BellBendCOLPEm Resource

From: Canova, Michael
Sent: Monday, February 22, 2010 8:12 AM
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Cc: BellBendCOL Resource; Colaccino, Joseph; Le, Hien; Kowal, Mark; Hearn, Peter
Subject: RE: Bell Bend COLA - Request for Information - Final Letter No. 68 (RAI No. 68) with Revision- CTSB - 3551
Attachments: Final RAI Letter 68 - CTSB 3551 revised.doc

RAI No. 68 for the Bell Bend COL Application was transmitted on 2/16/2010. Question 16.2 contained an extraneous note embedded within the last paragraph. This transmittal removed that note from that question. Based today's transmittal, you are requested to respond to this revised request within 30 days. If additional time is required to respond, please inform me of your proposed schedule to respond at 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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From: Canova, Michael

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Request for Additional Information No. 68
Application Revision 0

2/16/2010

Bell Bend
PPL Bell Bend LLC.
Docket No. 52-039
SRP Section: 16 - Technical Specifications
Application Section: TS 3.7.8

QUESTIONS for Technical Specification Branch (CTSB)

16-1

TS 3.7.8, Essential Service Water (ESW) System.

In the BBNPP PTS, action statements for the limiting conditions for operation (LCO) 3.7.8, state that when in Condition C with the Retention Pond water level is not within limits specified in surveillance requirement (SR) 3.7.8.9, or the Retention Pond water temperature is not within limits specified in SR 3.7.8.8, the completion time (CT) for restoring these operating parameters to within specified limits is 72 hours.

Condition C implies that in a design basis accident event, all four ultimate heat sink (UHS) cooling towers may be affected, which could result in a potential loss of the UHS safety function. For a similar condition, the standard technical specifications (STS) for Westinghouse plants (NUREG-1431) suggests a more responsive action (e.g. requiring that the Control Room operators verify that the average temperature for the previous 24-hour is within limits specified in the respective TS LCO with a CT of 1 hour, which is normally applied to an unanalyzed plant condition.

Provide justification for the selected CT of 72 hours in the BBNPP PTS, and revise TS 3.7.8 and its associated TS bases, as appropriate

16-2

TS 3.7.8, Essential Service Water (ESW) System.

BBNPP FSAR Subsection 9.2.5.3 states, in part, “the minimum required level of 12 ft., elevation 664 ft [mean sea level] msl, which maintains a volume of approximately 50.3 acre-ft. … The total inventory loss from the ESWEMS retention pond during the 30 day period under the most limiting meteorological conditions (maximum evaporation conditions) was conservatively calculated to be 46.4 acre-ft. … This inventory loss consists of the following calculated losses and design allowances: (1) 34.2 acre-ft for cooling tower evaporation; (2) 9.8 acre-ft for loss to an ice cover; (3) 2.4 acre-ft for pond seepage. The total water remaining after 30 days is 3.9 acre-ft. All of the remaining water is usable, which provides a margin greater than 8% of the total volume requirement.”

In BBNPP PTS Section 3.7.8, Surveillance Requirement (SR) 3.7.8.9 states “Verify water level of the ESWEMS Retention Pond is >/= 644 feet mean sea level (msl).”

The discussion of SR 3.7.8.9 in the PTS bases B 3.7.8 states, in part, “this SR verifies that adequate long term ESW cooling tower basin makeup (i.e., 27 days) is available. The specified level also ensures that sufficient [please spell out the acronym the first time you use it] net positive suction head (NPSH) is available to operate the ESWEMS pumps during the 27 days after a loss of coolant accident (LOCA).”

It appears that the ESWEMS pump NPSH requirement was not considered in the specified minimum value of 644 feet msl. Also, the value of “664 ft msl” in the FSAR is not consistent with the PTS value of “644 ft msl”.

Justify that the BBNPP Essential Service Water Emergency Makeup System (ESWEMS) pump can satisfy the required NPSH during the 27 day period post LOCA. Revise TS 3.7.8 and its associated TS bases, as appropriate.

This information is needed to ensure adequacy and completeness of TS 3.7.8 requirements. The level of details in the TS and TS Bases should be comparable to those provided in the STS. At the same time TS requirements and the supporting information in the TS Bases should be consistent with relevant information provided in the FSAR

16-3

TS 3.7.8, Essential Service Water (ESW) System.

BBNPP FSAR Subsection 9.2.5.3 describes site-specific ESWEMS equipment which includes transfer pumps, ESWEMS recirculation motor operated valves (MOVs), ESWEMS isolation MOVs, blowdown system isolation valves, and others that automatically respond to an accident signal. The transfer pump operability is verified in Surveillance Requirement (SR) 3.7.8.7 but no SR was provided for the transfer pump valves.

Justify not including a SR for testing of various ESWEMS motor operated valves (MOVs) and control valves to verify their operability in TS 3.7.8. Revise TS 3.7.8 and its associated TS bases, as appropriate.

This justification is needed to ensure adequacy and completeness of TS 3.7.8 requirements