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Ms. Amy Elliott  
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**BELL BEND NUCLEAR POWER PLANT  
AIR CONFORMITY ANALYSIS FOR EMISSIONS  
RELATED TO ACOE ACTIVITIES  
BNP-2013-067 Docket No. 52-039**

In response to your verbal request, the attached enclosure provides the ACOE-related air conformity analysis construction emissions on an annual basis. The ACOE-related construction activities include the intake and discharge structures (including bank stabilization), seven bridges, and wetlands mitigation/enhancement. The ACOE-related emissions were proportioned to the total of applicable construction land disturbance and then compared to the NO<sub>x</sub> and VOC *de minimis* thresholds of 100 tons per year (tpy) and 50 tpy, respectively, and to the total construction emission values.

Should you have any questions regarding the enclosed please contact me at 610-774-5996 or via e-mail at [gpetrewski@pplweb.com](mailto:gpetrewski@pplweb.com).

Respectfully,

A handwritten signature in black ink that reads 'Gary Petrewski'. The signature is fluid and cursive, written in a professional but personal style.

Gary Petrewski

GP/kw

Enclosure: Air Conformity Analysis Emissions Related to ACOE Activities

cc: w/ Enclosure

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Enclosure

Air Conformity Analysis for Emissions Related to ACOE Activities

## Air Conformity Analysis for Emissions Related to ACOE Activities

### General Background:

Section 110(a) of the Clean Air Act (CAA) (42 U.S.C. §7410(a)) requires each state to adopt and submit to the USEPA a State Implementation Plan (SIP) that provides for the implementation, maintenance, and enforcement of each National Ambient Air Quality Standard (NAAQS). The area of the Bell Bend Project (BBNPP) is within the SIP Scranton-Wilkes-Barre air basin. This basin is currently designated as a maintenance area with respect to the 8-hour NAAQS for ozone (O<sub>3</sub>).

40 CFR §93.153 requires federal agencies to determine the conformity of any planned federal actions to state or federal implementation plans. A conformity determination is required in a SIP maintenance area for each criteria pollutant (a pollutant for which a NAAQS has been established) or precursor where the total direct and indirect emissions of the criteria pollutant or precursor would equal or exceed specified annual emission rates, referred to as "*de minimis*" thresholds. The *de minimis* thresholds for O<sub>3</sub> precursors (nitrous oxides (NO<sub>x</sub>) and volatile organic compounds (VOC's)) are set at 100 and 50 tons per year (tpy) respectively (40 CFR §93.153(b)(2)). The General Conformity regulation requires that a federal project's emissions, when they meet or exceed the *de minimis* threshold, be either entirely offset by the purchase and use of emission reduction credits or by implementing mitigation measures. Alternatively, all of the project's emissions could be incorporated into the State Implementation Plan (SIP).

The DEP has indicated to PPL and the NRC that it will include the project's emissions as part of the Scranton-Wilkes-Barre Maintenance Plan SIP revision that is scheduled to be submitted to EPA the summer of 2013.

A general air conformity analysis (General Air Conformity Analysis NO<sub>x</sub> and VOC Emissions from Construction Activities, Bell Bend Nuclear Power Plant, Revision 2, February 2012) was previously prepared for BBNPP by PPL Bell Bend, LLC (PPL) and filed with the Pennsylvania Department of Environmental Protection (PADEP), the Nuclear Regulatory Commission (NRC) and Army Corps of Engineers (ACOE). As summarized in this analysis BBNPP total annual emissions have been determined to exceed the *de minimis* threshold for NO<sub>x</sub> in construction years 1 through 4.

The ACOE subsequently requested additional information specific to air emissions associated with the portion of the proposed Project that is associated with PPL's application for a Clean Water Act (CWA) Section 404 permit for planned project discharges of fill material into waters of the U.S. This analysis responds to this ACOE request.

### ACOE Analysis:

BBNPP proposes to construct and/or install the following ACOE Section 404 regulated activities:

- Bridges and road crossing culverts;

- Bank stabilization along the Susquehanna River and Walker Run and its unnamed tributaries;
- Wetland mitigation and enhancement projects; and
- Intake and Discharge structures.

The methodology to determine ACOE-related emissions used the NO<sub>x</sub> and VOC emissions from the aforementioned general air conformity analysis and proportioned the emissions based on the area disturbed or the area of the structure of the ACOE Section 404 regulated activities. Proportioning by area disturbed or the area of the structure provides a conservative estimate of the ACOE Section 404 related activities emissions, as it neglects the reduced fuel consumption and reduced duration of these activities. This assumption therefore yields upper limit values for the annual emissions associated with the ACOE Section 404 related activities.

The calculated annual ACOE-related construction emissions based on the projected 7-year construction schedule are:

| NO <sub>x</sub> Emissions (tpy) |      |      |      |      |      |      |
|---------------------------------|------|------|------|------|------|------|
| 1                               | 2    | 3    | 4    | 5    | 6    | 7    |
| 3.36                            | 9.55 | 8.72 | 8.40 | 5.19 | 1.24 | 0.25 |

| VOC Emissions (tpy) |      |      |      |      |      |      |
|---------------------|------|------|------|------|------|------|
| 1                   | 2    | 3    | 4    | 5    | 6    | 7    |
| 0.30                | 0.74 | 0.67 | 0.68 | 0.45 | 0.16 | 0.04 |

tpy = tons per year

The ACOE-related emissions on an annual basis are relatively small when compared to the overall emissions for the construction of the BBNPP Project. The emissions for the ACOE-related activities peak in years 2 and 3 due to the wetlands mitigation/enhancement activities and bridge construction.

The largest calculated annual NO<sub>x</sub> emission is 9.55 tpy in year 2 which represents about 10% of the *de minimis* threshold of 100 tpy, and only about 6% of the overall construction emissions value of 162.6 tpy. The largest annual VOC emission is 0.74 tpy in year 2 which represents less than 2 percent of the *de minimis* threshold of 50 tpy and only about 5% of the overall construction emissions value of 13.8 tpy.

### Conclusion

The ACOE-related construction emissions represent only a small percentage of total expected construction emissions and on an individual basis fall far below the *de minimus* threshold levels for NO<sub>x</sub> and VOC.