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Tennessee Valley Authority, 1101 Market Street, LP 5A, Chattanooga, Tennessee 37402-2801

October 3, 2008

10 CFR 52.80

Document Control Desk
U.S. Nuclear Regulatory Commission
Washington, D.C. 20555

In the Matter of) Docket Numbers 52-014 and 52-015
Tennessee Valley Authority)

**BELLEFONTE COMBINED LICENSE APPLICATION – STANDARDIZATION ERRATA
REPORT REVISION 4**

- Reference:
1. Letter from Ashok Bhatnagar (TVA) to Mr. R. William Borchardt (NRC), "Application for Combined License for Bellefonte Units 3 and 4," dated October 30, 2007.
 2. Letter from Jack A. Bailey (TVA) to Mr. R. William Borchardt (NRC), "AP1000 Combined License Application Standardization," dated March 14, 2008.
 3. Letter from Jack A. Bailey (TVA) to NRC Document Control Desk, "AP1000 Combined License Application Standardization Errata Report Letter Revision 1," dated March 28, 2008.
 4. Letter from Andrea L. Sterdis (TVA) to NRC Document Control Desk, AP1000 Combined License Application Standardization Errata Report Letter Revision 2," dated April 28, 2008.
 4. Letter from Andrea L. Sterdis (TVA) to NRC Document Control Desk, AP1000 Combined License Application Standardization Errata Report Letter Revision 3," dated September 29, 2008.

The purpose of this letter is to identify updates to the Bellefonte Nuclear Plant Units 3 and 4 (BLN) combined license applicant.

TVA submitted an application for two AP1000 advanced passive pressurized water reactors in the Reference 1 letter. The BLN application has been designated by the AP1000 Design-Centered Working Group (DCWG) as the reference application (R-COLA) for the AP1000 DCWG; accordingly, the information designated therein as "standard content" is expected to be used in subsequent AP1000 applicants (S-COLAs). The information provided in Enclosures 1 and 2 to

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this letter describes changes to "non-standard content" in Part 3, Applicant's Environmental Report – Combined License Stage, and Part 9, Withheld Information, of the R-COLA.

Enclosure 1 contains the portion of the Revision 4 R-COLA Errata Report that updates the publically available, non-standard content in Part 3 of the BLN application. TVA has concluded that none of these updates described in Enclosure 1 require an immediate change to the BLN application. These updates will be incorporated into a future revision of the BLN application.

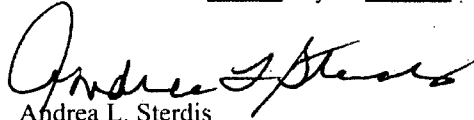
Enclosure 2 contains updates to non-standard content in Part 3 of the BLN application that TVA requests to be **withheld from public disclosure** under the Commission's regulations in 10 CFR 2.390. TVA's withholding request is based on its determination that the information described in the Enclosure 2 errata is of a nature that it is specifically exempted from disclosure by statute, in accordance with 10 CFR 2.390(a)(3). Specifically, Change Nos. BLN-0128 and BLN-0129 contain information relative to critical infrastructure and key resources required to be protected from attack, and is thus exempted from disclosure in accordance with 10 CFR 2.390(a)(3), and Homeland Security Presidential Directive (HSPD-7), dated December 17, 2003, and Change Nos. BLN-130 through BLN-134 and BLN-140 contain information concerning the nature and location of archeological resources exempted from disclosure in accordance with 10 CFR 2.390(a)(3) and 16 U.S.C. 470hh. Accordingly, these changes will be reflected in Part 9, Withheld Information, of the R-COLA. TVA has concluded that none of the updates described in Enclosure 2 require an immediate change to the BLN application. These updates will be incorporated into a future revision of the BLN application.

Errata in both enclosures are identified with a unique tracking number for each entry. While the entries are generally sequential, beginning with entries in Revision 0, they do not include updates that were proposed but not adopted; consequently, the individual tracking numbers are not consecutive in all cases. Revision 4 is inclusive of the Revision 0 (Reference 2), Revision 1 (Reference 3), Revision 2 (Reference 4), and Revision 3 (Reference 5) entries previously provided (as indicated above), and these previous revisions remain valid but are not repeated in this letter.

If you should have any questions, please contact Thomas Spink at 1101 Market Street, LP5A, Chattanooga, Tennessee 37402-2801, by telephone at (423) 751-7062, or via email at tespink@tva.gov.

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

Executed on this 3rd day of Oct, 2008.



Andrea L. Sterdis
Vice President, Nuclear Generation Development
Nuclear Generation Development & Construction

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Enclosures:

1. R-COLA Non-Standard Errata, Rev. 4 – Part 3, Applicant's Environmental Report – Combined License Stage
2. R-COLA Non-Standard Errata, Rev. 4 – Part 9, Withheld Information

cc (Enclosure):

M. A. Hood, NRC/HQ

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ENCLOSURE 1
R-COLA NON-STANDARD ERRATA, REV. 4
COLA PART 3, APPLICANT'S ENVIRONMENTAL REPORT – COMBINED LICENSE STAGE

R-COLA NON-STANDARD ERRATA
Rev. 4

COLA PART 3
APPLICANT'S ENVIRONMENTAL
REPORT – COMBINED LICENSE STAGE

Enclosure 1
AP1000 R-COLA Errata Report Rev. 4
Non-Standard Content Changes - COLA Part 3

Change No.	COLA Part	Chap.	Section / Page	Text, Table, or Figure Change	Reason for Change
BLN-0036	3	0	ACRONYMS	This errata revises a change provided in Enclosure 2 to TVA's letter dated July 2, 2008 [ML081850612] by intentionally omitting the change to add "ft2" or "ft3" to the list of ACRONYMS following the master table of contents for the ER.	Enclosure 2 provides the ER Section 7.4 changes associated with the rewritten transportation accidents section. The ER mark-up adds the abbreviations for square feet (ft2) and cubic feet (ft3) to the ER ACRONYM list and the UNITS OF MEASURE ABBREVIATIONS list. These two terms are units of measure, not abbreviations, so it is not appropriate to add them to the ACRONYM list.
BLN-0037	3	0	ACRONYMS / xii	Revise ER Units of Measure Abbreviations, Sheet 4 of 5, by capitalizing the abbreviation for metric ton uranium, "MTU."	To provide abbreviation that is consistent with regulatory usage.
BLN-0038	3	0	ACRONYMS / xxi	Replace notation for "PM2.5" with "PM-2.5" and "PM10" with "PM-10" in the List of Acronyms (pg. xxi). [NOTE: Change ID #356 makes corresponding text changes for PM-2.5, and #358 makes corresponding text changes for PM-10.]	Editorial change for consistency with terminology used by U.S. Environmental Protection Agency (EPA) and throughout this ER.
BLN-0040	3	1	1.1 / 1.1-2	Change Section 1.1, tenth paragraph, as follows: 1) Fifth sentence: Change FROM: "About 900 ac. ..." TO: "About 400 ac. ..." 2) Sixth sentence: Change FROM: "... approximately 700 ac. ..." TO: "... approximately 1200 ac. ..."	Text is corrected for consistency with information presented throughout the ER. The approximate "400 previously disturbed acres" used in the ER is based on information presented in the 1974 Bellefonte Nuclear Plant Final Environmental Statement (FES).
BLN-0041	3	2	2.00 / 2-xix	Fix hyperlink in LIST OF FIGURES for Figure 2.1-1.	The current hyperlink for Figure 2.1-1 in the List of Figures takes you to Figure 2.2-1. (NOTE: The hyperlink in the text in ER Section 2.1 works correctly.)
BLN-0042	3	2	2.2.1.2 / 2.2-2	Change the first sentence in the fourth paragraph Subsection 2.2.1.2, as follows. Change the described location of the Boy Scout Camp FROM: "approximately 4 mi. east of the " TO: "approximately 4 mi. south of the "	Provide a more accurate description of the camp location. The location of Camp Jackson Boy Scout Camp and Boat Ramp is depicted on ER Figure 2.3-X1, Bellefonte Nuclear Plant - Recreation Sites within a Six Mile Radius, which was provided as Attachment D to TVA's letter dated May 2, 2008 [ML081270657].
BLN-0043	3	2	2.3, Fig. 2.3-X1	This editorial change is applicable to new ER Figure 2.3-X1, which is added by TVA Letter dated May 2, 2008 [ML081270657]. Change title of Figure 2.3-X1. FROM: "Recreational Sites within a Six-Mile Radius" TO: "Recreational Sites within a 6-Mi. Radius of BLN."	Revised title is more descriptive, and is consistent with style guidance followed for the ER content.
BLN-0044	3	2	2.3, Figures 2.3-25, 2.5-7	Revise the placeholder sheets for Figure 2.3-25, which is withheld under 10 CFR 2.390, by using red text for the words "Part 9."	To align with standard editorial practice for the BLN ER uses red text for hyperlinks.
BLN-0045	3	2	2.3, Table 2.3-18 / 2.3-83	Change the heading for the third column in Table 2.3-18, FROM: "TRM Location" TO: "Inlet Location (TRM)"	As currently written, it is not clear what location is being addressed by the data in this column. This column is presenting the location of the tributary inlet to the Guntersville Reservoir (i.e., Tennessee River). A corresponding change is made in the note below the table (i.e., TRM location is changed to inlet location).
BLN-0046	3	2	2.3, Table 2.3-22 / 2.3-92 -- 2.3-93	Change the Hydraulic Gradient and Flow Velocity data in Table 2.3-22 (Sheets 1 and 2), as discussed below. Make the following changes to the data provided for Velocity (V), in ft/day and Travel Time (T), in days, Hydraulic conductivity (Kh), in cm/s, and porosity (n), as follows: Sheet 1 (BLN Unit 3 to Town Creek Embayment): 7/11/06: Change (V) FROM: "0.51" TO "1.20"; Change (T) FROM "3,154" TO "1335" 8/31/06: Change (V) FROM "0.95" TO "2.24"; Change (T) FROM "1,687" TO "714." 9/21/06: Change (V) FROM "1.05" TO "2.49"; Change (T) FROM "1,517" TO "642." 10/26/06: Change (V) FROM "1.20" TO "2.84"; Change (T) FROM "1,331" TO "563." 11/13/06: Change (V) FROM "1.23" TO "2.90"; Change (T) FROM "1,305" TO "552." 12/11/06: Change (V) FROM "0.92" TO "2.17"; Change (T) FROM "1,742" TO "737." 1/4/07: Change (V) FROM "1.29" TO "3.05"; Change (T) FROM "1,241" TO "525." 2/1/07: Change (V) FROM "1.40" TO "3.32"; Change (T) FROM "1,139" TO "482." 3/5/07: Change (V) FROM "1.40" TO "3.32"; Change (T) FROM "1139" TO "482." 4/17/07: Change (V) FROM "1.29" TO "3.05"; Change (T) FROM "1341" TO "525." 5/5/07: Change (V) FROM "1.05" TO "2.49"; Change (T) FROM "1517" TO "642." Change Hydraulic conductivity (Kh) FROM "3.95 x 10(-3)" TO "4.2 x 10(-3)" Change Porosity (n) FROM "0.04" TO "0.018"	Revised data is consistent with data calculated in response to issues identified during the BLN site hydrology audit. The revised data, and related FSAR changes are presented in TVA's letter from Jack A. Bailey (TVA) to NRC Document Control Desk, "Bellefonte Combined License Application – Items Identified in NRC Hydrology Related Site Visit Trip Report," dated July 23, 2008.

