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April 10, 2012

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

**BELL BEND NUCLEAR POWER PLANT
PARTIAL RESPONSE TO REQUEST FOR ADDITIONAL
INFORMATION NO. 105, FSAR CHAPTER 3
BNP-2012-095 Docket No. 52-039**

- References:
- 1) M. Canova (NRC) to R. R. Sgarro (PPL Bell Bend, LLC), Bell Bend COLA – FINAL Request for Information No. 105 (RAI No. 105) – EMB 5572, email dated May 26, 2011.
 - 2) BNP-2011-146, R. R. Sgarro (PPL Bell Bend, LLC) to Document Control Desk (NRC), “Partial Response to Request for Additional Information No. 105, FSAR Chapter 3,” dated July 22, 2011.
 - 3) BNP-2012-072, R. R. Sgarro (PPL Bell Bend, LLC) to Document Control Desk (NRC), “Schedule Information for Responses to Requests for Additional Information for the Bell Bend FSAR,” dated March 14, 2012.

The purpose of this letter is to respond to the request for additional information (RAI) identified in reference 1. In reference 3, PPL Bell Bend, LLC (PPL) indicated that a response to RAI No. 105, Questions 03.02.01-1 and 03.02.01-3, would be provided on or before April 12, 2012. This RAI addresses Seismic Classification, as described in Chapter 3 of the Final Safety Analysis Report (FSAR) and submitted in Part 2 of the Bell Bend Nuclear Power Plant Combined License Application (COLA). The response to RAI No. 105, Questions 03.02.01-2 and 03.02.01-4, was provided in reference 2.

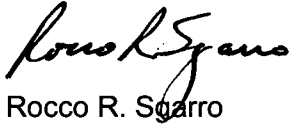
The enclosure provides our response to RAI No. 105, Questions 03.02.01-1 and 03.02.01-3, which includes revised COLA content. The revised COLA content will be included in a future revision of the BBNPP COLA. The future revision of the COLA is the only new regulatory commitment in this letter.

D102
NRW

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.

Respectfully,

A handwritten signature in black ink, appearing to read "Rocco R. Sgarro". The signature is written in a cursive style with a large, stylized initial "R".

Rocco R. Sgarro

RRS/kw

Enclosure: As stated

cc: (w/ Enclosure)

Mr. Michael Canova
Project Manager
U.S. Nuclear Regulatory Commission
11555 Rockville Pike
Rockville, MD 20852

(w/o Enclosure)

Mr. William Dean
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Enclosure

Response to NRC Request for Additional Information No. 105
Questions 03.02.01-1 and 03.02.01-3

Bell Bend Nuclear Power Plant

RAI 105**Question 03.02.01-1:**

BBNPP FSAR provided site-specific SSCs in Table 3.2-1. However, the definitions for some acronyms (e.g., PA, PAB, PAC, SGAO, etc.) in Table 3.2-1 cannot be located in the acronym list in the BBNPP FSAR or the U.S. EPR FSAR. Add the definition to the list of acronyms in Table 1.1-1 or add notes in Table 3.2-1. Additionally, the system title in Table 3.2-1 seems to be inconsistent with the component codes. As an example, there are no PA, PAB, PAC components listed under system heading "PA, PAA, PAB, PAC, PAS Circulating Water System" and no components listed under system heading "GW Raw Water Supply System, includes Essential Service Water Normal Makeup Supply", etc. Another example is that there are no heading codes listed for component codes UYF and UTG etc., and neither component codes nor system heading code listed for "Water Treatment System. The applicant is requested to verify whether UPB & UST needs to be added to the location codes in Note 3 of Table 3.2-1. Location codes for many components are missing in Table 3.2-1 (for example, location codes for "Instrumentation and Controls in Circ Water Piping" and for "Instrumentation and Controls in Makeup Piping" for "PA, PAA, PAB, PAC, PAS Circulating Water System", location codes for "Valves" and "Potable Water System Electrical Distribution Equipment" in "GK, GKB Potable Water System" etc.).

Response:

FSAR Table 3.2-1 has been extensively revised and reorganized to enhance usability. These changes include:

- Definitions have been added to the notes in Table 3.2-1 (Notes 3 and 5) to identify and describe the location and structure, system and component (SSC) acronyms used in Table 3.2-1.
- Location and SSC code information has been added to Table 3.2-1 to address instances where this information was not previously provided¹.
- The presentation of system identification information in Table 3.2-1 has been improved to provide greater clarity and eliminate potential sources of misunderstanding regarding the system-level designation of components within a system heading.
- Additional component-level detail has been provided in Table 3.2-1, including specific noun descriptions for electrical equipment (e.g., batteries, switchgear, distribution panels, transformers, remote I/O cabinets, etc.). Building names were also revised to be consistent with the BBNPP controlled building list, as reflected on the Site Utilization Plot Plan.

COLA Impact:

FSAR Table 3.2-1 will be updated as shown below to include SSC and location codes, and acronym definitions will be added in a future COLA revision. Given the extensive nature of the changes that were made to improve the order, content and presentation of information provided in this update to Table 3.2-1, the changes are presented as a complete replacement of the existing Table 3.2-1 and individual changes are not indicated.

¹ The sole use of location code UPB in FSAR Table 3.2-1 was corrected in BBNPP COLA Revision 3 to UQF.

