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June 28, 2012

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

# BELL BEND NUCLEAR POWER PLANTENVIRONMENTAL AUDIT NEED FORINFORMATION RESPONSES:FIFTH SUBMITTALBNP-2012-159Docket No. 52-039

The purpose of this letter is to formally document PPL Bell Bend, LLC's (PPL) responses to NRC Need for Information (NFI) requests that were discussed with the NRC at the Bell Bend Supplemental Environmental Audit held the week of May 14, 2012. Additional letters providing the remainder of NFI responses requested by NRC at the audit will be provided in coming weeks.

Responses to the following NFIs are included in this letter as Enclosure 1:

| • | ACC-12  | • | GEN-01  | • | GEN-02 | ٠ | NFP-02 | • | NFP-03 |
|---|---------|---|---------|---|--------|---|--------|---|--------|
| • | S/EJ-13 | • | S/EJ-14 | • | STO-02 |   |        |   |        |

Additional supporting enclosures are as follows:

 Enclosure 2 – GEN-01 and GEN-02 – Select Graphic Files from BBNPP Rev. 3 COLA ER in .PNG and GIS Shapefile Formats

As discussed at the audit, the information presented in STO-02 requires an update to language in the Bell Bend Nuclear Power Plant (BBNPP) Combined License Application (COLA) Part 3, "Environmental Report," Rev. 3 to be consistent with information provided in the Enclosure 1 response to STO-02. The revised COLA content will be included in a future revision of the BBNPP COLA. The future revision of the COLA is the only new regulatory commitment in this letter.

Should you have questions or need additional information, please contact the undersigned at 610.774.7552.

DID'L

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

Executed on June 28, 2012.

Respectfully,

Rocco R. Sgarro

RRS/kw

Enclosures: 1) Need For Information Responses

2) GEN-01 and GEN-02 – Select Graphic Files from BBNPP Rev. 3 COLA ER in .PNG and GIS Shapefile Format provided on DVD

#### cc: (w/ Enclosures)

Ms. Laura Quinn-Willingham Project Manager U.S. Nuclear Regulatory Commission 11545 Rockville Pike Mailstop: T-6 C32 Rockville, MD 20852

(w/o Enclosures)

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#### Enclosure 1

#### Need for Information Responses

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#### ACCIDENTS (ACC)

ACC-12: Describe sources and genesis of BB EPR rad source terms, population distribution, land use data, surface water data, and economic costs that were used in the Severe Accident analysis. Include a cross reference to other sections in the ER and DCD.

**Audit Disposition:** Upon review of the ACC-12 response at the audit, and after subsequent discussions, the NRC requested that PPL make available hard copies of the calculation packages placed in the electronic reading room for further review by NRC/PNNL.

**Response:** To accommodate the NRC's request for additional review of the ACC-12 calculation packages, PPL has coordinated the placement of hard copies of these files in locations in Washington state and Maryland where NRC/PNNL may visit to review them. PPL is working with NRC to coordinate review dates and times convenient for NRC/PNNL technical staff.

GENERAL (GEN)

GEN-01: Provide publication quality ER figures in .png or .tif format at a resolution of at least 300 ppi, sized for 8.5"x11" page, figures for wind roses in ER 2.7 not required to be included.

GEN-02: Provide publication quality ER figures in .dng or .gif format at a resolution of at least 300 dpi, and sized for 8.5"x11" page, figures for wind roses in ER 2.7 are not required to be included. (Provide figures which have changed since ER rev. 0).

**Audit Disposition:** Based on discussion at the audit, PPL has prepared and is providing a group of files supporting NRC's DEIS production. All native graphic files have been revised to remove all color and make linetypes stand out in black or greyscale, and to remove title blocks and logos.

**Response:** Enclosure 2 to this letter provides graphic (.png) and GIS figure native files for NRC use on CD. The following list of files represents the graphics and GIS files provided on the Enclosure 2 CDs.

