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October 21, 2009

ATTN: Document Control Desk
U.S. Nuclear Regulatory Commission
Washington, DC 20555-0001

BELL BEND NUCLEAR POWER PLANT
RESPONSE TO RAI No. 51
BNP-2009-298 Docket No. 52-039

References: 1) M. Canova (NRC) to R. Sgarro (PPL Bell Bend, LLC), Bell Bend COLA – Request for Information No. 51 (RAI No. 51) – CQVP - 3577, email dated September 29, 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. This RAI addresses the Initial Test Program, as discussed in Section 14.2 of the Final Safety Analysis Report (FSAR), as submitted in Part 2 of the Bell Bend Nuclear Power Plant Combined License Application (COLA).

The enclosure provides our response to RAI No. 51, Questions 14.01-13, 14.02-14, 14.02-15.

The only new regulatory commitment in this letter is to update the BBNPP COLA in a future revision.

If you have any 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 October 21, 2009

Respectfully,

Rocco R. Sgarro

RRS/kw

Enclosure: As stated

D079
NRO

cc: (w/o Enclosures)

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Enclosure

Response to NRC Request for Additional Information No. 51
Bell Bend Nuclear Power Plant

Question 14.02-13:

COL Item 14.2-2 in Revision 1 of the U.S. EPR FSAR states that A COL applicant that references the U.S. EPR certified design will develop a test program that considers the following guidance components:

1. The applicant should allow at least nine months to conduct preoperational testing.

2. The applicant should allow at least three months to conduct startup testing, including fuel loading, low power tests, and power ascension tests.

3. Plant safety will not be dependent on the performance of untested SSC during any phase of the startup test program.

4. Surveillance test requirements will be completed in accordance with plant Technical Specification requirements for SSC operability before changing plant modes.

5. Overlapping test program schedules (for multi-unit sites) should not result in significant divisions of responsibilities or dilutions of the staff provided to implement the test program.

6. The sequential schedule for individual startup tests should establish, insofar as practicable, that test requirements should be completed prior to exceeding 25 percent power for SSC that are relied upon to prevent, limit, or mitigate the consequences of postulated accidents.

7. Approved test procedures should be in a form suitable for review by regulatory inspectors at least 60 days prior to their intended use or at least 60 days prior to fuel loading for fuel loading and startup test procedures.

8. Identify and cross reference each test (or portion thereof) required to be completed before initial fuel loading and that is designed to satisfy the requirements for completing ITAAC.

The NRC staff requests that the applicant revise Subsection 14.2.11 of the BBNPP COL FSAR to address all 8 criteria listed in the COL item.

Response:

The BBNPP COLA will be revised to include this COLA Item in

- FSAR Table 1.8-2
- Section 14.2.11
- COLA Part 10, ITAAC

COLA Impact:

The BBNPP COLA will be revised as follows:

Table 1.8-2 FSAR Sections that Address COL Items

(Page 13 of 15)

Item No.	Description	Section
13.4-1	A COL applicant that references the U.S. EPR design certification will provide site-specific information for operational programs and schedule for implementation.	13.4
13.5-1	A COL applicant that references the U.S. EPR design certification will provide site-specific information for administrative, operating, emergency, maintenance, and other operating procedures.	13.5
13.6-1	A COL applicant that references the U.S. EPR design certification will provide a site-specific security assessment that addresses identification of vital equipment, development of target sets, vulnerability assessments, defensive analyses, design features to enhance security, the portions of the NRC orders to the current operating plants that impact U.S. EPR design, and the other security features of the U.S. EPR that establish the security system design.	13.6
13.6-2	A COL applicant that references the U.S. EPR design certification will provide a PSP to the NRC to fulfill t)(35).	13.6
13.7-1	A COL EPR design certification will submit a physical security plan t uty requirements of 10 CFR Part 26.	13.7
14.2-1	A COL EPR certified design will provide site specific information that describes the organizational units that manage, supervise, or execute any phase of the test program.	14.2.2
14.2-2	~~A COL applicant that references the U.S. EPR certified design will develop a test program that considers the following five guidance components: 1. The applicant should allow at least 9 months to conduct preoperational testing. 2. The applicant should allow at least 3 months to conduct startup testing, including fuel loading, low-power tests, and power ascension tests. 3. Overlapping test program schedules (for multi-unit sites) should not result in significant divisions of responsibilities or dilutions of the staff provided to implement the test program. 4. The sequential schedule for individual startup tests should establish, insofar as practicable, that test requirements should be completed prior to exceeding 25 percent power for SSCs that are relied upon to prevent, limit, or mitigate the consequences of postulated accidents. 5. Approved test procedures should be in a form suitable for review by regulatory inspectors at least 60 days prior to their intended use or at least 60 days prior to fuel loading for fuel loading and startup test procedures.~~	14.2.11
14.2-3	A COL applicant that references the US EPR design certification will provide site-specific information for review and approval of test procedures.	14.2.3
14.2-4	A COL applicant that references the US EPR design certification will address the site-specific administrative procedures for review and approval of test results.	14.2.5
14.2-5	A COL applicant that references the U.S. EPR design certification will provide site-specific test information for the circulating water system.	14.2.12
14.2-6	The first COL applicant that references the U.S. EPR certified design will commit to review results from European predecessors concerning the new, unique, or novel EPR features (such as reactor internals (vibration measurement), natural circulation of the reactor coolant system, reactor coolant pump stand-still seal, pressurizer surge line (thermal stratification)) and propose supplemental testing if necessary.	14.2.8.1
14.2-7	A COL applicant that references the U.S. EPR design certification will provide site-specific test information for the cooling tower.	14.2.12
14.3-1	A COL applicant that references the U.S. EPR design certification will provide ITAAC for emergency planning, physical security, and site specific portions of the facility that are not included in the Tier 1 ITAAC associated with the certified design (10 CFR 52.80(a)).	14.3
14.3-2	A COL applicant that references the U.S. EPR design certification will describe the selection methodology for site-specific SSCs to be included in ITAAC, if the selection methodology is different from the methodology described within the FSAR, and will also provide the selection methodology associated with emergency planning and physical security hardware.	14.3
16.0-1	Brackets are used to identify information or parameters that are plant specific or are based on preliminary design information. A COL applicant that references the U.S. EPR design certification will replace preliminary information provided in brackets of the Technical Specifications and Technical Specification Bases with plant specific values.	16.0

