

BellBendCOLPEm Resource

From: Woodring, Kathryn L [KFitzpatrick@pplweb.com]
Sent: Monday, November 23, 2009 2:42 PM
To: Canova, Michael
Cc: 'j freels'; Wilson, Christine L; Scopelliti, Karen T; Sgarro, Rocco R
Subject: FW: BNP-2009-365 Document Missing Pages
Attachments: BNP-2009-365.pdf

Mike,

Attached please find the corrected entire electronic copy including the missing pages of PPL's response to RAI 37. Please let me know if you would also like me to send an additional hardcopy of this response.

If you have any questions, please call.

Thanks!

Katie Fitzpatrick (Woodring)
Administrative Assistant
PPL Nuclear Development
38 Bomboy Lane, Suite 2
Berwick, PA 18603
(570) 802-5638

From: NUC, BBNPP [mailto:BBNPP@pplweb.com]
Sent: Monday, November 23, 2009 1:28 PM
To: Freels, James L; Hull, Vernon; Sgarro, Rocco R; Woodring, Kathryn L; Scopelliti, Karen T; Wilson, Christine L
Subject: FW: BNP-2009-365 Document Missing Pages

From: Canova, Michael[SMTP:MICHAEL.CANOVA@NRC.GOV]
Sent: Monday, November 23, 2009 1:27:46 PM
To: Sgarro, Rocco R; Freels, James; NUC, BBNPP;
'Jacqueline.bell@unistarnuclear.com';
'melanie.Frailer@unistarnuclear.com'
Cc: BellBendCOL Resource
Subject: BNP-2009-365 Document Missing Pages
Auto forwarded by a Rule

Please forward the missing information directly to me and I will ensure the Document Control Desk can complete receipt of the document.

Thanks,

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

From: King, Mike
Sent: Monday, November 23, 2009 11:30 AM
To: Canova, Michael
Subject: Document Rejected by the Document Control Desk (DCD)

The following document was rejected from processing into ADAMS by the DCD:

Docket No.: 52-039

Document date: November 16, 2009

Subject: Bell Bend NPP - Partial Response to RAI No. 37, BNP-2009-365

Signed by: Rocco R. Sgarro

Reason for rejection: Document is missing page 4 of 5.

We are forwarding the document to you via the internal mail. Please address the outstanding issue(s) above and return the completed document to the DCD at T-2-F-1.

Thank you.

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Email Number: 402

Mail Envelope Properties (CDF4D29ABD774147915D56DD38B27EE821771DC2)

Subject: FW: BNP-2009-365 Document Missing Pages
Sent Date: 11/23/2009 2:41:36 PM
Received Date: 11/23/2009 2:41:42 PM
From: Woodring, Kathryn L

Created By: KFitzpatrick@pplweb.com

Recipients:

"j freels" <jimfreels525@yahoo.com>
Tracking Status: None
"Wilson, Christine L" <CLWest@pplweb.com>
Tracking Status: None
"Scopelliti, Karen T" <ktscopelliti@pplweb.com>
Tracking Status: None
"Sgarro, Rocco R" <rrsgarro@pplweb.com>
Tracking Status: None
"Canova, Michael" <Michael.Canova@nrc.gov>
Tracking Status: None

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Files	Size	Date & Time
MESSAGE	2690	11/23/2009 2:41:42 PM
BNP-2009-365.pdf	646711	

Options

Priority: Standard
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Expiration Date:
Recipients Received:

R. R. Sgarro
Manager-Nuclear Regulatory Affairs

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November 16, 2009

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

**BELL BEND NUCLEAR POWER PLANT
PARTIAL RESPONSE TO RAI No. 37
BNP-2009-365 Docket No. 52-039**

- References:
- 1) M. Canova (NRC) to R. Sgarro (PPL Bell Bend, LLC), Bell Bend COLA – Request for Information No. 37 (RAI No. 37) – SEB1 -2659, 2660, 2661, e-mail dated July 27, 2009
 - 2) BNP-2009-244, R. R. Sgarro (PPL Bell Bend, LLC) to U.S. Nuclear Regulatory Commission, “Response to RAI No. 37 and Schedule Information,” dated August 26, 2009

The purpose of this letter is to provide a partial response to the request for additional information (RAI) identified in the NRC correspondence to PPL Bell Bend, LLC (PPL) (Reference 1). This RAI addresses Seismic System Analysis, Seismic Subsystem Analysis, and Seismic Design Parameters as discussed in Chapter 2 of the Final Safety Analysis Report (FSAR) and submitted in Part 2 of the Bell Bend Nuclear Power Plant Combined License Application (COLA).

Responses to portions of RAI No. 37 were provided in the previous PPL Bell Bend correspondence to the NRC (Reference 2). Reference 2 also provided the schedule for submittal of the remainder of RAI 37 responses. In Reference 2, PPL Bell Bend identified that responses to portions of RAI 37 Questions 03.07.01-4 (sub-questions 2, 4, 5 and 6) and 03.07.01-8 (sub-questions 1 and 2) would be provided by November 18, 2009.