Enclosure 1
AP1000 R-COLA Errata Report Rev. 4
Non-Standard Content Changes - COLA Part 3

Change No.	COLA Part	Chap.	Section / Page	Text, Table, or Figure Change	Reason for Change
				<p>Sheet 2 (BLN Unit 4 to Town Creek Embayment):</p> <p>7/11/06: Change (V) FROM: "1.40" TO "3.31"; Change (T) FROM "1,853" TO "784."</p> <p>8/31/06: Change (V) FROM "1.60" TO "3.79"; Change (T) FROM "1,623" TO "687."</p> <p>9/21/06: Change (V) FROM "1.52" TO "3.58"; Change (T) FROM "1,715" TO "726."</p> <p>10/26/06: Change (V) FROM "1.75" TO "4.12"; Change (T) FROM "1,490" TO "631."</p> <p>11/13/06: Change (V) FROM "1.71" TO "4.04"; Change (T) FROM "1,519" TO "643."</p> <p>12/11/06: Change (V) FROM "1.49" TO "3.52"; Change (T) FROM "1,747" TO "740." 1/4/07: Change (V) FROM "1.88" TO "4.44"; Change (T) FROM "1,384" TO "586." 2/1/07: Change (V) FROM "1.71" TO "4.04"; Change (T) FROM "1,519" TO "643." 3/5/07: Change (V) FROM "1.75" TO "4.15"; Change (T) FROM "1,482" TO "627." 4/17/07: Change (V) FROM "1.71" TO "4.03"; Change (T) FROM "1,524" TO "645." 5/5/07: Change (V) FROM "1.47" TO "3.46"; Change (T) FROM "1,773" TO "750." Change Hydraulic conductivity (Kh) FROM "3.95 x 10(-3)" TO "4.2 x 10(-3)" Change Porosity (n) FROM "0.04" TO "0.018"</p>	
BLN-0047	3	2	2.3.1.5.3 / 2.3-23	<p>Revise the second paragraph of Subsection 2.3.1.5.3,</p> <p>FROM: "In and near the BLN site area, the principal water-bearing unit is the Mississippian-age Knox Dolomite, determined to be at approximately 1000 ft. below the ground surface beneath the BLN (FSAR Figures 2.5-230 and 2.5-231). The nearest outcrop of the Knox Dolomite is approximately 3200 ft. northwest of the BLN site, dipping to the southeast at approximately 15 degrees. The Ordovician-age ..."</p> <p>TO: "In and near the BLN site area, the principal water-bearing unit formations are the Knox Dolomite of Cambrian and Ordovician age, and the Fort Payne Chert of Mississippian age. The southeastern edge of an outcrop belt of the Knox Dolomite is located approximately 3200 ft. northwest of the BLN site. The Knox dips to the southeast and is at a depth of approximately 1000 ft. below ground surface at the location of Units 3 and 4 (FSAR Figures 2.5-230 and 2.5-231). The northwestern edge of an outcrop belt of Fort Payne Chert is located about 3000 ft. southeast of the plant site along River Ridge. The Fort Payne Chert dips away from the plant site with the majority of the outcrop area below the level of Guntersville Reservoir. The Ordovician-age ..."</p>	To clarify information related to water-bearing formations in the Knox Dolomite of Cambrian and Ordovician age. This ER text change enhances consistency between the regional hydrogeology description in the ER and the information provided in FSAR Subsection 2.4.12.1.2.

Enclosure 1
AP1000 R-COLA Errata Report Rev. 4
Non-Standard Content Changes - COLA Part 3

