BellBendCOLPEm Resource

From: Canova, Michael
Sent: Monday, January 11, 2010 9:11 AM
To: 'Sgarro, Rocco R'; 'BBNPP@pplweb.com'; 'Freels, James'; 'melanie.Frailer@unistarnuclear.com'; 'Jacqueline.bell@unistarnuclear.com'
Cc: BellBendCOL Resource; Miernicki, Michael; Thomas, Brian; Ma, John
Subject: Bell Bend COLA - Request for Information No. 74 (RAI No. 74)- SEB1 - 2503
Attachments: Letter 74 - RAI 2503 - SEB1.pdf

Attached is RAI No.s 74 for the Bell Bend COL Application. Based on our phone conversation with the staff on 11/16/2009, question 03.08.01-2 pertaining to containment has been deleted as it pertains to, and is being addressed on, the U.S. EPR Design Certification docket. we understand you have no questions on this RAI. You are requested to respond to this 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

Hearing Identifier: BellBend_COL_Public
Email Number: 473

Mail Envelope Properties (77BCCD26C6050B42A72FE3939CF492ED162E45C6CD)

Subject: Bell Bend COLA - Request for Information No. 74 (RAI No. 74)- SEB1 - 2503
Sent Date: 1/11/2010 9:11:07 AM
Received Date: 1/11/2010 9:11:08 AM
From: Canova, Michael

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Post Office: HQCLSTR01.nrc.gov

Files	**Size**	**Date & Time**
MESSAGE	916	1/11/2010 9:11:08 AM
Letter 74 - RAI 2503 - SEB1.pdf	20905	

Options
Priority: Standard
Return Notification: No
Reply Requested: No
Sensitivity: Normal
Expiration Date:
Recipients Received:

Request for Additional Information No. 74
Application Revision 0

1/11/2010

Bell Bend
PPL Bell Bend LLC.
Docket No. 52-039
SRP Section: 03.08.01 - Concrete Containment
Application Section: 3.8.1.3

QUESTIONS for Structural Engineering Branch 1 (AP1000/EPR Projects) (SEB1)

03.08.01-1

For COL information item COL 3.8(1) in the BBNPP COL FSAR, Subsection 3.8.1.3,"Loads and Load Combinations" (SRP Section 3.8.1), the applicant states in the third paragraph (Page 3-164) "Site specific Reactor Containment Building (RCB) design loads are confirmed to lie within the standard U.S. EPR design certification envelope with the exception of design loads resulting from the BBNPP site specific seismic response spectra and soil profiles described in 3.7.1. Additional confirmatory evaluations for the site specific seismic response spectra were performed to confirm that the RCB is acceptable for the BBNPP site.
These evaluations confirmed:

- BBNPP site specific Nuclear Island (NI) Common Base Mat Structure foundation soil spring values are enveloped by the standard U.S. EPR design certification soil spring values.
- BBNPP site specific NSSS support loads are enveloped by the standard U.S. EPR design certification NSSS support loads.
- The BBNPP site specific zero period acceleration (ZPA) values for the RCB are enveloped by the standard U.S. EPR design certification ZPA values for the RCB."

Also, in BBNPP COL FSAR, Subsection 3.7.1,"Seismic Design Parameters", the third paragraph states "The SSE at BBNPP is defined as the maximum GMRS on top of the Mahantango formation, at approximate Elevation 640.0 ft msl (194.8 m)."

The applicant is requested to provide the following information:

1. In BBNPP COL FSAR, Subsection 3.7.1, the applicant states that the Ground Motion Response Spectra (GMRS) for BBNPP are not bounded by the Certified Seismic Design Response Spectra (CSDRS) at all frequencies (Page 3-30). Provide the technical basis for why the three additional evaluations (shown as the three bullets in the first paragraph above) demonstrate that the seismic response of the RCB for BBNPP is enveloped by that of U.S. EPR.
2. The elevation of the water table is about 30 ft. above the elevation of the bottom of the NI foundation basemat. The SSI analysis performed in the US-EPR FSAR did not consider the effect of this high water table.
   Provide the technical basis that supports the conclusion that the effect of high

water table is negligible, and that the results of US-EPR are applicable to BBNPP RCB.

3. (c) 10CFR Part 50, Appendix S states that “The Safe Shutdown Earthquake Ground Motion must be characterized by free-field ground motion response spectra at the free ground surface”. The grade elevation for BBNPP is at 674.5 ft. However, in the second paragraph quoted above, the SSE for BBNPP is defined at the elevation of 640 ft.

Provide justification for the use of the GMRS at the 640 ft elevation for the SSE.