Since Reference 2 was submitted, PPL Bell Bend has investigated the potential to re-locate the physical siting of the Nuclear Island, Turbine Island, supporting buildings and structures within the PPL-owned property area. This re-location may change site-specific characteristics, such as Structure-Soil-Structure Interaction (SSSI), Soil-Structure Interaction (SSI), Site-specific peak ground accelerations, In-Structure Response Spectra (ISRS) and damping values.

The following RAI No. 37 Questions are considered impacted by the re-location of the plant physical siting:

- Question 03.07.01-4, sub-questions 2, 4 and 5
- Question 03.07.01-7
- Question 03.07.01-8, sub-questions 1 and 2
- Question 03.07.02-7

Since this re-location will result in additional information being submitted to the NRC with respect to the Bell Bend COLA, information necessary to address these questions will be included in the submitted changes to FSAR Section 3.7. The schedule date for submitting the new information for FSAR Section 3.7 is August 30, 2010.

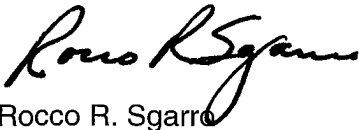
RAI 37 Question 03.07.01-4 (sub-question 6) remains unaffected by a relocation of the physical plant siting. The response for this sub-question is provided in Enclosure 1. The only new regulatory commitment contained in this letter is to update the BBNPP COLA at a future date.

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 November 16, 2009

Respectfully,

A handwritten signature in black ink, appearing to read "Rocco R. Sgarro". The signature is fluid and cursive, with the first name "Rocco" and last name "Sgarro" clearly distinguishable.

Rocco R. Sgarro

RRS/kw

Enclosure: As stated

cc: Mr. Samuel J. Collins
Regional Administrator
U.S. Nuclear Regulatory Commission
Region I
475 Allendale Road
King of Prussia, PA 19406-1415

Mr. Michael Canova
Project Manager
U.S. Nuclear Regulatory Commission
11545 Rockville Pike, Mail Stop T6-E55M
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Enclosure 1

Response to RAI No. 37 Question 03.07.01-4, Sub-question 6
Bell Bend Nuclear Power Plant

Question 03.07.01-4:

In FSAR Section 3.7.1.1 on page 3-35, it states that the ground motion for the soil-structure interaction (SSI) analysis of the EPGB and ESWB are based on the foundation input response spectra (FIRS) developed by the site response analysis that accounts for structure-soil-structure interaction (SSSI) effects due to the influence of the NI. However, details relating to the development of the seismic design parameters were not provided and it is not clear whether they meet the acceptance criteria of SRP Section 3.7.1 and SRP 3.7.2.

1. Describe in detail the process used to develop the FIRS and indicate if the FIRS were developed in a probabilistic manner. State if the site profiles used in the calculations were based on the geologic outcrop at the foundation elevation of each structure.
2. Describe how the SSSI effects are determined and subsequently used to modify the FIRS for the EPGB and ESWB.
3. Describe the ground motion input time histories that were used in the SSI analysis and how they meet SRP Acceptance Criteria 1.B of SRP Section 3.7.1. In addition, provide a comparison of the response spectra of the input time histories to the FIRS for each of the structures and demonstrate how the response spectra of the input time histories meet Approach 1 or Approach 2 of SRP Acceptance Criteria 1.B of SRP Section 3.7.1.
4. Describe the SSI analyses performed, including a description of the computer codes, seismic models, how embedment effects were considered, modeling assumptions, and how the backfill was incorporated into the analyses. Address in your response how the SSI analysis meets SRP Acceptance Criteria 4 of SRP Section 3.7.2.
5. In the site-specific SSI analyses performed for the EPGB and ESWB, provide a definition of the BE, upper bound (UB) and LB profiles that were selected for the analysis of these structures including a description of concrete fill or soil backfill that was used in the analyses.
6. Provide information to clarify and support the statement that the EPGB is a “conservatively surface founded” structure.

Response:**Sub-question 6:**

The EPGB is embedded 5 feet below the finished grade and has a 6 ft thick foundation mat. The surface-founded model for the EPGB is conservative for sliding evaluation where any passive soil resistance present due to an embedment is ignored. For all other analyses, it is appropriate to consider it as surface-founded structure as the embedment is limited to the thickness of the foundation.

BBNPP FSAR Section 3.7.1.1.1 will be revised to delete the word “conservatively.”

COLA Impact:

The BBNPP COLA, FSAR Section 3.7.1.1.1, will be revised as follows in a future revision of the COLA:

Site-Specific SSI AnalysesSoil Profiles

Table 3.7-1, Table 3.7-2 and Table 3.7-3 show the strain-compatible Best Estimate (BE), Lower Bound (LB) and Upper Bound (UB) soil cases, respectively, used in the site-specific SSI analysis for the NI Common Basemat Structures. Since the EPGB and ESWB are at different elevations, the soil profiles considered for these structures are different and include the structural fill from the ground surface to the individual foundations of these structures. The EPGB is analyzed as a conservatively-surface founded structure (bottom of basemat at 5 ft (1.5 m) below grade) while and the ESWB is analyzed with an embedment of ~~embedded~~ about 22 ft (6.7 m).