Change No.	COLA Part	Chap.	Section / Page	Text, Table, or Figure Change	Reason for Change
BLN-0048	3	2	2.3.1.5.6 / 2.3-29	<p>Change the following text, beginning with the fourth through sixth paragraphs:</p> <p>Fourth Paragraph - Change FROM: "Porosity of the upper portion of the Stones River Group Formation Limestone is reported as 0.04 and hydraulic conductivity of 3.95 x 10-3 cm/s was measured from pump testing of groundwater monitoring well MW-1217b in September 2006. The hydraulic conductivity measured in MW-1217b is the highest measured to date at the BLN." TO: Porosity of the upper portion of the Stones River Group Formation Limestone is reported as 0.018 from evaluation of voids in the upper 20 ft. of bedrock during the 2006 pre-COL application field investigation. The highest hydraulic conductivity reported during the 2006 pre-COL application field investigation was 4.2 x 10-3 cm/s, measured from packer testing on boring B-1046. The hydraulic conductivity measured in B-1046 is the highest measured to date at the BLN.</p> <p>Fifth paragraph - Add new first sentence: "Aquifer pump testing was also performed to determine aquifer hydraulic conductivity." Add new sentence to end of paragraph: "The aquifer pump test reported a highest hydraulic conductivity value of 3.95 x 10-3 cm/s for the associated observation well OW-12." Add new paragraph between current fifth and sixth paragraphs, as follows: "For the purpose of characterizing groundwater movement and transport, groundwater flow is assumed to be concentrated in a single, straight-line fracture with the highest hydraulic conductivity measured to date. A straight line flow path is considered the most conservative as the actual groundwater pathways would be much more tortuous, transport times would be much longer, and hydraulic conductivities (Kh) of the fractures/joints are expected to be lower." Sixth paragraph - fifth and sixth sentences: FROM: "... Town Creek embayment is 1547 days (approximately 4.2 years). The average groundwater travel time from Unit 4 to the intake channel is 1603 days (4.4 years). However, the hydraulic potential for groundwater flow from the area of Unit 4 to the intake channel ..." TO: "... Town Creek embayment is 655 days (approximately 1.8 years). The average groundwater travel time from Unit 4 to the intake channel is 678 days (approximately 1.9 years); however, the hydraulic potential for groundwater flow from the area of Unit 4 towards the intake channel ..."</p>	<p>The text provided in this COLA Change is consistent with TVA's response to issues identified during the BLN Site Hydrology Audit, which were addressed in TVA's letter dated July 23, 2008. Reference: Letter from Jack A. Bailey (TVA) to NRC Document Control Desk, "Bellefonte Combined License Application – Items Identified in NRC Hydrology Related Site Visit Trip Report," dated July 23, 2008.</p>
BLN-0049	3	2	2.3.2.2 / 2.3-32	<p>Change the sixth paragraph Subsection 2.3.2.2, as follows. 1) In the first sentence, replace "1721 Mgd" with "9400 million gallons per year," and 2) Revise the percentages in the second sentence, and change the source reference, FROM: "Approximately 67percent of this annual withdrawal is for agricultural (irrigation) uses, 30 percent for industrial uses, and the remainder is for domestic use (Reference 2)." TO: "Approximately 87 percent of this annual withdrawal is for agricultural (irrigation) uses, 8 percent for industrial uses, and 5 percent for domestic use (Reference 12)."</p>	<p>This change accurately describes the Tennessee River Basin withdrawals for the portion of the watershed within Alabama for domestic, industrial, and agricultural uses as provided in the Tennessee River Clean Water Partnership Management Plan, 2003, Section 1.2.3. The source reference change reflects the use of this document for Tennessee River Basin withdrawals within the Alabama.</p>
BLN-0050	3	2	2.3.2.4 / 2.3-35	<p>Revise the first sentence in the third paragraph of Subsection 2.3.2.4, by replacing the median daily groundwater use value from 239 Mgd to 245 Mgd, and changing the reference citation from Reference 2 to Reference 9, as follows. "The median daily use of groundwater in the Tennessee River Basin watershed over the last 35 years is 245 Mgd, and the range is 170 – 305 Mgd (Reference 9)."</p>	<p>The correct value for median daily use of groundwater in the Tennessee River Basin watershed over the last 35 years, is based on information provided in Reference 9, Tennessee Valley Water Supply Inventory & Needs Analysis, pg. 2-8.</p>
BLN-0051	3	2	2.4.2.5.2/ 2.4-22	<p>Revise the last line in the second paragraph of Subsection 2.4.2.5.2, FROM: "... County, but they have not been identified near the BLN site." TO: "... County, but they have not been identified on, or adjacent to, the BLN site."</p>	<p>The phrase "near the BLN site" is ambiguous, due to the undefined term, "near." By replacing this with the phrase, "on, or adjacent to, the BLN site," this change minimizes ambiguity and enhances clarity.</p>
BLN-0052	3	2	2.5 / Figure 2.5-8	<p>Change ER Section 2.5, by replacing Figure 2.5-8, Rev. 0, with revised Figure 2.5-8, Rev. 1, which was provided as Attachment 2.5.3-2D to a TVA letter dated August 1, 2008 [ML082190840].</p>	<p>The response to RAI 2.5.3-2 in TVA's August 1, 2008, letter included the following statement, "ER Figure 2.5-8 is updated to reflect the results of the 2008 historic resources survey and is provided as Attachment 2.5.3-2D." However, specific directions to replace Figure 2.5-8, Rev. 0, with Figure 2.5-8, Rev. 1, were not provided in the "Associated BLN COL Application Text Change" section for this RAI response.</p>

Enclosure 1
AP1000 R-COLA Errata Report Rev. 4
Non-Standard Content Changes - COLA Part 3

Change No.	COLA Part	Chap.	Section / Page	Text, Table, or Figure Change	Reason for Change
BLN-0053	3	2	2.5.2.7.1 / 2.5-15	Change Subsection 2.5.2.7.1, first paragraph, fourth sentence, FROM: "The Scottsboro Municipal Water System currently uses approximately 20 percent of their normal utilization condition capacity." TO: "During peak operating times, the Scottsboro Municipal Water System currently uses approximately 75 percent of its normal utilization condition capacity."	Correction of municipal water system usage is based on updated information provided by the Waterworld, LLC Manager in Scottsboro, AL. It is noted that a corresponding change was previously presented for ER Subsection 4.4.2.3 in TVA's letter dated July 3, 2008 [ML081900451], in response to NRC Information Needs SE-09 and SE-31.
BLN-0054	3	2	2.5.3.2 / 2.5-21	In the last paragraph, second sentence, August 11 is changed to August 28.	The correct date on the additional letters to the North American tribal historic preservation officer (THPO) is August 28.
BLN-0055	3	2	2.5.6 / 2.5-40	This change revises the Reference Numbers only for three new references that were added by TVA's letter dated August 1, 2008 [ML082190840], in response to RAI 2.5.3-2. The reference numbers changes are as follows: Ref. 149 is changed to 138; Ref. 150 is changed to 147; Ref. 151 is changed to 148. Corresponding changes are also made to the new text in ER Subsections 2.5.3.1, 2.5.3.2, and 2.5.3.6.	These changes are made to eliminate the need for "unused" reference numbers 138, 147, and 148, which had been reserved for other references that were subsequently determined to be unnecessary. This change conforms with the format and content guidelines used for the BLN COLA.
BLN-0056	3	2	2.7, Table 2.7-117 / 2.7-178	Change ER Table 2.7-117 by replacing the data with the exact same data as in FSAR Table 2.3-318. Revise title of ER Table 2.7-117 by replacing "INNER 550 FT RADIUS" with "INNER 160 M (525 FT.) RADIUS." Add footnote 2 to this table stating, "The minimum distance is based on the shortest distance from the 160 m (525 ft.) effluent release boundary to the EAB within a 45[degree] sector centered on each compass direction." Footnote 2 is the same as Note 2 to FSAR Figure 2.3-318, with the addition of the "160 m (525 ft.)" conversion.	ER Table 2.7-117 erroneously contained data based on the use of a 550 ft. effluent release boundary. FSAR Table 2.3-318 contains the correct information; consequently, this information is being copied into ER Table 2.7-117.
BLN-0057	3	2	2.7, Table 2.7-126 / 2.7-196	Revise Table 2.7-126 by: (1) changing the units in the table headings from "(deg°F)" to "(°F)"; (2) changing the units for Dew Point Diurnal Range from "(delta T degF)" to "(delta-T, °F)"; and (3) adding zeros to temperatures in the table to provide consistent significant digits.	(1) The term "deg°F" is redundant and nonsensical. (2) For consistency, the degree sign (°) is used in the units for Dew Point Diurnal Range. The addition of a hyphen in the term delta-T is an editorial correction. (3) The addition of zeros to the right of the decimal point provides consistent significant digits within each column.
BLN-0058	3	2	2.7.1.1 / 2.7-2	Relocate the heading "Air Quality" to precede the paragraph beginning with the text, "Relative potential for air pollution ..."	The preceding paragraph discusses precipitation in the BLN area, and should have been included under the "General Climate" heading.
BLN-0059	3	2	2.7.1.3 / 2.7-7	Replace notation for "PM10" with "PM-10" in Subsections 2.7.1.3 (Page 2.7-7). [NOTE: Change ID #356 makes similar changes for PM-2.5, and #1096 makes changes to list of ACRONYMS on Page xxi.]	Editorial change for consistency with terminology used by U.S. Environmental Protection Agency (EPA) and throughout this ER.
BLN-0060	3	2	2.7.1.3 / 2.7-7	Replace notations for "PM 2.5" with "PM-2.5" in ER Subsection 2.7.1.3 (two occurrences on Page 2.7-7). [NOTE: Change ID #1095 makes similar changes for PM-10, and #1096 makes changes to list of ACRONYMS on Page xxi.]	Editorial change for consistency throughout the ER and consistency with EPA terminology.
BLN-0061	3	3	3.3.1.5 / 3.3-3	Change the last sentence in Subsection 3.3.1.5 FROM: "RWS clarifier and is estimated to be 650 gpm." TO: "granular media filter and is estimated to be 625 gpm."	These changes are provided to accurately reflect the system design and provide consistency with the remainder of the ER. This change is consistent with the Water Balance Summary provided as Figure 3.3-1.
BLN-0062	3	3	3.4.1.1 / 3.4-2	Change the first paragraph of Subsection 3.4.1.1, under Circulating Water System, FROM: " capacity vertical turbine pumps, ..." TO: " capacity, electric motor-driven, mixed-flow pumps, ..."	These changes are made to correct CWS pump type data, as described in the cooling tower conceptual design report. This change does not impact the analyses or evaluations in the BLN ER.
BLN-0063	3	3	3.4.2.3 / 3.4-7	Revise the third sentence in the first paragraph of Subsection 3.4.2.3 on page 3.4-7, FROM: "The natural draft cooling tower is a concrete tower that is 477 ft. high and has a basin with a diameter of 418 ft." TO: "The natural draft cooling tower is a concrete tower that is 474 ft. high and has a basin with a diameter of 412 ft." (NOTE: This change is consistent with COLA Change No. 1209, which changes the stated NDCT height in Subsection 4.4.1.4 from 477 ft. to 474 ft.)	These changes are made to correct cooling tower dimensions as noted in the Circulating Water System Conceptual Design Report. These changes do not affect the evaluations or conclusions presented in the ER.
BLN-0064	3	3	3.7, Figure 3.7-1	Revise the placeholder sheets for Figure 3.7-1, which are withheld under 10 CFR 2.390, by using red text for the words "Part 9."	To align with standard editorial practice for the BLN ER uses red text for hyperlinks.
BLN-0065	3	3	3.8, Table 3.8-8	The following change is made to new Table 3.8-8, which was provided in TVA's letter dated July 2, 2008 [ML081850612]. Add a citation to Footnote (a) immediately following the title for Table 3.8-8 (i.e., superscript (a) following the last word in the title name).	Footnote (a) was included with the ER Section 3.8 changes, but it was not called out in the table. Because this footnote applies to the entire table, it is appropriate to add the citation immediately after the table's title.
BLN-0135	3	3	3.8.3 / 3.8-10	Change Reference 5 by adding "Volume 1" between "NUREG-1437" and "May 1996." Replace Reference 12 (US Department of Energy, DOE/EIS-0250, Yucca Mountain EIS) with NUREG-1437, Supplement 1, May 1996.	This changes a reference that was provided in TVA's letter dated July 2, 2008, "Response to NRC Information Need related to Transportation," [ML081850612]. The statement that discusses the Yucca Mountain EIS, but was taken from NUREG-1437, Supplement 1.
BLN-0137	3	4	4.00, List of Tables / 4-v	In the List of Figures for Chapter 4, change the title of Figure 4.4-2 FROM "Project Construction Staffing by Discipline," TO "BLN Construction Staffing by Craft."	The revised figure was provided with this title. The title change does not affect the information provided in this figure.

