

October 14, 2009

**Comanche Peak Nuclear Power Plant, Units 3 & 4
COL Application**

**Part 3,
Environmental Report
Update Tracking Report**

Revision 5

Revision History

Revision	Date	Update Description
0	3/31/2009	No technical changes in Rev.0 Editorial Changes in Chapters: Ch.1, 2, 3, 4, 5, 6, 7, 8, 9 and 10
1	4/14/2009	Updated Chapters: Ch. 1, 2, 3, 4, 5, 8, 9
2	4/24/2009	Updated Chapters: Ch. 1, 2, 4, 5, 10
-	4/28/2009	Updated Chapters: Ch. 7 See Luminant Letter TXNB-09013 dated 4/28/2009
3	5/08/2009	Updated Chapters: Ch 2, 3, 4, 5, 6
4	06/30/2009	Updated Chapters: Ch 2, 3, 4, 5, 6, 9, 10
-	7/27/2009	Updated Chapters: Ch. 2, 4 See Luminant Letter TXNB-09027 dated 7/27/2009
-	9/16/2009	Updated Chapters: Ch. 2 See Luminant Letter TXNB-09046 dated 9/16/2009

-	10/08/2009	Updated Chapters: CH. 9 See Luminant Letter TXNB-09052 dated 10/08/2009
5	10/14/2009	Updated Chapters: Ch 1, 2, 3, 6

Chapter 1

Chapter 1 Tracking Report Revision List

Change ID No.	Section	ER Rev. 0 Page	Reason for change	Change Summary	Rev. of ER T/R
CTS-00615	Acronyms and Abbreviations	1-xv	Editorial correction	Change "MPT Main Power Transformer" to "MT Main Transformer".	0
CTS-00462	Table 1.3-2	1.3-5	Match to NUREG 1555	Change section titles of 4.7, 4.8, 5.11 and 5.13.	0
LU-02	Figure 1.1-5	—	Represent line from CPNPP to DeCordova as a new line.	Change color of line from CPNPP to DeCordova from red to green.	1
CTS-00693	Table 1.2-1	1.2-3 1.2-4 1.2-5 1.2-6 1.2-8 1.2-9	Table needs to accurately reflect the permit conditions and permits required.	Table 1.2-1 updated to reflect only those permits that apply.	1
CTS-00694	Table 1.2-1	1.2-3 1.2-4 1.2-5 1.2-6 1.2-8 1.2-9	Editorial	Adjust column setting and row to improve the readability	1
MET-25	Table 1.2-1	1.2-9	ER Site Audit NRC information need	Add TCEQ 30 TAC 116 State Construction Air Permit	1
ALT-11	1.0	1.0-1	Increase information as discussed with the NRC.	Revised subsection to include a concise statement of the purpose and the need for the proposed project.	2
CTS-00693	Table 1.2-1	1.2-9	Editorial	Removed the information for financial institutions	2
CTS-00716	1.1.2	1.1-2	Erratum	Revised the coordinates of the center of the reactors and the center point of the CPNPP units 3 and 4.	5

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1.1.2 SITE LOCATION

As described in [Section 2.1](#), the CPNPP site is a 7950-acre (ac) site located in rural portions of Hood and Somervell counties of north central Texas. [Figures 1.1-1, 1.1-2, and 1.1-3](#) provide a visual indication of the current region, vicinity, and site. The CPNPP Units 3 and 4 are located along the southern banks of Squaw Creek Reservoir (SCR). The site is 5.2 miles (mi) north of Glen Rose and 9.6 mi south of Granbury. Granbury is the largest city within a 10-mi radius of the site. The nearest population centers to the site are Glen Rose and Granbury. The four largest population centers (as defined by 10 Code of Federal Regulations [CFR] 100.3) in the region are Fort Worth, Haltom City, Burleson, and Cleburne.

[Section 2.1](#) lists the coordinates of the center of the new reactors as:

LATITUDE AND LONGITUDE NAD83 (degrees/minutes/seconds)			
	Latitude	Longitude	
UNIT 3:	32° 18' 08.9" N	97° 47' 30.1" W	
UNIT 4:	32° 18' 07.5" N	97° 47' 41.8" W	

UNIVERSAL TRANSVERSE MERCATOR ZONE 14 NAD83 (Meters)			
	Northing	Easting	
UNIT 3:	613759 <u>3574606</u>	3574606 <u>613759</u>	CTS-00716
UNIT 4:	613453 <u>3574559</u>	3574559 <u>613453</u>	CTS-00716

The center point of the CPNPP Units 3 and 4 site is located at ~~613606~~3574584N and ~~3574584~~613606E. CTS-00716

The CPNPP site boundary ([Figure 1.1-3](#)) encompasses the operating nuclear CPNPP Units 1 and 2, the proposed location for CPNPP Units 3 and 4, the support structures and facilities, and the entire SCR. As noted in [Section 2.1](#), the aquatic environs are dominated by SCR, which has an approximate pool elevation of 775 feet (ft) above mean sea level (msl). The plant grade ([Subsection 2.3.1.2.6](#)) elevation for the new units is 822 ft above msl.

The proposed units, constructed within the CPNPP site boundary ([Figure 1.1-3](#)), utilize areas of previous construction activity (such as laydown yards and parking) along with previously undisturbed areas of land.

CPNPP Units 1 and 2 began commercial operations in 1990 and 1993, respectively. Construction activities for CPNPP Units 1 and 2 resulted in extensive alteration of the site involving vegetation clearing; establishment of on-site roads; establishment of a railroad spur to the site; extensive excavation and grading with heavy equipment; construction of SCR and the Safe Shutdown Impoundment (SSI); and building of on-site warehouses, shops, and support facilities. The CPNPP Units 3 and 4 construction proposed activities are similar in nature but effort is being

Chapter 2

Chapter 2 Tracking Report Revision List

Change ID No.	Section	ER Rev. 0 Page	Reason for change	Change Summary	Rev. of ER T/R
CTS-00615	Acronyms and Abbreviations	2-xlii	Editorial correction	Change “MPT Main Power Transformer” to “MT Main Transformer”.	0
CTS-00611	2.1	2.1-1	Erratum	Change “624,067” to “653,320”; “61,115” to “62,306”; “39,875” to “39,987”; “37,976” to “41,564”; “29,184” to “29,689” to match 2006 US Census instead of 2005 US Census.	0
CTS-00611	2.1.1	2.1-2	Updated reference required to provide 2006 data not 2005 data	Change (US Census 2005) to (US Census 2006) notated as US Census Bureau. “American FactFinder – Texas By Place GCT Population Estimates.” US Census Bureau, Washington, DC. Available URL: http://factfinder.census.gov/servlet/home/en/official-estimates.html , Accessed July 24, 2008.	0
CTS-00459	2.3.1.1.5	2.3-4	Erratum	Change “384 ac” to “400 ac”.	0
CTS-00455	2.3.3.3.5	2.3-61	Editorial correction	Delete “No” and add “Other than CPNPP Units 1 and 2,”	0
CTS-00648	2.3.1.1.6	2.3-4	Erratum	Change “0.25 ac” to “0.78 ac”.	0
MET-04	List of Tables	2-xvii and 2-xviii	Erratum	Add “Dallas” in front of “Fort Worth” and “Airport” after Fort Worth	1
MET-14	List of Tables	2-xix 2-xx	Increase information as discussed with the NRC.	Add tables: 2.7-129, 2.7-130, 2.7-131, 2.7-132, 2.7-133, 2.7-134, 2.7-135	1
LU-05	2.2.1.1	2.2-1	Erratum	Revise paragraph to clarify mineral rights.	1
LU-01	2.2.2	2.2-5	Increase information as discussed with the NRC.	Insert sentence and add “CDP” to Pecan Plantation to clarify Pecan Plantation is a housing development and not an	1

Change ID No.	Section	ER Rev. 0 Page	Reason for change	Change Summary	Rev. of ER T/R
				incorporated town.	
LU-11	2.2.2	2.2-5	Increase information as discussed with the NRC.	Insert sentence to clarify zoning along Lake Granbury.	1
LU-09	2.2.3	2.2-6	Increase information as discussed with the NRC.	Revised text to include information on Proctor Lake and adjust numbers accordingly.	1
LU-08	Figure 2.2-3		Increase information as discussed with the NRC.	Show location of state parks.	1
SOC-11	2.5.2.7.2.1	2.5-18	Increase information as discussed with the NRC.	Updated with current information and revised text to discuss public safety and medical services for Hood and Somervell counties.	1
SOC-11	2.5.2.7.2.1	2.5-19	Erratum	Update reference (The Nursing Home Project 2006) to (The Nursing Home Project 2006a).	1
SOC-11	2.5.2.7.2.2	2.5-19	Erratum	Update reference citation from TDPS 2004 to TDPS 2006	1
SOC-11	2.5.2.7.2.3	2.5-19	Increase information as discussed with the NRC.	Add new subsections to discuss Bosque, Erath, Johnson, and Tarrant counties public safety and medical services.	1
SOC-11	2.5.2.7.2.3	2.5-19	Increase information as discussed with the NRC.	Updated with current information and revised text to discuss public safety and medical services for Hood and Somervell counties. Update reference citation from TDPS 2004 to TDPS 2006	1
CR-04	2.5.3.6	2.5-25	Increase information as discussed with the NRC.	New subsection to include background for 2.5.3.	1
CR-04	2.5.6	2.5-29	Increase information as discussed with the NRC.	Add 13 new reference notations that are cited in the new Subsection 2.5.3.6.	1

Change ID No.	Section	ER Rev. 0 Page	Reason for change	Change Summary	Rev. of ER T/R
SOC-13	2.5.4.4	2.5-28	Increase information as discussed with the NRC.	Revised Subsection to include information on subsistence populations.	1
SOC-11	2.5.6	2.5-32	Increase information as discussed with the NRC.	Update reference notation from (The Nursing Home Project 2006) to (The Nursing Home Project 2006a)	1
SOC-11	2.5.6	2.5-34	Increase information as discussed with the NRC.	Update reference notation from (TDPS 2004) information to (TDPS 2006) information.	1
SOC-11	2.5.6	2.5-36	Increase information as discussed with the NRC.	Revised to include 11 new reference notations.	1
MET-03	2.7.1.2.4	2.7-11	Erratum	Add “16” to number of day each year and “by county” to wind events to reconcile thunderstorm information.	1
MET-04	2.7.1.2.8	2.7-17	Erratum	Add “the” in front of “Dallas Fort Worth and Airport” after “Fort Worth” to correct the reference to Forth Worth Airport.	1
MET-13	2.7.2.1.2	2.7-19 and 2.7-23	Erratum	Replaced 2001 – 2006 with 2001 – 2004 and 2006 to describe which data years were used.	1
MET-04	2.7.2.1.4	2.7-23	Erratum	Add “Dallas” in front of Fort Worth Airport to correct the reference to Forth Worth Airport.	1
MET-11	2.7.2.1.7	2.7-25	Erratum	Change Table 2.7-34 to Table 2.3-23 to correct reference to the table.	1
MET-13	2.7.3.1	2.7-28	Erratum	Replaced 2001 – 2006 with 2001 – 2004 and 2006 to describe which data years were used.	1

Change ID No.	Section	ER Rev. 0 Page	Reason for change	Change Summary	Rev. of ER T/R
MET-12	2.7.3.1	2.7-28	Erratum	Remove “control room” and replace with “low population zone” to correct reference to control room.	1
MET-13	2.7.3.2 And 2.7.4.2	2.7-30 and 2.7-31	Erratum	Replaced 2001 – 2006 with 2001 – 2004 and 2006 to describe which data years were used.	1
MET-14	2.7.4.3	2.7-33	Increase information as discussed with the NRC.	Insert new Subsection to include evaporate pond results.	1
MET-03	Table 2.7-11	2.7-68	Erratum	Change numbers in average per year (#/yr)	1
MET-13	Table 2.7-11	2.7-68	Erratum	Replaced 2006 with 7/31/2006 to describe which data years were used.	1
MET-13	Table 2.7-85	2.7-68	Erratum	Replaced 2001 – 2006 with 2001 – 2004 and 2006 to describe which data years were used.	1
MET-04	Table 2.7-86	2.7-150	Erratum	Add “Dallas” in front of “Fort Worth Airport” to correct the reference to Forth Worth Airport.	1
MET-04	Table 2.7-96	2.7-162	Erratum	Add “Dallas” in front of Fort Worth and “Airport” after “Fort Worth” to correct the reference to Forth Worth Airport.	1
MET-04	Table 2.7-99	2.7-165	Erratum	Add “Dallas” in front of “Fort Worth Airport” to correct the reference to Forth Worth Airport.	1
MET-14	Table 2.7-129 through Table 2.7-135		Increase information as discussed with the NRC.	Add Tables 2.7-129, 2.7-130, 2.7-131, 2.7-132, 2.7-133, 2.7-134, and 2.7-135.	1

Change ID No.	Section	ER Rev. 0 Page	Reason for change	Change Summary	Rev. of ER T/R
SOC-07	List of Tables	2-xi	Increase information as discussed with the NRC.	Changed the Title of Table 2.5-16 from "Hood and Somervell County 2002 and 2007 Property Taxes" to "Economic Region 2002 and 2007 Property Taxes"	2
SOC-06	2.5.2.1	2.5-8	Editorial Correction	Removed "counties" Changed Table 5.8-1 to 5.8-2.	2
SOC-06 SOC-03	2.5.2.1	2.5-10	Errata	Changed number of workers from "4300" to "4953" and from "550" to "494"	2
SOC-07	2.5.2.3.1	2.5-13	Editorial Correction	Changed "Hood and Somervell" to "the cities and" and added "in the economic region"	2
SOC-07	2.5.2.3.1	2.5-13	Increase information as discussed with the NRC.	Revised discussion in subsection to discuss the state and local taxes associated with the proposed units.	2
SOC-07	2.5.6	2.5-31	Editorial correction	Revised reference from (Combs 2007) to (Combs 2007a). Added reference (Combs 2009).	2
SOC-07	2.5.6	2.5-35 2.5-31	Increase information as discussed with the NRC.	Removed reference notation for (Combs 2006). Added two new reference notations as a result of the revisions to subsection 2.5.2.3.1.	2
SOC-07	Table 2.5-16	2.5-64	Increase information as discussed with the NRC.	Revised table to increase information for local taxes.	2
LU-03	List of Tables	2-vii	Increase information as discussed with the NRC.	Added Table 2.2-5.	3
NP-15	List of Tables	2-xii	Increase information as discussed with the NRC.	Added Tables 2.5-28 and 2.5-29.	3