#### Graphic and GIS Files Provided as GEN-1 and GEN-2 Response

| ER Figure | Figure Name   |
|-----------|---|
| 2.1-1     | BBNP Site and Proposed New Plant Layout                                     |
| 2.2-1     | Land Use on Site  |
| 2.2-4     | BBNPP Site Zoning   |
| 2.2-5     | Regional T-lines  |
| 2.2-6     | Land Use in 50-Mi Region  |
| 2.3-3     | Walker Run Watershed  |
| 2.3-4     | Site Utilization Layout   |
| 2.3-11    | Susquehanna River Bathymetry  |
| 2.3-21    | Surficial Deposits at BBNPP Site and Vicinity                               |
| 2.3-22    | Legend of Surficial Deposits  |
| 2.3-32    | Surface Water Monitoring Stations   |
| 2.3-33    | Locations of Hydro Cross-Sections   |
| 2.3-34    | Hydrogeological Cross Section A-A'  |
| 2.3-35    | Hydrogeological Cross Section B-B'  |
| 2.3-36    | Thickness Map of the Glacial Overburden Aquifer                             |
| 2.3-37    | Topography of Bedrock Surface   |
| 2.3-47    | Groundwater Elevation vs. Time, Well Cluster MW 306                         |
| 2.4-2     | Plant Community Map   |
| 2.4-3     | Location of Aquatic Biota Collection Stations                               |
| 2.4-7     | Important Terrestrial Habitats in the Vicinity of BBNPP                     |
| 3.1-1     | Site Layout including Drainage, Wetlands & Watercourses, Bridges + Culverts |
| 3.1-2     | Aerial View of SSES with BBNPP Superimposed                                 |
| 3.1-6     | Ground Level View Looking North West with BBNPP Superimposed                |
| 3.1-7     | Architectural Rendering of BBNPP Looking Northeast                          |
| 3.3-1     | Water Use Diagram   |
| 3.4-3     | Cooling Water System Intake/Discharge Structure Location Plan               |
| 3.4-4     | Plan View of Intake   |
| 3.4-5     | Section View of Intake  |
| 3.4-6     | View of Discharge Outfall   |
| 3.4-11    | BBNPP Intake Structure Construction Cofferdam                               |
| 3.4-12    | End of Blowdown Line  |
| 4.1-1     | BBNPP Site Zoning and Grading Layout  |
| 4.1-3     | Construction Impacts to Floodplains within the BBNPP Project Area           |
| 4.2-1     | Permanent Grading Impact and Impervious Areas                               |
| 4.3-1     | Project Boundary and Limit of Disturbance                                   |
| 4.3-2     | Vegetation Impacts  |
| 4.3-3     | Wetland Impacts   |
| 4.4-1     | BBNPP Traffic Impact Assessment Study Area                                  |
| 6.1-1     | SSES and BBNPP Discharge and Temperature Monitoring Stations                |

- 8.0-1 Primary Market Area Region of Interest
- 9.3-1 Region of Interest
- 9.3-2 Candidate Area Exclusionary Criteria
- Graphic and GIS Files Provided as GEN-1 and GEN-2 Response, Pg. 2
- ER Figure Figure Name
- 9.3-4 Candidate Sites
- 9.3-5 BBNPP Location Map
- 9.3-6 Montour Site Location Map
- 9.3-7 Humboldt Industrial Park Location Map
- 9.3-8 Seedco Industrial Park Location Map
- 9.3-9 Alternative Site Evaluation Process Overview
- 9.3-10 Candidate Area Exclusionary Criteria Population
- 9.3-11 Candidate Area Exclusionary Criteria Transmission
- 9.3-12 Candidate Area Exclusionary Criteria Dedicated Lands
- 9.3-13 Candidate Area Exclusionary Criteria Waterway
- 9.3-14 Locations of Sites within Candidate Areas
- 9.3-15 Alternative Sites and Proposed Site
- 9.3-16 BBNPP Vicinity Map
- 9.3-17 Montour Site Vicinity Map
- 9.3-22 Humboldt Industrial Park Vicinity Map
- 9.3-29 Seedco Industrial Park Vicinity Map
- 9.3-35 Past, Present and Reasonably Foreseeable Projects and Other Actions...
- 9.3-36 Martins Creek Site Location Map
- 9.3-37 Martins Creek Site Vicinity Map
- ASER Figure Figure Name
- 2-1 Alternative Site Evaluation Process
- 2-2 Alternative Site Evaluation Process Overview
- 3-1 Region of Interest
- 4-1 Exclusionary Criterion Population Center
- 4-2 Exclusionary Criterion Transmission Line Exclusion Area
- 4-3 Exclusionary Criterion Waterway Exclusion Area
- 4-4 Exclusionary Criterion Dedicated Land
- 4-5 Candidate Area Exclusionary Criteria Composite
- 4-6 Candidate Areas
- 4-7 Sites in Candidate Areas
- 5-1 Candidate Sites
- 6-1 Alternative Sites
- JPA App F Attachment A, pages F-13 through F-17