Enclosure 1
AP1000 R-COLA Errata Report Rev. 4
Non-Standard Content Changes - COLA Part 3

Change No.	COLA Part	Chap.	Section / Page	Text, Table, or Figure Change	Reason for Change
BLN-0066	3	4	4.2.1.6 / 4.2-6	Change Subsection 4.2.1.6, under the heading for Potential Construction Impacts, as follows: 1) Fourth sentence: Change FROM: "Impacts in vegetated or forested areas ..." TO: "Impacts in these vegetated or forested areas ..." 2) Add the following sentences at the end of the paragraph: "However, approximately 11 ac. of forested wetlands are situated within the new reactor footprint. Impacts to wetlands within the construction area are considered to be MODERATE and mitigation is expected."	Text is added to clarify the impacts to wetlands and address the difference between the impacts described in Subsection 4.4.1.4 and those in this subsection. These changes provide the text clarification identified during the COLA sufficiency review period.
BLN-0067	3	4	4.3.2 / 4.3-7	Change Subsection 4.3.2, fifth (last) paragraph, third sentence, by adding a citation for Reference 7 at the end of the sentence. The revised sentence will end with, "... to preserve bank integrity (Reference 7)."	This sentence provides examples of best management practices (BMPs) that are employed along the transmission lines. Reference 7 is TVA's guide for these BMPs that are followed for TVA's Transmission Construction and Maintenance Activities, and is the appropriate reference for this statement.
BLN-0068	3	4	4.3.2.6 / 4.3-9	Change the fifth sentence in the second paragraph, Subsection 4.3.2.6, as follows. Change the described distance of Riversnail relative to BLN site, FROM: " occur within 19 mi. of the BLN site " TO: " occur within 10 mi. of the BLN site "	The Sensitive Area Review (SAR) desktop review performed for the BLN site in April 2006 found that no Federally-listed aquatic animal species were known to exist within ten miles of the BLN site. As a result of an apparent typographical error, this statement was entered into the BLN ER by stating that no riversnails exist within 19 mi. of the site. This change corrects this typographical error.
BLN-0069	3	4	4.4.1.4 / 4.4-3	Change the natural draft cooling tower (NDCT) height in Subsection 4.4.1.4, second paragraph, first sentence, FROM: "... 477 feet (ft.) in height." TO: "... 474 feet (ft.) in height." (NOTE: This is consistent with COLA Change No. 410, which changed the NDCT height in Subsection 3.4.2.3.)	This change is made to correct the cooling tower height as noted in the Circulating Water System Conceptual Design Report. This change does not affect the evaluations or conclusions presented in the ER.
BLN-0070	3	4	4.4.1.6 / 4.4-6	Replace notation for "PM10" with "PM-10" in Subsection 4.4.1.6 (page 4.4-6). [NOTE: Change ID #356 makes similar changes for PM-2.5, and #1096 makes changes to list of ACRONYMS on Page xxi.]	Editorial change for consistency with terminology used by U.S. Environmental Protection Agency (EPA) and throughout this ER.
BLN-0071	3	4	4.4.2.5 / 4.4-12	Change the new text for Subsection 4.4.2.5, presented in TVA's August 11, 2008 letter that presented responses to RAIs on Socioeconomics/Environmental Justice, by changing the reference citation at the end of the third sentence in the eighth paragraph FROM: "(Reference 21)" TO: "(Reference 1)." [NOTE: This change conforms with the reference number change made by COLA Change #1215.]	COLA Change No. 1205 changes the number for ER Section 4.4.4, new Reference 22 to Reference 1. The reference citation that is being changed by this COLA change was erroneously identified as Reference 21, but should have been Reference 22, which is now Reference 1 in Section 4.4.
BLN-0072	3	4	4.4.4 / 4.4-15	Replace current Reference 1 in ER Subsection 4.4.4, with Reference 22, which was presented in TVA's response to RAIs 4.4.2-7 and 4.4.2-8 in the letter dated August 11, 2008, SUBJECT: Bellefonte Combined License Application - Response to Environmental Report Request for Additional Information - Socioeconomics/ Environmental Justice. By this change, the National Center for Education Statistics' (NCES') 1999 Statistical Analysis Report on the Condition of America's Public School Facilities becomes Reference 1.	Changes made to ER Section 4.4 make the existing Reference 1 unnecessary, as it is no longer cited in this section. Therefore, the new Reference 22 is changed to Reference 1 to fill the void created by deleting the existing Reference 1. This is consistent with format and content guidance applicable to the BLN COLA.
BLN-0139	3	4	4.5, Table 4.5-1 / 4.5-4	Change ER Table 4.5-1, Construction Worker X/Q and D/Q Values, by adding data for "X/Q, 2.26 Day Decay Undepleted," and "X/Q, 8.00 Day Decay Depleted."	The addition of this data is consistent with a change provided in response to "safety" RAI 1101, RAI #12.3-12.4-04 in RAI Lett104. This change provides a complete table of X/Q and D/Q values that are used in the evaluation of the construction worker.
BLN-0073	3	4	4.8 / n/a	Change new Section 4.8, third sentence in the fifth paragraph, description of Construction Area method of impact separation by replacing BLN 1 and BLN 2, with BLN 3 and BLN 4, as follows. FROM: "Of these developed areas, approximately 50 ac. are expected to be developed for safety-related SSCs (25 ac. each for BLN 1 and BLN 2)." TO: "Of these developed areas, approximately 50 ac. are expected to be developed for safety-related SSCs (25 ac. each for BLN 3 and BLN 4)."	This is an editorial correction. The power blocks that form the basis for this separation ratio are those for the proposed new nuclear units, BLN 3 and 4.
BLN-0136	3	4	4.8, Table 4.8-1 / 4.8-5	In Table 4.8-1, change the last sentence of the "Basis for Estimate" for ER Subsection 4.4.1, by replacing "35%" with "40%", "<5%" with "10%", and "as 20%" with "as 25%."	This change corrects an edit from an earlier estimate that was based on lower construction percentages. The new, changed values are consistent with the average (25%) presented in the Construction column.
BLN-0074	3	5	5.2.2.1.2 / 5.2-6	Change the first sentence in the second paragraph of Subsection 5.2.2.1.2, by adding "which includes the Chickamauga Limestone" at the end of the parenthetical phrase, as follows: "(a poor water-bearing unit in the area of the BLN, which includes the Chickamauga Limestone)"	This phrase is added to further clarify the locations of the underlying aquifers.