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LU-03	2.2.2	2.2-5	Increase information as discussed with the NRC.	Added a sentence to refer the reader to Table 2.2-5 for land use acreages in the pipeline right of way.	3
LU-03	Table 2.2-5	--	Increased information as discussed with the NRC.	Added Land Use Table 2.2-5 to provide pipeline land use information.	3
SOC-01 SOC-08	2.5.2.2.3	2.5-11	Increase information as discussed with the NRC.	Revised subsection to provide updated traffic information.	3
NP-15	2.5.2.3.1	2.5-13	Increase information as discussed with the NRC.	Revised subsection to discuss estimates of wages paid.	3
SOC-09	2.5.2.5	2.5-15	Increase information as discussed with the NRC.	Added sentence to discuss the proposed new recreational area at Wheeler Branch reservoir.	3
SOC-09	2.5.2.5	2.5-15	Increase information as discussed with the NRC.	Revised sentence to clarify that light pollution in the area has been lessened by CPNPP efforts to improve the aesthetics of the area.	3
SOC-09	2.5.2.6	2.5-15	Increase information as discussed with the NRC.	Revised reference to Table 5.8-1 to Table 5.8-2.	3
SOC-09	2.5.2.6	2.5-16	Increase information as discussed with the NRC	Changed "10" percent to "9.5" percent.	3
SOC-09	2.5.2.6	2.5-16	Increased information as discussed with the NRC.	Revised subsection to clarify housing information.	3
SOC-09	2.5.2.6	2.5-17	Increase information as discussed with the NRC.	Revised subsection to include additional information on RV Parks.	3

Change ID No.	Section	ER Rev. 0 Page	Reason for change	Change Summary	Rev. of ER T/R
SOC-10	2.5.2.7.1	2.5-17 2.5-18	Increase information as discussed with the NRC	Revised subsection to reconcile inconsistencies between subsections 2.5 and 4.4.	3
SOC-12	2.5.2.8.2	2.5-20	Increased information as discussed with the NRC.	Revised subsection to clarify public education system in the vicinity of the proposed units.	3
SOC-12	2.5.2.8.3	2.5-20	Increased information as discussed with the NRC.	Added a new subsection "2.5.2.8.3 Counties in the Economic Region" to clarify public education system in the vicinity of the proposed units. Revised subsequent subsection number from "2.5.2.8.3" to "2.5.2.8.4" as a result.	3
NP-15	2.5.6	2.5-31	Increased information as discussed with the NRC.	Added two new reference notations as a result of the revisions to subsection 2.5.2.3.1.	3
SOC-10	2.5.6	2.5-30 2.5-31 2.5-33 2.5-36	Increased information as discussed with the NRC.	Added eight new reference notations as a result of the revisions in Subsection 2.5.2.7.1.	3
SOC-12	2.5.6	2.5-32	Increased information as discussed with the NRC.	Added seven new reference notations (Granbury ISD 2007) as a result of revisions in Subsection 2.5.2.8 and removed two reference notations as a result of the new references.	3
SOC-09	2.5.6	2.5-33 2.5-36	Increased information as discussed with the NRC.	Added 11 reference notations for revisions associated with this issue.	3
SOC-01 SOC-08	2.5.6	2.5-34	Increased information as discussed with the NRC.	Added new reference notation as a result of revisions to Subsection 2.5.2.2.3.	3
SOC-09	Table 2.5-18	2.5-66	Increased information as discussed with the NRC.	Revised number of housing units from "801" to "903."	3

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SOC-10	Table 2.5-20	2.5-68 2.5-69 2.5-70	Errata	Added footnotes (a) and (b) to reconcilable inconsistencies between Subsection 2.5 and 4.4.	3
NP-15	Table 2.5-28 Table 2.5-29		Increased information as discussed with the NRC.	Added two new tables to summarize information provided in subsection 2.5.2.3.1.	3
CTS-00709	2.3.1.1.6	2.3-4	Errata	Revised number of littoral wetlands from "Fifty three" to "Forty-eight" and the cumulative area from "52.5" to "53" and the associated percentage from "0.66" to "less than one."	4
CTS-00710	2.3.1.1.6	2.3-4	Provide a figure that depicts the streams discussed in the text.	Revised referenced figure from Figure 2.4-3 to Figure 4.3-1 to depict streams associated with wetlands.	4
CTS-00710	2.3.1.1.6	2.3-4	Errata	Revised sentence associated with the revised reference to Figure 4.3-1, and revised discussion from two littoral wetlands to one littoral wetland.	4
CTS-00469	2.3.2.2	2.3-39	Provide updated water use estimates per TXNB-08024.	Added description of "draft" 2006 TWDB postings.	4
CTS-00469	2.3.2.2.1	2.3-41	Provide updated water use estimates per TXNB-08024.	Added description of TWDB 2006 water use estimates for Somervell and Hood Counties, Texas.	4
CTS-00465	2.3.2.2.4	2.3-42	Reconcile ER circulating water system, makeup water, and blowdown from Lake Granbury, with MHI confirmed flow rates in FSAR.	Revised the estimated water withdrawal and consumptive use numbers to be consistent with the circulating water system description.	4

Change ID No.	Section	ER Rev. 0 Page	Reason for change	Change Summary	Rev. of ER T/R
CTS-00455	2.3.3.3.5	2.3-61	Editorial Correction	Added “no” following “Other than CPNPP Units 1 and 2,” to read: “Other than CPNPP Units 1 and 2, no ..”	4
CTS-00469	2.3.4	2.3-66	Provide updated water use estimates per TXNB-08024.	Added reference (TWDB 2009) to support the 2006 draft estimated water use values.	4
CTS-00465	Table 2.3-39	2.3-164	Reconcile ER circulating water system, makeup water, and blowdown from Lake Granbury, with MHI confirmed flow rates in FSAR.	Revised the estimated water discharge flow rate to Lake Granbury.	4
CTS-00711	Figure 2.4-2	--	Revise figure to depict streams.	Added streams to figure.	4
CTS-00709	2.4.1	2.4-3	Errata	Revised sentences to state “Neither species was audibly or visually identified during the April survey.”	4
CTS-00709	2.4.1.1.2	2.4-7	Errata	Changed “Fifty-three” to “Forty-eight” and removed paragraph “The northwest wetland is approximately 0.5...”	4
CTS-00648	2.4.1.1.2	2.4-7	Erratum	Changed 0.25 to 0.78	4
RAI SOC-09	2.5.2.6	2.5-16	See Luminant letter TXNB-09027 dated 7/27/2009	Additional information requested in RAI.	-

Change ID No.	Section	ER Rev. 0 Page	Reason for change	Change Summary	Rev. of ER T/R
RAI SOC-09	List of Tables	2-xii	See Luminant letter TXNB-09027 dated 7/27/2009	Added Table 2.5-30 to support additional information.	-
RAI SOC-09	Table 2.5-30	-	See Luminant letter TXNB-09027 dated 7/27/2009	Additional information requested in RAI.	-
RAI SOC-13	2.5.4.3	2.5-28	See Luminant letter TXNB-09027 dated 7/27/2009	Revised low-income census numbers.	-
RAI SOC-13	Table 2.5-24	2.5-85	See Luminant letter TXNB-09027 dated 7/27/2009	Revised low-income census numbers.	-
RAI AE-01	2.4.2.2	2.4-24	See Luminant letter TXNB-09027 dated 7/27/2009	Additional information requested in RAI.	-
RAI AE-01	2.4.3	2.4-34 2.4-35	See Luminant letter TXNB-09027 dated 7/27/2009	Additional information requested in RAI.	-
TE-07	2.4.1.1.4.1	2.4-15	See Luminant letter TXNB-09027 dated 7/27/2009	Additional information requested in RAI.	-

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TE-07	2.4.3	2.4-29 2.4-39	See Luminant letter TXNB-09027 dated 7/27/2009	Additional references to support additional information requested in RAI.	-
TE-10	2.4.1.1.4.1 2.4.2.7	2.4-15 2.4-28	See Luminant letter TXNB-09027 dated 7/27/2009	Additional information requested in RAI.	-
TE-10	2.4.3	2.4-29 2.4-33	See Luminant letter TXNB-09027 dated 7/27/2009	Additional references to support additional information requested in RAI.	-
RAI TE-04	2.4.1	2.4-2	See Luminant letter TXNB-09046 dated 9/16/2009	Supplemental habitat survey information conducted in the BDTF area.	-
HYD-05 HYDSV-24	2.3.1.5.6	2.3-35	Hydrology Site Safety Visit and resulting changes to FSAR.	Revised discussion of alternative pathways to be consistent with the FSAR revisions made as a result of the hydrology site visit.	5
HYD-22 HYDSV-30	2.3.1.5.6	2.3-35 2.3-36	Hydrology Site Safety Visit and resulting changes to FSAR.	Revised discussion of alternative pathways to be consistent with the FSAR revisions made as a result of the hydrology site visit.	5
CTS-00464	2.3.2.3.2	2.3-44	Correction	Corrected the number of existing water wells identified on the CPNPP site and provided a clarifying statement on the well functions.	5
HYD-22 HYDSV-30	Table 2.3-31	2.3-140 2.3-141 2.3-142	Hydrology Site Safety Visit and resulting changes to FSAR.	Revised Table 2.3-31 to include data associated with the revised discussion of alternative pathways.	5
CTS-00464	Table 2.3-41	2.3-166	Correction	Updated Table 2.3-41 to list well locations and functions as discussed in Subsection 2.3.2.3.2	5

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CTS-00716	2.1	2.1-1	Erratum	Revised the coordinates of the center of the reactors and the center point of the CPNPP units 3 and 4.	5
CTS-00464	Figure 2.3-25	--	Correction	Updated figure to show well locations to match updated Table 2.3-41.	5

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Part 3 - Environmental Report

~~Due to variable subsurface conditions in the vicinity of CPNPP Units 3 and 4, two postulated groundwater pathway scenarios were evaluated for each reactor unit. Scenarios 1 and 2 show a conservative pathway by estimating a groundwater travel time from each reactor unit to SCR through the regolith/undifferentiated fill zone. Because the regolith/undifferentiated fill zone is expected to be removed during construction of Units 3 and 4, Scenarios 3 and 4 provide the likely characteristics of the post construction groundwater environment. With the removal of the regolith/undifferentiated fill zone, the groundwater pathway to SCR would be in the shallow bedrock zone. The groundwater flow paths use a conservative straight line flow path approach using the shortest distance from groundwater monitoring wells located nearest to each reactor centerline and the highest measured hydraulic conductivity from each soil or bedrock zone. A straight line flow path would be considered conservative as the actual groundwater pathways are expected to be tortuous, resulting in longer transport times, and hydraulic conductivities (Kh) of the fractures/joints would be (or are) expected to be lower than the highest measured on site. The straight line distance from Unit 3 to the SCR is 530 ft (Scenarios 1 and 2) and the straight line distance from Unit 4 to the SCR is 607 ft (Scenarios 3 and 4).~~

HYD-05
HYDSV-24

Based on the grain size distribution of the on-site soils (Fugro 2007a), the total porosity was determined by averaging the porosity range for sand, silt, and clay. The average total porosity of the on-site regolith/undifferentiated fill (soils) is assumed to be 0.45. To estimate the effective porosity of the on-site soils, the arithmetic mean of the effective porosities for fine grained sand, silt, and clay were averaged (ANL 1993). The average effective porosity of the on-site regolith/undifferentiated fill (Scenarios 1 and 2) is assumed to be 0.20. To calculate the travel time in the regolith/undifferentiated fill material from each of the units to SCR, the highest measured hydraulic conductivity of 5.00×10^{-4} cm/s was used.

The bedrock is comprised of limestone from the Glen Rose Formation. The shallow bedrock porosity values from geotechnical borings B-1007 and B-1029 were used to estimate the porosity in the vicinity of the Unit 3 Auxiliary Building A/B and groundwater monitoring well MW-1215b. The porosity values from geotechnical borings B-2000, B-2008, and B-2029 were used to estimate the porosity values in the vicinity of the Unit 4 A/B and groundwater monitoring well MW-1217b.

HYD-05
HYDSV-24

The results of the geotechnical analysis performed at the CPNPP Units 3 and 4 site indicated that an average porosity of the shallow bedrock (limestone and shale) is 25.6 percent and the average total porosity of limestone is 11.9 percent. The Argonne National Laboratory publication, Data Collection Handbook to Support Modeling Impacts of Radioactive Material in Soil, dated April 1993 (ANL 1993) references an arithmetic mean of the effective porosity for limestone of 14 percent. Consequently, the most conservative approach when determining velocity and travel time is to use the measured 11.9 percent porosity value which provides a higher calculated velocity through the shallow bedrock.

~~Using the shallow bedrock porosity values from geotechnical borings B-2000, B-2008, and B-2029 to estimate the porosity values in the vicinity of groundwater monitoring well MW-1217b (Unit 3) and the porosity values from geotechnical borings B-1007 and B-1029 to estimate the porosity in the vicinity of groundwater monitoring well MW-1215b (Unit 4), an average total porosity of the shallow bedrock in the vicinity of CPNPP Units 3 and 4 of 0.24 is assumed (Fugro 2007a). The effective porosity of limestone (Scenarios 3 and 4) is assumed to be 0.14 (ANL~~

Comanche Peak Nuclear Power Plant, Units 3 & 4
COL Application
Part 3 - Environmental Report

~~1993). To calculate the travel time in the shallow bedrock from each of the units to SCR the highest measured hydraulic conductivity of 1.37×10^{-5} cm/s was used.~~

HYD-05
HYDSV-24

Groundwater pathways are considered from the Units 3 and 4 Auxiliary Buildings, where the Boric Acid Tank (BAT) is located, to SCR, which is the nearest potential receptor. Postulated groundwater pathway scenarios include. Unit 3 A/B to SCR through the regolith and the undifferentiated fill; Unit 3 A/B to SCR through the Glen Rose Limestone; Unit 4 A/B to SCR through the undifferentiated fill and regolith; and Unit 4 A/B to SCR through the Glen Rose Limestone. Due to the planned removal of all overburden material down to the plant grade elevation of 822-ft, and the sub-grade elevation of the BAT of 793 ft, the pathway scenarios through the undifferentiated fill and regolith are considered not plausible and are not discussed further. For the post construction groundwater pathways the two remaining pathway scenarios, Unit 3 A/B to SCR through the Glen Rose Limestone and Unit 4 A/B to SCR through the Glen Rose Limestone, are considered to represent the most conservative pathways from a two reactor site where groundwater flow is possible in different directions from each unit. Using the most conservative straight line approach, two flow paths are considered from Unit 3 A/B to SCR and two flow paths are considered from Unit 4 A/B to SCR. These flow paths consider the most plausible straight line groundwater flow direction from the release points to SCR and the highest measured Hydraulic Conductivity (Kh). A straight line flow path would be considered the most conservative as the actual groundwater pathways are expected to be tortuous, resulting in longer transport times, and Kh of the fractures/joints would be (or are) expected to be lower than the highest measured on-site.

