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January 31, 2011

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BELL BEND NUCLEAR POWER PLANT
PARTIAL RESPONSE AND SCHEDULE INFORMATION FOR RAI No. 84, FSAR CHAPTER 9, AND SCHEDULE INFORMATION FOR RAI No. 93, FSAR CHAPTER 2
BNP-2011-034 Docket No. 52-039

References:

1) M. Canova (NRC) to R. Sgarro (PPL Bell Bend, LLC), Bell Bend COLA – Request for Information – Final Letter No. 84 (RAI No. 84) with Revision – SBPA - 3990, e-mail dated March 23, 2010

2) M. Canova (NRC) to R. Sgarro (PPL Bell Bend, LLC), Bell Bend COLA – Request for Information – Final Letter No. 93 and 94 (RAI Nos. 93 and 94) – NSIR – LIB 4443, 4445, e-mail dated April 8, 2010

3) R.R Sgarro (PPL Bell Bend, LLC) to U.S. Nuclear Regulatory Commission, BNP-2010-096, "Partial Response for RAI 84 and Request for Extension," dated May 3, 2010 (ML101260116)

4) R. R. Sgarro (PPL Bell Bend, LLC) to U.S. Nuclear Regulatory Commission, BNP-2010-332, "Schedule Information for RAI No. 84, FSAR Chapter 9, and RAI No. 93, FSAR Chapter 2," dated December 16, 2010 (ML103550565)

The purposes of this letter are to provide updated schedule information for the Request for Additional Information (RAI) No. 84 (Reference 1) and RAI No. 93 (Reference 2) and provide a partial response for RAI No. 84 Question 09.02.05-14. These RAIs address the Ultimate Heat Sink, as discussed in Section 9.2.5 of the Final Safety Analysis Report (FSAR), and Regional Climatology, as discussed in FSAR Section 2.3.1 and submitted in Part 2 of Bell Bend Nuclear Power Plant (BBNPP) Combined License Application (COLA).

Reference 3 provided a response to RAI No. 84 Question 09.02.05-14, Bullets 2, 3, 4, 5, 6, and 7 and identified that the response for Bullet 1 would be provided at a later date. The enclosure to this letter provides our response to RAI No. 84 Question 09.02.05-14 Bullet 1 and completes our response to Question 09.02.05-14. The response to Question 09.02.05-14 Bullet 1 does not impact the RAI No. 84 responses made in Reference 3.

Reference 4 identified that PPL Bell Bend, LLC (PPL) would provide a schedule for submittal of open RAI No. 84 and RAI No. 93 questions by January 31, 2011. Open RAI No. 84 Questions 09.02.05-3, 09.02.05-4 Bullet 7, 09.02.05-4 Bullet 11, 09.02.05-5 Bullet 2 have been dependent on RAI responses that were addressed through the U.S. Evolutionary Power Reactor (U.S.

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EPR) FSAR. The work to address these questions and provide BBNPP RAI input is complete at this time. However, the work to address these U.S. EPR FSAR RAIs will result in additional BBNPP Ultimate Heat Sink analyses and the current scope and schedule for this additional work are not yet established. The additional scope and duration of any site-specific analyses are being assessed and the staff will be provided a schedule for the BBNPP RAI No. 84 open question responses by June 30, 2011.

The response to RAI No. 93 Question 02.03.01-02 will be submitted by May 6, 2011.

The submittal of a response schedule for RAI No. 84 Questions 09.02.05-3, 09.02.05-4 Bullet 7, 09.02.05-4 Bullet 11, 09.02.05-5 Bullet 2 by June 30, 2011 and the submittal of RAI No. 93 Question 02.03.01-2 response by May 6, 2011 are the only new regulatory commitments in this letter.

Should you have questions or need additional information, please contact the undersigned at 570.802.8102.