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BLN-0075	3	5	5.2.2.5 / 5.2-9	Revise the fourth and fifth sentences in the first paragraph, Subsection 5.2.2.5. FROM: "Total consumptive use is projected to increase from 331 to 980 Mgd or about 51 percent (Reference 7). Per-capita use is estimated as approximately 2000 gpd in 2030, ..." TO: "Total consumptive use is projected to increase from 649 to 980 Mgd or about 51 percent (Reference 7). Per-capita use is estimated as approximately 2370 gpd in 2030, ..."	1) The basis document for the first change (Ref. 7, Tennessee Valley Water Supply and Inventory Needs Analysis), indicates the initial total consumptive water use is 649 Mgd. This was mistated by using the change in consumptive water use (331 Mgd), rather than the initial value. 2) The basis document for the second change (Ref. 8, USGS, Estimated Use of Water in the Tennessee River Watershed in 2000 and Projections of Water Use to 2030) projects the per-capita use in 2030 as 2370 gpd. This was misstated as 2000 gpd in 2030.
BLN-0076	3	5	5.3, Table 5.3-3 / 5.3-21	Change the value provided for "Air mass flow rate per tower" in Table 5.3-3. FROM: "34,646 lb/s" TO: "34, 650 lb/s."	Air mass flow rate is rounded for consistency with Exit Air Flow value presented for NDCT in text / table in Subsection 5.3.3.1, near bottom of current (Rev. 0) page 5.3-10.
BLN-0077	3	5	5.3.1.1.2 / 5.3-3	The fifth sentence refers to Figure 3.4-3. This reference is changed to Figure 3.4-2.	The intake channel described in this sentence is depicted in Figure 3.4-2, not Figure 3.4-3.
BLN-0078	3	5	5.3.2.1 / 5.3-7	Revise the second sentence in the next-to-last paragraph in Subsection 5.3.2.1, FROM, "... the greatest temperature difference (delta-T) of 56°F exists between the river water at 40°F..." TO, "... the greatest temperature difference (delta-T) of approximately 56°F exists between the river water at 39.2°F ..."	This sentence addresses conditions that were used in the CORMIX evaluations, in which the ambient water temperature is 39.2°F, and the discharge temperature is 95°F. The temperature difference (95°F - 39.2°F) is 45.8°F, approximately 46°F. This change is in conformance with the CORMIX results presented in TVA's letter dated August 22, 2008, SUBJECT: Bellefonte Combined License Application - Response to Environmental Report Request For Additional Information - CORMIX - Related Hydrology Information.
BLN-0079	3	5	5.3.3.1 / 5.3-10	Revise the BLN NDCT Value for "Heat Rejection Rate" in the parameter list at the end of Subsection 5.3.3.1, FROM, "7660 MBtu/hr per tower (actual 7630 MBtu/hr)." TO, "7660 MBtu/hr per tower (actual 7540 MBtu/hr)."	TVA's calculation of the cooling tower plume characteristics states that the actual heat rejection rate is 7630 MBtu/hr, and that the higher value is used in the calculation (7660 MBtu/hr) because it is more conservative to use the higher value, and it does not have a significant impact on the calculation results.
BLN-0080	3	5	5.3.4.1 / 5.3-15	Change Subsection 5.3.4.1, first paragraph, third sentence, by adding "Reservoir" after "Guntersville" at the end of the sentence, so it reads, "In 2006, no state swimming advisories were issued for the Guntersville Reservoir."	Editorial correction to add missing word.
BLN-0081	3	5	5.4 / 5.4-1	Add the following text as the second paragraph in Section 5.4: "Consuming vegetables irrigated by public drinking water contributes less than 10 percent to the overall total body dose due to routine liquid effluents and is negligible compared to the doses due to routine gaseous effluents; therefore, this pathway is not included in the liquid doses due to routine liquid effluents."	This ER change is consistent with a change to FSAR Chapter 11, Subsection 11.2.3.5, that was provided in response to FSAR RAI 421.
BLN-0082	3	5	5.4, Table 5.4-1 / 5.4-9	Change the next-to-last parameter FROM: "Downstream Distance Use to Determine Dilution Factor for Shoreline Activities (mi.)" TO: "Downstream Distance used to Determine Dilution Factor for Shoreline Activities (mi.)"	Corrects an editorial error by replacing the word "Use" with "used."
BLN-0083	3	5	5.4, Table 5.4-16 / 5.4-25	Make the following change to Table 5.4-16, which is revised by the response to RAI 5.4.1-1: Add a subscripted "(d)" at the end of the title, as follows, "DOSE TO BIOTA FROM LIQUID AND GASEOUS EFFLUENTS(d)."	The revised table included Footnote (d), but did not identify where this general footnote should be called out. It applies to the entire table; consequently, it is applied to the table title.
BLN-0084	3	5	5.4, Table 5.4-6 / 5.4-14	Make the following change to Table 5.4-6, which is revised by the response to RAI 5.4.1-1: Add a subscripted "(g)" at the end of the title, as follows, "GASPAR INPUT DATA(g)."	The revised table included Footnote (g), but did not identify where this general footnote should be called out. It applies to the entire table; consequently, it is applied to the table title.
BLN-0085	3	5	5.4.3.3 / 5.4-5	Revise the first sentence in the third paragraph of Subsection 5.4.3.3, FROM: "The whole body dose to individuals living in the site region from existing radiation sources (background radiation) is expected to average about 340 mrem/yr." TO: "In the United States, the average person is exposed to an effective dose equivalent of approximately 360 millirems (mrem) (whole-body exposure) per year from all sources (Reference 3)." (NOTE: The reference for this information is added to the Section 5.4 references by COLA Change No. 1217.) Also, add a reference to the following publication: "U.S. Environmental Protection Agency, Ionizing Radiation Fact Sheets Series: No. 2, (from NCRP Report No. 93), Website, http://www.epa.gov/radiation/docs/ionize/402-f-98-010.htm , accessed May 21, 2007."	This change provides updated information based on a recent National Council on Radiation Protection (NCRP) publication on that provides objective data on background radiation.