Table 3.2-1 – {Classification Summary for Site-Specific SSCs}

KKS System or Component Code (Note 5)	SSC Description	Safety Classification (Note 1)	Quality Group Classification	Seismic Category (Note 2)	10 CFR 50 Appendix B Program (Note 4)	Location (Note 3)	Comments / Commercial Code
Table 3.2.2-1 of the U.S. EPR FSAR contains the following conceptual design information for the UKE, Access Building, and UBZ, Buried Conduit Duct Bank.							
[[LUKE	Access Building	NS-AQ	N/A	CS	No	UKE	
UBZ	Buried Conduit Duct Bank	S	N/A	I	Yes	UBZ]]	
The U.S. EPR FSAR descriptions provided in U.S. EPR FSAR Table 3.2.2-1 regarding the UKE, Access Building, and UBZ, Buried Conduit Duct Bank are applicable to BBNPP, and are incorporated by reference.							
Switchyard Building Electrical Distribution Equipment							
31/32BHT11	6.9kV-480V Non-Class 1E Transformer	NS	N/A	NSC	No	UAA	IEEE / NEMA
31BHK01	480V Non-Class 1E MCC	NS	N/A	NSC	No	UAA	IEEE / NEMA
Intake Structure Electrical Distribution Equipment							
33/34 BBG	Non-Class 1E 6.9kV Switchgear	NS	N/A	NSC	No	UPE	IEEE / NEMA
33/34 BBT07	13.8kV / 6.9kV Non-Class 1E 7500 kVA Transformers	NS	N/A	NSC	No	UPE	IEEE / NEMA
34BHG01	480V Non-Class 1E MCC	NS	N/A	NSC	No	UPE	IEEE / NEMA
34BHT07	6.9kV-480V Non-Class 1E Transformer	NS	N/A	NSC	No	UPE	IEEE / NEMA
34BTF01	250V Batteries	NS	N/A	NSC	No	UPE	IEEE / NEMA
34BTG01	250V DC Battery Charger	NS	N/A	NSC	No	UPE	IEEE / NEMA
34BUG	250V DC Non-Class 1E Distribution Panel	NS	N/A	NSC	No	UPE	IEEE / NEMA
34CFJ	Intake Structure Non-Class 1E Remote I/O Cabinet	NS	N/A	NSC	No	UPE	IEEE / NEMA
Circulating Water Pump House Electrical Distribution Equipment							
35BHT01	6.9kV-480V Non-Class 1E Transformer	NS	N/A	NSC	No	UQA	IEEE / NEMA
35BHG01	480V Non-Class 1E MCC	NS	N/A	NSC	No	UQA	IEEE / NEMA
35BJ01	480V-120V 15 kVA Non-Class 1E Lighting Transformer	NS	N/A	NSC	No	UQA	IEEE / NEMA
35BJB01	120V Non-Class 1E Lighting Cabinet	NS	N/A	NSC	No	UQA	IEEE / NEMA
35CFK	Circulating Water Pump House Non-Class 1E Remote I/O Cabinet	NS	N/A	NSC	No	UQA	IEEE / NEMA

Table 3.2-1 – {Classification Summary for Site-Specific SSCs}

KKS System or Component Code (Note 5)	SSC Description	Safety Classification (Note 1)	Quality Group Classification	Seismic Category (Note 2)	10 CFR 50 Appendix B Program (Note 4)	Location (Note 3)	Comments / Commercial Code
	ESWEMS Pump House Electrical Distribution Equipment and I&C Cabinets						
30CFH10/20/30/40	ESWEMS Pump House Pump Bay 1/2/3/4 Class 1E Remote I/O Cabinet	S	N/A	I	Yes	UQF	IEEE / NEMA
30CFH50/60/70/80	ESWEMS Pump House Pump 1/2/3/4 Bay Non-Class 1E Remote I/O Cabinet	NS	N/A	NSC	No	UQF	IEEE / NEMA
31/32/33/34BGG01	ESWEMS Pump House Bay 1/2/3/4 Class 1E Panelboard (Located inside Class 1E MCC)	S	N/A	I	Yes	UQF	IEEE / NEMA
31/32/33/34BGT01	ESWEMS Pump House Bay 1/2/3/4 Class 1E 480V-208V/ 120V Transformer (Located inside Class 1E MCC)	S	N/A	I	Yes	UQF	IEEE / NEMA
35/36/37/38BHA01	ESWEMS Pump House Bay 1/2/3/4 Non-Class 1E 480V Motor Control Center	NS	N/A	NSC	No	UQF	IEEE / NEMA
35/36/37/38BJA01	ESWEMS Pump House Bay 1/2/3/4 Non-Class 1E Panelboard (Located inside Non-Class 1E MCC)	NS	N/A	NSC	No	UQF	IEEE / NEMA
35/36/37/38BJT01	ESWEMS Pump House Bay 1/2/3/4 Non-Class 1E 480V-208V/ 120V Transformer (Located inside Non-Class 1E MCC)	NS	N/A	NSC	No	UQF	IEEE / NEMA
31/32/33/34BMT05	ESWEMS Pump House Bay 1/2/3/4 Class 1E 6.9 kV-480V Transformer	S	N/A	I	Yes	UQF	IEEE / NEMA
31/32/33/34BNG01	ESWEMS Pump House Bay 1/2/3/4 Class 1E 480V MCC	S	N/A	I	Yes	UQF	IEEE / NEMA
	Plant Physical Protection Systems						
30CZQ00	Security Access Electrical Distribution Equipment	NS	N/A	NSC	No	UYF	IEEE / NEMA
GA	Raw Water Supply System,						
30GA10/20/30/40 AA001-100	Valves	NS	E	NSC	No	UPE / UZT / UPQ	ANSI / NEMA
30GA10/20/30/40 AA101-180	Control Valves	NS	E	NSC	No	UPQ / UZT	ASME B31.1 / ANSI
30GA10/20/30 AP001	Pumps/ Motors	NS	E	NSC	No	UPE	ASME B31.1 / NEMA / ANSI
30GA10/20/30 AT001	Automatic Strainers/Motors	NS	E	NSC	No	UPE	ANSI / NEMA
30GA10/20/30 AT002	Media Filters	NS	E	NSC	No	UPQ	ASME B31.1