#### FSAR Figure Figure Name

2.4-5 Site Utilization Plan

#### **NEED FOR POWER (NFP)**

NFP-02: Provide quantitative discussions of the PPL assessment of the expected affects of forthcoming EPA rules covering power plant emissions as suggested in the NERC moderate case and in the NERC strict case assessments reported in "Potential Impacts of Future Environmental Regulations: Extracted from the 2011 Long-Term Reliability Assessment" (November, 2011).

#### Audit Disposition:

During the Need for Power breakout session at the Environmental Audit, the NRC raised the question captured by NFP-02 above, and the following response provides PPL's reply to this question.

#### **Response:**

The Environmental Protection Agency (EPA) rules covering power plant air emissions include

the Mercury and Air Toxics Standards for Utilities (Utility Air Toxics Rule) and Cross-State Air

Pollution Rule (CSAPR). Both of these rules are final and were published on February 16, 2012 (77 Federal Register [FR] 9304) and August 8, 2011 (76 FR 48208), respectively, and are applicable to all hazardous air pollutants emitted by coal- and oil-fired electric generating units with a capacity of 25 megawatts (MW) or greater. Emissions standards set under the Utilities Air Toxics Rule are federal air pollution limits that individual facilities must meet by a set date, for example, existing facilities have up to four years to comply with the standards. (EPA, 2012a). EPA also proposed requirements for cooling water intake structures for existing power generating facilities under Section 316(b) of the Clean Water Act (the 316(b) Rule) on April 20, 2011 and for coal ash (the Coal Combustion Residuals Rule) on June 21, 2010 (EPA, 2012b) and 2012c). The cost of compliance with these four regulations, which are expected to go effect over the next 10 years, plus other pending carbon dioxide regulations may result in early retirement of some fossil fuel-fired power plants (North American Electric Reliability Corporation [NERC], 2011a). Additional information regarding facilities scheduled for retirement within the ROI was presented in the response to NFI ALT-1.

The NERC performed analyses of the proposed rules using Moderate and Strict Case scenarios and prepared a report, "Potential Impacts of Future Environmental Regulations: Extracted from the 2011 Long-Term Reliability Assessment," to present the potential impacts of these rules on their industry through 2018. The overall conclusion is that retirements and derating commitments would decrease the amount of available capacity through this period. According to this analysis, a total of 38 gigawatts (GW) of incremental capacity in coal (approximately 60

percent of the total) and oil/gas-fired (approximately 40 percent of the total) generation was

identified for either retirement or for capacity reductions to support additional station loads

(deratings) by 2018 in the Moderate Case scenario. In the Strict Case scenario, capacity reductions amount to approximately 59 GW for coal and oil/gas plants in 2018. Of most importance, however, are the retirements that may occur, as well as the retrofits needed to be implemented by 2015, to meet compliance deadlines in the Utility Air Toxics Rule. Retirements or derates are not expected in 2013 under the Moderate Case but for the Strict Case, CSAPR is estimated to impact about 3.5 GW through retirements or derates. In 2015, the Utility Air Toxics Rule alone would impact about 9 GW in the Moderate Case scenario and could increase to about 12 GW in the Strict Case scenario. (NERC, 2011a)