HYD-22
HYDSV-30

To estimate groundwater travel time through the Glen Rose Formation, the average porosity of limestone of 0.119, the highest Kh measured at the site (1.37×10^{-5} cm/s), and the steepest hydraulic gradient measured from the monthly gauging events of the nearest groundwater monitoring wells to the Unit 3 and 4 Reactor Buildings (Table 2.3-30) were used for the pathway analysis (FSAR Figure 2.4.12-212).

For groundwater pathway 3a, it is assumed that an instantaneous release from the BAT would travel out of the Unit 3 A/B northeast towards SCR where it would encounter a minimum of 100 lateral feet of Glen Rose Formation followed by the fill material of the Unit 3 Ultimate Heat Sink (UHS) and then by post construction engineered fill material before reaching SCR. Since the physical properties of the engineered fill material may change as the design is finalized and the potential exists for groundwater flow through the fill material of the Unit 3 UHS, it is conservatively estimated that an instantaneous release to SCR will occur once the Unit 3 UHS is encountered. The travel time from the Unit 3 A/B through a minimum of 100 feet of Glen Rose Formation to the Unit 3 UHS is 3146 days. Therefore, a very conservative estimate of the time it would take a release to travel from the Unit 3 A/B to SCR along pathway 3a is more than 3146 days.

For groundwater pathway 3b, it is assumed that an instantaneous release from the BAT would travel out of the Unit 3 A/B through the fill material of the Unit 3 Reactor Building (R/B) due east towards SCR where it would encounter a minimum of 80 lateral feet of Glen Rose Formation followed by the fill material of the Unit 3 Essential Service Water (ESW) Pipe Tunnel and an undetermined lateral distance of Glen Rose Formation followed by post construction engineered fill and undifferentiated fill material before reaching SCR. Since the physical properties of the engineered fill material may change as the design is finalized and the physical properties of the

Comanche Peak Nuclear Power Plant, Units 3 & 4
COL Application
Part 3 - Environmental Report

HYD-22
HYDSV-30

undifferentiated fill material are estimated, and the potential exists for groundwater flow through the fill material of the Unit 3 ESW Pipe Tunnel, it is conservatively estimated that an instantaneous release to SCR will occur once the ESW Pipe Tunnel is encountered. The travel time from the Unit 3 A/B and R/B through a minimum of 80 feet of Glen Rose Formation to the Unit 3 ESW Pipe Tunnel is 2516 days. Therefore, a very conservative estimate of the time it would take a release to travel from the Unit 3 A/B to SCR along pathway 3b is more than 2516 days.

For groundwater pathway 4a, it is assumed that an instantaneous release from the BAT would travel out of the Unit 4 A/B north-northwest towards SCR where it would encounter a minimum of 60 lateral feet of Glen Rose Formation followed by the fill material of the Unit 4 UHS and then by post construction engineered fill material before reaching SCR. Since the physical properties of the engineered fill material may change as the design is finalized and the potential exists for groundwater flow through the fill material of the Unit 4 UHS, it is conservatively estimated that an instantaneous release to SCR will occur once the Unit 4 UHS is encountered. The travel time from the Unit 4 A/B through a minimum of 60 feet of Glen Rose Formation to the Unit 4 UHS is 1916 days. Therefore, a very conservative estimate of the time it would take a release to travel from the Unit 4 A/B to SCR along pathway 4a is more than 1916 days.

For groundwater pathway 4b, it is assumed that an instantaneous release from the BAT would travel out of the Unit 4 A/B northeast towards SCR where it would encounter a minimum of 120 lateral feet of Glen Rose Formation followed by the fill material of the Unit 4 UHS and undocumented fill and engineered fill before reaching SCR. Since the physical properties of the undocumented fill are estimated and the physical properties of the engineered fill material may change as the design is finalized, and the potential exists for groundwater flow through the fill material of the Unit 4 UHS and through the undocumented fill, it is conservatively estimated that an instantaneous release to SCR will occur once the Unit 4 UHS is encountered. The travel time from the Unit 4 A/B through a minimum of 100 feet of Glen Rose Formation to the Unit 4 UHS is 3834 days. Therefore, a very conservative estimate of the time it would take a release to travel from the Unit 4 A/B to SCR along pathway 4b is more than 3834 days.

Scenario 1

~~Scenario 1 estimates the groundwater travel time between CPNPP Unit 3 and SCR through the undifferentiated fill/regolith using groundwater levels from groundwater monitoring well MW 1217a, screened in the regolith/undifferentiated fill zone, and the surface water elevation of SCR. The steepest measured groundwater gradient within the undifferentiated fill material from Unit 3 to SCR was 0.104 ft/ft. Based on the average effective porosity of 0.20 and a hydraulic conductivity of 5.00×10^{-4} cm/s, the estimated groundwater travel time from Unit 3 to SCR in the regolith/undifferentiated fill zone is 720.9 days (approximately 2 years).~~

Scenario 2

~~Scenario 2 estimates the groundwater travel time between CPNPP Unit 3 and SCR using groundwater levels from groundwater monitoring well MW 1217b screened in the shallow bedrock zone, and the surface water elevation of SCR. The steepest measured groundwater gradient within the shallow bedrock zone from Unit 3 to SCR is 0.0974 ft/ft. Based on the average effective porosity of 0.14 and a hydraulic conductivity of 1.37×10^{-5} cm/s, the estimated~~

Comanche Peak Nuclear Power Plant, Units 3 & 4
COL Application
Part 3 - Environmental Report

~~groundwater travel time from Unit 3 to the SCR in the shallow bedrock zone is 10,615.0 days (approximately 54 years).~~

HYD-22
HYDSV-30

~~Scenario 3~~

~~Scenario 3 estimates the groundwater travel time between CPNPP Unit 4 and SCR through the undifferentiated fill/regolith using groundwater levels from groundwater monitoring well MW-1215a, screened in the regolith/undifferentiated fill zone, and the surface water elevation of SCR. The steepest measured gradient for the regolith undifferentiated fill material from Unit 4 to SCR was 0.109 ft/ft. Based on an average effective porosity of 0.20 and a hydraulic conductivity of 5.00×10^{-4} cm/s, the estimated groundwater travel time from Unit 4 to SCR in the regolith/undifferentiated fill zone is 782.6 days (approximately 2 years).~~

~~Scenario 4~~

~~Scenario 4 estimates the groundwater travel time between CPNPP Unit 4 and SCR through the shallow bedrock using groundwater levels from groundwater monitoring well MW-1215b screened in the shallow bedrock zone, and the surface water elevation of SCR. The steepest measured gradient for the shallow bedrock zone from Unit 4 to SCR was 0.0962 ft/ft. Based on an average effective porosity of 0.14 and a hydraulic conductivity of 1.37×10^{-5} cm/s the estimated groundwater travel time from Unit 4 to the SCR in the shallow bedrock zone is 22,737.6 days (approximately 62 years).~~

Table 2.3-31 provides the calculated travel times based on monthly measured gradients. The locations of Units 3 and 4 and groundwater monitoring wells MW-1215a, MW-1215b, MW-1217a, and MW-1217b are shown on Figure 2.3-26. Additional information on groundwater flow characteristics are provided in CPNPP Units 3 and 4 FSAR Subsection 2.4.12.

2.3.1.5.7 Surface Soil Profiles

The site is underlain by a sedimentary rock sequence which, at the surface, has been weathered to a clayey, silty, sandy overburden soil with some rock fragments. No alluvium sediments were encountered during the 2006 and 2007 geotechnical drilling program in the vicinity of the CPNPP Units 3 and 4 build area, although they may exist in other portions of the site. Drilling and excavation experience at the site shows that the residual soil transition through weathered rock to hard, unweathered bedrock can be gradual in the natural shallow subsurface profile in some places, or can consist of soil in direct contact with hard bedrock in other places. Most of the CPNPP site is situated in areas disturbed by previous construction activities associated with the construction of the existing CPNPP Units 1 and 2 structures. Those areas are covered with undifferentiated and engineered fill, gravel roadways and parking areas, and concrete building foundation pads.

The soils occurring on the CPNPP site are described in the Hood and Somervell counties soil survey information provided by the U.S. Department of Agriculture (USDA) Natural Resources Conservation Service's on-line Soil Data Mart website (USDA 2007). A total of 18 soil mapping phases representing 17 soil series occur within the CPPNP site boundary. Descriptions of each soil series are provided in Table 2.3-32, and the location of the soil mapping phases are shown on Figure 2.3-28.

Comanche Peak Nuclear Power Plant, Units 3 & 4
COL Application
Part 3 - Environmental Report

2.3.2.3.1 Local Groundwater Use

Groundwater use information for Hood and Somervell counties was obtained from the TWDB historical water use database (TWDB 2008a). The 2003 data set provides the most recent complete data for groundwater withdrawal from the Trinity Aquifer.

The estimated 2003 groundwater withdrawal in Hood County is 5729 ac-ft, which is approximately 3.33 percent of the total withdrawals from the Trinity aquifer. Approximately 91 percent of this withdrawal was reported as municipal use, 5 percent livestock use, 3 percent mining use, and less than 1 percent steam electric use.

The estimated 2003 groundwater withdrawal in Somervell County is 1726 ac-ft, which is approximately 1 percent of the total withdrawals from the Trinity aquifer. Approximately 55 percent of this withdrawal was reported as municipal use, 41 percent mining use, 2 percent steam electric use, 2 percent livestock use, and less than 1 percent manufacturing use. Table 2.3-40 shows 2003 groundwater withdrawals by use category for Hood and Somervell counties.

2.3.2.3.2 Plant Groundwater Use

~~Eleven~~ Twelve existing water wells were identified on the CPNPP site. ~~The wells include seven potable water wells that support CPNPP Units 1 and 2 operations and four observation wells. The wells include seven active potable water wells that support CPNPP Units 1 and 2 operations, one inactive potable water well associated with Squaw Creek Park, and four observation wells.~~

CTS-00464

Information regarding these wells is provided in Table 2.3-41, and the well locations are shown on Figure 2.3-25. On-site groundwater withdrawal information for 2006 was obtained from an annual report provided by Luminant (TCEQ 2006). The report indicates on-site withdrawals of 27.90 ac-ft (9,092,700 gal) from five active wells in 2006 which is a use rate of 24,911.5 gpd or approximately 17.3 gpm. Monthly use data for 2006 are provided in Table 2.3-42. Luminant is not anticipating using groundwater as an operational or safety-related source of water for CPNPP Units 3 and 4, and has implemented a conservation plan for future groundwater withdrawals at the CPNPP site. During construction of CPNPP Units 3 and 4, and during operation of CPNPP Units 1 through 4, potable water is planned to be supplied by the Somervell County Water District's water supply system. Water for temporary fire protection, concrete batching, and other construction uses is expected to be supplied by the Somervell County Water District. Groundwater conservation at CPNPP has voluntarily been an environmental commitment with the TCEQ, Clean Texas Program, since 2003 and with the EPA Performance Track Program since 2005. CPNPP has reduced groundwater use from approximately 50 gpm in mid-1990s to approximately 16 gpm during 2007.

2.3.2.4 Future Water Use

Future consumptive water use information was obtained from the 2006 Brazos Region G Water Plan, which forecasts water demands by category for the years 2010 – 2060 (Brazos G 2006). The water demand estimates compiled for each type of water use do not specify future ground or surface water demand. Estimated demand surpluses or shortages are based on projected surface and groundwater supplies. Additionally, projections for non-consumptive water uses, such as navigation, hydroelectric generation, environmental flows, and recreation are not presented. As shown in Table 2.3-43, total water use for the region is projected to increase from

Comanche Peak Nuclear Power Plant, Units 3 & 4
COL Application
Part 3 - Environmental Report

TABLE 2.3-31 (Sheet 1 of 3)
GROUNDWATER VELOCITY AND TRAVEL TIMES

Scenario 1 (Unit 3/MW-1217a to SCR)												
Date	12/27	1/23	2/20	3/19	4/10	5/16	6/13	7/16	8/13	9/13	10/16	11/15
MW-1217a (ft msl)	829.52	829.45	829.45	829.45	829.45	829.45	829.44	830.31	829.70	829.57	829.54	829.54
SCR (ft msl)	775.23	775.42	775.19	775.00 ^(a)	775.36	775.39	775.31	775.33	775.40	775.46	775.48	775.38
Hydraulic Gradient	0.1020	0.1020	0.1020	0.1030	0.1020	0.1020	0.1020	0.1040	0.1020	0.1020	0.1020	0.1020
Velocity (V) (ft/day)	0.7260	0.7230	0.7260	0.7280	0.7230	0.7230	0.7240	0.7350	0.7260	0.7240	0.7230	0.7240
Travel Time (T) (days)	730.0	733.5	730.4	727.9	732.7	733.1	732.2	720.9	729.9	732.5	733.1	731.8
Scenario 2 (Unit 3/MW-1217b to SCR)												
Date	12/27	1/23	2/20	3/19	4/10	5/16	6/13	7/16	8/13	9/13	10/16	11/15
MW-1217b (ft msl)	810.94	820.76	824.72	825.06	823.82	820.08	820.38	821.13	822.28	823.83	825.64	827.00
SCR (ft msl)	775.23	775.42	775.19	775.00 ^(a)	775.36	775.39	775.31	775.33	775.40	775.46	775.48	775.38
Hydraulic Gradient	0.0674	0.0855	0.0935	0.0945	0.0914	0.0843	0.0850	0.0864	0.0885	0.0913	0.0946	0.0974
Velocity (V) (ft/day)	0.0187	0.0237	0.0259	0.0262	0.0254	0.0234	0.0236	0.0240	0.0245	0.0253	0.0263	0.0270
Travel Time (T) (days)	28,354.1	22,331.8	20,442.7	20,226.2	20,894.1	22,656.7	22,465.6	22,107.6	21,598.2	20,932.9	20,185.9	19,615.0
Scenario 3 (Unit 4/MW-1215a to SCR)												
Date	12/27	1/23	2/20	3/19	4/10	5/16	6/13	7/16	8/13	9/13	10/16	11/15
MW-1215a (ft msl)	833.79	835.25	8325.93	836.21	837.27	837.26	839.70	841.18	841.41	841.89	841.81	841.42
SCR (ft msl)	775.23	775.42	775.19	775.00 ^(a)	775.36	775.39	775.31	775.33	775.40	775.46	775.48	775.38
Hydraulic Gradient	0.0965	0.0986	0.1000	0.1010	0.1020	0.1020	0.1060	0.1080	0.1090	0.1090	0.1090	0.1090
Velocity (V) (ft/day)	0.6840	0.6990	0.7090	0.7150	0.7230	0.7220	0.7520	0.7690	0.7710	0.7760	0.7740	0.7710
Travel Time (T) (days)	887.7	868.9	855.9	849.3	839.7	840.2	807.4	789.5	787.5	782.6	783.7	787.2