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BLN-0086	3	5	5.4.5 / 5.4-8	Add a new Reference 3 to the list of references for ER Section 5.4, as follows: "3. U.S. Environmental Protection Agency, Ionizing Radiation Fact Sheets Series: No. 2, (from NCRP Report No. 93), Website, http://www.epa.gov/radiation/docs/ionize/402-f-98-010.htm , accessed May 21, 2007." (NOTE: The citation for this new reference is added to Subsection 5.4.3.3 by COLA Change No. 422.)	This change provides updated information based on a recent National Council on Radiation Protection (NCRP) publication that provides objective data on background radiation.
BLN-0087	3	5	5.5.1 / 5.5-2	Change the parenthetical text near the end of the 4th paragraph in Subsection 5.5.1, FROM: "... (see Chapter 9 of NUREG-1473)" TO: "... see Chapter 9 of NUREG-1437"	Editorial correction to appropriately refer to the commonly cited GEIS for License Renewal of Nuclear Power Plants.
BLN-0088	3	5	5.5.1.1.1 / 5.5-3	Change Subsection 5.5.1.1.1, 4th sentence FROM: "... permit takes biocide and chlorine concentrations in to account ..." TO: "... permit takes biocide and chlorine concentrations into account ..."	Editorial correction combines the words "in" and "to" as a single word, "into."
BLN-0090	3	5	5.5.1.1.3 / 5.5-4	Change the new text that is added to Subsection 5.5.1.1.3 by adding the word "be" between "will" and "routed" in the new third sentence in the second paragraph. This new text is added in response to NRC Information Need H-50 in TVA's letter dated June 12, 2008 [ML081680428].	This change corrects a minor editorial error.
BLN-0091	3	5	5.7 / 5.7-3	Revise the definition for the abbreviation "RRY" FROM: "reactor reference year" TO: "reference reactor year." This change is made in the ACRONYM list on page xxii and in the first full paragraph on page 5.7-3. The revised sentence reads, "This is referred to here as a "reference reactor year" (RRY).	This change is for consistency with regulatory terminology (e.g., 10 CFR 51.51, Table S-3), and consistency throughout the ER (e.g., ER Table 5.7-2).
BLN-0092	3	5	5.7.10 / 5.7-9	Correct the listing for Reference 12 to read: "U.S. Public Law 107-200 – July 23, 2002, 116 STAT. 735, Joint Resolution Approving Yucca Mountain Repository, available at Office of Civilian Radioactive Waste Management (OCRWM) website, http://www.ocrwm.doe.gov/about/pm/pdf/f_publ200_107.pdf , accessed September 2008."	The current listing does not indicate that the reference document is a public law; it only states where the document can be obtained (OCRWM website). This change also provides the correct/direct URL to obtain the reference.
BLN-0093	3	5	5.8.2.2.1 / 5.8-7	Change the third sentence in the second paragraph of Subsection 5.8.2.2.1 FROM: "Alabama distributes 75 percent of the ..." TO: "Alabama distributes 78 percent of the ..."	The TVA response to RAI 2.5.2-3 and 4.4.2.2.1 in TVA's letter dated August 11, 2008, SUBJECT: Bellefonte Combined License Application - Response to Environmental Report Request for Additional Information - Socioeconomic/ Environmental Justice, changed the distribution of TVA tax-equivalent payments in ER Subsection 2.5.2.3 to 78 percent. This change, which is in agreement with subsections 4.4.2.2.1 and 10.4.1.1.1, is based on the Code of Alabama, Section 40-28-2, for FY 2005-2006 and each fiscal year thereafter.
BLN-0094	3	5	5.8.2.3.3 / 5.8-10	This change revises the Reference Number only for a new reference that was added by TVA's letter dated August 11, 2008, SUBJECT: Bellefonte Combined License Application - Response to Environmental Report Request for Additional Information - Socioeconomic/ Environmental Justice, in response to RAIs 4.4.2-7 and 4.4.2-8. Change the first sentence of the second paragraph in the revised Subsection 5.8.2.3.3, FROM: "... ages of 5 and 18 (Reference 6)." TO: "... ages of 5 and 18 (Reference 19)." (NOTE: A corresponding change (COLA Change #1198) is also made to the list of references in Subsection 5.8.4.)	This change is made to eliminate the need for "unused" reference number 20, which had been reserved for another reference that was subsequently determined to be unnecessary. This change conforms with the format and content guidelines used for the BLN COLA.
BLN-0095	3	5	5.8.4 / 5.8-14	This change revises the Reference Number only for a new reference that was added by TVA's letter dated August 11, 2008, SUBJECT: Bellefonte Combined License Application - Response to Environmental Report Request for Additional Information - Socioeconomic/ Environmental Justice, in response to RAIs 4.4.2-7 and 4.4.2-8. The reference number change is as follows: Ref. 20 is changed to 19. (NOTE: A corresponding change (COLA Change No. 1208) is also made to the new text in ER Subsection 5.8.2.3.3.)	This change is made to eliminate the need for "unused" reference number 20, which had been reserved for another reference that was subsequently determined to be unnecessary. This change conforms with the format and content guidelines used for the BLN COLA.
BLN-0096	3	6	6.1.2 / 6/1-2	Change Subsection 6.1.2, first paragraph, second sentence, FROM: "... using CORMIX Version 4.3 ..." TO: "... using CORMIX Version 5.0 ..."	CORMIX Version 5.0 was used in for modeling the anticipated thermal effects of the cooling system discharges, in response to RAIs 5.2-5, 5.3-3(2), 5.3-3(3), 5.3-5, and 5.3-8 in TVA's letter that provided responses to Environmental Report Requests for Additional Information on CORMIX-Related Hydrology Information, dated August 22, 2008.

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BLN-0097	3	7	7.3.2 / 7.3-3	Revise ER Subsection 7.3.2, by adding the following text to the end of the last paragraph: "Pursuant to 10 CFR 51.55(b), it was confirmed that the design changes that are incorporated into the referenced DCD, as defined in Section 1.1, did not change the SAMA screening or evaluation results or conclusions. Specifically, the severe accident mitigation design alternatives assessed as being rejected for the certified AP1000 design, as documented in DCD Revision 15 Appendix 1B, have not become cost-beneficial for the BLN site. Nor have any new severe accident mitigation design alternatives been identified for the BLN site."	This change summarizes the results of the assessment that was performed prior to submittal of the BLN COLA to demonstrate the applicability of the AP1000 PRA to the Bellefonte site, as discussed in FSAR 19.59.10.5.
BLN-0098	3	7	7.3.3 / 7.3-4	Change ER Subsection 7.3.3 by changing the last sentence, FROM: At that time, appropriate administrative controls on plant operations would be incorporated into the plant's management systems as part of its baseline. TO: At that time, risk insights will be considered in the development of plant procedures and training.	This change provides more explicit text regarding the use of risk insights in the development of plant procedures and development.
BLN-0099	3	7	7.3.3 / 7.3-4	Change the last sentence in Subsection 7.3.3, FROM: "At that time, appropriate administrative controls on plant operations would be incorporated into the plant's management systems as part of its baseline." TO: "At that time, risk insights will be considered in the development of plant procedures and training."	This change is based on TVA's intention to utilize the information obtained from the SAMDA analysis, and the plant's risk insights, to assist in the development of administrative processes (i.e., procedures and training).
BLN-0100	3	7	7.4 / n/a	The following changes are made to the ER Section 7.4 changes that were provided in TVA's letter dated July 2, 2008 (ML081850612): 1) Delete Reference 7, and renumber current References 8 and 9 accordingly (i.e., Ref. 8 becomes Ref. 7; Ref. 9 becomes Ref. 8), and 2) Table 7.4-3: Add the citation for Footnote (a) as a superscript after the title of this table.	1) Reference 7 is the same document as Reference 6. 2) Footnote (a) is provided after the table, but is not cited in the table. It applies to the entire table, so it is appropriate to include after the title.
BLN-0101	3	8	8 - LIST OF FIGURES / 8-v	Correct the titles of Figures 8.4-9, 8.4-10, and 8.4-11, in the Chapter 8 List of Figures, as follows: Figure 8.1-2: Delete "the" before "TVA" Figure 8.2-12: Delete "the" before "TVA" Figure 8.4-9: "Reduction in SO2 Emissions due to BLN Unit 3 (2018) and BLN Unit 4 (2019)" Figure 8.4-10: "Percent Reduction in TVA SO2 Emissions due to BLN Unit 3 (2018) and BLN Unit 4 (2019)" Figure 8.4-11: Delete "the" before "TVA" (NOTE: The "2" in SO2 is subscript in titles for Figures 8.4-9 and 8.4-10.)	This change provides the correct titles in the List of Figures to be consistent with the titles on Figures 8.4-9 and 8.4-10. It also correct a minor discrepancy (remove the word "the") in titles of Figures 8.1-2, 8.2-12, and 8.4-11 to be consistent with the titles on the figures.
BLN-0102	3	8	8.2, Figures 8.2-4a, 8.2-14 through 8.2-18	Change the placeholder sheets for Figures 8.2-4a and 8.2-14 through 8.2-18, which are withheld und10 CFR 2.390, by using red text for the words "Part 9."	To align with standard editorial practice, the BLN ER uses red text for hyperlinks.
BLN-0104	3	8	8.3, Figures 8.3-1 through 8.3-3	Change the placeholder sheets for Figures 8.3-1 through 8.3-3, which are withheld und10 CFR 2.390, by using red text for the words "Part 9."	To align with standard editorial practice, the BLN ER uses red text for hyperlinks.
BLN-0103	3	8	8.4 / Figures 8.4-1 through 8.4-8	Change the placeholder sheets for Figures 8.4-1 through 8.4-8, which are withheld und10 CFR 2.390, by using red text for the words "Part 9."	To align with standard editorial practice, the BLN ER uses red text for hyperlinks.
BLN-0105	3	9	9.2 / Table 9.2-6	Under the Nuclear heading for Socioeconomic Impacts - Change from "SMALL (Adverse) to LARGE (Beneficial)" to "SMALL to LARGE (Adverse) to LARGE (Beneficial)"	This change is made for conformance with impact analyses in other ER Sections.
BLN-0106	3	9	9.2, Table 9.2-2 / 9.2-41	Change Table 9.2-2 by deleting the word "NATURAL." The changed title reads, "Air Emissions from the 2120 MW Coal-Fired Alternative."	This is an editorial correction. The word "natural" is superfluous and is not used throughout the energy alternatives discussion in ER Section 9.2.
BLN-0107	3	9	9.2, Table 9.2-2 / 9.2-41	Revise Table 9.2-2, for the Annual Coal Consumption calculation, delete the redundant conversion factor at the end of the calculation "8760 hr per year."	To correct typo associated with Annual Coal Consumption calculation.
BLN-0108	3	9	9.2, Table 9.2-3 / 9.2-42	Table 9.2-3, Insert Characteristic for Uncontrolled SOx emissions into table between data for NOx and CO uncontrolled emission, as follows, "Uncontrolled SOx emissions = 38lb/T." Insert the Basis associated with the Uncontrolled SOx emissions insert, as follows, "Typical for pulverized coal, tangentially fired, dry bottom, NSPS (adjust for fuel sulfur content)."	Added uncontrolled SOx emissions for consistency with other emission data provided for the coal-fired alternative.