Table 3.2-1 – {Classification Summary for Site-Specific SSCs}

KKS System or Component Code (Note 5)	SSC Description	Safety Classification (Note 1)	Quality Group Classification	Seismic Category (Note 2)	10 CFR 50 Appendix B Program (Note 4)	Location (Note 3)	Comments / Commercial Code
30GA10/20/30/40 BR001-100	Piping	NS	E	NSC	No	UQA / UZT	ASME B31.1
GFA	ESWEMS System						
30GFA10/20/30/40 AA101, 401	Motor Operated Valves	S	C	I	Yes	UQF/ UZT	ASME III / IEEE
30GFA10/20/30/40 AA001	Check Valves	S	C	I	Yes	UQF	ASME III
30GFA10/20/30/40 AA002	Isolation Valves	S	C	I	Yes	UQF	ASME III
30GFA10/20/30/40 AA301, 302,303, 304, 305	Instrument Isolation Valves	S	C	I	Yes	UQF	ASME III
30GFA10/20/30/40 AA501-599	Vent Valves	S	C	I	Yes	UQF	ASME III
30GFA10/20/30/40 AP001	Pump Unit	S	C	I	Yes	UQF	ASME III ANSI / HI 2.3 IEEE / NEMA
30GFA10/20/30/40 AT001	ESWEMS Pump Discharge Strainers	S	C	I	Yes	UQF	ASME III
30GFA10/20/30/40 AT002	Screens	NS-AQ	N/A	II	Yes	UQF	ANSI / AWWA
30GFA10/20/30/40 BR001	Piping to ESW Cooling Towers	S	C	I	Yes	UQF/ UZT	ASME III
30GFA10/20/30/40 CF001-100	Flow Measurement Instruments and Controls	S	N/A	I	Yes	UQF	ASME III / IEEE
30GFA10/20/30/40 CP001-100	Pressure Measurement Instruments and Controls	S	N/A	I	Yes	UQF	ASME III / IEEE
30GFA10/20/30/40 CT001-100	Temperature Measurement Instruments and Controls	S	N/A	I	Yes	UQF	ASME III / IEEE
GK	Potable and Sanitary Water System						
30GKB00	Potable and Sanitary Water Distribution System						

Table 3.2-1 – {Classification Summary for Site-Specific SSCs}

KKS System or Component Code (Note 5)	SSC Description	Safety Classification (Note 1)	Quality Group Classification	Seismic Category (Note 2)	10 CFR 50 Appendix B Program (Note 4)	Location (Note 3)	Comments / Commercial Code
30GKB00 AA001-100	Valves	NS	E	NSC	No	UZH / UKE / UJH / UJK / UKS / UST / UYF / UBP / UYH	ASME B31.1 / AWWA/ ANSI
30GKB00 AP001, 002	Potable Water System Booster Pumps	NS	E	NSC	No	Office – Field Construction	ASME B31.1 / AWWA/ ANSI
30GKB00 AP003-020	Sanitary Water System Lift Pumps	NS	E	NSC	No	UZH	ASME B31.1/ AWWA/ ANSI
30GKB00 BB001	Potable Water System Storage Tank	NS	E	NSC	No	Office – Field Construction	ASME B31.1 / ASME VIII/ ANSI
30GKB00 BR001-100	Underground Piping	NS	E	NSC	No	UZH	ASME B31.1/ ANSI
PA	Circulating Water Supply System						
30PAA10/20/30/40 AT001	Removable Screens	NS	N/A	NSC	No	UQA	ANSI/ AWWA
30PAA10/20/30 AT002	Traveling Screens	NS	N/A	NSC	No	UQA	ANSI/ AWWA
30PAA10/20/30 AP001	Screen wash pumps	NS	E	NSC	No	UQA	ANSI
30PAB10/20/30/40 AA001-050	Circulating Water Piping Valves	NS	E	NSC	No	UQA / UMA / URA / UZH	AWWA/ ASME B31.1/ IEEE
30PAB10/20/30/40 AA051-100	Circulating Water Makeup Piping Valves	NS	E	NSC	No	UQA / UMA/ URA / UZH	AWWA/ ASME B31.1/ IEEE
30PAB10/20/30/40 AA101-180	Control Valves	NS	E	NSC	No	UQA / UMA / URA / UZH	AWWA/ASME B31.1/IEEE
30PAB10/20/30/40 BR001-025	Circulating Water Piping	NS	E	NSC	No	UQA / UMA / URA / UZH	ASME B31.1 / AWWA
30PAB10/20/30/40 BR026-051	Circulating Water Makeup Water Piping	NS	E	NSC	No	UZH / UPE / URA	AWWA/ ASME B31.1
30PAB10/20/30/40 BR052-075	Circulating Water Cooling Tower Blowdown Piping	NS	E	NSC	No	UQA / UZH	AWWA / ASME B31.1

