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August 8, 2014

ATTN: Document Control Desk
U.S. Nuclear Regulatory Commission
Washington, D.C. 20555-0001

**BELL BEND NUCLEAR POWER PLANT
ENVIRONMENTAL REPORT
SUPPLEMENTAL INFORMATION
BNP-2014-100 Docket No. 52-039**

Reference: 1) BNP-2014-070, R. R. Sgarro (PPL Bell Bend, LLC) to U.S. NRC, "Response to NRC Questions on BBNPP Schedule Milestones and Self-Scheduling" dated May 2, 2014

The purpose of this letter is to clarify several sections of the Bell Bend Nuclear Power Plant (BBNPP) Combined License Application (COLA) Environmental Report (ER), and to provide preconstruction workforce information.

ER Section 1.1, "Proposed Action" is being clarified to include the power output and timing associated with the proposed action.

ER Section 1.2.7, "Major Activity Start and Completion Dates" is being clarified to reflect the in-series preconstruction and construction durations of 24 and 68 months respectively; it supersedes the revisions to this section provided in the Reference..

ER Sections 4.4.2.2.1, "Labor Force Availability and Potential Composition" and 4.4.3.1.1, "50 Mile (80 km) Comparative Geographic Area" have been updated to reflect more recent schedule information consistent with the Reference.

Markups of the above changes are provided in the Enclosure. Inclusion of this revised ER content in a future revision of the COLA is the only regulatory commitment in this correspondence.

Additionally, with respect to the workforce during preconstruction, an average workforce of approximately 200 workers is anticipated during the 24 month period, with a peak workforce of approximately 300 workers occurring in the second year of activity.

D102
NRO

Should you have questions, please contact the undersigned at 610.774.7552.

I declare under penalty of perjury that the foregoing is true and correct.

Executed on August 8, 2014.

Respectfully,

A handwritten signature in black ink, appearing to read "Rocco R. Sgarro". The signature is fluid and cursive, with the first name "Rocco" and last name "Sgarro" clearly distinguishable.

Rocco R. Sgarro

RRS/kw

Enclosure: Updated Environmental Report Sections

cc: w/ Enclosure

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w/o Enclosure

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Enclosure

Updated Environmental Report Sections

1.1

PROPOSED ACTION

PPL Bell Bend, LLC propose to build a new nuclear power plant to be designated as BBNPP located west of the existing Susquehanna Steam Electric Station site. Federal action resulting in the issuance of a combined license (COL) by the Nuclear Regulatory Commission under 10 CFR 52, Early Site Permits; Standard Design Certification; and Combined Licenses for Nuclear Power Plants (CFR, 2007b) is anticipated. The purpose of the proposed new nuclear power plant is to generate electricity (baseload power) for sale.

approximately 1600
MWe of

beginning in November 2025,
which is the Commercial
Operation Date (COD) for the
facility.

Numerous other permits and approvals are required from various Federal, State and local agencies as discussed in Section 1.3. These actions will require public meetings and hearings, as required, to obtain the necessary approvals to proceed with construction and operation of the new unit. Constraints may be placed on the proposed action (e.g., limiting groundwater appropriation on site) as the various agency reviews and approvals are processed and issued.

Environmental issues are evaluated using a three-tier standard of significance - SMALL, MODERATE, or LARGE. The definitions of the three significance levels are defined in Footnote 3 of Table B-1 of 10 CFR 51 (CFR, 2007c) as follows:

SMALL: Environmental effects are not detectable or are so minor that they will neither destabilize nor noticeably alter any important attribute of the resource.

MODERATE: Environmental effects are sufficient to alter noticeably, but not to destabilize, important attributes of the resource.

LARGE: Environmental effects are clearly noticeable and are sufficient to destabilize important attributes of the resource.

1.2.7 Major Activity Start and Completion Dates

The following major activities are scheduled:

- | | | |
|---|--------------------------|--|
| 1. Submit Design Certification Application for the U.S. EPR | December 2007 | |
| 2. Submit Reference Plant (CCNPP Unit 3) COLA | March 2008 | |
| 3. Submit COL Application for BBNPP | October 2008 | |
| 4. Start of Construction* | November 2017 | |
| 5. Construction Completed | June 2022 | |
| 6. Commercial Operation | June 2023 | |
| * First safety-related concrete. | | |

- | | |
|----------------------------------|---------------|
| 4. Start of Preconstruction | March 2017 |
| 5. Start of Construction | April 2019 |
| 6. First Safety-Related Concrete | May 2019 |
| 7. Construction Completed | November 2024 |
| 8. Commercial Operation Date | November 2025 |

model, based upon the construction industry in the ROI, generated a multiplier of 1.3866 indirect jobs created for each direct job. This multiplier was then applied to the estimated peak number of new direct FTE workers to estimate the peak number of indirect jobs that will be created in the ROI.

This analysis evaluates two potential in-migration impact scenarios for the construction workforce: an assumed 20% of the peak construction workforce moving into the ROI with their families for the duration of construction; and a second scenario with 35% moving into the ROI. These scenarios were selected because they are representative of the range of in-migration levels that the NRC found in studies they conducted in 1981 of nuclear power plant construction workforces. The NRC (NRC, 1981) conducted a study of 28 surveys of construction workforce characteristics for 13 nuclear power plants. They found that 17% to 34% of the total construction workforces at most of these nuclear power plants (the 75th percentile) had moved their families into the study areas for each power plant.

