 from performing its <u>their</u> safety function.</p>	<p>a. Type tests, tests, analysis, or a combination of tests and analyses will be performed. b. Inspections will be conducted of the as-built equipment. <u>a. An analysis of the Fire Water Distribution System will be performed.</u> <u>b. An inspection will be conducted of the Fire Water Distribution System equipment and piping.</u></p>	<p>a. A report exists that concludes the as-built Fire Water Distribution System equipment and piping that are designated as Seismic Category II or Seismic Category II-SSE <u>are designed in accordance with the applicable design standards referenced in Section 9.5.1.2.1 of the U.S. EPR FSAR and can withstand design basis seismic loads without impacting the capability of piping and equipment designated as Seismic Category I from performing its <u>their</u> safety function.</u></p> <p>b. <u>A report exists that concludes the as-built Fire Water Distribution System equipment and piping that are designated as Seismic Category II or Seismic Category II-SSE agree with construction drawings and deviations from the approved design are reconciled are installed as designed.</u></p>
5	<p>Buried Fire Protection piping to Seismic Category I structures that does not support equipment required to perform during a Safe Shutdown Earthquake is designated as Seismic Category II, and can withstand a design basis seismic event without losing the integrity of its pressure boundary. Deleted.</p>	<p>a. Type tests, tests, analyses, or a combination of tests and analyses will be performed. b. Inspections will be conducted of the buried Fire Protection piping to Seismic Category I structures.</p>	<p>a. The as-built buried Fire Protection piping to Seismic Category I structures that does not support equipment required to perform during a Safe Shutdown Earthquake can withstand a design basis seismic event without losing the integrity of its pressure boundary.</p> <p>b. The as-built buried Fire Protection piping to Seismic Category I structures that does not support equipment required to perform during a Safe Shutdown Earthquake are installed as designed.</p>