Table 3.2-1 – {Classification Summary for Site-Specific SSCs}

KKS System or Component Code (Note 5)	SSC Description	Safety Classification (Note 1)	Quality Group Classification	Seismic Category (Note 2)	10 CFR 50 Appendix B Program (Note 4)	Location (Note 3)	Comments / Commercial Code
30PAB10/20/30/40 BR076-100	Circulating Water Bypass Piping	NS	E	NSC	No	URA / UZT	AWWA / ASME B31.1
30PAB10/20/30/40 CF001-020	Flow Instrumentation	NS	N/A	NSC	No	UQA / UMA / URA / UZT	ASME B31.1 / AWWA
30PAB10/20/30/40 CP001-020	Pressure Instrumentation	NS	N/A	NSC	No	UQA / UMA / URA / UZT	ASME B31.1 / AWWA
30PAB10/20/30/40 CT001-020	Temperature Instrumentation	NS	N/A	NSC	No	UQA / UMA / URA / UZT	ASME B31.1 / AWWA
30PAC10/20/30 AP001	Circulating Water Pump Units	NS	E	NSC	No	UQA	ASME B31.1/ ANSI/ HI 2.3/ IEEE/ NEMA
30PAS10/20/30 AP001	Circulating Water Makeup Pump Units	NS	E	NSC	No	UPE	ASME B31.1/ ANSI/ HI 2.3/ IEEE/ NEMA
PB	Circulating Water Treatment System						
30PBN10/20/30/40 BR001-100	Circulating Water Chemical Treatment Piping	NS	E	NSC	No	UQA	ASME B31.1
PEB	Essential Service Water Piping System						
30PEB10/20/30/40	ESW Blowdown piping inside UQBs and downstream of Isolation Valves 30PEB 10/20/30/40 AA015, AA016	NS-AQ	D	II	Yes	UQB	ANSI / ASME B31.1
30PEB10/20/30/40 AA205	ESW Normal blowdown check valve	NS-AQ	D	II	Yes	UQB	ANSI / ASME B31.1
PED	Essential Service Water Recirculation Cooling System						
30PED10/20/30/40 AA022	ESW Chemical Treatment System Isolation Valves	NS-AQ	D	II	Yes	UQB	ANSI / ASME B31.1
30PED 10/20/30/40	ESW Chemical Treatment System Piping	NS-AQ	D	II	Yes	UQB	ANSI / ASME B31.1
30PED10/20/30/40	ESW Normal makeup water piping upstream of Isolation Valves 30PED10/20/30/40 AA019 and downstream of UQB wall penetration.	NS-AQ	D	II	Yes	UQB	ANSI / ASME B31.1
QC	Water Treatment System						
30QC10/20/30/40 AA001-024	Valves	NS	E	NSC	No	UZT	ASME B31.1 / ANSI / IEEE

Table 3.2-1 – {Classification Summary for Site-Specific SSCs}

KKS System or Component Code (Note 5)	SSC Description	Safety Classification (Note 1)	Quality Group Classification	Seismic Category (Note 2)	10 CFR 50 Appendix B Program (Note 4)	Location (Note 3)	Comments / Commercial Code
30QC10/20/30/40 AP001-024	Chemical Feed Pumps	NS	E	NSC	No	UZT	ASME B31.1 / ANSI/ IEEE
30QC10/20/30/40 BB001-024	Water Treatment Chemical Storage Tanks	NS	E	NSC	No	UZT	ASME B31.1 / ASME VIII/ ASME X
30QC10/20/30/40 BR001-024	Piping	NS	E	NSC	No	UZT	ASME B31.1
QJ	Central Gas Distribution System						
30QJ00 AA001-100	Valves	NS	E	NSC	No	UTG	ASME B31.1
30QJ00 BB001-004	Compressed Gas Storage Tanks	NS	E	NSC	No	UTG	DOT Standard
30QJ00 BR001-100	Piping	NS	E	NSC	No	UTG	ASME B31.1
30SAK	Fire Protection Pump Building Ventilation Equipment						
30SAK00	Fire Protection Pump Building Ventilation Equipment	NS-AQ	D	II-SSE	Yes	USG	NFPA 20, 2007 ed. NFPA 90A, 2002 ed. Including 2003 & 2005 Errata ASME AG-1, 2003 ed. Including 2004 Addenda ASME N-509, 2002 ed. ASCE 43, 2005 ed.
30SAH	ESWEMS Pump House Ventilation System						
30SAH10/20/30/40 AA001	Computer Room Normal Return Air Volume Dampers	NS-AQ	N/A	II	Yes	UQF	ASME AG-1
30SAH10/20/30/40 AA002	Pump Normal Return Air Volume Dampers	NS-AQ	N/A	II	Yes	UQF	ASME AG-1
30SAH10/20/30/40 AA003	Pump Room Exhaust Backdraft Dampers	S	N/A	I	Yes	UQF	ASME AG-1, NFPA
30SAH10/20/30/40 AA004	Cooling Fan Volume Dampers (Safety Related)	S	N/A	I	Yes	UQF	ASME AG-1
30SAH10/20/30/40 AA101	Intake Control Dampers	S	N/A	I	Yes	UQF	ASME AG-1, NFPA
30SAH10/20/30/40 AA102	Return Air Control Dampers	NS-AQ	N/A	II	Yes	UQF	ASME AG-1