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BLN-0109	3	9	9.2, Table 9.2-4 / 9.2-44	Change Table 9.2-4 to reflect natural gas gross heating value of 1025 Btu/cf, as provided in U.S. Department of Agriculture (USDA) TechLine Fuel Value Calculator (ER Section 9.2, Reference 12). Based on this value, Table 9.2-4 is changed as follows: 1) Btu/Cu. Ft. - Delete all entries for this parameter. 2) Annual Gas Consumption - (a) Calc: Replace "cf/1037 Btu" with "cf/1025 Btu" (b) Result: Replace "95,585,673,443 cf/yr" with "96,704,725,229 cf/yr" 3) Annual Btu Input - (a) Calc: Replace "95,585,673,443 cf/yr" with "96,704,725,229 cf/yr"; (b) Calc: Replace "1037 Btu/cf" with "1025 Btu/cf"; (c) Result: Replace "99,109,569 MMBtu/yr" with "99,122,343 MMBtu/yr" 4) SOx - (a) Calc: Replace "99,109,569 MMBtu/yr" with "99,122,343 MMBtu/yr"; (b) Result: Replace "168 Tpy" with "169 Tpy" 5) NOx - (a) Calc: Replace "99,109,569 MMBtu/yr" with "99,122,343 MMBtu/yr"; (b) Result: Replace "1785 Tpy" with "1784 Tpy" 6) CO - Calc: Replace "99,109,569 MMBtu/yr" with "99,122,343 MMBtu/yr" 7) PM (particulate matter) - Calc: Replace "99,109,569 MMBtu/yr" with "99,122,343 MMBtu/yr"	1) Natural gas gross heating value of 1025 Btu/cf is based on value in U.S. Department of Agriculture (USDA) TechLine Fuel Value Calculator (ER Section 9.2, new Reference 12). This gross heating value is also added to ER Table 9.2-5. 2 through 7) Calculation and Result for Annual Gas Consumption, Annual Btu Input, SOx, NOx, CO, and PM are changed based on use of gross heating value of 1025 Btu/cf. 3 and 4) Results are corrected based on rounded errors.
BLN-0110	3	9	9.2, Table 9.2-5 / 9.2-45	Change Table 9.2-5 to reflect natural gas gross heating value of 1025 Btu/cf, as provided in U.S. Department of Agriculture (USDA) TechLine Fuel Value Calculator (ER Section 9.2, Reference 12). Based on this value, Table 9.2-5 is changed as follows: 1) Change Fuel heating value FROM "1037 Btu/ft ³ " TO "1025 Btu/ft ³ " 2) Change Basis for Fuel heating value FROM "2004 value for gas used in Alabama" TO "USDA TechLine Fuel Value Calculator (Reference 12)" 3) Change Fuel consumption from "95,585,673,443" TO "96,704,725,229" ft ³ /yr	1 and 2) Natural gas gross heating value of 1025 Btu/cf is based on value in U.S. Department of Agriculture (USDA) TechLine Fuel Value Calculator (ER Section 9.2, new Reference 12). This gross heating value is also added to ER Table 9.2-4. 3) Fuel consumption is recalculated in Table 9.2-4, based on use of gross heating value of 1025 Btu/cf.
BLN-0111	3	9	9.2.2.2 / 9.2-12	Change the last sentence in the third paragraph in Subsection 9.2.2.2, FROM: "The Southeast receives an average of 32 to 43 kWh/ft ² per day of solar radiation." TO: "The Southeast receives an average of 0.3 to 0.4 kWh/ft ² per day of solar radiation."	The information presented in this section came from the following source: US NREL, U.S. Solar Radiation Resource Maps, "Atlas for the Solar Radiation Data Manual for Flat-Plate and Concentrating Collectors," no date, Website, rredc.nrel.gov/solar/old_data/nsrdb/redbook/atlas/ , accessed November 2006. There was an apparent conversion error in transcribing the data from the solar radiation maps to the ER.
BLN-0112	3	9	9.2.2.8 / 9.2-18	Revise the last line in the fifth paragraph of Subsection 9.2.2.8, FROM: "... costs of \$2000/kW to \$4000/kW." TO: "... costs of \$3000/kW to \$4000/kW."	To provide a more accurate cost measurement for GE Fuel cell latest prototype as provided in Attachment H-4 to TVA's letter dated June 12, 2008 [ML081680583], "Fuel Cell System Economics: Comparing the Costs of Generating Power with Stationary and Motor Vehicle PEM Fuel Cell Systems, 2004," page 113.
BLN-0113	3	9	9.2.3.1.1 (9.2-22), Table 9.2-2 (9.2-41), Table 9.2-3 (9.2-42)	Replace notation for "PM10" with "PM-10" in Subsection 9.2.3.1.1 (two places on Page 9.2-22), Table 9.2-2 (Page 9.2-41), and Table 9.2-3 (Page 9.2-42). [NOTE: Change ID #356 makes similar changes for PM-2.5, and #1096 makes changes to list of ACRONYMS on Page xxi.]	Consistency with terminology used by U.S. Environmental Protection Agency (EPA) and consistent terminology use throughout this ER.
BLN-0114	3	9	9.2.3.2.1 / 9.2-30; Table 9.2-4 / 9.2-44; Table 9.2-5 / 9.2-45 and 9.2-46	Replace notations for "PM 2.5" with "PM-2.5" in Subsection 9.2.3.2.1 (Pg. 9.2-30), Table 9.2-4 (Pg. 9.2-44), and Table 9.2-5 (Pg. 9.2-45 and 9.2-46). [NOTE: Change ID #1095 makes similar changes for PM-10, and #1096 makes changes to list of ACRONYMS on Page xxi.]	Editorial change for consistency throughout the ER and consistency with EPA terminology.
BLN-0115	3	9	9.2.3.2.3 / 9.2-33	Revise Subsection 9.2.3.2.3, first sentence in the Socioeconomics section, FROM: "For a single 400-MW facility, construction would take approximately 27 months." TO: "For a single 400-MW facility, construction would take approximately 31 months."	The information pertaining to construction of a natural gas-fired power plant is based on the Portland Gas and Electric Port Westward gas plant. Reference documentation was provided as Attachments M2 and M3 in TVA's letter dated June 12, 2008 [ML081680583]. Attachment M3, "PGE - 06/12/2007 News Release: Portland General Electric Announces that its Port Westward Plant is Available for Commercial Generation," identifies a 31-month construction period.
BLN-0116	3	9	9.2.5 / 9.2-39	Change Section 9.2.5 by adding new Reference 12, as follows: 12. U.S. Department of Agriculture, Forest Products Laboratory, Techline Fuel Value Calculator, Website, http://www.fpl.fs.fed.us/documents/techline/fuel-value-calculator.pdf , accessed March 2008.	This new reference is used as the source for the natural gas fuel heating value (1025 Btu/cu. ft) in Tables 9.2-4 and 9.2-5.
BLN-0117	3	9	9.3, Table 9.3-X3 / 9.3-50	Change Source information provided in six notes following Table 9.3-X3 to cite References provided in ER Section 9.3-45. The source references are current Reference 5 in Section 9.3.4 and new References 7 through 11.	The information provided in the ER RAI response letter that added this table is correct, but the references were not included in the same manner in which they normally are provided for Source documents. Therefore, they were added to the Reference list, and referenced as sources in this table.