Comanche Peak Nuclear Power Plant, Units 3 & 4
COL Application
Part 3 - Environmental Report
TABLE 2.3-31 (Sheet 2 of 3)
GROUNDWATER VELOCITY AND TRAVEL TIMES

	Scenario 4 (Unit 4/MW 1215b to SCR)											
Date	12/27	1/23	2/20	3/19	4/10	5/16	6/13	7/16	8/13	9/13	10/16	11/15
MW 1215b (ft msl)	831.35	831.27	831.64	831.60	832.10	831.80	832.91	833.74	833.55	833.54	833.84	833.12
SCR (ft msl)	775.23	775.42	775.19	775.00 ^(a)	775.36	775.39	775.31	775.33	775.40	775.46	775.48	775.38
Hydraulic Gradient	0.0925	0.0920	0.0930	0.0932	0.0935	0.0929	0.0949	0.0962	0.0958	0.0957	0.0961	0.0961
Velocity (V) (ft/day)	0.0256	0.0255	0.0258	0.0259	0.0259	0.0258	0.0263	0.0267	0.0266	0.0265	0.0267	0.0264
Travel Time (T) (days)	23,665.4	23,779.8	23,527.1	23,464.7	23,406.8	23,543.8	23,057.3	22,737.6	22,839.3	22,866.8	22,757.1	23,001.4

Assumptions:

~~Scenario 1~~

~~Hydraulic gradient is between Unit 3/MW 1217a and SCR~~

~~Pathway Distance (L) = 530 ft.~~

~~Hydraulic Conductivity (K) = 5.00 x 10⁻⁴ cm/s~~

~~porosity (n) = 0.20~~

~~Scenario 2~~

~~Hydraulic gradient is between Unit 3/MW 1217b and SCR~~

~~Pathway Distance (L) = 530 ft.~~

~~Hydraulic Conductivity (K) = 1.37 x 10⁻⁵ cm/s~~

~~porosity (n) = 0.14~~

~~Scenario 3~~

~~Hydraulic gradient is between Unit 4/MW 1215a and SCR~~

~~Pathway Distance (L) = 607 ft.~~

~~Hydraulic Conductivity (K) = 5.00 x 10⁻⁴ cm/s~~

~~porosity (n) = 0.20~~

HYD-22
HYDSV-30

Comanche Peak Nuclear Power Plant, Units 3 & 4
COL Application
Part 3 - Environmental Report
TABLE 2.3-31 (Sheet 3 of 3)
GROUNDWATER VELOCITY AND TRAVEL TIMES

~~Scenario 4~~

~~Hydraulic gradient is between Unit 4/MW 1215b and SCR~~

~~Pathway Distance (L) = 607 ft.~~

~~Hydraulic Conductivity (K) = 1.37×10^{-5} cm/s~~

~~porosity (n) = 0.14~~

~~(a) 775.00 ft was used as surface water elevation for SCR on 3/19 as USGS elevation data was unavailable~~

~~Conversions: 1 day = 86,400 seconds; 1 foot = 30.48 centimeters~~

HYD-22
HYDSV-30

Comanche Peak Nuclear Power Plant, Units 3 & 4
COL Application
Part 3 - Environmental Report

Table 2.3-31 (Sheet 1 of 3)
Groundwater Velocity and Travel Times

HYD-22
HYDSV-30

Scenario 1. Pathway 3a (Unit 3/MW-1217a to SCR)

<u>Date</u>	<u>12/27</u>	<u>1/23</u>	<u>2/20</u>	<u>3/19</u>	<u>4/10</u>	<u>5/16</u>	<u>6/13</u>	<u>7/16</u>	<u>8/13</u>	<u>9/13</u>	<u>10/16</u>	<u>11/15</u>
<u>MW-1217a (ft amsl)</u>	810.94	820.76	824.72	825.06	823.82	820.08	820.38	821.13	822.28	823.83	825.64	827.00
<u>SCR (ft amsl)</u>	775.23	775.42	775.19	775.00 ^(a)	775.36	775.39	775.31	775.33	775.40	775.46	775.48	775.38
<u>Hydraulic Gradient</u>	0.0674	0.0855	0.0935	0.0945	0.0914	0.0843	0.0850	0.0864	0.0885	0.0913	0.0946	0.0974
<u>Velocity (V) (ft/day)</u>	0.0220	0.0279	0.0305	0.0308	0.0298	0.0275	0.0277	0.0282	0.0289	0.0298	0.0308	0.0318
<u>Travel Time (T) (days)</u>	4.550	3.587	3.280	3.246	3.356	3.638	3.608	3.550	3.466	3.359	3.242	3.149

Scenario 1. Pathway 3b (Unit 3/MW-1217b to SCR)

<u>Date</u>	<u>12/27</u>	<u>1/23</u>	<u>2/20</u>	<u>3/19</u>	<u>4/10</u>	<u>5/16</u>	<u>6/13</u>	<u>7/16</u>	<u>8/13</u>	<u>9/13</u>	<u>10/16</u>	<u>11/15</u>
<u>MW-1217b (ft amsl)</u>	810.94	820.76	824.72	825.06	823.82	820.08	820.38	821.13	822.28	823.83	825.64	827.00
<u>SCR (ft amsl)</u>	775.23	775.42	775.19	775.00 ^(a)	775.36	775.39	775.31	775.33	775.40	775.46	775.48	775.38
<u>Hydraulic Gradient</u>	0.0674	0.0855	0.0935	0.0945	0.0914	0.0843	0.0850	0.0864	0.0885	0.0913	0.0946	0.0974
<u>Velocity (V) (ft/day)</u>	0.0220	0.0279	0.0305	0.0308	0.0298	0.0275	0.0277	0.0282	0.0289	0.0298	0.0308	0.0318
<u>Travel Time (T) (days)</u>	3.640	2.870	2.624	2.596	2.684	2.911	2.887	2.840	2.772	2.687	2.594	2.519

Scenario 2. Pathway 4a (Unit 4/MW-1215a to SCR)

<u>Date</u>	<u>12/27</u>	<u>1/23</u>	<u>2/20</u>	<u>3/19</u>	<u>4/10</u>	<u>5/16</u>	<u>6/13</u>	<u>7/16</u>	<u>8/13</u>	<u>9/13</u>	<u>10/16</u>	<u>11/15</u>
<u>MW-1215a (ft amsl)</u>	831.35	831.27	831.64	831.60	832.10	831.80	832.91	833.74	833.55	833.54	833.84	833.12
<u>SCR (ft amsl)</u>	775.23	775.42	775.19	775.00 ^(a)	775.36	775.39	775.31	775.33	775.40	775.46	775.48	775.38
<u>Hydraulic Gradient</u>	0.0925	0.0920	0.0930	0.0932	0.0935	0.0929	0.0949	0.0962	0.0958	0.0957	0.0961	0.0961
<u>Velocity (V) (ft/day)</u>	0.0302	0.0300	0.0303	0.0304	0.0305	0.0303	0.0309	0.0314	0.0312	0.0312	0.0313	0.0313
<u>Travel Time (T) (days)</u>	1.989	2.000	1.979	1.974	1.968	1.981	1.939	1.913	1.921	1.923	1.915	1.915

Comanche Peak Nuclear Power Plant, Units 3 & 4
COL Application
Part 3 - Environmental Report

Table 2.3-31 (Sheet 2 of 3)
Groundwater Velocity and Travel Times

HYD-22
HYDSV-30

Scenario 2. Pathway 4b (Unit 4/MW-1215b to SCR)

<u>Date</u>	<u>12/27</u>	<u>1/23</u>	<u>2/20</u>	<u>3/19</u>	<u>4/10</u>	<u>5/16</u>	<u>6/13</u>	<u>7/16</u>	<u>8/13</u>	<u>9/13</u>	<u>10/16</u>	<u>11/15</u>
<u>MW-1215b (ft msl)</u>	<u>831.35</u>	<u>831.27</u>	<u>831.64</u>	<u>831.60</u>	<u>832.10</u>	<u>831.80</u>	<u>832.91</u>	<u>833.74</u>	<u>833.55</u>	<u>833.54</u>	<u>833.84</u>	<u>833.12</u>
<u>SCR (ft msl)</u>	<u>775.23</u>	<u>775.42</u>	<u>775.19</u>	<u>775.00</u> ^(a)	<u>775.36</u>	<u>775.39</u>	<u>775.31</u>	<u>775.33</u>	<u>775.40</u>	<u>775.46</u>	<u>775.48</u>	<u>775.38</u>
<u>Hydraulic Gradient</u>	<u>0.0925</u>	<u>0.0920</u>	<u>0.0930</u>	<u>0.0932</u>	<u>0.0935</u>	<u>0.0929</u>	<u>0.0949</u>	<u>0.0962</u>	<u>0.0958</u>	<u>0.0957</u>	<u>0.0961</u>	<u>0.0961</u>
<u>Velocity (V) (ft/day)</u>	<u>0.0302</u>	<u>0.0300</u>	<u>0.0303</u>	<u>0.0304</u>	<u>0.0305</u>	<u>0.0303</u>	<u>0.0309</u>	<u>0.0314</u>	<u>0.0312</u>	<u>0.0312</u>	<u>0.0313</u>	<u>0.0313</u>
<u>Travel Time (T) (days)</u>	<u>3.979</u>	<u>4.000</u>	<u>3.957</u>	<u>3.949</u>	<u>3.936</u>	<u>3.962</u>	<u>3.878</u>	<u>3.826</u>	<u>3.842</u>	<u>3.846</u>	<u>3.830</u>	<u>3.830</u>

Assumptions:

Scenario 1. Pathway 3a

The hydraulic gradient between MW-1217b and SCR is the nearest known hydraulic gradient to the Unit 3 A/B. The highest hydraulic gradient between MW-1217B and SCR was used for this pathway.

Pathway Distance (L) = 100 lateral feet of Glen Rose Formation

Hydraulic Conductivity (K_h) = 1.37 x 10⁻⁵ cm/s = 0.0388 ft/day

Porosity (η) = 0.119

Scenario 1. Pathway 3b

The hydraulic gradient between MW-1217b and SCR is the nearest known hydraulic gradient to the Unit 3 A/B. The highest hydraulic gradient between MW-1217B and SCR was used for this pathway.

Pathway Distance (L) = 80 lateral feet of Glen Rose Formation

Hydraulic Conductivity (K_h) = 1.37 x 10⁻⁵ cm/s = 0.0388 ft/day

Porosity (η) = 0.119

Scenario 2. Pathway 4a

The hydraulic gradient between MW-1215b and SCR is the nearest known hydraulic gradient to the Unit 4 A/B. The highest hydraulic gradient between MW-1215B and SCR was used for this pathway

Pathway Distance (L) = 60 lateral feet of Glen Rose Formation

Hydraulic Conductivity (K_h) = 1.37 x 10⁻⁵ cm/s = 0.0388 ft/day

Porosity (η) = 0.119

Comanche Peak Nuclear Power Plant, Units 3 & 4
COL Application
Part 3 - Environmental Report

Table 2.3-31 (Sheet 3 of 3)
Groundwater Velocity and Travel Times

Scenario 2. Pathway 4b

The hydraulic gradient between MW-1215b and SCR is the nearest known hydraulic gradient to the Unit 4 A/B. The highest hydraulic gradient between MW-1215B and SCR was used for this pathway

Pathway Distance (L) = 120 lateral feet of Glen Rose Formation

Hydraulic Conductivity (K_h) = 1.37 x 10⁻⁵ cm/s = 0.0388 ft/day

Porosity (η) = 0.119

(a) - 775.00 ft was used as surface water elevation for SCR on 3/19 as USGS elevation data was unavailable

Conversions: 1day = 86,400 seconds; 1 foot = 30.48 centimeters

HYD-22
HYDSV-30

**Comanche Peak Nuclear Power Plant, Units 3 & 4
COL Application
Part 3 - Environmental Report**

TABLE 2.3-41-
~~CPNPP WATER WELL INFORMATION~~

CTS-00464

Well Number	Owner	Primary Use	Well Depth (ft)	Aquifer	Latitude	Longitude	County	Well Type
3242903	Texas Utilities	Not Used	479	Twin Mountains (Trinity)	321654	974623	Somervell	Observation
3242902	Texas Utilities	Not Used	318	Twin Mountains (Trinity)	321709	974513	Somervell	Observation
	G.A. Jackson/							
3242901	Texas Utilities	Public Supply	350	Twin Mountains (Trinity)	321714	974522	Somervell	Withdrawal of Water
3242601	Texas Utilities	Public Supply	466	Twin Mountains (Trinity)	321745	974723	Somervell	Withdrawal of Water
3242602	Texas Utilities	Public Supply	490	Twin Mountains (Trinity)	321754	974649	Somervell	Withdrawal of Water
	JC Ice/Texas-							
3242502	Utilities	Not Used	352	Twin Mountains (Trinity)	321807	974853	Hood	Observation
3242503	Texas Utilities	Public Supply	517	Twin Mountains (Trinity)	321802	974826	Somervell	Withdrawal of Water
32425—	Texas Utilities	Public Supply	485	Twin Mountains (Trinity)	321713	974706	Somervell	Withdrawal of Water
3242504	Texas Utilities	Public Supply	400	Twin Mountains (Trinity)	321802	974822	Somervell	Withdrawal of Water
3242603	Texas Utilities	Public Supply	474	Twin Mountains (Trinity)	321858	974656	Somervell	Withdrawal of Water
3242604	Texas Utilities	Not Used	470	Twin Mountains (Trinity)	321910	974655	Hood	Observation

Source: (TWDB 2007c)

Comanche Peak Nuclear Power Plant, Units 3 & 4
COL Application
Part 3 - Environmental Report