Additionally, the NERC studied the effects on planning reserve margins from both unit retirements (assuming retired capacity is not replaced) and retrofits, which cause capacity reductions due to increased station loads to support emission controls. If no action is taken to replace existing resources, it is estimated that PJM Interconnection's (PJM's) planning reserve margin will fall below the NERC Reference Margin Level in 2018. (NERC, 2011a) As stated in the response to NFI NFP-1 (BNP-2012-131, dated May 31, 2012), PJM would need additional resources of 1,300 MW as early as 2017 to satisfy reserve margins (NERC, 2011b). The BBNPP would enable PJM to sustain the reserve margins for several years, although projected reserve margin deficits would exceed the additional capacity provided by the BBNPP before 2021. This is consistent with PPL's assessment of the need for power as provided in the ER Chapter 8, supplemented by the response to NFI NFP-1.

Data Sources:

**EPA, 2012a.** Mercury and Air Toxics Standards (MATS), Basic Information, Website: <u>http://www.epa.gov/mats/basic.html</u>, date accessed: June 19, 2012.

**EPA, 2012b.** Cooling Water Intake Structures—CWA §316(b), Website: <u>http://water.epa.gov/lawsregs/lawsguidance/cwa/316b/index.cfm</u>; date accessed: June 20, 2012.

**EPA**, 2012c. Wastes – Non-Hazardous Waste – Industrial Waste, Coal Combustion Residuals – Proposed Rule, Website: <u>http://www.epa.gov/osw/nonhaz/industrial/special/fossil/ccr-rule/index.htm</u>, date accessed: June 20, 2012.

**Federal Register, 2012.** "National Emission Standards for Hazardous Air Pollutants From Coaland Oil-Fired Electric Utility Steam Generating Units and Standards of Performance for Fossil-Fuel-Fired Electric Utility, Industrial-Commercial- Institutional, and Small Industrial-Commercial-Institutional Steam Generating Units," Environmental Protection Agency, Final Rule, Federal Register 77:32 (February 16, 2012), p. 9304.

**Federal Register, 2011.** "Federal Implementation Plans: Interstate Transport of Fine Particulate Matter and Ozone and Correction of SIP Approvals," Environmental Protection Agency, Final Rule, Federal Register 76:152 (August 8, 2011), p. 48208.

**NERC, 2011a.** "Potential Impacts of Future Environmental Regulations: Extracted from the 2011 Long-Term Reliability Assessment", November.

NERC, 2011b. 2011 Long-Term Reliability Assessment, November.

NFP-3: Provide discussion of the role of reasonably expected future incremental improvements in residential and commercial building codes and appliance standards in PPL's demand forecast. Discuss expected demand impacts from these and the balance of efficiency measures in the context of their affect on total system demand.

#### **Disposition:**

During the Need for Power breakout session at the Environmental Audit, the NRC raised the question captured by NFP-03 above, and the following response provides PPL's reply to this question.

#### **Response:**

Programs to incentivize use of more energy efficient residential and commercial buildings and components, including appliances, to reduce consumer electricity demand are integral to PPL Electric Utilities Corporation's (PPL EU's) Demand Side Management (DSM) Program, as well as their Energy Efficiency and Conservation (EE&C) Plan submitted to the Pennsylvania Public Utility Commission (PPUC) in 2009 to comply with Section 2806.1 (b)(1)(i) of Act 129 of 2008 (Act 129). PPL EU's EE&C Plan was approved by the PPUC in February 2010. (PPL EU, 2012)

Act 129 expanded the PPUC's oversight responsibilities and imposed new requirements on electric distribution companies (EDC) with the overall goal of reducing energy consumption and demand. Act 129 also required the Commonwealth's electric utilities with more than 100,000 customers to reduce electricity consumption by its residential customers by a minimum of 1 percent for the period June 1, 2010 through May 31, 2011; a minimum of 3 percent for the period June 1, 2011 through May 31, 2013; and by May 31, 2013, reduce peak demand for electricity by a minimum of 4.5 percent of the EDC's annual peak demand in the 100 hours of highest demand (PPL EU, 2012; PPUC, 2012).

