BellBendCOLPEm Resource

From: Canova, Michael
Sent: Friday, January 20, 2012 11:30 AM
To: 'Sgarro, Rocco R'; 'BBNPP@pplweb.com'; 'melanie.Frailer@unistarnuclear.com'; Woodring, Kathryn L; Kirkwood, Jon K
Cc: BellBendCOL Resource; Hodgdon, Ann; Segala, John; Wheeler, Larry; McKenna, Eileen; Hearn, Peter
Subject: Bell Bend COLA - FINAL Request for Information No. 110 (RAI No. 110)- SBPA 5822
Attachments: Fianl RAI Letter 110 - SBPA 5822.doc

Attached is RAI No. 110 for the Bell Bend COL Application. Per your discussion on 1/19/2012, we understand that you have no further questions on this RAI. You are requested to respond by April 30, 2012. If additional time is required to respond, please inform me of your proposed schedule your earliest opportunity.

If you have any questions, please contact me.

Michael A. Canova
Project Manager - Bell Bend COL Application
Docket 52-039
EPR Project Branch
Division of New Reactor Licensing
Office of New Reactors
301-415-0737

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RAI Letter No. 110
Application Revision 2

1/20/2012

Bell Bend
PPL Bell Bend LLC.
Docket No. 52-039
SRP Section: 09.02.05 - Ultimate Heat Sink
Application Section: 9.2.9

QUESTIONS for Balance of Plant Branch 1 (AP1000/EPR Projects) (SBPA)

Request for Additional Information No. 5822

09.02.05-17

1. BBNPP FSAR Section 9.2.9.4 states that to minimize potential flooding caused by failures of piping or components, the raw water piping is located remote from any safety-related systems or equipment, except for the lines connecting to the essential service water system (ESWS) cooling tower basins and the essential service water emergency makeup system (ESWEMS) retention pond. FSAR Section 9.2.9.4 also states that failures other than at the cooling tower basin and ESWEMS retention pond connections will not adversely impact safety functions because the plant storm water controls are designed to divert surface water flow away from the ESWS cooling tower and the ESWEMS retention pond. According to the applicant, the connections to the tower basins are made through safety-related motor operated valves, thereby assuring basin integrity under accident conditions. Based on the guidance of SRPs 9.2.1 and 9.2.5 and the requirements of GDC 2, SSCs important to safety are to be designed to withstand the effects of natural phenomena like earthquakes. Assuming a seismic event, the staff considers that all four trains of the non-safety-related pipes could be breached at their interface to the ESWS pump house with the raw water pumps running at high flow rate, continuing to feed the break. Desribe in the BBNPP FSAR the impact of a seismic event on the four ESWS pump houses and the means by which the ultimate heat sink (UHS) cooling towers and ESWS components would continue to meet their intended safety function. Provide the details of this evaluation in the FSAR.
2. BBNPP FSAR Figure 9.2-11 describes that the piping connection to the UHS is via EPR FSAR Reveision 2 Figure 9.2.1-1 sheet 3. This piping connection could not be found; however, the piping connection is on EPR FSAR Figure 9.2.1-5 and should be corrected in the BBNPP FSAR.
3. BBNPP FSAR Figure 9.2-11 does not state that the media filters are located in the water treatment building. Confirm whether media filters are located in the water treatment building and make appropriate corrections to BBNPP FSAR Figure 9.2-11.
4. The RWSS maintains the UHS cooling towers basin during normal operations within its required Technical Specification water level (EPR FSAR Chapter 16, SR 3.7.19.1). Based on the staff's review of BBNPP FSAR Figure 2.4-5, over 3.2

km (10,000 feet) of buried carbon steel (CS) RWSS piping will be installed at BBNPP, with a large percentage of the nonsafety-related RWSS being untreated river water. BBNPP FSAR Figure 9.2-11 provides that chemical treatment is downstream of the media filters near the water treatment building. As described in GL 89-13, degraded system performance can be caused by corroded water systems and defective protective pipe coatings. The complete failure of the (RWSS) may result in undesirable challenges to plant safety systems required for safe shutdown since it would require operators to trip the unit due to loss of normal makeup to the ESWS basin (TS 3.7.19). Describe in the BBNPP FSAR the controls to limit CS pitting, microbiological corrosion, and long term aging concerns (such as external piping protective coatings, extra corrosion allowances, and/or cathodic protection) to prevent wall thinning related to the RWSS buried and above ground piping. State whether cathodic protection will be utilized at the BBNPP for the RWSS, and, if so, describe the cathodic protection that will be utilized.

5. BBNPP FSAR Section 9.2.9.2 states that the RWSS is schematically represented in Figure 9.2-1. Revise the FSAR to clarify which figure includes the RWSS since it appears the correct figure should be Figure 9.2-11.