Table 3.2-1 – {Classification Summary for Site-Specific SSCs}

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30SAH10/20/30/40 AC001	Emergency AC Unit Evaporator Coils	S	D	I	Yes	UQF	ASME AG-1, ASME Sect. VIII
30SAH10/20/30/40 AC002	Emergency AC Unit Condensers	S	E	I	Yes	UQF / UZT	ASME AG-1
30SAH10/20/30/40 AH001, 004	Pump Room Normal Electric Unit Heaters	NS-AQ	N/A	II	Yes	UQF	ASME AG-1
30SAH10/20/30/40 AH002, 003	Pump Room Normal Electric Unit Heaters (Safety Related)	S	N/A	I	Yes	UQF	ASME AG-1
30SAH10/20/30/40 AN001	Emergency Cooling Fans	S	N/A	I	Yes	UQF	ASME AG-1
30SAH10/20/30/40 AN002	Normal Supply Fans	NS-AQ	N/A	II	Yes	UQF	ASME AG-1, NFPA
30SAH10/20/30/40 AT001	Cooling Fan Filters (Safety Related)	S	N/A	I	Yes	UQF	ASME AG-1
30SAH10/20/30/40 AT002	Normal Air Filters	NS-AQ	N/A	II	Yes	UQF	ASME AG-1
30SAH10/20/30/40 BR001-012	Normal Supply Air Ductwork	NS-AQ	N/A	II	Yes	UQF	ASME AG-1, NFPA
30SAH10/20/30/40 BR013	Evaporator Coils Condensation Drain Line Piping	NS-AQ	E	II	Yes	UQF	ASME AG-1
30SAH10/20/30/40 CH001, 002	Smoke Detectors	NS-AQ	N/A	NSC	No	UQF	ASME AG-1, NFPA
30SAH10/20/30/40 CH003	Smoke Detectors (Safety Related)	S	N/A	I	Yes	UQF	ASME AG-1
30SAH10/20/30/40 CP001	Air Filter Pressure Instrumentation (Safety Related)	S	N/A	I	Yes	UQF	ASME AG-1
30SAH10/20/30/40 CP002	Air Filter Pressure Instrumentation	NS-AQ	N/A	NSC	No	UQF	ASME AG-1, NFPA
30SAH10/20/30/40 CT001 -004, 007, 008	Temperature Instrumentation	NS-AQ	N/A	NSC	No	UQF	ASME AG-1, NFPA
30SAH10/20/30/40 CT005, 006	Temperature Instrumentation (Safety Related)	S	N/A	I	Yes	UQF	ASME AG-1

Table 3.2-1 – {Classification Summary for Site-Specific SSCs}

KKS System or Component Code (Note 5)	SSC Description	Safety Classification (Note 1)	Quality Group Classification	Seismic Category (Note 2)	10 CFR 50 Appendix B Program (Note 4)	Location (Note 3)	Comments / Commercial Code
30SAQ50	Circulating Water Pump Building Ventilation System						
30SAQ50 AA001/002/003/004	Pump Room Exhaust Fan Inlet Dampers	NS	N/A	NSC	No	UQA	ASHRAE / NFPA
30SAQ50 AA005	Chemical Tank Room Outside Air Inlet Damper	NS	N/A	NSC	No	UQA	ASHRAE / NFPA
30SAQ50 AA006	Chemical Tank Room Inside Air Inlet Damper	NS	N/A	NSC	No	UQA	ASHRAE / NFPA
30SAQ50 AH001-006	Pump Room Unit Heaters	NS	N/A	NSC	No	UQA	ASHRAE / NFPA
30SAQ50 AH007, 008	Chemical Tank Room Unit Heaters	NS	N/A	NSC	No	UQA	ASHRAE / NFPA
30SAQ50 AN001/002/003/004	Pump Room Exhaust Fans / motors	NS	N/A	NSC	No	UQA	ASHRAE / NFPA
30SAQ50 AN005	Chemical Tank Room Exhaust Fan	NS	N/A	NSC	No	UQA	ASHRAE / NFPA
30SAQ50 BR001-100	Ductwork	NS	N/A	NSC	No	UQA	ASHRAE / NFPA
30SAQ50 BR MR005	Chemical Tank Room Exhaust Air Louver	NS	N/A	NSC	No	UQA	ASHRAE / NFPA
30SAQ50 BR MR001/002/003/004	Pump Room Outside Air Intake Louvers	NS	N/A	NSC	No	UQA	ASHRAE / NFPA
30SAQ50 CT001-100	Temperature Instrumentation	NS	N/A	NSC	No	UQA	ASHRAE / NFPA
30SAN	Intake Structure Ventilation System						
30SAN00AA001	Supply Fan Outside Air Damper	NS	N/A	NSC	No	UPE	ASHRAE / NFPA
30SAN00AA002	Supply Fan Recirculation Air Damper	NS	N/A	NSC	No	UPE	ASHRAE / NFPA
30SAN00AA003	Supply Fan Discharge Air Damper	NS	N/A	NSC	No	UPE	ASHRAE / NFPA
30SAN00AA004	Duct Heater Supply Damper	NS	N/A	NSC	No	UPE	ASHRAE / NFPA
30SAN00AH001/002/003/004/005/006	Electric Unit Heaters	NS	N/A	NSC	No	UPE	ASHRAE / NFPA
30SAN00AH007	Electric Duct Heater	NS	N/A	NSC	No	UPE	ASHRAE / NFPA
30SAN00AN001	Supply Air Fan Unit	NS	N/A	NSC	No	UPE	ASHRAE / IEEE / NEMA
30SAN00AN002	Battery Room Exhaust Air Fan Unit	NS	N/A	NSC	No	UPE	ASHRAE / IEEE / NEMA
30SAN00BR001-050	Ductwork	NS	N/A	NSC	No	UPE	ASHRAE / NFPA
30SAN00BR MR001	Outside Air Intake Louver	NS	N/A	NSC	No	UPE	ASHRAE / NFPA
30SAN00BR MR002	Exhaust Backdraft Combination Louver	NS	N/A	NSC	No	UPE	ASHRAE / NFPA
30SAN00BR MR003	Battery Room Exhaust Air Louver	NS	N/A	NSC	No	UPE	ASHRAE / NFPA