PPL EU's EE&C Plan includes measures and programs to achieve PPL EU's approved electricity consumption and peak load reduction targets of a 3 percent energy savings by 2013 equal to 1,146,000 megawatt-hours (MWh) and a 4.5 percent peak load reduction by 2013 equal to 297 megawatts (MW). PPL EU's plan describes an extensive portfolio of energyefficiency, conservation, and peak load reduction measures, programs, and education consisting of the following programs, all of which are voluntary for customers:

- Efficient Equipment Incentive Program
- Residential Energy Assessment & Weatherization
- Residential Lighting Program (formerly called Compact Fluorescent Lighting Campaign)
- Appliance Recycling Program
- ENERGY STAR® New Homes Program
- Renewable Energy Program
- Direct Load Control Program
- Time of Use Rates
- Energy-efficiency Behavior & Education
- Low-income WRAP
- Low-income E-Power Wise
- Commercial and Industrial Custom Incentive Program

- HVAC Tune-Up Program
- Load Curtailment Program. (PPL EU, 2012)

All PJM states, including Pennsylvania, require new residential and commercial buildings to meet energy efficiency standards. The current Pennsylvania Uniform Construction Code requires new residential and commercial buildings to meet the energy efficiency standards set out in the 2006 International Energy Conservation Code (IECC) developed by the International Code Council. Commercial buildings must also comply with American Society of Heating and Refrigeration and Air Conditioning Engineers (ASHRAE) 90.1-2004. The IECC and ASHRAE 90.1 are model codes that mandate certain energy efficiency standards. (Institute for Energy Research, 2012) If Pennsylvania began implementing the 2009 IECC and Standard 90.1-2007 statewide in 2011, businesses and homeowners would save an estimated \$101 million annually by 2020 and \$203 million annually by 2030 in energy costs (assuming 2006 prices). Additionally, implementing the latest model codes would help avoid about 21.6 trillion British Thermal Units (BTU) of primary annual energy use by 2030 (approximately 0.5 percent of the 2007 total annual energy consumption). (Online Code Environment and Advocacy Network, 2012)

The Commonwealth of Pennsylvania does not impose state-based appliance efficiency standards. However, in 2004, Executive Order 2004-12 was enacted requiring state agencies to purchase Energy Star® appliances when economical and consistent with life-cycle costs. Appliances are banned in state-owned or leased buildings unless specifically approved by the Department of General Services or designated Commonwealth official (Institute for Energy Research, 2012).

As noted above, current and expected future incremental improvements in residential and commercial building codes and appliance standards have a projected minimal overall effect on electricity demand and, as a result, a negligible effect on PPL's overall forecast of the need for power.

Data Sources:

**Institute for Energy Research, 2012.** Institute for Energy Research, Pennsylvania, Website: <u>http://www.instituteforenergyresearch.org/states/pennsylvania#\_edn7</u>, date accessed: May 23, 2012.

Pennsylvania Public Utility Commission (PPUC), 2012. Act 129 Information, Website: <u>http://www.puc.state.pa.us/electric/Act\_129\_info.aspx</u>, date accessed: May 22, 2012.

**PPL Electric Utilities Corporation (PPL EU), 2012.** Energy Efficiency and Conservation Plan, Before the Pennsylvania Public Utilities Commission, Docket No. M-2009-2093216, Proposed Changes, February 2.

**Online Code Environment and Advocacy Network, 2012.** "Pennsylvania, Current Codes", Website: <u>http://energycodesocean.org/state-country/pennsylvania</u>, date accessed: May 23, 2012.

### SOCIOECONOMICS/ENVIRONMENTAL JUSTICE (S/EJ)

## NFI S/EJ-13: A benefit/cost assessment to discuss the need for updating the ER's estimated values of the cost of construction and annual operating and maintenance costs, decommissioning cost, or any other internal costs of the proposed facility

**Audit Disposition:** Upon completion of the audit, the NRC requested that additional information be provided on overnight capital costs, infrastructure costs, decommissioning costs, levelized busbar energy costs (or technically equivalent value) for operations, maintenance and fuel costs.