TABLE 2.3-41
CPNPP Water Well Information

CTS-00464

<u>CPNPP Well ID</u>	<u>State Well Number</u>	<u>Location</u>	<u>Primary Use</u>	<u>Well Depth (ft)</u>	<u>Latitude</u>	<u>Longitude</u>	<u>Well Type</u>
<u>1</u>	<u>3242903</u>	<u>Ball Bark Road</u>	<u>Not Used</u>	<u>479</u>	<u>321651</u>	<u>974623</u>	<u>Observation</u>
<u>2</u>	<u>3242902</u>	<u>Training Center</u>	<u>Not Used</u>	<u>318</u>	<u>321707</u>	<u>974515</u>	<u>Observation</u>
<u>3</u>	<u>3242901</u>	<u>Training Center</u>	<u>Public Supply</u>	<u>350</u>	<u>321707</u>	<u>974516</u>	<u>Withdrawal of Water</u>
<u>4</u>	<u>3242601</u>	<u>Batch Plant</u>	<u>Public Supply</u>	<u>466</u>	<u>321748</u>	<u>974733</u>	<u>Withdrawal of Water</u>
<u>5</u>	<u>3242602</u>	<u>Met Tower</u>	<u>Public Supply</u>	<u>490</u>	<u>321750</u>	<u>974650</u>	<u>Withdrawal of Water</u>
<u>6</u>	<u>N/A</u>	<u>Plant Entrance</u>	<u>Not Used</u>	<u>>280⁽¹⁾</u>	<u>321749</u>	<u>974859</u>	<u>Observation</u>
<u>7</u>	<u>3242503</u>	<u>NOSF - North</u>	<u>Public Supply</u>	<u>517</u>	<u>321760</u>	<u>974828</u>	<u>Withdrawal of Water</u>
<u>8</u>	<u>3242504</u>	<u>NOSF - South</u>	<u>Public Supply</u>	<u>400</u>	<u>321757</u>	<u>974826</u>	<u>Withdrawal of Water</u>
<u>9</u>	<u>3242603</u>	<u>Squaw Creek Park</u>	<u>Public Supply</u>	<u>471</u>	<u>321905</u>	<u>974659</u>	<u>Withdrawal of Water</u>
<u>10</u>	<u>3242604</u>	<u>Squaw Creeak Park</u>	<u>Not Used</u>	<u>470</u>	<u>321905</u>	<u>974660</u>	<u>Observation</u>
<u>11</u>	<u>N/A</u>	<u>Squaw Creek Park Office</u>	<u>Public Supply</u>	<u>Unknown⁽²⁾</u>	<u>321946</u>	<u>974648</u>	<u>Withdrawal of Water</u>
<u>12</u>	<u>N/A</u>	<u>Rifle Training Facility</u>	<u>Public Supply</u>	<u>485</u>	<u>321905</u>	<u>974659</u>	<u>Withdrawal of Water</u>

Notes:

Onsite water wells are owned by Luminant and completed in the Twin Mountains (Trinity) Aquifer

(1) Total depth of well is unknown due to obstruction. Static water level has been measured at approximately 280 ft below top of casing.

(2) Inactive public supply well, total depth of well is unknown.

NOSF Nuclear Operations Support Facility

N/A Not Assigned

Comanche Peak Nuclear Power Plant, Units 3 & 4
COL Application
Part 3 - Environmental Report

2.1 STATION LOCATION

Luminant Generation Company LLC (Luminant) proposes to construct and operate two Mitsubishi Heavy Industries (MHI) US-APWR reactors (Units 3 and 4) at Luminant's CPNPP 7950-ac site located in rural Somervell and Hood counties, in north central Texas. Luminant is the applicant, owner, and operator of the new units. Current assets at this site include two Westinghouse 4-loop pressurized water reactor (PWR) units (CPNPP Units 1 and 2) and supporting infrastructures. The site plot plan is shown in **Figure 2.1-1**; regional and vicinity maps are shown as **Figures 1.1-1, 1.1-2** and an aerial view as **Figure 1.1-3**.

The coordinates of the centers of the new reactors (Units 3 and 4) are:

LATITUDE AND LONGITUDE NAD83 (degrees/minutes/seconds)

	Latitude	Longitude
UNIT 3:	32° 18' 08.9" N	97° 47' 30.1" W
UNIT 4:	32° 18' 07.5" N	97° 47' 41.8" W

UNIVERSAL TRANSVERSE MERCATOR ZONE 14 NAD83 (Meters)

	Northing	Easting	
UNIT3:	613759 <u>3574606</u>	3574606 <u>613759</u>	CTS-00716
UNIT4:	613453 <u>3574559</u>	3574559 <u>613453</u>	CTS-00716

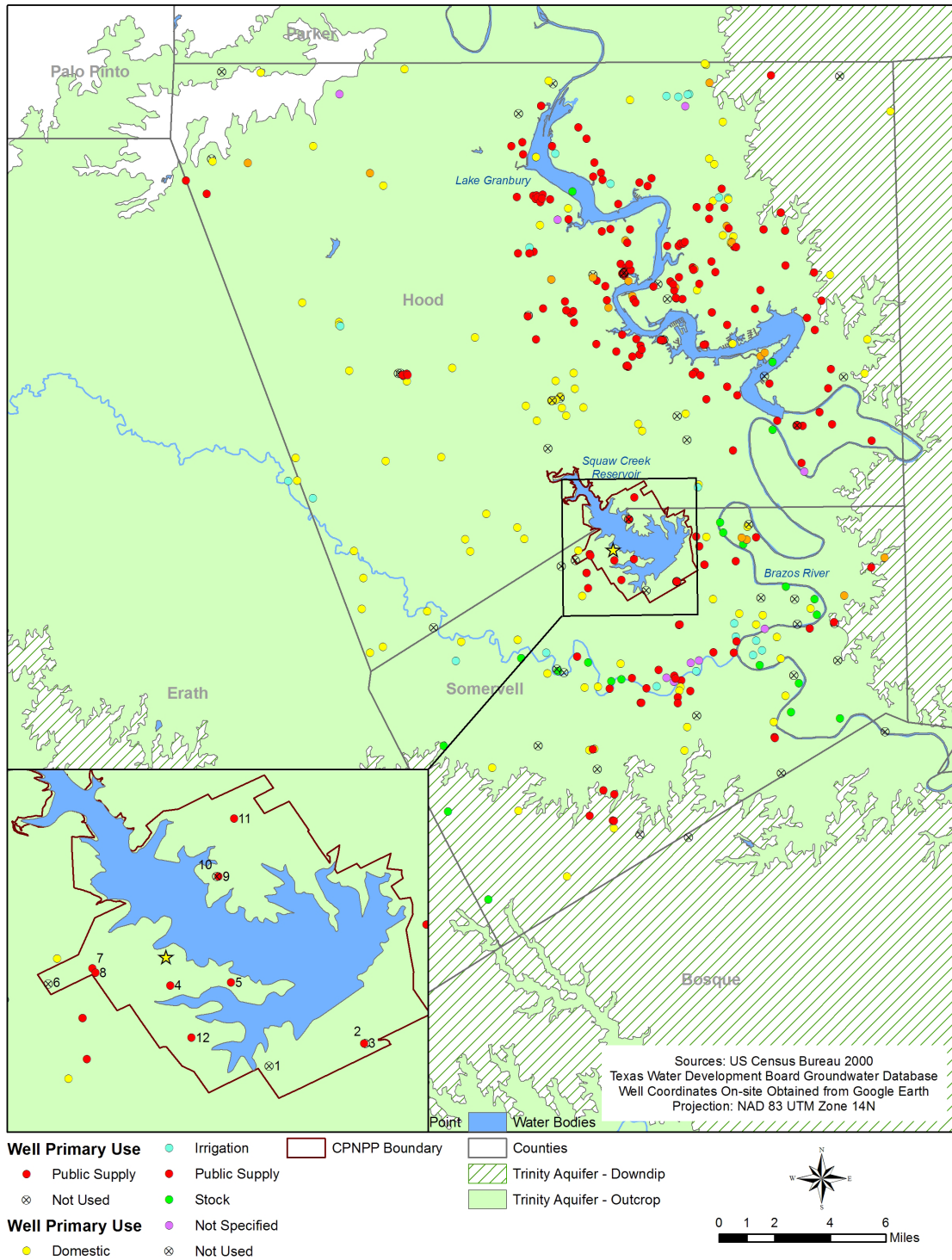
The center point of the CPNPP Units 3 and 4 site is located at ~~613606~~3574584N and ~~3574584~~613606E. CTS-00716

There are six population centers (as defined by 10 CFR 100.3) within 50 mi of the reactors: Fort Worth, population ~~624,067~~653,320; North Richland Hills, population ~~61,415~~62,306; Haltom City, population ~~39,875~~39,987; Mansfield, population ~~37,976~~41,564; Burleson, population ~~29,613~~31,660; and Cleburne, population ~~29,184~~29,689; Watauga, population 23,685; Weatherford, population 24,630; and Benbrook with a population of 22,307. (US Census 2006) CTS-00611

The site is approximately 40 mi southwest of Fort Worth, Texas; 46 mi southwest of Haltom City; 32 mi west of Burleson; and 24 mi west of Cleburne. The nearest population center to the CPNPP site is Cleburne. The closest communities to the CPNPP center point are the cities of Glen Rose and Granbury. The site is 5.2 mi north of Glen Rose and 9.6 mi south of Granbury. Granbury is the largest city within a 10-mi radius of the CPNPP (USGS 2007 and US Census ~~2005~~6). CTS-00611

The property boundary of the CPNPP site encompasses approximately 7950 ac. The site is accessible by a rail spur, which connects to the Fort Worth and Western Railroad Company main line at Tolar, Texas, by a plant access road which connects to Farm to Market Road 56 (FM 56),

Comanche Peak Nuclear Power Plant, Units 3 & 4
COL Application
Part 3 - Environmental Report



CTS-00464

CTS-00464

Figure 2.3-25 Hood and Somervell County Water Wells

Chapter 3

Chapter 3 Tracking Report Revision List

Change ID No.	Section	ER Rev. 0 Page	Reason for change	Change Summary	Rev. of ER T/R
CTS-00615	Acronyms and Abbreviations	3-xix	Editorial correction	Change "MPT Main Power Transformer" to "MT Main Transformer".	0
CTS-00452	3.3.1.1	3.3-2	Editorial correction	Change "average" to "estimated".	0
CTS-00452	3.3.1.2	3.3-2	Editorial correction	Change "average" to "estimated".	0
CTS-00452	3.3.1.3	3.3-3	Editorial correction	Change "average" to "estimated".	0
CTS-00452	3.3.1.3	3.4-5	Editorial correction	Remove "monthly average".	0
CTS-00660	3.4.2.1	3.4-6	Editorial correction	Add a sentence about passive screens of the intake system.	0
CTS-00495	Table 3.4-1	3.4-8	Editorial correction	Superscript the number to represent scientific notation as opposed to a whole number	0
CTS-00612	3.5.1.1.2	3.5-5	To reflect DCD terminology	Add "containment Vessel" before reactor so that it reads: containment vessel reactor coolant drain tank, and change the acronym (RCDT) to (CVDT)	0
CTS-00612	3.5.1.1.2	3.5-6	Erratum	Change the acronym (RCDT) to (CVDT)	0
CTS-00613	3.5.1.5	3.5-8	Editorial correction	Remove "gaseous or airborne" and add "liquid" after radioactive	0
CTS-00468	3.5.4	3.5-16	Erratum	Change "179 gpm" to "7 gpm".	0

Change ID No.	Section	ER Rev. 0 Page	Reason for change	Change Summary	Rev. of ER T/R
CTS-00614	3.5.4	3.5-16	Erratum	Change "119.79 gallons per hour (gal/hr)" to "approximately 2 gpm".	0
CTS-00615	3.7.1	3.7-1	Editorial correction	Change "CPNPP Units 3 and 4 Switching Station (CPNPP Units 3 and 4 Switching Station)" to "Plant Switching Station".	0
CTS-00649	3.7.1	3.7-1	Editorial correction	Change "plant switching station" to "Plant Switching Station".	0
CTS-00615	3.7.2	3.7-2	Editorial correction	Change "CPNPP Units 3 and 4 Switching Station" to "Plant Switching Station".	0
CTS-00615	3.7.2	3.7-2	Editorial correction	Change "Main Power Transformer (MPT)" to "Main Transformer (MT)".	0
CTS-00616	3.7.2	3.7-3	Editorial correction	Change "MPT" to "MT"	0
CTS-00615	3.7.2	3.7-3	Editorial correction	Change "CPNPP Units 3 and 4 Switching Station" to "Plant Switching Station".	0
CTS-00617	3.9.4	3.9-11	Erratum	Change "four" to "five".	0
CTS-00617	3.9.4	3.9-11	Erratum	Change "94" to "74".	0
CTS-00617	3.9.4	3.9-11	Erratum	Change "50" to "37".	0
CTS-00618	3.9.4.1.1	3.9-12	Erratum	1st paragraph Change "five" to "four". Change "three" to "one". Change "three" to "one". Change "304" to "309".	0
CTS-00618	3.9.4.1.2	3.9-12	Erratum	Change area dimensions from "167" to "180", and from "321" to "355"	0

Change ID No.	Section	ER Rev. 0 Page	Reason for change	Change Summary	Rev. of ER T/R
CTS-00618	3.9.4.1.2	3.9-12	Erratum	Change “three” to “four”.	0
CTS-00691	Table 3.8-4	3.8-14	Update the proprietary status of information	Remove “Withheld from Public Disclosure Under 10 CFR 2.390 (a) (4)” from the title. Remove “Note: Luminant considers the location of alternative site proprietary.”	1
TR-06	3.8.1.5	3.8-2	Increase information as discussed with the NRC.	Revised subsection to increase information for the decay heat.	3
LU-10	Figure 3.1-2	--	Increase information as discussed with the NRC.	Revised figure to show batch plant contained within the property boundaries.	3
TR-04	3.8.1.10	3.8-4	Increase information as discussed with the NRC.	Added new subsection 3.8.1.11 to discuss the decay heat. Changed subsequent subsection number “3.8.1.11”	3
TR-01	3.8.1.11	3.8-4	Increase information as discussed with the NRC.	Revised subsection to address inconsistency between assemblies per truck and per package for Subsection 3.8.1.11 and Table 3.8-1.	3
TR-07	3.8.2	3.8-8	Increase information as discussed with the NRC.	Added sentence to describe how many hours per km were used as stop time.	3
TR-01	Table 3.8-1	3.8-10	Errata	Revised table to agree with US-APWR and revised normalization factor numbers.	3
TR-03 TR-06	Table 3.8-2	3.8-11 3.8-12	Increase information as discussed with the NRC.	Added additional information to the table regarding shipments per day and applicability to Table S-4.	3
CTS-00701	Table 3.8-2	3.8-11	Editorial	Added commas to five digit numbers for readability.	3
TR-03	Table 3.8-3	3.8-12 3.8-13	Increase information as discussed with the NRC.	Revised to clarify number of shipments per day and applicability to Table S-4.	3