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

Executed on January 31, 2011

Respectfully,

Rocco R. Sgarro

RRS/kw

Enclosure: As stated

cc: (w/o Enclosure)

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Enclosure

Response for RAI No. 84 Question 09.02.05-14 Bullet 1
Bell Bend Nuclear Power Plant

Question 09.02.05-14:

The staff reviewed the site-specific TS requirements that are proposed for ESWEMS in Part 4 of the COL application to confirm that they adequately reflect the information provided in Bell Bend FSAR Section 9.2.5 and to confirm that the TS Basis accurately represents the TS requirements that are proposed. The staff found that the proposed TS requirements appear to be incomplete and not entirely consistent with Standard Technical Specification requirements. Consequently, additional information is needed and the Bell Bend FSAR and TS requirements need to be revised accordingly to address the following items:

- If long-term cooling capability of the ESWS (heat exchangers and cooling towers) relies upon certain water quality specifications, TS requirements need to be established to specify appropriate actions and surveillance requirements to ensure that the heat removal function can be performed over the 30 day post-accident period as assumed. This is related to **RAI 9.2.5-05 (ID 3990/15471).**
- While the pond level requirement that is proposed is consistent with the description in Bell Bend FSAR Section 9.2.5, the basis for this level has not been adequately described in FSAR Section 9.2.5. This is related to **RAI 9.2.5-04 (ID 3990/15470)**.
- The basis for the existing surveillance requirement that specifies a minimum makeup water flow rate of 300 gpm needs to be described in Bell Bend FSAR Section 9.2.5. This is related to **RAI 9.2.5-04 (ID 3990/15470)**.
- Because the ESWEMS is normally in standby mode, the frequency of surveillance flow testing should be commensurate with systems that are normally in standby mode; once every 24 months is not appropriate. Also, in addition to periodically verifying valve positions, surveillance requirements are needed to periodically verify that the system has not drained, and to confirm that instrumentation and set points for actuation of automatic functions and annunciation are within calibration.
- A surveillance requirement is needed to periodically inspect and clean the intake bay bar screens, and to inspect for silt buildup.
- The description of the ESWEMS that is provided in the background section to replace the first set of bracketed information is incomplete in that it does not include the recirculation valve, instruments and controls, and associated piping.
- The description of the ESWEMS that is provided in the LCO section to replace the bracketed text needs to be revised to include the strainer.

Response:

Bullet 1: The BBNPP Plant-Specific Technical Specifications are based on the U.S. EPR Generic Technical Specifications (GTS). As required by NUREG-0800, Chapter 16, the proposed U.S. EPR GTS are modeled after the current Pressurized Water Reactor (PWR) Standard Technical Specifications (STS) (NUREGs 1430, 1431, and 1432). U.S. EPR GTS, Technical Specification 3.7.19, was reviewed by the NRC staff and addressed in the draft Safety Evaluation Report (SER) for U.S. EPR FSAR, Chapter 16 dated March 10, 2010 [ML090900107]. The staff found that the U.S. EPR GTS followed accepted STS content which is based on the four criteria listed in 10 CFR 50.36:

- *Criterion 1.* Installed instrumentation that is used to detect, and indicate in the control room, a significant abnormal degradation of the reactor coolant pressure boundary.
- *Criterion 2.* A process variable, design feature, or operating restriction that is an initial condition of a design basis accident or transient analysis that either assumes the failure of or presents a challenge to the integrity of a fission product barrier.

- *Criterion 3.* A structure, system, or component that is part of the primary success path and which functions or actuates to mitigate a design basis accident or transient that either assumes the failure of or presents a challenge to the integrity of a fission product barrier.
- *Criterion 4.* A structure, system, or component which operating experience or probabilistic risk assessment has shown to be significant to public health and safety.

Water quality of the ultimate heat sink does not meet any of the criteria specified in 10 CFR 50.36. Furthermore, ultimate heat sink water quality requirements are not included in any of the current PWR STS (NUREGs 1430, 1431, and 1432). The BBNPP COLA will not be revised as a result of this response.

COLA Impact:

Bullet 1: The BBNPP COLA will not be revised as a result of this response.