

## BellBendEnveRAIPEm Resource

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**From:** Terry, Tomeka  
**Sent:** Friday, January 17, 2014 2:25 PM  
**To:** Rocco R. Sgarro (rrsgarro@pplweb.com); Kirkwood, Jon K (jon.kirkwood@unistarnuclear.com)  
**Cc:** Mcdowell, Bruce K (Bruce.Mcdowell@pnnl.gov); 'Leigh, Kimberly D'; amarchese@numarkassoc.com; Palmrose, Donald; Rishel, Jeremy P (jeremy.rishel@pnnl.gov); Tom Grant (tgrant@numarkassoc.com) (tgrant@numarkassoc.com); Quinn-Willingham, Laura; BellBendEnveRAIPEm Resource  
**Subject:** Final RAIs ENV-26  
**Attachments:** RAIs ENV-26.pdf

Rocky,

Attached is the final RAI ENV-26 for the Bell Bend COL application. The ENV-24 RAI is related to Severe Accident.

The NRC assumes technically correct and complete responses within 30 days of receipt of the final RAIs. For any RAIs that cannot be responded to within 30 days, it is expected that a date for receipt of this information will be provided to the staff within the 30-day period so that the staff can access how this information might impact the schedule. Please contact me if you have any questions.

Thanks!

Tomeka Terry  
Environmental Project Manager  
Environmental Projects Branch  
Mailstop T6-C32  
Division of New Reactor Licensing  
Office of New Reactors  
Nuclear Regulatory Commission  
Telephone: 301-415-1488  
e-mail address: [Tomeka.Terry@nrc.gov](mailto:Tomeka.Terry@nrc.gov)

**Hearing Identifier:** BellBend\_COL\_Env\_RAI  
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**From:** Terry, Tomeka

**Created By:** Tomeka.Terry@nrc.gov

**Recipients:**

"Mcdowell, Bruce K (Bruce.Mcdowell@pnnl.gov)" <Bruce.Mcdowell@pnnl.gov>  
Tracking Status: None  
"Leigh, Kimberly D" <Kimberly.L Leigh@pnnl.gov>  
Tracking Status: None  
"amarchese@numarkassoc.com" <amarchese@numarkassoc.com>  
Tracking Status: None  
"Palmrose, Donald" <Donald.Palmrose@nrc.gov>  
Tracking Status: None  
"Rishel, Jeremy P (jeremy.rishel@pnnl.gov)" <jeremy.rishel@pnnl.gov>  
Tracking Status: None  
"Tom Grant (tgrant@numarkassoc.com) (tgrant@numarkassoc.com)" <tgrant@numarkassoc.com>  
Tracking Status: None  
"Quinn-Willingham, Laura" <Laura.Quinn-Willingham@nrc.gov>  
Tracking Status: None  
"BellBendEnveRAIPEm Resource" <BellBendEnveRAIPEm.Resource@nrc.gov>  
Tracking Status: None  
"Rocco R. Sgarro (rrsgarro@pplweb.com)" <rrsgarro@pplweb.com>  
Tracking Status: None  
"Kirkwood, Jon K (jon.kirkwood@unistarnuclear.com)" <jon.kirkwood@unistarnuclear.com>  
Tracking Status: None

**Post Office:** HQCLSTR02.nrc.gov

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## **Request for Additional Information No. 7326**

Issue Date: 1/17/2014

Application Title: Bell Bend Environmental Review Docket Number 52-039

Operating Company: PPL Bell Bend LLC.

Docket No. 52-039

Review Section: EIS ACC/SAMDA - Severe Accident Mitigation Design Alternatives

Application Section: Part 3 – Environmental Report

### **QUESTIONS**

ESRP Section 7.2 directs the staff to evaluate and provide input to the environmental impact statement (EIS) concerning the environmental risks of accidents involving radioactive material that can be postulated for the plant under review. Additionally, ESRP Section 7.3 directs the staff to evaluate the severe accident mitigation alternatives (SAMAs) for reviews of COL applications, if SAMAs are included in the applicant's Environmental Report (ER). To perform this review, the staff must obtain from the applicant an evaluation of the economic data used in the consequence assessment and the population data and distribution within an 80-km (50-mile) radius from the time of the licensing action under consideration.

BBNPP ER, Rev. 4, Section 1.2.7 revised the commercial operation date from June 2018 to June 2023. However, BBNPP ER, Rev. 4, Section 7.2, Severe Accidents, and Section 7.3, Severe Accident Mitigation Design Alternatives (SAMDA), do not discuss how the delay of the 2018 start-up date to 2023 affects the previous Base-Year (2050) population projections for determining severe accident risks and SAMDA evaluations. Additionally, the analysis in BBNPP ER Rev. 4 is based on 2000 U.S. Census data and should be updated with data from the 2010 Census. Provide updated economic and projected demographic data (e.g., population distribution) within an 80-km (50-mile) radius from the time of the licensing action under consideration for the year for commercial operation of 2023 by applying the latest available U.S. Census data. Update the severe accident risk information and SAMDA assessment to the revised projected demographic data.