Change ID No.	Section	ER Rev. 0 Page	Reason for change	Change Summary	Rev. of ER T/R
CTS-00702	Table 3.8-3	3.8-13	Editorial	Added footnote designations	3
CTS-00700	Table 3.8-5	3.8-15 3.8-16	Editorial corrections	Provided formatting changes for readability. Replaced Alternative Site A, B and C with Luminant A – Coastal, Luminant B – Pineland, and Luminant C – Trading House, respectively.	3
TR-02	Table 3.8-5	3.8-15	Errata	Removed row item Min/Max radii of annular area around truck stop and revised information with regards to the stop time. Removed information from sheet 3 of 3.	3
TR-07	Table 3.8-7	3.8-19	Errata	Revised normalized average annual shipments from “1.5” to “3.4” and revised cumulative annual does, person-rem per reference reactor year.	3
CTS-00700	Table 3.8-7	3.8-19	Editorial corrections	Provided formatting changes for readability. Replaced Alternative Site A, B and C with Luminant A – Coastal, Luminant B – Pineland, and Luminant C – Trading House, respectively.	3
TR-02	Table 3.8-9	3.8-21	Errata	Revised Minimum and maximum row item information to cite the NUREG and to correct the parameter values.	3
LU-12	3.9.3.7	3.9-9	Increase information as discussed with the NRC.	Revised subsection to include information on the location of on site soil retention areas based on evaluation of certain selection criteria.	3
CTS-00465	Table 3.3-1	3.3-5	Reconcile ER circulating water system, makeup water, and blowdown from Lake Granbury, with MHI	Revised “Normal Flow per Unit” and Maximum Flow per Unit” numbers for the following items: Evaporation Rate”, Blowdown Rate, CWS Makeup Rate and Raw	4

Change ID No.	Section	ER Rev. 0 Page	Reason for change	Change Summary	Rev. of ER T/R
			confirmed flow rates used in FSAR.	Water Rate, and Potable Water to be consistent with the updated water balance. Update raw water flow from 550 gpm to 1100 gpm cited in footnote "b" to be consistent with the circulating water system description. Add footnote "c)."	
CTS-00465	Figure 3.3-1	--	Reconcile ER circulating water system, makeup water, and blowdown from Lake Granbury, with MHI confirmed flow rates used in FSAR.	Revised "Flow at Max Power Operation" numbers for items 1, 2 and 3 to be consistent with the circulating water system description.	4
CTS-00465	3.4.1.4	3.4-5	Reconcile ER circulating water system, makeup water, and blowdown from Lake Granbury, with MHI confirmed flow rates used in FSAR.	Revised water volumes cited in the Makeup Water system discussion to be consistent with the circulating water system description.	4
CTS-00465	3.4.2.3	3.4-7	Reconcile ER circulating water system, makeup water, and blowdown from Lake Granbury, with MHI confirmed flow rates used in FSAR.	Revised water flow rates entering the cooling tower to be consistent with the circulating water system description. Revised temperature from 15.5 to 15.2.	4
CTS-00465	3.4.2.3	3.4-7	Erratum	Revised temperature from 15.5 to 15.2.	4
CTS-00712	3.4.2.3	3.4-7	Reconcile cooling tower heat dissipation capacity and fan power consumption values with the Ultimate Heat Sink System.	Revised the rated heat-dissipation capacity of each cooling tower from 3.27×10^8 Btu/hr to 1.96×10^8 Btu/hr; and revised the power consumption for each fan from 187 hP to 200 hP.	4
CTS-00465	Table 3.4-2	3.4-9	Reconcile ER circulating water system, makeup water, and blowdown from Lake	Revised water flow rates for "Power Operation" Quantities withdrawn, consumed, and discharged, except for quantity discharged (ESWS)	4

Change ID No.	Section	ER Rev. 0 Page	Reason for change	Change Summary	Rev. of ER T/R
			Granbury, with MHI confirmed flow rates used in FSAR.	to be consistent with the circulating water system description.	
CTS-00465	3.6.1.1	3.6-2	Reconcile ER circulating water system, makeup water, and blowdown from Lake Granbury, with MHI confirmed flow rates used in FSAR.	Revised the water rates from 13,038 gallons per minute to 13,050 gallons per minute, to be consistent with the circulating water system description.	4
CTS-00842	Figure 3.1-1	--	Erratum	Revised the coordinate of the center of the reactor of CPNPP unit 3.	5
CTS-00842	Figure 3.1-2	--	Erratum	Revised the coordinate of the center of the reactor of CPNPP unit 3.	5
CTS-00842	Figure 3.4-3	--	Erratum	Revised the coordinate of the center of the reactor of CPNPP unit 3.	5

Figure 3.1-1 Site Plan



Part 3 - Environmental Report



~~Revision 0~~

Comanche Peak Nuclear Power Plant, Units 3 & 4
COL Application
Part 3 - Environmental Report

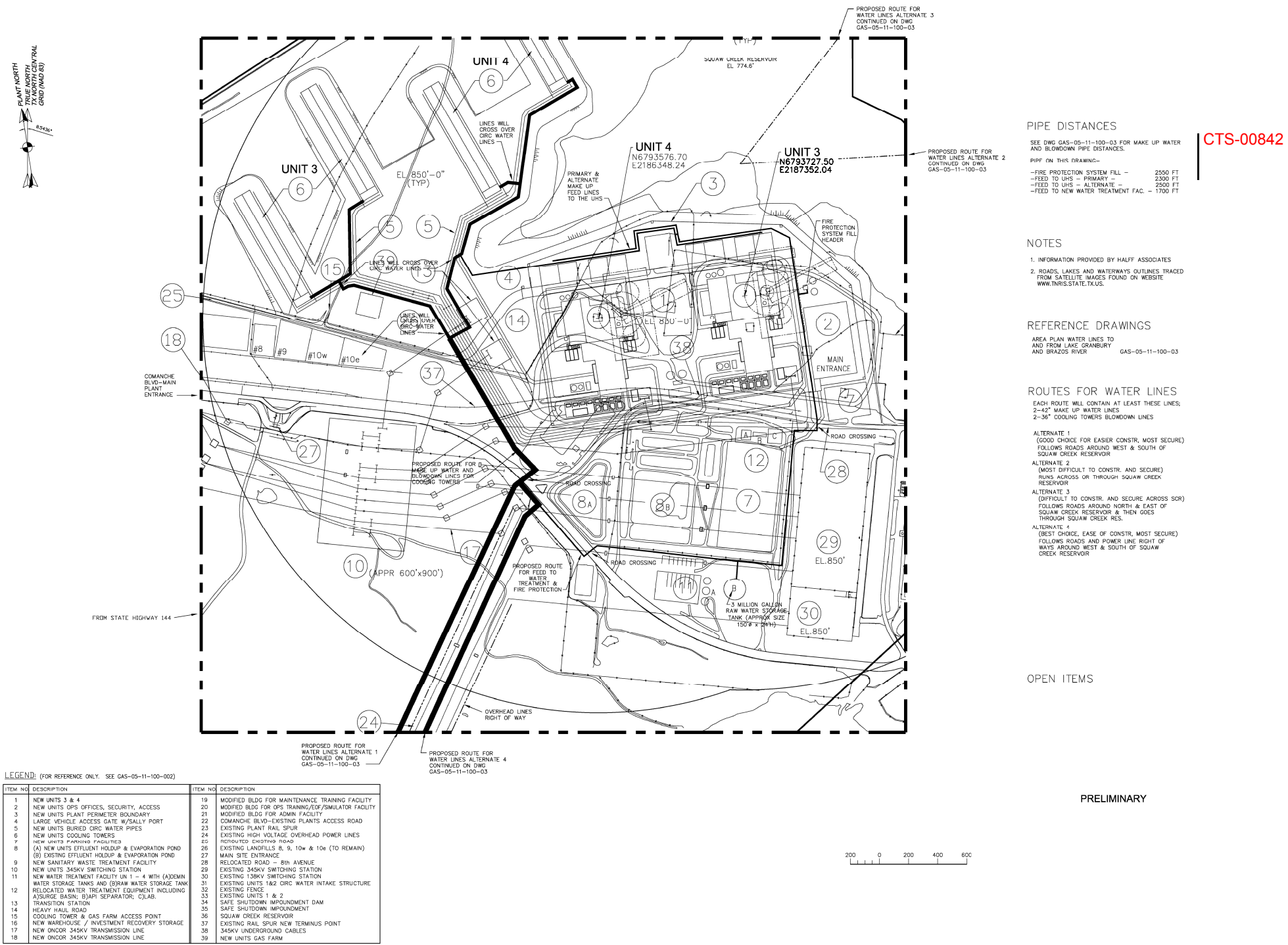


Figure 3.4-3 Intake and Discharge Locations (Sheet 3 of 3)

Chapter 4

Chapter 4 Tracking Report Revision List

Change ID No.	Section	ER Rev. 0 Page	Reason for change	Change Summary	Rev. of ER T/R
CTS-00615	Acronyms and Abbreviations	4-xvii	Editorial correction	Change "MPT Main Power Transformer" to "MT Main Transformer".	0
CTS-00650	4.1.1.1	4.1-1	Erratum	Change "275 ac" to "675 ac".	0
CTS-00650	4.1.1.1	4.1-1	Erratum	Add "the Blowdown Treatment Facility (BDTF) area,"	0
CTS-00459	4.1.1.1	4.1-1	Erratum	Change "384 ac" to "400 ac".	0
CTS-00459	4.1.2	4.1-4	Erratum	Change "384 ac" to "400 ac".	0
CTS-00459	4.2.1.1.5	4.2-3	Erratum	Change "384 ac" to "400 ac".	0
CTS-00619	4.2.1.2	4.2-4	Editorial correction	Change "cooling water" to "makeup water and blowdown".	0
CTS-00620	4.2.1.4	4.2-5	Editorial correction	Change "cooling water" to "makeup water and blowdown system".	0
CTS-00620	4.2.1.4.1	4.2-6	Editorial correction	Change "cooling water" to "makeup water and blowdown system".	0
CTS-00621	4.2.1.4.1	4.2-6	Editorial correction	Change "cooling" to "makeup".	0
CTS-00621	4.2.1.4.1	4.2-6	Editorial correction	Change "cooling water system" to "CWS and UHS".	0

Change ID No.	Section	ER Rev. 0 Page	Reason for change	Change Summary	Rev. of ER T/R
CTS-00622	4.2.2.1	4.2-9	Editorial correction	Change “cooling water system” and “raw water system” to “makeup water and blowdown system”, respectively.	0
CTS-00623	Table 4.2-1	4.2-14	Erratum	Change population count from “8186” to “6354” and average daily consumption from “0.383” to “0.362”.	0
CTS-00459	4.3.1	4.3-2	Erratum	Change “384 ac” to “400 ac”.	
CTS-00651	4.3.1	4.3-2	Update	Change acreages on page 4.3-2 of ER that describe area of soil disturbed during construction to agree with the new survey of the BDTF.	0
SOC-11	4.4.2.3	4.4-14	Increase information as discussed with the NRC.	Updated with current information and revised text to discuss public safety and medical services for Hood and Somervell counties.	1
SOC-11	4.4.2.3	4.4-15	Increase information as discussed with the NRC.	Delete paragraph to revise text to discuss public safety and medical services for Hood and Somervell counties.	1
SOC-11	4.4.4	4.4-20	Increase information as discussed with the NRC.	Revised to include 2 new reference notations.	1
SOC-03	List of Tables	4-v	Erratum	Changed title of Table 4.4-2 from “Total Number of Workers per Year for Construction of CPNPP Units 3 and 4” to “Total Number of On-site Workforce per Year for Construction of CPNPP Units 3 and 4”	2
SOC-03	List of Figures	4-vi	Increase information as discussed with the NRC.	Added figure 4.4-1 to show the CPNPP total project staffing	2
SOC-03	4.4.1.1	4.4-1	Increase information as discussed with the NRC.	Revised paragraph to include a discussion of the on site workforce for each quarter.	2

Change ID No.	Section	ER Rev. 0 Page	Reason for change	Change Summary	Rev. of ER T/R
SOC-03	4.4.1.1	4.4-1	Errata	Changed "4300" to "5201 in 2014" Added "construction" before "workforce"	2
SOC-03	4.4.1.3	4.4-3	Increase information as discussed with the NRC.	Revised paragraph to include on site peak workforce.	2
SOC-03	4.4.1.3	4.4-3	Errata	Changed "2150" to "2601" and "4300" to "5201"	2
SOC-03	4.4.1.3	4.4-4	Erratum	Changed "4300" to "4395" Changed "2150" to "2601"	2
SOC-03 MET-07	4.4.1.5.3	4.4-8	Errata	Changed "2150" to "2601" Replaced "4300 construction workers" with "5201 total on-site workers" Changed "4300" to "4953"	2
MET-07	4.4.1.6	4.4-8	Increase information as discussed with the NRC.	Revised subsection to discuss air quality impacts from vehicle emissions.	2
MET-07	4.4.1.6	4.4-9	Increase information as discussed with the NRC.	Revised subsection to address additional air quality impacts.	2
MET-09	4.4.1.6	4.4-9	Increase information as discussed with the NRC.	Revised subsection to describe the process to be used to develop and communicate air permit compliance monitoring requirements during construction.	2
SOC-03	4.4.2.1	4.4-10 4.4-11	Increase information as discussed with the NRC.	Revised subsection to provide discussions based on new and updated construction workforce populations for the proposed units.	2
SOC-03	4.4.2.1	4.4-10	Increase information as discussed with the NRC.	Added "six counties of the" before economic region to clarify the number of counties.	2
SOC-06	4.4.2.2	4.4-11	Editorial Correction	Changed Table 5.8-1 to Table 5.8-2	2
SOC-06	4.4.2.2	4.4-11	Increase information as discussed with	Revised subsection to include basis for assumptions.	2

Change ID No.	Section	ER Rev. 0 Page	Reason for change	Change Summary	Rev. of ER T/R
			the NRC.		
SOC-06	4.4.2.2	4.4-12	Increase information as discussed with the NRC.	Revised subsection to include basis for assumptions. Added “economic” in front of “the region”	2
SOC-07	4.4.2.2.1	4.4-12	Increase information as discussed with the NRC.	Revised subsection to provide additional information and to provide clarification.	2
SOC-07	4.4.2.2	4.4-13	Increase information as discussed with the NRC.	Added sentence “During the construction period, ad valorem taxes, sales and use taxes, and property taxes increase in the economic region.” Added “economic” in front of “region”	2
MET-07	4.4.4	4.4-20 4.4-21	Increase information as discussed with the NRC	Added four new reference notations as a result of revisions to subsections 4.4.1.6.	2
SOC-03	Table 4.4-2	4.4-24	Increase information as discussed with the NRC	Changed the title from “Total Number of Workers per Year for Construction of CPNPP Units 3 and 4” to “Total Number of On-site Workforce per Year for Construction of CPNPP Units 3 and 4” Expanded the table to include Construction and Operation and revised total worker numbers	2
SOC-03	Figure 4.4-1		Increase information as discussed with the NRC	Added figure to show total project staffing.	2
GEN-05 GEN-06 SOC-16 CR-03	List of Tables	4-v	Increase information as discussed with the NRC.	Added Table 4.9-1.	3
LU-10	Figure 4.1-1	--	Increase information as discussed with the NRC.	Revised figure to show batch plant contained within the property boundary.	3

