BellBendCOLPEm Resource

From: Sgarro, Rocco R [rrsgarro@pplweb.com]
Sent: Thursday, November 19, 2009 1:46 PM
To: Canova, Michael
Cc: 'Freels, James'; Kirkwood, Jon K; Woodring, Kathryn L
Subject: RAI 48
Attachments: BNP-2009-368.pdf

Mike,

Attached please an advance electronic copy of PPL's response to RAI 48. If you have any questions, please advise.

Thanks!

Rocky

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November 19, 2009

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BELL BEND NUCLEAR POWER PLANT
RESPONSE TO RAI No. 48
BNP-2009-368 Docket No. 52-039

Reference: 1) M. Canova (NRC) to R. Sgarro (PPL Bell Bend, LLC), Bell Bend COLA – Request for Information No. 48 (RAI No. 48) – EEB -2833, e-mail dated November 2, 2009

The purpose of this letter is to respond to the request for additional information (RAI) identified in the referenced NRC correspondence to PPL Bell Bend, LLC (PPL). This RAI addressed Electrical Systems-Inspections, Tests, Analyses, and Acceptance (ITAAC) Criteria as discussed in Chapter 14 of the Final Safety Analysis Report (FSAR) and Part 10, ITAAC, of the Bell Bend Nuclear Power Plant (BBNPP) Combined License Application (COLA).

Enclosure 1 provides the responses for RAI 48, Questions 14.03.06-1, 14.03.06-2 and 14.03.06-3. The only new regulatory commitment in this letter is to update the BBNPP COLA in a future revision.

If you have any questions, please contact the undersigned at 570.802.8102.

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

Executed on November 19, 2009

Respectfully,

Rocco R. Sgarro

RRS/kw

Enclosure: As stated

cc: (w/o Enclosures)

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Enclosure 1

Response to NRC Request for Additional Information No. 48
Bell Bend Nuclear Power Plant

Question 14.03.06-1:

Part 10 "ITAAC & ITAAC Closure":

Table 2.4-24, "Off-site Power System ITAAC," of the Bell Bend NPP FSAR addresses the interface requirements of U.S. EPR FSAR Section 2.5.5.

Interface requirement 5.4 of U.S. EPR FSAR Tier 1 Section 2.5.5 requires verification that the transmission system will not subject the reactor coolant pumps (RCPs) to a sustained frequency decay of greater than 3.5 Hz/second. FSAR Table 2.4-24 does not include an ITAAC to verify that the frequency decay at the bus supplying the RCPs will meet this criterion. Please provide an ITAAC to verify that this criterion is met or justify an alternative.

Response:

An ITAAC will be added to Table 2.4-24, "Offsite Power System Inspections, Tests, Analyses, and Acceptance Criteria" to confirm that the transmission system will not subject the reactor coolant pumps to a sustained frequency decay of greater than 3.5 Hz/sec. FSAR Table 14.3-3, "Interface Requirements Screening Summary" will also be revised to indicate that an ITAAC is selected for this interface requirement.

COLA Impact:

Part 10 of the BBNPP COLA will be revised to add an ITAAC to Table 2.4-24 and Part 2, FSAR Table 14.3.3 will be revised as shown in the below markup.

Table 2.4-24—{Offsite Power System Inspections, Tests, Analyses, and Acceptance Criteria}

	Commitment Wording	Inspection, Test or Analysis	Acceptance Criteria
6	The transmission system will not subject the reactor coolant pumps to a sustained frequency decay of greater than 3.5 Hz/second.	Analysis of the transmission system will be conducted.	A report exists and concludes that the transmission system will not subject the reactor coolant pumps to a sustained frequency decay of greater than 3.5 Hz/sec.

Table 14.3-3—{Interface Requirements Screening Summary}

U.S. EPR FSAR Tier 1 Section #	Interface Requirement	Selected for ITAAC
4.10 and 2.5.5	Interface requirements for the offsite power system, including the switchyard, are provided in Section 2.5.5 of Tier 1 of the U.S. EPR FSAR. The transmission system will not subject the reactor coolant pumps to a sustained frequency decay of greater than 3.5 Hz/second.	~~No. The frequency decay analysis is provided in Section 8.2.2.4.~~ Yes

Question 14.03.06-2:

Part 10 "ITAAC & ITAAC Closure":

Table 2.4-26, "Class 1E Emergency Power Supply Components for Site-Specific System ITAAC," item 4 of the Bell Bend NPP FSAR, addresses site-specific Class 1E systems associated with the Emergency Service Water Emergency Makeup System (ESWEMS). Since these site-specific ESWEMS systems will be an integral part of the Bell Bend NPP Class 1E electrical system, confirm that all site-specific inspections, tests and analyses are to be conducted in accordance with the generic requirements of U.S. EPR FSAR Tier 1 for the Class 1E emergency Power Supply System (i.e., analysis described in item 5.11 of Table 2.5.1-3, U.S. EPR FSAR Tier 1) and incorporated in Appendix B to Part 10, Section 2.1 of Bell Bend NPP ITAAC.

