

## BellBendCOLPEm Resource

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**From:** Canova, Michael  
**Sent:** Thursday, May 26, 2011 4:25 PM  
**To:** 'Sgarro, Rocco R'; 'BBNPP@pplweb.com'; 'Freels, James'; 'melanie.Frailer@unistarnuclear.com'  
**Cc:** BellBendCOL Resource; Colaccino, Joseph; Dehmel, Jean-Claude; Clark, Phyllis; Roach, Edward  
**Subject:** Bell Bend COLA - FINAL Request for Information No. 100 (RAI No. 100)- CHPB 5414, 5418, 5419  
**Attachments:** Final RAI Letter 100 - CHPB 5414, 5418, 5419.doc

Attached is RAI No. 99 for the Bell Bend COL Application. [Per our discussion on 5/25/2010](#), we understand that you [have no questions on this RAI](#). You are requested to respond [by July 25, 2011](#). If additional time is required to respond, please inform me of your proposed schedule 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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Request for Additional Information No. 100  
Application Revision 2

5/26/2011

Bell Bend  
PPL Bell Bend LLC.  
Docket No. 52-039

QUESTIONS for Health Physics Branch (CHPB)

SRP Section: 11.04 - Solid Waste Management System  
Application Section: 11.4 and 9.5.1 and 9B

11.04-1

BBNPP FSAR Tier 2, Rev. 2, Section 11.4 endorses the corresponding sections of the U.S. EPR FSAR Section 11.4 as it relates to the management of radioactive wastes in plant buildings. A parallel review of U.S. EPR FSAR Sections 9.5.1 and 9A.1 on fire protection analysis (FPA) involving radioactive materials indicates that fires could occur over the life of a nuclear power plant and should be treated as anticipated operational occurrences. U.S. EPR FSAR Sections 9.5.1 and 9A.1 and Table 9A-2 address the need to conduct a fire protection analysis given the presence of radioactive materials in the plant. The results of such analyses would be used to identify measures such that fires would not result in unacceptable radiological releases and radiological consequences to the public under the criteria of 10 CFR Part 20, as noted in RG 1.189. A review U.S. EPR FSAR Rev. 2, Table 9A-2 (footnote 15) indicates that such analyses would identify the potential presence of radioactive materials as a source of combustible materials, assess the potential for fires and possible radiological effects from a fire, and evaluate the need for additional in-depth fire protection features to mitigate the consequences of a fire.

However, BBNPP FSAR Tier 2, Sections 9B.1.2, 9B2.3, Table 9.5-1, and 11.4 do not present a FPA for areas of the plant where radioactive materials, such as dry active wastes, spent ion-exchange resins, and spent charcoals will be processed and stored while awaiting shipment. Accordingly, the applicant is requested to:

- a. present this information for all areas of the plant where combustible radioactive materials will be processed and stored,
- b. describe radiological releases in the event of a fire involving radioactive materials, including the initial source terms, types of releases, release paths from within buildings to the outside via building ventilation systems, credit, if any, for filtration and retention of radioactivity within buildings in mitigating releases, and radionuclide distributions and concentration at assumed dose receptors located in unrestricted areas, and
- c. assess the radiological consequences to the public under the criteria of 10 CFR Part 20.1301 and 20.1302 and Part 20, Appendix B ECLs for airborne releases.

SRP Section: 11.05 - Process and Effluent Radiological Monitoring Instrumentation and Sampling Systems  
Application Section: 11.5

11.05-1

BBNPP FSAR Section 11.5.2 endorses the use of NEI ODCM Template 07-09A (Revision 0, March 2009) to meet COL Information Item 11.5-1 until a plant and site-specific ODCM is prepared, before fuel load, under the requirements of a license condition described in BBNPP FSAR Section 13.4, Table 13.4-1. The staff has reviewed NEI ODCM Template 07-09A and found it acceptable (ML091050234). The development of the site specific ODCM and implementing procedures should meet the provisions of GL 89-01 (Supplement No. 1), Radiological Assessment Branch Technical Position (Revision 1, November 1979) included as Appendix A in NUREG-1301, as ODCM guidance for PWRs, and the guidance of NUREG-0133, "Preparation of Radiological Effluent Technical Specifications for Nuclear Power Plants," October 1978. The staff finds this approach acceptable, given the inclusion of COL Information Item 11.5-1 in U.S. EPR FSAR Tier 2, Revision 1, Sections 1.8.1 and 11.5.2, and its implementation in BBNPP FSAR Tier 2, Revision 2, and Section 13.4.