Replace with Insert 1

INSERT 1:

A COL applicant that references the U.S. EPR certified design will develop a test program that considers the following eight guidance components: 1) The applicant should allow at least nine months to conduct preoperational testing. 2) The applicant should allow at least three months to conduct startup testing, including fuel loading, low-power tests, and power-ascension tests. 3) Plant safety will not be dependent on the performance of untested SSCs during any phase of the startup test program. 4) Surveillance test requirements will be completed in accordance with plant Technical Specification requirements for SSC operability before changing plant modes. 5) Overlapping test program schedules (for multiunit sites) should not result in significant divisions of responsibilities or dilutions of the staff provided to implement the test program. 6) The sequential schedule for individual startup tests should establish, insofar as practicable, that test requirements should be completed prior to exceeding 25 percent power for SSC that are relied on to prevent, limit, or mitigate the consequences of postulated accidents. 7) Approved test procedures should be in a form suitable for review by regulatory inspectors at least 60 days prior to their intended use or at least 60 days prior to fuel loading for fuel loading and startup test procedures. 8) Identify and cross reference each test (or portion thereof) required to be completed before initial fuel loading and that is designed to satisfy the requirements for completing ITAAC.

14.2.11 TEST PROGRAM SCHEDULE

The U.S. EPR FSAR includes the following COL Item in Section 14.2.11:

A COL applicant that references the U.S. EPR certified design will develop a test program that considers the following ~~five~~ eight guidance components:

- The applicant should allow at least nine months to conduct preoperational testing.
- The applicant should allow at least three months to conduct startup testing, including fuel loading, low-power tests, and power-ascension tests.
- Overlapping test program schedules (for multiunit sites) should not result in significant divisions of responsibilities or dilutions of the staff provided to implement the test program.
- The sequential schedule for individual startup tests should establish, insofar as practicable, that test requirements should be completed prior to exceeding 25 percent power for SSC that are relied on to prevent, limit, or mitigate the consequences of postulated accidents.
- Approved test procedures should be in a form suitable for review by regulatory inspectors at least 60 days prior to their intended use or at least 60 days prior to fuel loading for fuel loading and startup test procedures.

♦ Plant safety will not be dependent on the performance of untested SSCs during any phase of the startup test program.
♦ Surveillance test requirements will be completed in accordance with plant Technical Specification requirements for SSC operability before changing plant modes.

♦ Identify and cross reference each test (or portion thereof) required to be completed before initial fuel loading and that is designed to satisfy the requirements for completing ITAAC.

This COL Item is addressed as follows:

A site-specific test program shall be developed that considers the ~~five guidance~~ listed above components and shall provide copies of approved test procedures to the NRC at least 60 days prior to their scheduled performance date.

INDIVIDUAL TEST DESCRIPTIONS

The U.S. EPR FSAR includes the following COL Item in Section 14.2.12.7.11:

A COL applicant that references the U.S. EPR design certification will provide site-specific information for the circulating water supply system.

The U.S. EPR FSAR includes the following COL Item in Section 14.2.12.21.6:

A COL applicant that references the U.S. EPR design certification will provide site-specific information for the cooling tower.

These COL Items are addressed in Section 14.2.14.

14.2.13 REFERENCES

No departures or supplements.

14.2.14 COL APPLICANT SITE-SPECIFIC TESTS

This section is added to provide a location for COL applicants to list site-specific startup tests.