Response:

The electrical equipment noted in COLA Part 10, ITAAC, Appendix B, Table 2.4-26 "Class 1E Emergency Power Supply Components for Site-Specific Systems Inspections, Tests, Analyses, and Acceptance Criteria," Item 4, will be subject to the same ITAAC requirements as the non-site-specific portion of the Class 1E electrical system as applicable. These requirements are contained in the U.S. EPR FSAR Tier 1, Table 2.5.1-3 for Class 1E Emergency Power Supply System (EPSS) and are incorporated by reference in the BBNPP FSAR Part 10, ITAAC, Appendix B, Section 2.1.

The analyses proposed to close the ITAACs noted in Table 2.5.1-3, U.S. EPR FSAR Tier 1, which are applicable to the site-specific portions of the EPSS, encompass the entire EPSS including the site-specific distribution equipment.

COLA Impact:

The COLA will not be revised as a result of this response.

Question 14.03.06-3:

FSAR Chapter 14, Verification Program, Table 14.3-3 – Interface Requirements Screening Summary, Item 4.9 states that Interface requirements for the lightning protection and grounding system are provided in Section 2.5.8 of Tier 1 of the U.S. EPR FSAR. Item 4.9 of Table 14.3-3 also indicates that Section 8.3 incorporates the U. S. EPR lightning protection and grounding system by reference.

Section 2.5.8 of Tier 1 does not currently address offsite power/switchyard system grounding and lightning protection systems. In Request for Information (RAI) question 14.03.06-34 on US EPR (RAI 275), the NRC staff has requested that the US EPR FSAR include an interface requirement to address this matter.

Neither Table 14.3-3 nor FSAR Section 8.3 (Onsite Power Systems) addresses offsite power/switchyard grounding and lightning protection systems as an ITAAC. Confirm that offsite power system/switchyard grounding and lightning protection system are selected for ITAAC or justify an alternative.

Response:

AREVA stated in the response to NRC RAI 275, Question 14.03.06-34[1] for the U.S. EPR FSAR, that the FSAR Tier 1, Chapter 2, Subsection 2.5.5, Interface Requirements, will be revised to add Item 5.8, "Lightning protection and grounding is provided for the switchyard." This Interface Requirement establishes the need for lightning protection and grounding for the offsite power circuits and components located in the station switchyard.

Therefore, the BBNPP FSAR Table 14.3-3, "Interface Requirements Screening Summary," will be updated to reflect that the lightning protection and grounding for the switchyard are selected for ITAAC. The BBNPP COLA will be revised after the AREVA response to NRC RAI 275, Question 14.03.06-34 has been incorporated into U.S. EPR FSAR Tier 1, Chapter 2, Sub-section 2.5.5.

COLA Impact:

The BBNPP COLA, Part 2, FSAR Table 14.3-3, will be revised after the AREVA response to NRC RAI 275, Question 14.03.06-34 has been incorporated into U.S. EPR FSAR Tier 1, Chapter 2, Sub-section 2.5.5 as shown:

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[1] R. Wells (AREVA) to G. Tesfaye (NRC), "Response to U.S. EPR Design Certification Application RAI No. 275, FSAR Ch 14," email dated 09/21/09 (ML092650009)

Table 14.3-3 – {Interface Requirements Screening Summary}

U.S. EPR FSAR Tier 1 Section #	Interface Requirement	Selected for ITAAC
4.10 and 2.5.5	Interface requirements for the offsite power system, including the switchyard, are provided in Section 2.5.5 of Tier 1 of the U.S. EPR FSAR. Lightning protection and grounding is provided for the switchyard.	Yes

The BBNPP COLA, Part 10, ITAAC Table 2.4-24, will be revised after the AREVA response to NRC RAI 275, Question 14.03.06-34 has been incorporated into U.S. EPR FSAR Tier 1, Chapter 2, Sub-section 2.5.5 as shown:

Table 2.4-24 – {Offsite Power System Inspections, Tests, Analyses and Acceptance Criteria}

	Commitment Wording	Inspection, Test or Analysis	Acceptance Criteria
7	Electrical grounding exists for the 500 kV switchyard.	Inspections will be conducted of the as-installed equipment.	A report exists and concludes that the as-built grounding for the 500 kV switchyard is in accordance with the design drawings and documentation.
8	Lightning protection exists for the 500 kV switchyard.	Inspections will be conducted of the as-installed equipment.	A report exists and concludes that the as-built lightning protection for the 500 kV switchyard is in accordance with the design drawings and documentation.