

Rocco R. Sgarro • Vice President–Nuclear Project Development
835 Hamilton St., Suite 150 • Allentown, PA 18101
(610) 774-7552 • rocco.sgarro@talenenergy.com

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

**BELL BEND NUCLEAR POWER PLANT
CORRECTIONS TO BBNPP ENVIRONMENTAL
REPORT
BNP-2015-031 Docket No. 52-039**

Reference: 1) Jennifer L. Dixon-Herrity (NRC) to R. R. Sgarro (PPL Bell Bend, LLC), "Bell Bend COLA – Notice of Availability of the Draft Environmental Impact Statement for the Combined License Application for Bell Bend Nuclear Power Plant," dated April 16, 2015.

Reference 1 gave notice of the availability of the Draft Environmental Impact Statement (DEIS) for the Combined License Application (COLA) for the Bell Bend Nuclear Power Plant (BBNPP). In Talen Energy's subsequent review of this document we noted that the NRC had identified two minor errors in the BBNPP Environmental Report (ER) that they corrected in the DEIS. Other minor errors were also identified during this review. The purpose of this letter is to document the correction of the BBNPP ER. The Enclosure provides a markup of the changes.

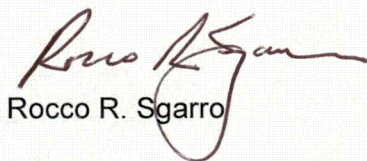
This revised COLA content will be included in a future COLA revision, and is the only regulatory commitment in this correspondence.

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 June 18, 2015.

Respectfully,



Rocco R. Sgarro

RRS/kw

Enclosure: Corrections to BBNPP Environmental Report

D102
NRD

cc: w/ Enclosure

Ms. Patricia Vokoun, Project Manager
Environmental Projects Branch
Division of New Reactors Licensing
Office of New Reactors
U.S. Nuclear Regulatory Commission
Mail Stop: T-6 C32
Washington, DC 20555

Ms. Tomeka Terry, Project Manager
Environmental Projects Branch
Division of New Reactor Licensing
Office of New Reactors
U.S. Nuclear Regulatory Commission
Mail Stop: T-6 C32
Washington, DC 20555

w/o Enclosure

Mr. Daniel Dorman
Regional Administrator
U.S. Nuclear Regulatory Commission
Region I
2100 Renaissance Blvd., Suite 100
King of Prussia, PA 19406-2713

Enclosure

Corrections to BBNPP Environmental Report

construction workers (with the exception of certain specialty contractors loading fuel or using industrial radiation sources for radiography) do not deal with radiation sources.

There are three regulations that govern dose rates to members of the general public. Dose rate limits to the public are provided in 10 CFR 20.1301 (CFR, 2007a) and 10 CFR 20.1302 (CFR, 2007b) and 10 CFR 50, Appendix I (CFR, 2007c). Compliance with 10 CFR 20.1302 is discussed in Section 4.5.7. The design objectives of 10 CFR 50, Appendix I apply relative to maintaining dose as low as reasonably achievable (ALARA) for construction workers. Also, 40 CFR 190 (CFR, 2007d) applies because it is referred to in 10 CFR 20.1301. Note that 10 CFR 20.1001, 20.1201, 20.1203, 20.1204 and 20.1205 do not apply to the general public, but only to radiation workers. Thus, they will not be considered here.

4.5.5.1 10 CFR 20.1301

The 10 CFR 20.1301 regulations limit annual doses from licensed operations to individual members of the public to 100 mrem (1 mSv) total effective dose equivalent (TEDE). In addition, the dose rate from external sources to unrestricted areas must be less than 2 mrem (20 μ Sv) in any one hour. This applies to the public both outside and within controlled areas. Given that the relevant sources are relatively constant in time, the hourly limit is met if the annual limit is met.

Dose rates in each 99 ft (30 m) by 97 ft (30 m) block of the plant grid are calculated and the array of dose rates searched for the maximum in the construction zones. The maximum dose rates by zone are given in Table 4.5-13. For an occupational year, i.e., 2200 hours on site, the maximum dose would be on Confers Lane west of SSES Unit 1 Cooling Tower where the dose is 16.2 mrem (162 μ Sv). This assumes the worker stood on Confers Lane for all working hours in one year. This is less than 100 mrem (1 mSv), thus, it meets the criterion and therefore construction workers can be considered to be members of the general public, for the purpose of radiation protection.