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Change No.	COLA Part	Chap.	Section / Page	Text, Table, or Figure Change	Reason for Change
BLN-0118	3	9	9.3.2.4.2 / 9.3-10	Change Subsection 9.3.2.4.2, fifth paragraph, fourth sentence, by changing the name of the nearby town from "Luka" to "luka."	Editorial change to correct the spelling of the name of the town, luka, MS.
BLN-0119	3	9	9.3.4 / 9.3-45	Add 5 new references to list of references for ER Section 9.3. These new references were included as "Source Documents" in the bottom of new Table 9.3-X3 in TVA's letter dated August 22, 2008.	These new references were included as "Source Documents" in the bottom of new Table 9.3-X3 in TVA's letter dated August 22, 2008. For consistency with format and content guidance provided for the COLA development, these source documents are listed as references.
BLN-0120	3	10	10.4, Table 10.4-1 / 10.4-14	Replace notations for "PM 2.5" with "PM-2.5" in Table 10.4-1 (Pg. 10.4-14). [NOTE: Change ID #1095 makes similar changes for PM-10, and #1096 makes changes to list of ACRONYMS on Page xxi.]	Editorial change for consistency throughout the ER and consistency with EPA terminology.
BLN-0121	3	10	10.4, Table 10.4-1 / 10.4-14	Replace notation for "PM10" with "PM-10" in Table 10.4-1 (Page 10.4-14). [NOTE: Change ID #356 makes similar changes for PM-2.5, and #1096 makes changes to list of ACRONYMS on Page xxi.]	Editorial change for consistency with terminology used by U.S. Environmental Protection Agency (EPA) and throughout this ER.
BLN-0138	3	10	10.4.2.2 / 10.4-9	Change Subsection 10.4.2.2, first paragraph, second sentence, by replacing "24" with "28" for the number of alternative sites. The changed sentence reads, "... of the proposed project at 28 alternative sites." (Related to BLN-0122.)	The number of potential sites was reconfirmed in a report titled, "Site Screening Process, Information Complementary to Section 9.3.2 of the Bellefonte Nuclear Plant, Units 3 and 4, COLA Applicant's Environmental Report," dated August 2008, which was provided to the NRC in a TVA letter dated August 22, 2008 [ML082400687]. This report, which addresses the issue raised by RAI 9.3-1, includes a table that identifies each of the 28 sites.
BLN-0122	3	10	10.4.3 / 10.4-11	Change Subsection 10.4.3, second paragraph, first sentence, by replacing "24" with "28" for the number of potential sites. The changed sentence reads, "The BLN site was selected over 28 potential sites, ..." (Related to BLN-0138.)	The number of potential sites was reconfirmed in a report titled, "Site Screening Process, Information Complementary to Section 9.3.2 of the Bellefonte Nuclear Plant, Units 3 and 4, COLA Applicant's Environmental Report," dated August 2008, which was provided to the NRC in a TVA letter dated August 22, 2008. This report, which addresses the issue raised by RAI 9.3-1, includes a table that identifies each of the 28 potential sites.
BLN-0123	3	10	10.1, Table 10.1-2 / 10.1-24	Change the summary of thermal plume in Table 10.1-2 (bottom of page 10.1-24). FROM: "Summaries of the predicted river plume analysis data are provided in Table 5.3-2. For the maximum delta-T conditions, low river temperature downstream flow, low river temperature reverse river flow, the surface area within a 5°F temperature isotherm is estimated to be 8384 sq. ft. These isotherms extend approximately 36 ft. from the discharge diffuser. The maximum width of the 5°F isotherm is about 235 ft., about 0.14 percent of the width of the river, which is approximately 1640 ft. at normal reservoir pool condition, hence the formation of a thermal barrier is precluded. TO: "Summaries of the predicted plume analysis data are provided in Table 5.3-2. For the maximum delta-T conditions, low river temperature 7Q10 downstream flow, the surface area within a 5°F temperature isotherm is estimated to be 25,213 sq. ft. These isotherms extend approximately 36 ft. from the discharge diffuser. The maximum width of the 5°F isotherm is approximately 379 ft., or about 23 percent of the width of the river, which is approximately 1640 ft. at normal reservoir pool condition. Therefore, the formation of a thermal barrier is precluded.	This change is consistent with COLA text changes provided in TVA's that provided the results of the 2008 CORMIX runs. The COLA text changes are provided in response to RAIs 5.2-5, 5.3-3(2) and (3), 5.3-5, and 5.3-8 in the letter from Jack A. Bailey, "Bellefonte Combined License Application - Response to Environmental Report Request For Additional Information - CORMIX - Related Hydrology Information," dated August 22, 2008.
BLN-0124	3		App. A / Various	Change ER Appendix A, Agency Consultation Letters and Responses, by including additional letters (as discussed in response to NRC sufficiency review comments, Information Needs, and RAIs), deleting duplicate letters, and reorganizing correspondence such that it is more easily located and retrieved.	This is an editorial change to restructure this compilation of applicant/agency correspondence.
BLN-0125	3	0	Various	Change the headers, footers (if used), and brief explanatory notes used to identify pages that contained sensitive, unclassified, non-safeguards information (SUNSI) such that the Public Version of these pages indicate that they contained information that has been withheld under 10 CFR 2.390. Any such changes will be made by changing the word "withheld" to "withhold" where used in the headers, footers, and notes in the public version of these pages. These changes will not be identified with rev. bars or changes to the revision numbers if there are no other changes on these pages.	This change is based on direction provided by the NRC at a public meeting held on September 11, 2008. Use of the word "Withhold" on the public pages created confusion, as it indicated that these redacted pages should be withheld.

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Change No.	COLA Part	Chap.	Section / Page	Text, Table, or Figure Change	Reason for Change
BLN-0126	3	0	Various	<p>This erratum captures General editorial changes that are corrected in Revision 1 of the BLN Environmental Report:</p> <p>General: Change the letter "X" to the Greek symbol Chi ("Χ") wherever it is used inappropriately.</p> <p>Chapter 2 2.3.1.5.3 –2nd paragraph, 3rd sentence: Delete one "the" at the end of the sentence. Sentence currently reads "... northwest of the the BLN site." 2.5.6 - Correct the period for the Jackson County school district report card from "2006-2007" to "2005-2006" in Reference 142. This reference was provided in the TVA letter dated July 3, 2008 [ML081900451].</p> <p>Table 2.3-31 – Change the header in the next-to-last column by deleting the hyphen in "Consump-tion." Also, make corresponding change to COLA Part 9.</p> <p>Chapter 4 4.3.1.2 - First paragraph, Correct spelling from "detectible" to "detectable." 4.4.1.6 - Last bullet, Correct spelling from "vegatative" to "vegetative." 4.4.4 - Reference 4, Correct the title of NUREG-1437 by adding "Statement" between "Impact" and "for." 4.5-3 - First paragraph, Correct spelling from "construciton" to "construction."</p> <p>Table 4.6-1, under "Environmental Justice": Spelling error – change "disproportionably" to "disproportionately." Table 4.8-1, in several locations: Spelling error - change "acreas" to "acres."</p> <p>Chapter 5 5.2.2.8 and 5.3.2.1 – Footnote 1 for both subsections; Spelling correction from "measureable" to "measurable." 5.3.1.2.1 – New text added by ER LTR 01, at the end of the paragraph beginning, "TVA owns and operates ..." change "... less than .5 fps." to "... less than 0.5 fps." 5.3.3.1.3 - Editorial change to connect "Table" and "5.3-7." 5.4.4.3 - Editorial correction to correct quotation marks around ICRP quotation. Section 5.7.5: Second paragraph - Change 400 person-rem to 1070 person-rem (per Table 5.7-4) [400 is for reference reactor, 1070 is scaled up for 2 BLN reactors] Section 5.7.5: Third paragraph - Change "3.4 person-Sv" to "5.4 person-Sv" (per Table 5.7-4) 5.7.7 – Delete the parentheses around "0.05 Sv/yr" so that the sentence ends with: "... which is 0.05 Sv/yr (5 rem/yr)." Section 5.10, 1st bullet after the 3rd paragraph, delete commas in "environmental, safety, and health plan." Changed to read, "environmental safety and health plan." Section 5.10, 2nd and 5th bullets after the 3rd paragraph, spelling correction from "commitment" to "commitment." Table 5.10-1, last page: Spelling error – change "disproportionably" to "disproportionately."</p> <p>Chapter 6 6.3 - Last paragraph, last sentence: Correct spelling error from "certfication" to "certification."</p> <p>Chapter 7 Section 7.2.1: last paragraph, editorial correction - change "accients" to "accidents" Table 7.4-2: editorial correction - change spelling of "Bellafonte" to "Bellefonte"</p> <p>Chapter 9 Subsection 9.2.2.1, page 9.2-11, 4th paragraph, 4th sentence: Change "TVA'a" to "TVA's" Subsection 9.2-5, Ref. 8: Add letter "c" to correct spelling of "Protection."</p> <p>Chapter 10 10.2.1.3 - First paragraph, correct spelling from "certfication" to "certification" 10.3 - Second paragraph, correct spelling from "principally" to "principally"</p>	Editorial corrections.

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Change No.	COLA Part	Chap.	Section / Page	Text, Table, or Figure Change	Reason for Change
BLN-0127	3	0	Various	Renumber new Notes in ER Tables so that they are numbered in the order in which they occur in the tables.	The software that is used for the BLN COLA automatically makes this correction by assigning sequential numbers/letters to table notes, and the places where the notes are called out, such that the notes are numbered consistently from top to bottom and left to right in the tables. This often results in changes to the note identifiers if new notes are added subsequently to Rev. 0.