

## BellBendEnveRAIPEm Resource

---

**From:** Quinn-Willingham, Laura  
**Sent:** Thursday, September 06, 2012 12:04 PM  
**To:** 'Sgarro, Rocco R'  
**Cc:** Hsia, Anthony; Leigh, Kimberly D; Mcdowell, Bruce K; Tim Lynch (tim.lynch@pnnl.gov); Hickey, Eva E; Goldin, Laura; BellBendEnveRAIPEm Resource; Palmrose, Donald  
**Subject:** Bell Bend Final RAIs for Radiological Health (2 of 2)  
**Attachments:** ENV-11 RAI\_6778 RHH (2).pdf

Please find attached RAI Env-11 for the Bell Bend COL application. The ENV-11 RAI is an aggregate of the draft radiological health RAIs (RHH-4, RHH-8, RHH-9, and RHH-10) that were provided to you on August 13, 2012 as part of a complete table of draft RAIs. There was no request for a clarification discussion of these draft RAIs. RHH-4 and RHH-10 were revised to clarify what the staff is requesting as a result of the submittal of BNP-2012-197. No other changes are necessary; hence we are issuing this RAI as final.

The schedule we have established to the review of your application assumes technically correct and complete responses within 30 calendar days of receipt of RAIs. For any RAIs that cannot be responded to within 30 calendar 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 assess how this information might impact the schedule.

Please contact me if you have any questions.

*Laura Quinn-Willingham  
Project Manager  
Environmental Projects Branch 2  
Mailstop T6-C32  
Division of New Reactor Licensing  
Office of New Reactors  
Nuclear Regulatory Commission  
301-415-2220  
[Laura.Quinn-Willingham@nrc.gov](mailto:Laura.Quinn-Willingham@nrc.gov)*



Please consider the environment before printing this email.

**Hearing Identifier:** BellBend\_COL\_Env\_RAI  
**Email Number:** 14

**Mail Envelope Properties** (19D990B45D535548840D1118C451C74D01168280BEA9)

**Subject:** Bell Bend Final RAIs for Radiological Health (2 of 2)  
**Sent Date:** 9/6/2012 12:03:53 PM  
**Received Date:** 9/6/2012 12:04:55 PM  
**From:** Quinn-Willingham, Laura

**Created By:** Laura.Quinn-Willingham@nrc.gov

**Recipients:**

"Hsia, Anthony" <Anthony.Hsia@nrc.gov>  
Tracking Status: None  
"Leigh, Kimberly D" <Kimberly.Leigh@pnnl.gov>  
Tracking Status: None  
"Mcdowell, Bruce K" <Bruce.Mcdowell@pnnl.gov>  
Tracking Status: None  
"Tim Lynch (tim.lynch@pnnl.gov)" <tim.lynch@pnnl.gov>  
Tracking Status: None  
"Hickey, Eva E" <eva.hickey@pnnl.gov>  
Tracking Status: None  
"Goldin, Laura" <Laura.Goldin@nrc.gov>  
Tracking Status: None  
"BellBendEnveRAIPEm Resource" <BellBendEnveRAIPEm.Resource@nrc.gov>  
Tracking Status: None  
"Palmrose, Donald" <Donald.Palmrose@nrc.gov>  
Tracking Status: None  
"Sgarro, Rocco R" <rrsgarro@pplweb.com>  
Tracking Status: None

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

<b>Files</b>	<b>Size</b>	<b>Date &amp; Time</b>
MESSAGE	1368	9/6/2012 12:04:55 PM
ENV-11 RAI_6778 RHH (2).pdf		59632

**Options**

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

## **Request for Additional Information ENV-11**

Issue Date: 9/6/2012

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

Operating Company: PPL Bell Bend LLC.

Docket No. 52-039

Review Section: EIS 5.9 - Radiological Health Impacts of Normal Operations

Application Section: Part 3 - Environmental Report

### QUESTIONS

#### EIS 5.9-2

Provide the assumptions, input and output data, and calculation packages used for the evaluation of the onsite out-of-plant exposure rates based on data from the 2008-2011 SSES Radioactive Effluent Release Reports and Annual Radiological Environmental Operating Reports.