Change ID No.	Section	ER Rev. 0 Page	Reason for change	Change Summary	Rev. of ER T/R
TE-07 TE-12	4.3.1	4.3-2 4.3-3 4.3-4	Increase information as discussed with the NRC.	Revised subsection to increase discussion regarding the temporary and permanent habitat disturbance plan.	3
SOC-01 SOC-08	4.4.1.3	4.4-3 4.4-4	Increase information as discussed with the NRC.	Revised subsection based on research and evaluation of existing traffic data and provided additional information.	3
SOC-01 SOC-08	4.4.1.5	4.4-8	Increase information as discussed with the NRC.	Revised the number of daily truck deliveries from "100" to "60" based on research of existing traffic data.	3
NP-15	4.4.2.2.1	4.4-12	Increase information as discussed with the NRC.	Revised subsection to provide demonstration of wages paid.	3
SOC-10	4.4.2.3	4.4-13 4.4-14	Increase information as discussed with the NRC.	Revised subsection to reconcile inconsistency between Subsection 2.5 and 4.4.	3
SOC-09	4.4.2.4	4.4-15	Increase information as discussed with the NRC.	Revised subsection to include updated housing information.	3
SOC-12	4.4.2.5	4.4-16	Increase information as discussed with the NRC.	Revised subsection to clarify the discussion of the public education system in the vicinity of the proposed units and added Granbury School District.	3
SOC-12	4.4.4	4.4-20	Increase information as discussed with the NRC.	Added a new reference notation for (Census 2000) as a result of revisions to Subsection 4.4.2.5.	3
SOC-01 SOC-08	4.4.4	4.4-20	Increase information as discussed with the NRC.	Removed reference to (TxDOT 2007) as a result of revisions in Subsection 4.4.	3
GEN-05 GEN-06 SOC-16 CR-03	4.9	--	Increase information as discussed with the NRC.	Added subsection 4.9 to address the separation of construction from preconstruction on environmental impacts.	3
GEN-05 GEN-06 SOC-16 CR-03	Table 4.9-1	--	Increase information as discussed with the NRC.	Added Table 4.9-1 to address the separation of construction from preconstruction on environmental impacts.	3
CTS-00711	Figure 4.3-1	--	Revise figure to show streams.	Revised figure to show streams.	4

Change ID No.	Section	ER Rev. 0 Page	Reason for change	Change Summary	Rev. of ER T/R
CTS-00457	Table 4.4-2	4.4-24	Clarify milestone dates are provided on Table 1.1-1	Added footnote "For construction and operation milestones, see Table 1.1-1."	4
CTS-00457	Figure 4.4-1	--	Clarify milestone dates are provided on Table 1.1-1	Added footnote "For construction and operation milestones, see Table 1.1-1."	4
RAI SOC-20	4.4.3.2	4.4-19	See Luminant letter TXNB-09027 dated 7/27/2009	Additional information requested in RAI.	-
RAI HP-02	List of Tables	4-v	See Luminant letter TXNB-09027 dated 7/27/2009	Additional information requested in RAI.	-
RAI HP-02	4.4.1.5	4.4-5 4.4-6	See Luminant letter TXNB-09027 dated 7/27/2009	Additional information requested in RAI.	-
RAI HP-02	Table 4.4-4	--	See Luminant letter TXNB-09027 dated 7/27/2009	Additional information requested in RAI.	-
RAI HP-02	4.4.4	4.4-21	See Luminant letter TXNB-09027 dated 7/27/2009	Additional references to support the additional information requested in RAI.	-

Chapter 5

Chapter 5 Tracking Report Revision List

Change ID No.	Section	ER Rev. 0 Page	Reason for change	Change Summary	Rev. of ER T/R
CTS-00615	Acronyms and Abbreviations	5-xxii	Editorial correction	Change "MPT Main Power Transformer" to "MT Main Transformer".	0
CTS-00624	5.1.3.1.4	5.1-5	Erratum	Change "one mi" to "two mi".	0
CTS-00624	5.1.3.1.4	5.1-5	Editorial correction	Change "site boundary" to "property boundaries".	0
CTS-00625	5.1.2	5.1-2	Erratum	Change number of 345-kV transmission lines from "five" to "four".	0
CTS-00627	5.2.3.5	5.2-16	Editorial correction	Change the discussion regarding the cells and cubicles.	0
CTS-00628	Table 5.3-3	5.3-20	Editorial correction	Change the circulating water flow/tower and drift rate per tower numbers.	0
CTS-00629	Table 5.4-16	5.4-42	Erratum	Change "rad" to "person-rad".	0
MET-13	5.3.1	5.3-11	Increase information as discussed with the NRC.	Add "Six years of site meteorological data (2001 – 2006) were also used in the analysis.	1
SOC-11	5.8.2.3.1.2	5.8-11 and 5.8-12	Increase information as discussed with the NRC.	Update with current information and revise text to discuss public safety and medical services for Hood and Somervell counties. Update reference citation from TDPS 2004 to TDPS 2006	1
SOC-11	5.8.4	5.8-17	Increase information as discussed with the NRC.	Update reference notation (TDPS 2004) information to (TDPS 2006) information.	1

Change ID No.	Section	ER Rev. 0 Page	Reason for change	Change Summary	Rev. of ER T/R
SOC-04	5.8.1.1	5.8-1	Errata	Changed "550" to "494" Changed "1550" to "1494" Added "in 2018" Added sentence to clarify the number of workers after one year.	2
SOC-04	5.8.1.3	5.8-2	Editorial corrections	Removed "or Texas Stae Highway 144 (SH 144)" Changed "SH 144 to Texas State Highway 144"	2
SOC-04	5.8.1.3	5.8-2 5.8-7	Errata	Changed "1550" to "1494" Changed "total of 1550" to "peak total of 1494"	2
SOC-04	5.8.2.1	5.8-8 5.8-9	Increase information as discussed with the NRC.	Revised subsection to address the operation workforce assumptions.	2
SOC-04	5.8.2.1	5.8-9	Erratum	Changed "4300" to "4953"	2
SOC-06	5.8.2.2	5.8-9 5.8-10	Increase information as discussed with the NRC.	Revised subsection to discuss workforce economics.	2
SOC-07	5.8.2.2	5.8-10	Increase information as discussed with the NRC.	Removed "(Table 2.5-13)" Replaced "0.64" with "0.32"	2
SOC-07	5.8.2.2.1	5.8-11	Editorial correction	Changed "operation" to "operational"	2
SOC-07	5.8.2.2.1	5.8-11	Increase information as discussed with the NRC.	Revised paragraph to include wage information.	2
SOC-07	5.8.4	5.8-16	Increase information as discussed with the NRC.	Added two reference notations Updated (TDPS 2004) to (TDPS 2006) information.	2
SOC-01 SOC-08	5.8.1.3	5.8-2	Increase information as discussed with the NRC.	Revised subsection based on research and evaluation of existing traffic data and provided additional information.	3

Change ID No.	Section	ER Rev. 0 Page	Reason for change	Change Summary	Rev. of ER T/R
MET-08	5.8.1.5.4	5.8-8	Increase information as discussed with the NRC.	Revised subsection to provide quantitative estimates of emissions associated with operations.	3
NP-15	5.8.2.2	5.8-11	Increase information as discussed with the NRC.	Revised subsection to provide information on wages.	3
SOC-10	5.8.2.3	5.8-11	Editorial correction	Changed “described” to “described”	3
SOC-10	5.8.2.3.1.1	5.8-11	Errata	Replaced “an operational workforce of 550” with “the migrating workforce in 2018” and Changed “110” with “492”	3
SOC-09	5.8.2.3.2	5.8-12 5.8-13	Increase information as discussed with the NRC.	Revised subsection to provide updated housing information.	3
SOC-09	5.8.2.3.2	5.8-13	Erratum	Corrected “census” to “Census”	3
SOC-12	5.8.2.3.3	5.8-13	Increase information as discussed with the NRC.	Revised subsection to clarify the discussion of the public education system in the vicinity of the proposed units and added Granbury School District.	3
SOC-01 SOC-08	5.8.4	5.8-16	Increase information as discussed with the NRC.	Replaced Reference (TxDOT 2004) with (TxDOT 2007) notation information as a result of revisions made in subsection 5.8.	3
CTS-00465	5.2.1	5.2-1	Reconcile ER circulating water system, makeup water, and blowdown from Lake Granbury, with MHI confirmed flow rates used in FSAR.	Revised the combined drift and evaporation loss rates and the maximum consumption rate of Lake Granbury to be consistent with the circulating water system description.	4
CTS-00465	5.2.1.3	5.2-3	Reconcile ER circulating water system, makeup water, and blowdown from Lake	Revised the water withdrawal rate from Lake Granbury to be consistent with the circulating water system description.	4

Change ID No.	Section	ER Rev. 0 Page	Reason for change	Change Summary	Rev. of ER T/R
			Granbury, with MHI confirmed flow rates used in FSAR.		
CTS-00465	5.2.1.3	5.2-3 5.2-4	Reconcile ER circulating water system, makeup water, and blowdown from Lake Granbury, with MHI confirmed flow rates used in FSAR.	Revised the water withdrawal rate from Lake Granbury to 65,400 gpm to be consistent with the circulating water system description. Revised water discharge rate to Lake Granbury to be 23,700 gpm.	4
CTS-00469	5.2.1.4	5.2-4	Provide updated water use estimates per TXNB-08024.	Added description of TWDB 2006 water use estimates for Somervell and Hood counties.	4
CTS-00469	5.2.4	5.2-18	Provide updated water use estimates per TXNB-08024.	Added reference (TWDB 2009) to support the 2006 draft estimated water use values.	4
CTS-00465	5.3.1.1.1	5.3-2	Reconcile ER circulating water system, makeup water, and blowdown from Lake Granbury, with MHI confirmed flow rates used in FSAR.	Revised the water withdrawal rate to be consistent with the circulating water system description.	4

Chapter 6

Chapter 6 Tracking Report Revision List

Change ID No.	Section	ER Rev. 0 Page	Reason for change	Change Summary	Rev. of ER T/R
CTS-00615	Acronyms and Abbreviations	6-xvi	Editorial correction	Change "MPT Main Power Transformer" to "MT Main Transformer".	0
CTS-00630	6.3.1.1	6.3-2	Editorial correction	Change "SWS" to "ESWS"	0
CTS-00631	6.5.1	6.5-2	Editorial correction	Remove "nonradioactive".	0
CTS-00631	6.5.1	6.5-2	Editorial correction	Change "service water" to "essential service water"	0
CTS-00499	6.7	6.7-3	Editorial correction	Add information for current results regarding humidity date, and remove discussions for future additions.	0
CTS-00499	6.7	6.7-3	Editorial correction	Clean up to match ER 6.4.1 wording for RH instrumentation.	0
MET-24	6.4.1	6.4-2	Increase information as discussed with the NRC.	Revised discussion regarding the temporary relative humidity instrumentation to include current results and conclusions.	3
MET-24	6.7	6.7-3	Revised subsection as discussed in letter TXBN-08024 to the NRC dated 9/19/2008 and to increase information as discussed with the NRC.	Revised discussion regarding the temporary relative humidity instrumentation to include current results and conclusions and to be consistent with Subsection 6.4.1; and reversed change made in UTR Rev 0 "editorial correction" for CTS-00499.	3
CTS-00650	6.6.2	6.6-4	Erratum	Revised 659 to 675.	4

Change ID No.	Section	ER Rev. 0 Page	Reason for change	Change Summary	Rev. of ER T/R
CTS-00720	6.1.3	6.1-4	Errata	Corrected Statement regarding the modification of TPDES permit currently held by Units 1 and 2.	5

Comanche Peak Nuclear Power Plant, Units 3 & 4
COL Application
Part 3 - Environmental Report

Granbury. These outfall locations on Lake Granbury are expected to be in the vicinity of the current SCR discharge pipe (Outfall 005), which is approximately 600 ft upstream of DeCordova Dam (Figure 2.3-13).

6.1.3 OPERATIONAL MONITORING

The operational monitoring program is designed to detect changes in water temperature resulting from plant operation. The current CPNPP TPDES permit, Permit Number WQ0001854000, for CPNPP Units 1 and 2, establishes routine thermal monitoring of discharges to SCR. Specifically, discharges through Outfall 001, mainly discharges from the circulating and other wastewater systems that discharge through other described outfalls, must be monitored for temperature. The existing current daily average and daily maximum temperature limits for discharges made through Outfall 001 are 113°F and 116°F, respectively (TCEQ 2004). The permit requires that discharges made through Outfall 001 be continually monitored for temperature through a continuous recording device (TCEQ 2004). Under the current TPDES permit temperature limit for discharge to Lake Granbury is 93°F (Outfall 005). Monitoring requirements similar to those for CPNPP Units 1 and 2 are anticipated for CPNPP Units 3 and 4. ~~As previously mentioned, permit modification activities for the current TPDES permit are planned for 2008.~~

CTS-00720

The existing TPDES permit is sufficient for the continued operation of CPNPP Units 1 and 2 but a permit amendment is required for a new wastewater outfall for each of the CPNPP Units 3 and 4. Modification of the existing TPDES permit is anticipated to establish sampling requirements and outfall locations for CPNPP Units 3 and 4. ~~Activities to amend the site's TPDES wastewater permit are currently planned for 2008.~~ The TPDES permit will be amended as required to support Units 3 and 4 construction activities. Anticipated chemicals used and residual concentrations within the waste stream discharged from CPNPP Units 3 and 4 are listed in Subsection 3.6.1.

CTS-00720

The monitoring equipment to be used would be selected based on permit requirements. It is expected that the monitoring equipment used at CPNPP Units 3 and 4 would be identical or similar to equipment currently used at CPNPP Units 1 and 2.

Required data analysis procedures are developed through consultation with the TCEQ and implemented at the time of permit modification.