#### **Response:**

The attached table provides the requested information for the Bell Bend Nuclear Power Plant project in 2010 dollars.

#### **Bell Bend Nuclear Power Project**

| Total   | \$ | 8.623.321.839 |   |  |  |  |  |
|---|----|---------------|---|--|--|--|--|
| Owner's Development Costs (1)                       | \$ | 1,823,321,839 | - |  |  |  |  |
| EPC Price   | \$ | 6,800,000,000 |   |  |  |  |  |
| Estimate of Overnight Capital Cost (as of 12/31/10) |    |               |   |  |  |  |  |

Levelized Cost of Energy Production (as of 12/31/10)

| Total (3)                             | \$<br>65.91 | per<br>mwh |
|---------------------------------------|-------------|------------|
| Decommissioning                       | \$<br>0.91  | per<br>mwh |
| Fuel                                  | \$<br>8.76  | per<br>mwh |
| O&M (variable, fixed and maintenance) | \$<br>14.73 | per<br>mwh |
| Capital Charge (2)                    | \$<br>41.51 | per<br>mwh |

#### Notes:

(1) Owners' Development Costs includes Site Prep, Engineering Support, O&M/Training during construction, IT, Insurance, Licensing/Permitting costs, Transmission costs, Property Taxes during construction, Initial Fuel load, and other miscellaneous.

(2) Capital Charge (and discount rate for levelization calculations) based on cost of capital of 5.70%, based on anticipated capital structure including DOE Loan Guarantees, COFACE (French Gov't Export Credit Agency), and PPL Equity.

(3) Levelized Cost per MWH is based on an average MWH production of 13,294,538 MWH's per year over 40 years.

NFI S/EJ-14: Make available data on other benefits and quantify to the extent feasible, for example, annual federal, state, and local tax payments by source, number and type of jobs, total annual wages paid.

**Audit Disposition:** Upon completion of the audit, the NRC requested that additional information be provided on the estimated impact of operations on PPL Corporation income tax payments.

#### Response:

The requested information is estimated for the first 20 years of operation (2023 – 2042) below:

#### Local (Salem Township, Luzerne County)

PPL does not pay income taxes on the local level in Pennsylvania.

#### State (Pennsylvania)

Assuming current tax regulations remain in effect, net state tax liability is estimated at \$500M.

#### <u>Federal</u>

Assuming current tax regulations remain in effect, net federal tax liability is estimated at \$2B.

#### SITE AND TECHNICAL OVERVIEW (STO)

## STO-02: Discuss ER figures showing the site boundary, OCA, and land to be cleared (ER Figs 2.1-1, 2.2-1, 3.1-1).

**Disposition:** Following review of the STO-02 response at the audit, the NRC requested to have docketed a list of pertinent boundary terms.

**Response:** Definitions of pertinent boundary terms used in the BBNPP ER are provided below. In addition, clarifying edits to the ER will be made in a future revision, as shown in the COLA Impact section of this response.

#### Bell Bend Nuclear Power Plant Boundary Definitions

1. Bell Bend Nuclear Power Plant (BBNPP) Project Boundary: This boundary represents the limits of activities for the Bell Bend project. It encompasses both the Bell Bend Property Boundary as well as the Susquehanna Steam Electric Station (SSES) Property Boundary so that these properties combined form the BBNPP Project Boundary. This boundary encompasses approximately 2,055 acres of land. This boundary is shown on Environmental Report (ER) Figure 2.1-1 – BBNPP Site and Proposed New Plant Layout.

2. Bell Bend Nuclear Power Plant (BBNPP) Property Boundary: This boundary outlines the property that will be owned by PPL Bell Bend, LLC at a future date. The BBNPP property totals approximately 975 acres. This boundary is shown on ER Figure 2.1-1 – BBNPP Site and Proposed New Plant Layout.