However, BBNPP FSAR Section 11.5.2 does not address unique site-specific conditions that are not covered in the NEI ODCM Template 07-09A. The BBNPP FSAR does not address how sampling provisions for in-process and effluent streams described in U.S. EPR FSAR Section 11.5, Table 11.5-1 and Figure 11.5-1 will be evaluated and implemented to reflect site-specific conditions in demonstrating compliance with Part 20.1301 and 20.1302, Part 20 Appendix B ECLs, and Part 50 Appendix I design objectives. Similarly, the applicant has not addressed how operational ranges, sensitivity levels, and lower limits of detection for radiation monitoring equipment will be established for all radiation monitoring instrumentation described in U.S. EPR FSAR Section 11.5, Table 11.5-1 and Figure 11.5-1. The applicant is requested to present this information for all radiation monitoring equipment that will be installed at the BBNPP plant, and identify associated departures, if any, for specific in-process and effluent streams.

11.05-2

BBNPP FSAR Tier 2, Rev. 2, Section 11.5.2 endorses the use of NEI ODCM Template 07-09A (Revision 0, March 2009) to meet COL Information Item 11.5-1 until a plant and site-specific ODCM is prepared, before fuel load, under the requirements of a license condition described in BBNPP FSAR Section 13.4, Table 13.4-1. The staff has reviewed NEI Offsite Dose Calculation Manual (ODCM) Template 07-09A and found it acceptable (ML091050234). The development of the site specific ODCM and implementing procedures should meet the provisions of GL 89-01 (Supplement No. 1), Radiological Assessment Branch Technical Position (Revision 1, November 1979) included as Appendix A in NUREG-1301, as ODCM guidance for PWRs, and the guidance of NUREG-0133, "Preparation of Radiological Effluent Technical Specifications for Nuclear Power Plants," October 1978. The staff finds this

approach acceptable, given the inclusion of COL Information Item 11.5-1 in U.S. EPR FSAR Tier 2, Revision 1, Sections 1.8.1 and 11.5.2, and its implementation in BBNPP FSAR Tier 2, Revision 2, and Section 13.4.

However, BBNPP FSAR Tier 2, Section 11.5.2 does not address unique site-specific conditions that are not covered in the NEI ODCM Template 07-09A. The BBNPP FSAR does not consider how the ODCM will control liquid and gaseous effluent releases and doses to members of the public given that two licensees (SSES 1&2 and Bell Bend) will be contributing to and competing for a single dose allocation to members of the public under Parts 20.1301 and 20.1302; Part 20.1301(e) in complying with 40 CFR Part 190; and identify whether this may also apply for assessing the unity-rule in meeting liquid and gaseous effluent concentration limits of Part 20 (App. B, Table 2, Col. 1 and 2). Accordingly, the applicant is requested to:

1. Describe in BBNPP FSAR Tier 2, Section 11.5.2 the administrative program and procedures that will be used to coordinate all liquid and gaseous effluent releases and dose allocations to members of the public between SSES 1&2 and Bell Bend in complying with NRC regulations.
2. If PPL Bell Bend LLC has already made specific arrangements with SSES on this matter, the applicant is requested to describe in BBNPP FSAR Tier 2, Section 11.5.2 the type and duration of such arrangements, the scope of the arrangements made in coordinating the responsibility to control liquid and gaseous effluent releases and doses to members of the public and how the arrangements will be implemented in BBNPP administrative programs and procedures in FSAR Tier 2, Sections 13.1 and 13.5.
3. Confirm that these provisions will be included in the development of the BBNPP site-specific ODCM, given the operational program implementation and milestones described in FSAR Tier 2, Section 13.4.
4. Include this additional responsibility in the job functional descriptions of the Radiation Protection Supervisor and/or Chemistry Supervisor in BBNPP FSAR Tier 2, Section 13.1.2.2.