14.2.14.1 {Essential Service Water Emergency Makeup System (ESWEMS)

1. OBJECTIVES

a. To demonstrate the ability of the ESWEMS to supply makeup water as designed.

COL Item 5.3-2 in Section 5.3.2.1

A plant-specific Pressure and Temperature Limits Report shall be provided in accordance with {BBNPP} Technical Specification 5.6.4, "Reactor Coolant System (RCS) PRESSURE AND TEMPERATURE LIMITS REPORT (PTLR)," and shall be based on the methodology provided in ANP-10283P.

COL Item 5.4-1 in Section 5.4.2.5.2.2

The Steam Generator Tube Inspection Program shall incorporate the latest edition and addenda of the ASME Boiler and Pressure Vessel Code approved in 10 CFR 50.55a(b) on the date 12 months before initial fuel load.

COL Item 6.1-1 in Section 6.1.1.1

{PPL Bell Bend, LLC} shall review the fabrication and welding procedures and other QA methods of potential Engineered Safety Feature (ESF) component vendors to verify conformance with Regulatory Guides 1.31 and 1.44 prior to their selection as ESF component vendors.

COL Item 6.1-2 in Section 6.1.2

During component procurement, if components cannot be procured with Design Basis Accident (DBA)-qualified coatings applied by the component manufacturer, {PPL Bell Bend, LLC} shall do one of the following: Procure the component as uncoated and apply a DBA-qualified coating system in accordance with 10 CFR 50, Appendix B, Criterion IX; Confirm that the DBA-unqualified coating is removed and that the component is recoated with DBA-qualified coatings in accordance with 10 CFR 50, Appendix B, Criterion IX; Add the quantity of DBA-unqualified coatings to a list that documents those DBA-unqualified coatings already existing within containment.

COL Item 6.4-2 in Section 6.4.3

{PPL Bell Bend, LLC} shall provide written emergency planning and procedures for use in the event of a radiological or hazardous chemical release within or near the plant, and will provide training of control room personnel, prior to receipt of fuel onsite at {BBNPP}.

COL Item 8.3-1 in Section 8.3.1.1.5

Prior to initial fuel load, {PPL Bell Bend, LLC} shall establish procedures to monitor and maintain Emergency Diesel Generator reliability to verify the selected reliability level goal of 0.95 is being achieved as intended by Regulatory Guide 1.155.

COL Item 10.2-2 in Section 10.2.3.1

Following procurement of the {BBNPP} turbine generator, {PPL Bell Bend, LLC} shall submit to the NRC the applicable material data for the turbine rotor.

COL Item 10.2-3 in Section 10.2.3.2

Following procurement of the {BBNPP} turbine generator, {PPL Bell Bend, LLC} shall submit to the NRC the applicable turbine disk rotor specimen test data, load-displacement data from the compact tension specimens and the fracture toughness properties to demonstrate that the associated information and data presented in the U.S. EPR FSAR is bounding.

COL Item 14.2-2 in Section 14.2.11

{PPL Bell Bend, LLC} shall develop an initial plant test program that considers the ~~five guidance~~ components identified in FSAR Section 14.2.11 and shall provide copies of approved test procedures to the NRC at least 60 days prior to their scheduled performance date.

Question 14.02-14

COL Item 14.2-8 in Revision 1 of the U.S. EPR FSAR states that a COL applicant that references the U.S. EPR design certification will provide site-specific test abstract information for the raw water supply system. Please revise section 14.2.12 of the BBNPP COL FSAR to include this COL Item.

Response:

The BBNPP COLA will be revised to include this COLA Item in FSAR Table 1.8-2 and Section 14.2.12.

COLA Impact:

The BBNPP COLA will be revised as follows:

FSAR Table 1.8-2:

14.2.8	A COL applicant that references the U.S. EPR design certification will provide site-specific test abstract information for the raw water supply system.	14.2.12

FSAR 14.2.12:

The U.S. EPR FSAR includes the following COL Item in Section 14.2.12.5.1:

> A COL applicant that references the U.S. EPR design certification will provide site-specific test abstract information for the raw water supply system.

Question 14.02-15

COL Item 14.2-9 in Revision 1 of the U.S. EPR FSAR lists COL Item states that a COL applicant that references the U.S. EPR design certification will provide site-specific test abstract information for personnel radiation monitors. Please revise section 14.2.12 of the BBNPP COL FSAR to include this COL Item.

Response:

The BBNPP COLA will be revised to include this COLA Item in FSAR Table 1.8-2 and Section 14.2.12.

COLA Impact:

The BBNPP COLA will be revised as follows:

FSAR Table 1.8-2:

14.2.9	A COL applicant that references the U.S. EPR design certification will provide site-specific test abstract information for personnel radiation monitors.	14.2.12

FSAR 14.2.12:

The U.S. EPR FSAR includes the following COL Item in Section 14.2.12.11.27:

> A COL applicant that references the U.S. EPR design certification will provide site-specific test abstract information for personnel radiation monitors.