They then conducted a more detailed analysis of in-migrants and found that the most common in-migration levels (again for the 75th percentile) for the construction/labor portion of the workforce ranged from 11% to 29%. Additionally, an analysis of the craft labor portion of the workforce showed that pipefitters, electricians, iron workers, boilermakers, and operating engineers were the most likely non-managerial staff to in-migrate into an area, and general laborers, carpenters, and other types of construction workers were the least likely to in-migrate (NRC, 1981).

For managerial and clerical staff the in-migration levels ranged from 40% to 58%. Of the managerial staff alone (i.e., excluding clerical staff), most sites had in-migration rates of 58% to 76% (NRC, 1981).

The potential demographic, housing, and public services and facilities impacts are only discussed for the two-county region of influence, because those impacts are an integral part of, and derive from the impacts of, the in-migrating construction workforce. Impacts to employment and tax revenues are discussed for the 50 mi (80 km) comparative geographic area and the ROI, because of the construction labor pool that would be drawn from, and the collection and distribution of income and sales tax revenues throughout, the state.

4.4.2.2 Construction Labor Force Needs, Composition and Estimates

4.4.2.2.1 Labor Force Availability and Potential Composition

2019 to 2024

There would be an estimated maximum 3,950-FTE person workforce constructing the BBNPP power plant from 2012 to 2018, representing a significant increase in the overall employment opportunities for construction workers. In comparison, Luzerne County had 8,164 construction jobs in 2006 and Columbia County had 2,134 construction jobs (USCB, 2006a). As shown in Table 4.4-3, this peak is estimated to last for about 12 months, from about the third quarter of the fourth year of construction through about the second quarter of the fifth year. Over the course of the entire construction period, staffing needs are estimated to increase relatively steadily from the third quarter of the first year until the peak is reached. Once the peak has passed, the staff levels again would drop steadily until the last 5 months of construction, when employment levels would drop significantly.

Relatively recent studies have shown that the availability of qualified workers to construct the power plant might be an issue, particularly if several nuclear power plants are built concurrently nationwide. Competition for this labor could increase the size of the geographic area, beyond the middle eastern seaboard, from which the direct construction labor force

plant from area residents, in general, is great enough so that these populations would only be affected minimally by construction of the power plant (i.e., noise, air quality, and other disturbances from the footprint of the facility)

4.4.3.1.1 50 Mile (80 km) Comparative Geographic Area

Employment and Income

2019 to 2024

There would be an estimated maximum 3,950 person workforce constructing the BBNPP power plant from 2012 to 2018, representing a minor increase in the overall employment opportunities for construction workers in: the 50 mi (80 km) comparative geographic area, in which there are a total of 79,804 construction workers in the 22 county area in 2000 (USCB, 2000a); and the state, where a total of 339,363 construction workers were employed in 2000 (USCB, 2000a). Unemployed or underemployed members of minority and low income groups could benefit from increased employment opportunities, to the extent that they have the craft skills required (e.g., laborers, carpenters, electricians, plumbers, welders), are hired as part of the construction workforce, and have adequate transportation to access the construction site.

The greatest concentrations of minority populations within the comparative geographic area, but outside of the ROI, primarily reside toward the edges of the 50 mi (80 km) radius in: Lehigh County (located southeast of the BBNPP site with 54 aggregate minority census blocks); Lycoming County (located west-northwest of the BBNPP site with 8 aggregate groups); and Monroe County (located east of the BBNPP site with 6 aggregate groups). Similarly, the greatest concentrations of low income populations are located in: Lehigh County (13 census block groups); Lycoming County (9 census block groups); Monroe County (9 census block groups); Lackawanna County (located toward the edge of the 50 mi (80 km) radius northeast of the BBNPP site with 6 census block groups); and Northumberland County (located southwest of the BBNPP site with 5 census block groups) (Section 2.5.4). Given that the peak construction workforce would represent only about 4.9% of the construction workforce in the 50 mi (80 km) radius in 2000, and 1.2% of the construction workforce in the Commonwealth of Pennsylvania, the beneficial impacts of these potential new employment opportunities likely would be SMALL.

In addition, because of the demand for such skills, low income and minority construction workers from the comparative geographic area that are currently employed could realize increased income levels, to the extent that they leave lower paying jobs to work on the BBNPP. As discussed in Section 2.5.2 and Section 4.4.2, the BBNPP construction workforce average annual salary would be about \$70,720, compared to the mean earnings of \$64,352 in the Commonwealth of Pennsylvania in 2006 (USCB, 2006c). The beneficial impacts of these increased income levels for low income and minority populations likely would be SMALL.

There are no unique minority or low income populations within the comparative geographic area that would likely be disproportionately adversely impacted by the construction of the proposed power plant because they are located more than 20 mi (32 km, or outside of the ROI) from the BBNPP site where no environmental impacts (e.g., noise, air quality, water quality, changes in habitat, aesthetic, etc.) would likely occur.

4.4.3.1.2 Two-County Region of Influence

Employment and Income

Unemployed or underemployed members of minority and low income groups within the ROI also could benefit from increased employment opportunities, to the extent that they have the craft skills required (e.g., laborers, carpenters, electricians, plumbers, welders) and are hired as