3. Susquehanna Steam Electric Station (SSES) Property Boundary: This boundary outlines the property that will be owned by PPL Susquehanna, LLC after a certain amount of property has been turned over to PPL Bell Bend, LLC. The SSES property will total approximately 1,080 acres. This boundary is shown on ER Figure 2.1-1 – BBNPP Site and Proposed New Plant Layout.

4. Site Boundary (Alternative Sites – ER Chapter 9): The approximately 420 acre area needed to construct the US Evolutionary Power Reactor (EPR) at any given alternative site. This boundary represents the minimum area required to construct the plant. An example of this boundary is shown on ER Figure 9.3-5 – BBNPP Location Map. This figure shows the boundary for Bell Bend but is representative of the "Site Boundary" for the other alternative sites.

5. Limit of Disturbance (LOD): The LOD is defined as the discrete land area that is physically affected by project construction and construction support activities and defines the boundary past which no land will be altered in any way. As applicable, LOD includes laydown, modular assembly, and any other project related activity involving land disturbance on properties controlled by the applicant. This boundary is depicted on ER Figure 4.3-1 – BBNPP Project Boundary and Limit of Disturbance.

6. Owner Controlled Area: This is equivalent to the definition of 'Controlled area" from 10 CFR 20.1003 - "*Controlled area* means an area, outside of a restricted area but inside the site boundary, access to which can be limited by the licensee for any reason.". This boundary is shown on ER Figure 6.2-1 – Existing SSES TLD Monitoring Location within One Mile of Plant. The TLD locations are for SSES however, the legend shows the "Proposed BBNPP Owner Controlled Area Boundary" as the dashed blue line.

7. Protected Area Boundary (PAB): The boundary for the onsite area within the security boundary as defined in each site's Security Plan. The 'Protected Area' is defined in RG 5.79 as "An area encompassed by physical barriers and to which access is controlled." This boundary is shown on ER Figure 3.1-1 – Site Area Topographical Map.

8. Exclusion Area Boundary (EAB): The EAB is defined as the boundary for the 'Exclusion area' as defined by 10 CFR 100.3 – "Exclusion area means that area surrounding the reactor, in which the reactor licensee has the authority to determine all activities including exclusion or removal of personnel and property from the area. This area may be traversed by a highway, railroad, or waterway, provided these are not so close to the facility as to interfere with normal operations of the facility and provided appropriate and effective arrangements are made to control traffic on the highway, railroad, or waterway, in case of emergency, to protect the public health and safety. Residence within the exclusion area shall normally be prohibited. In any event, residents shall be subject to ready removal in case of necessity.

Activities unrelated to operation of the reactor may be permitted in an exclusion area under appropriate limitations, provided that no significant hazards to the public health and safety will result." This boundary is shown on ER Figure 3.1-1 – Site Area Topographical Map.

**COLA Impact:** The following BBNPP COLA parts will be revised, replaced, or removed in a future revision of the COLA:

Part 3 - ER

Text: 2.1; 2.2; 2.3; 2.4; 2.5; 2.8; 3.1; 3.4; 3.7; 4.1; 4.3; 4.4; 5.1; 5.3; 5.6; 5.8; 6.2; 9.3; 9.4; 10.3; 10.5.

Tables: 2.7-129; 132; 139; 146; 153; 158; 159; 160; 161; 5.10-1; 5.4-2,-14, -20; 6.2-4; 6.7-2; 9.2-1; 10.1-2.

Figures: 2.1-1; 3; 4; 3.1-1; 3.7-2; 6.1-1; 9.3-5; 9.3-16.

Part 2 – FSAR

Text: 1.1; 2.1; 2.3; 2.4; 2.5

Tables: 2.3-148; 151; 157; 163; 169

Figure: 2.4-5

Note that similar revisions (boundary definition term consistency edits) will be made to the FSAR Tables 2.3-148; 151; 157; 163; and 169 in a future version of the COLA.

Part 5 – Emergency Plan

Text: 1.B; 5.1

COLA impacts are shown on the following pages of this letter.

Enclosure 2

GEN-01 and GEN-02 – Select Graphic Files from BBNPP Rev. 3 COLA ER in .PNG and GIS Shapefile Format provided on DVD