Table 3.2-1 – {Classification Summary for Site-Specific SSCs}

KKS System or Component Code (Note 5)	SSC Description	Safety Classification (Note 1)	Quality Group Classification	Seismic Category (Note 2)	10 CFR 50 Appendix B Program (Note 4)	Location (Note 3)	Comments / Commercial Code
30SAN00CT001-100	Air Temperature Measuring Circuits	NS	N/A	NSC	No	UPE	ASHRAE / NFPA
30SG	Fire Protection Makeup (from RWSS)						
30SG AA001-100	Valves	NS-AQ	D	NSC	No	UZT	NFPA 22, 2003 ed. NFPA 25, 2002 ed
30SG BR001-100	Piping	NS-AQ	D	NSC	No	UZT	NFPA 22, 2003 ed. NFPA 25, 2002 ed
30SGA	Fire Water Distribution System, Conventional Area						
30SGA AA001-050	Valves and hydrants, Balance of Plant (Not providing Safe Shutdown Earthquake Protection)	NS-AQ	D	NSC	No	UMA / UZT	NFPA 24, 2007 ed. NFPA 25, 2002 ed. NFPA 214, 2005 ed. NFPA 804, 2006 ed.
30SGA AA051-100	Valves and hydrants, Balance of Plant (Safe Shutdown Equipment Protection following SSE)	NS-AQ	D	II-SSE	Yes	UJH / UJK / UZT	NFPA 24, 2007 ed. NFPA 25, 2002 ed. NFPA 804, 2006 ed. ANSI/ASME B31.1, 2004 ed.
30SGA BR001-050	Piping, Balance of Plant (Not providing Safe Shutdown Earthquake Protection)	NS-AQ	D	NSC	No	UMA / UZT	NFPA 24, 2007 ed. NFPA 25, 2002 ed. NFPA 214, 2005 ed. NFPA 804, 2006 ed.
30SGA BR051-100	Piping, Balance of Plant (Safe Shutdown Equipment Protection following SSE)	NS-AQ	D	II-SSE	Yes	UJH / UJK / UZT	NFPA 24, 2007 ed. NFPA 25, 2002 ed. NFPA 804, 2006 ed. ANSI/ASME B31.1, 2004 ed.
30SGA00	Fire Suppression Systems for ESWEMS Pump House and Fire Protection Building	NS-AQ	D	II-SSE	Yes	UQF, USG	NFPA 13, 2007 ed. NFPA 14, 2007 ed. NFPA 25, 2002 ed. NFPA 804, 2006 ed. ANSI/ASME B31.1, 2004ed.
30SGA00	Fire Suppression Systems for Site Specific Buildings other than ESWEMS Pump House and Fire Protection Building	NS-AQ	D	NSC	No	UST / UTG / UYF / UPQ	NFPA 13, 2007 ed. NFPA 14, 2007 ed. NFPA 25, 2002 ed. NFPA 804, 2006 ed.