4.5.5.2 10 CFR 50, Appendix I

The 10 CFR 50, Appendix I criteria (CFR, 2007c) apply only to effluents. The purpose of the criteria are to assure adequate design of effluent controls (in this case at SSES Units 1 and 2). The annual limits for liquid effluents are 3 mrem (30 μ Sv) to the total body and 10 mrem (100 μ Sv) to any organ. Table 4.5-14 shows that these criteria are met for liquid effluents with regard to BBNPP construction workers.

For gaseous effluents, the pertinent limits are 10 mrad (100 μ Gy) to air gamma and 20 mrad (200 μ Gy) to air beta without credit for occupancy. If the air dose limits are not met then the limits become doses to real people (with occupancy credit allowed) of 5 mrem (50 μ Sv) to the total body and 15 mrem (150 μ Sv) to organs including skin.

Table 4.5-14 shows the TEDE dose limit for whole body assuming full-time occupancy. There is no dose rate to a construction worker that exceeds the limits. Therefore, the criteria have been met. Note that BBNPP occupational zones, during construction, are treated, for purposes of these criteria, as unrestricted areas.

4.5.5.3 40 CFR 190

The 40 CFR 190 (CFR, 2007d) criteria apply to annual doses, called dose rate here because the units are in mrem per year, received by members of the general public exposed to nuclear fuel cycle operations, i.e., nuclear power plants. Therefore, these regulations apply to BBNPP construction workers on the plant site just as they apply to members of the general public

Table 5.4-20— Gaseous Pathway Doses for Maximally Exposed Individuals (MEI)⁽¹⁾

Location	Pathway	Total Body (mrem/yr)	Max. Organ (mrem/yr)	Skin (mrem/yr)
Nearest ⁽¹⁾ OCA ⁽²⁾ Boundary 0.16 mi, WSW	Plume	1.26E+00	1.26E+00 1.31	3.93E+00
Nearest ⁽¹⁾ Residence 0.79 mi, NNE	Ground	5.28E-04	5.28E-04	5.28E-04
Nearest ⁽¹⁾ Residence 0.79 mi NNE	Inhalation			
	Adult	5.83E-03	1.06E-04	5.81E-03
	Teen	5.88E-03	1.29E-04	5.86E-03
	Child	5.20E-03	1.58E-04	5.18E-03
Nearest ⁽¹⁾ Garden 0.25 mi SSW	Infant	2.99E-03	8.25E-05	
	Vegetable			
	Adult	1.64E-01	7.67E-01	1.35E-02
	Teen	2.66E-01	1.27E+00	1.57E-02
	Child	6.32E-01	3.08E+00	1.70E-02
Nearest ⁽¹⁾ Milk Animal 0.74 mi SSW	Infant	0.00E+00	0.00E+00	0.00E+00
	Cow Milk			1.38E-02
	Adult	1.69E-02	7.86E-02	
	Teen	3.04E-02	1.45E-01	
	Child	7.35E-02	3.56E-01	
Nearest ⁽³⁾ Meat Animal 0.33 mi WSW	Infant	1.52E-01	6.97E-01	
	Meat			
	Adult	7.30E-02	3.53E-01	7.29E-02
	Teen	6.11E-02	2.99E-01	6.11E-02
	Child	1.14E-01	5.61E-01	1.14E-01
	Infant	0.00E+00	0.00E+00	0.00E+00

Note:

- For a given dose pathway (i.e., plume, ground, inhalation, vegetable, milk, or meat), "nearest" refers to the fact that the location in this table was determined to be the maximum dose location for all of the "nearest" receptor locations (i.e., the nearest OCA boundary, residence, garden, milk animal, or meat animal within each of the 16 meteorological sectors) for that pathway.
- "OCA" is the acronym for "Owner Controlled Area."
- Nearest meat animal assumed to be at limiting site boundary location since actual location of animals within 5 miles is not available (SSES, 2010).