## **Request for Additional Information No. 7327**

Issue Date: 1/17/2014

Application Title: Bell Bend Environmental Review Docket Number 52-039

Operating Company: PPL Bell Bend LLC.

Docket No. 52-039

Review Section: EIS ACC/SA - Postulated Accidents Impacts / Severe Accidents

Application Section: Part 3 – Environmental Report

### **QUESTIONS**

ESRP Section 7.2 directs the staff to evaluate and provide input to the environmental impact statement (EIS) concerning the environmental risks of accidents involving radioactive material that can be postulated for the plant under review. Revisions have been made to the U.S. EPR PRA, as provided in DCD FSAR Chapter 19, Rev. 5, "PRA & Severe Accident Evaluation"). However, the revised material has not yet been incorporated in to BBNPP ER Section 7.2, "Severe Accidents." For example, referring to DCD, Rev. 5, PRA Section 19.1, Table 19.1-20, the radionuclide source term for each release category has been revised and the corresponding BBNPP ER Rev. 4 Table 7.2-2 ("Source Term Input to MACCS2") is no longer consistent with this DCD table. Additionally, BBNPP ER Section 7.2 does not reference the US EPR DCD as the source of the information in this section (e.g., Table 7.2-2). Provide an updated. BBNPP ER, Rev. 4, Chapter 7, "Environmental Impacts of Postulated Accidents Involving Radioactive Material," that is consistent with the revisions provided in the DCD FSAR Rev. 5. In addition, revise the references for BBNPP ER Section 7.2 to provide clarity as to the source of technical information in this section.

## **Request for Additional Information No. 7328**

Issue Date: 1/17/2014

Application Title: Bell Bend Environmental Review Docket Number 52-039

Operating Company: PPL Bell Bend LLC.

Docket No. 52-039

Review Section: EIS ACC/SA - Postulated Accidents Impacts / Severe Accidents

Application Section: Part 3 – Environmental Report

### **QUESTIONS**

ESRP Section 7.2 directs the staff to evaluate and provide input to the environmental impact statement (EIS) concerning the environmental risks of accidents involving radioactive material that can be postulated for the plant under review. The scope of this review should include dose consequence analysis for severe accidents, including socioeconomic impacts. Enclosure 1 of PPL Letter, BNP-2013-143, "BBNPP Correction to Response to ER RAI Nos. ACC 7.2-2 & 7.2-3," dated October 28, 2013, provides revisions and comparisons to the previous cumulative risk of early and latent fatalities for individuals within one mile and 10 miles of the reactor with the revised average individual risk of early and latent fatalities for the same distances. However, Enclosure 2 of BNP-2010-333, dated December 20, 2010, provides revisions and comparison, using Enclosure 3 (i.e., response to RAI No. 5021 EIS 5.11-7) of BNP-2010-333, which presents the previous average individual risk of early and latent fatalities. This inconsistency should be resolved and the BBNPP ER revised appropriately. In addition, provide in a future revision of Bell Bend COL ER a discussion of the capability of BBNPP design to meet the NRC Safety Goals, as set forth in the Commission's Safety Goal Policy Statement (51 FR 30028) and with the doses estimated for normal operations (see page 7.2-5 of NUREG-1555, Section 7.2, Rev. 1 of July 2007). Provide an updated analysis for BBNPP ER, Rev. 4, Section 7.2, "Severe Accidents," that applies the updated meteorology data (see BNP-2013-143) and discusses the result in terms of impacts for the severe accident risk, such as the capability of the BBNPP design to meet the NRC Safety Goals (51 FR 30028) and with the doses estimated for normal operations.

## **Request for Additional Information No. 7352**

Issue Date: 1/17/2014

Application Title: Bell Bend Docket Number 52-039

Operating Company: PPL Bell Bend LLC.

Docket No. 52-039

Review Section: EIS ACC/SA - Postulated Accidents Impacts / Severe Accidents

Application Section: Part 3- Environmental Report

### **QUESTIONS**

As the staff reviewed the prior RAI response MACCS2 computer code files submitted to the NRC in Enclosure 1 of PPL letter BNP-2012-121 dated May 14, 2012 to the same files submitted to the NRC in Enclosure 2 of PPL Letter, BNP-2013-143, dated October 28, 2013, differences were found in the files, for example between the respective MACCS2 SITE files (i.e., BBsite.inp) population distributions. Identify the input parameters that were revised or updated, the reason for the change, and provide the reference citations that were used as the basis of the revised or updated input parameters as part of the response to this RAI. Describe the changes in the MACCS2 base case that have occurred from the previous submission of site-specific MACCS2 code files submitted as Enclosure 1 of PPL letter BNP-2012-121 dated May 14, 2012 to the current versions submitted as Enclosure 2 of PPL letter BNP-2013-143 dated October 28, 2013.