Table 3.2-1 – {Classification Summary for Site-Specific SSCs}

KKS System or Component Code (Note 5)	SSC Description	Safety Classification (Note 1)	Quality Group Classification	Seismic Category (Note 2)	10 CFR 50 Appendix B Program (Note 4)	Location (Note 3)	Comments / Commercial Code
30SGM00 AP001	Diesel Engine Driven Pumps and Drivers and subsystems, including diesel fuel oil supply.	NS-AQ	D	II-SSE	Yes	USG	NFPA 20, 2007 ed. NFPA 25, 2002 ed. NFPA 804, 2006 ed. ASCE 43, 2005 ed. ANSI/ASME B31.1, 2004 ed.
30SGM00 AP002	Electric Motor Driven Pump and Driver	NS-AQ	D	NSC	No	USG	NFPA 20, 2007 ed. NFPA 25, 2002 ed. NFPA 804, 2006 ed.
30SGM00 AP003	Jockey Pump and driver	NS-AQ	D	NSC	No	USG	NFPA 20, 2007 ed. NFPA 25, 2002 ed. NFPA 804, 2006 ed.
	Structures						
30UAA	500 kV GIS Switchyard Building	NS	N/A	CS	No	UAA	IBC
30UBA	Switchgear Building	NS-AQ	N/A	II-SSE	Yes	UBA	IBC
31/32/33/34 UBZ	Electrical Duct Banks traversing from the Emergency Auxiliary Transformers to the Safeguards Buildings 1/2/3/4 UJH/ UJK	NS-AQ	N/A	II-SSE	Yes	UJK / UZT / UBE	IEEE / NEC
37UBZ 01/02	Electrical Duct Banks traversing from the Switchgear Building (UBA) to the Intake Structure (UPE)	NS	N/A	CS	No	UBA / UPE / UZT	IEEE / ASCE/ ACI-349/ AASHTO/ NEC
37UBZ 03	Electrical Duct Bank traversing from the Switchgear Building (UBA) to the 500 kV GIS Switchyard Building (UAA)	NS	N/A	CS	No	UBA / UAA / UZT	IEEE / ASCE/ ACI-349/ AASHTO/ NEC
37UBZ 04/05	Electrical Duct Banks traversing from the Switchgear Building (UBA) to the Circulating Water System Pump House (UQA)	NS	N/A	CS	No	UBA / UQA / UZT	IEEE / ASCE/ ACI-349/ AASHTO/ NEC
37UBZ 11/12/13/14	Electrical Duct Banks traversing from Safeguards Buildings 1/2/3/4 UJH/ UJK to Emergency Power Generating Buildings 1/2/3/4 UBP	S	N/A	I	Yes	UJK / UZT / UBP	IEEE/ ASCE/ ACI 349/ AASHTO/ NEC
37UBZ 15/16/17/18	Electrical Duct Banks traversing from Essential Service Water Pump Buildings 1/2/3/4 UQB to the ESWEMS Pump House	S	N/A	I	Yes	UQF / UQB / UZT	IEEE / ASCE/ ACI-349 / AASHTO / NEC

Table 3.2-1 – {Classification Summary for Site-Specific SSCs}

KKS System or Component Code (Note 5)	SSC Description	Safety Classification (Note 1)	Quality Group Classification	Seismic Category (Note 2)	10 CFR 50 Appendix B Program (Note 4)	Location (Note 3)	Comments / Commercial Code
37UBZ 21/22/23/24	Electrical Duct Banks traversing from Electrical Safeguards Buildings 1/2/3/4 UJK to Essential Service Water Pump Buildings 1/2/3/4 UQB	S	N/A	I	Yes	UJK / UZT / UQB	IEEE / ASCE / ACI 349 / AASHTO / NEC
37UBZ 31/32/33/34	Electrical Duct Banks traversing from Safeguards Buildings 1/2/3/4 UJH / UJK to the Switchgear Building UBA.	NS-AQ	N/A	II-SSE	Yes	UJK / UZT / UBA	IEEE / ASCE / ACI-349 / AASHTO / NEC
30UCL	Meteorological Tower	NS	N/A	NSC	No	UZT	
30UMA	Turbine Building	NS-AQ	N/A	II-SSE	Yes	UMA	IBC
30UPE	Intake Structure	NS	N/A	NSC	No	UPE	ASME B31.1 / ANSI / HI 2.3
30UPQ	Water Treatment Building	NS	N/A	CS	No	UPQ	IBC
30UQA	Circulating Water System Pump House	NS	N/A	CS	No	UQA	IBC
30UQF	ESWEMS Pump House	S	N/A	I	Yes	UQF	ANSI / HI 9.8 / ACI 349 / ANSI / AISC N690
30UQX	ESWEMS Retention Pond	S	N/A	I	Yes	UQX	ACI 318/ ACI 349/ ASCE
30URA	Circulating Water System Cooling Tower	NS	N/A	CS	No	URA	IBC
30USG	Fire Protection Storage Tanks and Fire Protection Building	NS-AQ	N/A	II-SSE	Yes	USG / UZT	NFPA 20, 2007 ed. NFPA 22, 2003 ed. NFPA 25, 2002 ed. AWWA D100, 2005 ed. ASCE 43, 2005 ed. ANSI/ASME B31.1, 2004 ed.
30UTG	Central Gas Supply Building	NS	N/A	CS	No	UTG	IBC
30UYF	Security Access Facility	NS	N/A	CS	No	UYF	IBC