Supplemental Information:

ESRP Section 5.4.1 directs the staff's identification and description of the environmental pathways by which radiation and radioactive effluents can be transmitted from the proposed plant to living organisms.

Dose estimates should be based on more recent SSES effluent data, waste activity, and spent fuel inventories. This will reflect the impact of the 13% SSES power uprate for Units 1 and 2 that began in 2008.

This was Info Need RHH-4 in the draft RAI table.

Acceptance Criteria:

ESRP Section 5.4.1; 10 CFR 20.1301(d), 10 CFR 50 Appendix I

#### EIS 5.9-3

Provide copies of the following calculation packages for review:

1. 51-9083400-002 or latest version: Technical Input to COLA ER Section 5.4 "Radiological Impacts for Normal Operations for BBNPP"
2. 126-9048674-005 or latest version: USEPR Annual Occupational Dose Estimation
3. 126-9070954-002 or latest version: Agricultural Production and Radiological Exposure Pathway Data for BBNPP.

Supplemental Information:

ESRP Section 5.4.3 directs the staff's preparation and presentation of a summary analysis and evaluation of the radiological impacts on individuals due to radioactive effluents released from the plant in the course of normal operation.

These three PPL calculation packages are not currently in the Reading Room. They contain information pertinent to determining compliance with requirements in 10 CFR 50 and 40 CFR 190 related to offsite doses, and for occupational dose estimates per NUREG-1555 ESRP Section 5.4.3.

This was Info Need RHH-8 in the draft RAI table and was a new Info Need from the site audit.

Acceptance Criteria:

ESRP Section 5.4.3; 10 CFR 20.1301 and 10 CFR 50 Appendix I

#### EIS 5.9-4

Incorporate the revisions to Section 5.4.3.1 in the ER per the commitment in BNP-2012-175 for HY-02 (ML12214A590).

Supplemental Information:

ESRP Section 5.4.1 directs the staff's identification and description of the environmental pathways by which radiation and radioactive effluents can be transmitted from the proposed plant to living organisms.

The marked-up version of ER Section 5.4.3.1 in the BNP-2012-175 package states that the "annual average dilution" was used for the population dose calculations and not the summer mean flow dilution as stated in the HY-02B response. The description in the HY-02F response that the land within a half-mile of the river for 50 miles downstream of BBNPP was assumed to be irrigated was not found in the marked-up version of Section 5.4.3.1. The decision was made to make this a new RHH RAI and not keep it as HY-02.

This was Info Need RHH-9 in the draft RAI table and was a new Info Need from the site audit.

Acceptance Criteria:

ESRP Section 5.4.1; 10 CFR 20.1301 and 10 CFR 50 Appendix I

#### EIS 5.9-5

Provide the assumptions, input and output data, and the calculation packages that were used to calculate the revised offsite doses from gaseous and liquid effluents and direct radiation sources shown in Enclosure 2 of the PPL response in BNP-2012-197 dated August 20, 2012 (ML122360478).

Supplemental Information:

ESRP Section 5.4.1 directs the staff's identification and description of the environmental pathways by which radiation and radioactive effluents can be transmitted from the proposed plant to living organisms.

The PPL responses to RAI 101 and 106 in BNP-2012-197 revised ER Sections 2.7, 3.5, and 5.4. This reflects the planned changes to offsite dose receptor locations, atmospheric dispersion factors, radionuclide source term, population projections and possible changes to liquid radiological waste system parameters, but did not provided the assumptions, input and output data, and the calculation packages that were used to calculate the revised offsite doses from gaseous and liquid effluents and direct radiation sources.

This was Info Need RHH-10 from the draft RAI table and was a new Info Need from the site audit.

Acceptance Criteria:

ESRP Section 5.4.1; 10 CFR 20.1301(d) and 10 CFR 50 Appendix I