Thermal monitoring during the operational phase of the project would comply with approved regulatory permits and requirements. Water temperatures from CPNPP Units 3 and 4 are expected to meet applicable federal and state environmental regulatory requirements. CPNPP Units 3 and 4 would use surfacewater from Lake Granbury, a public reservoir, for system operation. The existing operational units, CPNPP Units 1 and 2, would use surfacewater supplied by the SCR, a privately owned reservoir, and are permitted accordingly. In addition, CPNPP is permitted by the Brazos River Authority (BRA) to withdraw up to 48,300 ac-ft of water from Lake Granbury as makeup to SCR (BRA 1999).

6.1.4 REFERENCES

(Boss 2007) Boss, Stephen, PhD, P.G. Bathymetry and Volume Storage of a Portion of Lake Granbury, Hood County, Texas. Department of Geosciences University of Arkansas. Fayetteville, AR. July 11, 2007.

Chapter 7

Chapter 7 Tracking Report Revision List

Change ID No.	Section	ER Rev. 0 Page	Reason for change	Change Summary	Rev. of ER T/R
CTS-00615	Acronyms and Abbreviations	7-xvii	Editorial correction	Change "MPT Main Power Transformer" to "MT Main Transformer".	0
CTS-00470	7.2	7.2-7	Erratum	Change " 5.87×10^{-1} " to "1.15".	0
ACC-06	7.2-4 Tables: 7.2-5, 7.2-7, 7.2-9, 7.2-10, 7.2-11, 7.2-12, 7.2-13, 7.2-14	7.2-3, 7.2-7, 7.2-8, 7.2-13, 7.2-15, 7.2-17, 7.2-18, 7.2-19, 7.2-20, 7.2-21, 7.2-22, 7.2-23	See Luminant Letter TXNB-09013 dated 4/28/2009	Revised Subsection and Tables to reflect a 90% evacuation to a distance of 50 mi.	-

Chapter 8

Chapter 8 Tracking Report Revision List

Change ID No.	Section	ER Rev. 0 Page	Reason for change	Change Summary	Rev. of ER T/R
CTS-00615	Acronyms and Abbreviations	8-xvi	Editorial correction	Change “MPT Main Power Transformer” to “MT Main Transformer”.	0
NP-03	8.1	8.1-6	Increase information as discussed with the NRC.	Revised text to address why the plants are not specifically discussed within the context of the need for power analysis.	1
NP-05	8.1	8.1-6	Increase information as discussed with the NRC.	Revised text to discuss the ERCOT assumptions driving generation capacity.	1
NP-09 NP-13	8.4.1	8.4-1	Increase information as discussed with the NRC.	Revised text to clarify that market participants determine how and when to retire or build new capacity.	1
NP-12	8.1	8.1-6	Increase information as discussed with the NRC.	Revised text to explain that market forces determine how to meet the forecast load.	1
NP-18	8.3.1	8.3-1	Increase information as discussed with the NRC.	Added a “pointer” to the definition of “mothballed capacity.”	1
NP-09	8.4.1	8.4-1	Increase information as discussed with the NRC.	Revised text to clarify how ERCOT does their analysis.	1
NP-18	8.4.1	8.4-1	Increase information as discussed with the NRC.	Revised text to provide information regarding mothballed generating capacity.	1
NP-03	8.4.1	8.4-1	Increase information as discussed with the NRC.	Revised text to address why the plants are not specifically discussed within the context of the need for power analysis and at specific points in time, given that the plants would not come on line until about 10 years in the future.	1
NP-09	8.4.1	8.4-2	Increase information as discussed with the NRC.	Revised text to clarify how ERCOT does their analysis.	1

Change ID No.	Section	ER Rev. 0 Page	Reason for change	Change Summary	Rev. of ER T/R
NP-09	8.4.1	8.1-4	Increase information as discussed with the NRC.	Expands the discussion of reserve margin.	1
NP-12	8.4.1	8.4-5	Increase information as discussed with the NRC.	Expanded the discussion of reserve margin to indicate the decision to increase the number of plants rests with the market participants.	1
NP-01	8.4.5	8.4-7	Increase information as discussed with the NRC.	Revise text to discuss the 2007 ERCOT assessment and other information that has become available after the 2007 reference. Added subsection 8.4.5 entitled "ERCOT Update"	1
NP-01	8.4.6	8.4-7	Increase information as discussed with the NRC.	Revise references for the increased information.	1
NP-14	Table 8.4-1	8.4-8	Increase information as discussed with the NRC.	Revised table to include the load forecast and reserve margin.	1

Chapter 9

Chapter 9 Tracking Report Revision List

Change ID No.	Section	ER Rev. 0 Page	Reason for change	Change Summary	Rev. of ER T/R
CTS-00615	Acronyms and Abbreviations	9-xx	Editorial correction	Change "MPT Main Power Transformer" to "MT Main Transformer".	0
CTS-00632	9.2	9.2-9	Erratum	Change "peak" to "units".	0
CTS-00687	9.3.4.1.3.2	9.3-14	Update the proprietary status of information	Remove (proprietary)	1
CTS-00688	9.3	9.3-30	Update the proprietary status of information	Remove "Attachment proprietary information" and add "Luminant Nuclear Power Plant Siting Report, February 09, 2009, with a modified" and remove the period after Project.	1
CTS-00689	Tables: 9.3-1A 9.3-3 9.3-4 9.3-5 9.3-6 9.3-7 9.3-8 9.3-9 9.3-10 9.3-11 9.3-12 9.3-13 9.3-14 9.3-15 9.3-16 9.3-17 9.3-18 9.3-19 9.3-20 9.3-21 9.3-22 9.3-23 9.3-24 9.3-25 9.3-26 9.3-27	9.3-33, 9.3-36, 9.3-37, 9.3-38, 9.3-39, 9.3-40, 9.3-41, 9.3-42, 9.3-43, 9.3-44, 9.3-45, 9.3-46, 9.3-47, 9.3-48, 9.3-49, 9.3-50, 9.3-51, 9.3-52, 9.3-53, 9.3-54, 9.3-55, 9.3-56, 9.3-58, 9.3-59, 9.3-60, 9.3-61, 9.3-62, 9.3-63,	Update the proprietary status of information	Remove "Withheld from Public Disclosure Under 10 CFR 2.390 (a) (4)" from the title.	1

Change ID No.	Section	ER Rev. 0 Page	Reason for change	Change Summary	Rev. of ER T/R
		9.3-64, 9.3-65 9.3-66, 9.3-67, 9.3-68, 9.3-69, 9.3-70, 9.3-71, 9.3-72, 9.3-73, 9.3-74			
CTS-00690	Figure 9.3-2	-	Editorial Correction	Remove box with "Proprietary Information – Withheld Under 10 CFR 2.399 (a) (4)" and provide figure.	1
ALT-09	9.2	9.2-28	Editorial Correction	Remove the sentence "The levelized cost of electricity produced from pulverized coal fired power plants is \$0.033/kWh - \$0.041/kWh"	1
ALT-09	9.2	9.2-30	Erratum	Replace \$575 with \$544	1
CTS-00709	Table 9.3-21	9.3-39	Editorial Correction	Removed "128 ^(a) " and replaced with "53" and "6.4" with "< 1."	4
CTS-00459	9.4.2.1.4	9.4-17	Erratum	Revised 384 ac to 400 ac to be consistent with the current survey.	4

Chapter 10

Chapter 10 Tracking Report Revision List

Change ID No.	Section	ER Rev. 0 Page	Reason for change	Change Summary	Rev. of ER T/R
CTS-00615	Acronyms and Abbreviations	10-xvi	Editorial correction	Change “MPT Main Power Transformer” to “MT Main Transformer”.	0
CTS-00459	10.1.1.1	10.1-1	Erratum	Change “200 ac” to “400 ac”.	0
CTS-00461	10.1.3.2.1	10.1-11	Editorial Correction	Remove “diesel generators”, and mention the auxiliary boiler as an air emission source.	0
CTS-00459	Table 10.1-1	10.1-14	Erratum	Change “200 ac” to “400 ac”.	0
CTS-00650	Table 10.1-1	10.1-14	Erratum	Change “659 ac” to “675 ac”.	0
CTS-00633	Table 10.1-1	10.1-14	Erratum	Change 4152 to indicate this is the fourth item in the table and the number cited is 152	0
CTS-00460	10.1	10.1-5	Erratum	Add text to show an additional 250 gpm will be provided for de-mineralized water, and change “fifty gpm” to “three hundred gpm”.	0
CTS-00505	10.1.3.2.2	10.1-12	Editorial correction	Remove “adds on impact”.	0
CTS-00505	10.1.3.2.2	10.1-12	Editorial correction	Remove “not”.	0
CTS-00634	10.4.1.2.1	10.4-3	Erratum	Change “4461” to “4466”.	0
CTS-00459	10.4.2.2.1	10.4-8	Erratum	Change “approximately 200 ac” to “400 ac”.	0

Change ID No.	Section	ER Rev. 0 Page	Reason for change	Change Summary	Rev. of ER T/R
CTS-00506	Table 10.4-2	10.4-15	Erratum	Change alignment of "3180".	0
CTS-00459	Table 10.4-4	10.4-20	Erratum	Change "384 ac" to "400 ac".	0
NP-17	10.1.1.2	10.1-2	Errata	Changed "construction workers" to "on-site workforce" Changed "reach 4300 in 2013" to "be 5201" Changed "construction" to "on-site"	2
NP-17	10.1	10.1-5	Erratum	Changed "A thermal plume created from cooling water blowdown would be discharged to the Lake Granbury" to "Subsection 5.3.2.1 describes the thermal plume analysis and impacts from CPNPP."	2
NP-17	10.1.3.1.1	10.1-7	Errata	Changed "550" to "494" Changed "1550" to "1494"	2
NP-17	10.1.3.1.1	10.1-9	Editorial correction	Removed Radiological category discussion	2
NP-17	10.1.3.1.2	10.1-9	Errata	Changed "4300 construction" to "5201" Removed "in 2013"	2
NP-17	10.1.3.2.2	10.1-12	Errata	Changed "550" to "494" Changed "1550" to "1494"	2
NP-17	Table 10.3-1	10.3-6	Increase information as discussed with the NRC.	Changed "avoid" to "reduce"	2
NP-17	10.4.1.1.1	10.4-1	Increase information as discussed with the NRC.	Revised to clarify socioeconomics and to be consistent with other subsections.	2

Change ID No.	Section	ER Rev. 0 Page	Reason for change	Change Summary	Rev. of ER T/R
NP-17	10.4.1.1.1	10.4-2	Errata	Changed “550” to “494” Changed “4300” to “4953” Added “and 248 operations workers” before “on-site” and “at the start of operations” to clarify the socioeconomics and to be consistent with other subsections.	2
NP-17	10.4.1.1.1	10.4-2	Errata	Replace “economy of the region” with “economic region” and added “economic” before “region”	2
NP-17	10.4.1.1.1	10.4-2	Increase information as discussed with the NRC.	Changed “SMALL” to “LARGE” as a result of revisions.	2
NP-17	10.4.1.1.2	10.4-2	Increase information as discussed with the NRC.	Revised subsection to clarify socioeconomics and to be consistent with other subsections.	2
NP-17	10.4.1.1.2	10.4-2	Erratum	Changed “2007” to “2006” Changed “1121” to “48,965” Changed “Hood County and 220 people unemployed in Somervell County.” to “the economic region.”	2
NP-17	10.4.1.1.2	10.4-2	Erratum	Changed “vicinity and a SMALL beneficial impact in the region.” To “economic region” and Changed vicinity to “economic region”	2
NP-17	10.4.1.1.2	10.4-3	Increase information as discussed with the NRC.	Revised subsection to clarify socioeconomics and to be consistent with other subsections.	2
NP-17	10.4.1.2.3	10.4-4	Errata	Changed “989” and “1664” Changed “5289” to “5131” Changed “4300” to “4953” Changed “550” to “494” Changed “682” to “272” Changed “1232” to “766”	2
NP-17	10.4.2.2.2	10.4-9	Errata	Changed 56,592,000 gpd” to “55,690,560 gpd” Changed “consumption” to “forced evaporation”	2

Change ID No.	Section	ER Rev. 0 Page	Reason for change	Change Summary	Rev. of ER T/R
				Removed reference to “(Subsection 2.3.2.2.4)” and replace with “Table 2.3-38”	
NP-17	10.4.2.2.5	10.4-10	Discussed with the NRC	Removed subsection 10.4.2.2.5 as the discussion is not in context.	2
NP-17	10.4.2.2.6	10.4-11	Editorial Correction	Changed subsection 10.4.2.2.6 to 10.4.2.2.5	2
NP-17	10.4.2.2.7	10.4-11	Editorial Correction	Removed subsection 10.4.2.2.7 as the discussion is not in context.	2
NP-17	10.4.2.2.8	10.4-11	Editorial Correction	Changed subsection “10.4.2.2.8” to “10.4.2.2.6”	2
NP-17	Table 10.4-1 (sheet 1 of 2)	10.4-13	Errata	Changed “Net ad” to “Ad” Changed “4300” to “4953” Changed “550” to “494” Aligned the Subheading to the left. Removed subtitle below the line. Added “in \$/\$100 valuation” to clarify the tax rates.	2
NP-17	Table 10.4-1 (sheet 2 of 2)	10.4-14	Erratum	Removed “Dependence on Foreign Energy” row item Removed “Foreign Trade Deficit” row item.	2
NP-17	Table 10.4-2	10.4-15	Editorial Correction	Replaced footnote “a)” with “Air emissions were calculated using AP 42”	2
NP-17	Table 10.4-3 (Sheet 2 of 3)	10.4-17	Editorial Correction	Removed row “Radioactive Effluents and Emissions” and “Potential Nuclear Accident” row items.	2
NP-17	Table 10.4-4 (Sheet 1 of 4)	10.4-19	Erratum	Changed “4300” to “4953” Changed “550” to “494” Changed “1671” to “1936” Changed “989” to “1801” Changed “521” to “135”	2
NP-17	Table 10.4-4 (Sheet 2 of 4)	10.4-20	Editorial Correction	Removed row for “Foreign Trade Deficit”	2

Change ID No.	Section	ER Rev. 0 Page	Reason for change	Change Summary	Rev. of ER T/R
NP-17	Table 10.4-4 (Sheet 3 of 4)	10.4-21	Editorial Correction	Removed "Potential Nuclear Accident" row item.	2
CTS-00650	10.1.3.1.1 10.1.3.2.1	10.1-8 10.1-10	Errata	Revised 659 to 675.	4
CTS-00650	Table 10.1-2 Table 10.2-1	10.1-22 10.2-6	Errata	Revised 659 to 675.	4
CTS-00465	10.4.2.2.2	10.4-9	Reconcile ER circulating water system, makeup water, and blowdown from Lake Granbury, with MHI confirmed flow rates used in FSAR.	Revised the net consumption rate to be consistent with the circulating water system description.	4