Table 3.2-1 – {Classification Summary for Site-Specific SSCs}

KKS System or Component Code (Note 5)	SSC Description	Safety Classification (Note 1)	Quality Group Classification	Seismic Category (Note 2)	10 CFR 50 Appendix B Program (Note 4)	Location (Note 3)	Comments / Commercial Code
<p>Notes:</p>							
<p>1. As defined in U.S. EPR FSAR Subsection 3.2.1, the US EPR safety classifications are: S- Safety-related (QAPD Classification QA Level 1); NS- Non-safety related; NS-AQ- Supplemented Grade (QAPD Classification QA Level 2)</p>							
<p>2. As defined in Subsection 3.2.1 and U.S. EPR FSAR Subsection 3.2.1, the Seismic Classifications are: I - Seismic Category I; II - Seismic Category II II-SSE - Seismic Category II Fire Protection structures, systems, and components that are required to remain functional during and following a safe shutdown earthquake to support equipment required to achieve safe shutdown. The following Fire Protection structures, systems, and components are required to remain functional during and after a seismic event: 1) Fire Water Storage Tanks; 2) Fire Protection Building; 3) Diesel driven fire pumps and their associated sub systems and components, including the diesel fuel oil system; 4) critical support functions for the Fire Protection Building, i.e., ventilation; and 5) The portions of the fire water piping system and components (including isolation valves) which supply water to the stand pipes in buildings that house the equipment required for safe shutdown of the plant following an SSE. Manual actions may be required to isolate the portion of the Fire Protection piping system that is not qualified as Seismic Category II-SSE.</p>							
<p>3. Locations are defined below using the Kraftworks Kennzeichen System (KKS) Designator: KKS Designator: Location – UAA: 500 kV GIS Switchyard Building; UBA: Switchgear Building; UBE: Auxiliary Power Transformer Areas; UBP: Emergency Power Generating Building; UBZ: Buried Conduit Duct Bank; UCL: Meteorological Tower; UJK: Safeguard Buildings Electrical; UKE: Access Building; UMA: Turbine Building; UPE: BBNPP Intake Structure; UPQ: Water Treatment Building; UQA: Circulating Water System Pump House; UQB: Essential Service Water Pump Building; UQF: Essential Service Water Emergency Makeup System Pump House; UQX: Essential Service Water Emergency Makeup System Retention Pond; URA: Circulating Water System Cooling Tower; USG: Fire Protection Storage Tanks and Fire Protection Building; UST: Workshop & Warehouse Building; UTG: Central Gas Supply Building; UYF: Security Access Facility; UZT: Outdoor Area.</p>							
<p>4. Those SSCs classified as NS-AQ (for Safety Class) and classified as "Yes" for 10 CFR 50 Appendix B will be subject only to those quality assurance requirements of Appendix B that are pertinent to that SSC based on the potential affect of the SSC on safety-related functions.</p>							
<p>5. The following KKS System and Component Codes are used: BBG: 6.9 kV Non-Class 1E switchgear; BBT: High/Medium Transformers; BGG: ESWEMS Pump House Class 1E Panelboard (Located inside Class 1E MCC); BGT: ESWEMS Pump House Class 1E 480V-208V/ 120V Transformer (Located inside Class 1E MCC); BHA: ESWEMS Pumphouse Non-Class 1E 480V MCC; BHG: 480V Non-Class 1E MCC; BHK: 480V Non-Class 1E MCC; BHT: 6.9kV-480V transformer; BJ: Low voltage Non-Class 1E lighting, panelboards, and transformers; BJA: ESWEMS Pumphouse Non-Class 1E Panelboard (Located inside Non-Class 1E MCC); BJB: 120V Non-Class 1E Lighting Cabinet; BJT: ESWEMS Pumphouse Non-Class 1E 480V-208V / 120V Transformer (Located inside Non-Class 1E MCC); BMT: Low Voltage Class 1E Panel; BNG: ESWEMS Pumphouse Class 1E 480V MCC; BTF: 250V Batteries; BTG: 250V DC Battery Charger; BUG: 250V DC Non-Class 1E Distribution Panel; CFH: ESWEMS Pump House Remote I/O Cabinet; CFJ: BBNPP Intake Structure Non-Class 1E I/O Cabinet; CFK: Circulating Water Pumphouse Non-Class 1E Remote I/O Cabinet; CZQ: Physical Protection Power Supply; GA: Raw Water Supply System; GFA: Essential Service Water Emergency Makeup System; GK: Potable and Sanitary Water Systems; GKB: Potable and Sanitary Water Distribution System; PA: Circulating Water Supply System; PAA: Circulating Water Screening Plant; PAB: Circulating Water Piping System; PAC: Circulating Water Pump System; PAS: Circulating Water Makeup System; PBN: Circulating Water Chemical Supply System; PEB: Essential Service Water Piping System; PED: Essential Service Water Recirculation Cooling System; QC: Central Chemicals Supply System; QJ: Central Gas Distribution System; SAH: ESWEMS Pumphouse Ventilation System; SAK: Fire Protection Pump Building Ventilation System; SAN: BBNPP Intake Structure Ventilation System; SAQ50: Circulating Water Pump Building Ventilation System; SG: Stationary Fire Protection Systems; SGA: Fire Water Distribution System, conventional area; SGM: Fire Protection Equipment.</p>							

RAI 105**Question 03.02.01-3:**

Site-specific SSCs for the fire water supply system and the fire suppression system were added to BBNPP FSAR Table 3.2-1. However, the BBNPP FSAR site-specific piping and instrumentation diagram (P&ID) Figure 9.5-2 "Fire Water Distribution System – Site Specific Facilities" does not identify the SSC's Seismic Category. Provide the SSC's Seismic Category on the simplified fire protection system P&ID Figure 9.5-2 in the FSAR.

Response:

The Fire Water Distribution System components shown on FSAR Figure 9.5-2 are assigned as Safety Classification "NS-AQ", Quality Group Classification "D", and Seismic Category "NSC", as described in FSAR Table 3.2-1. FSAR Figure 9.5-2 will be updated to provide a Note (Note 3) describing the safety, quality and seismic classification for the depicted Fire Water Distribution System components.

COLA Impact:

FSAR Figure 9.5-2 will be updated as shown to provide a description of safety, quality and seismic classification for the depicted Fire Water Distribution System components in a future COLA revision.

FSAR Figure 9.5-2 – {Fire Water Distribution System - Site Specific Facilities}

