

Comanche Peak Nuclear Power Plant, Units 3 & 4 COL Application Part 2, FSAR

System	Series	Group/formation	Remarks	Tectonic Setting	Tectonic Association
Pleistocene	Gulf Series	Terraces	Sedimentation in coastal and offshore Louisiana (not in site region)	Reactivation of southern Rocky Mountains, uplift of Colorado Plateau, eastward tilting of the Great Plains and renewed uplift of southern Appalachians.	Gulf of Mexico Basin Loading Subsidence
Pliocene		Goliad			
Miocene		Fleming			
Oligocene		Frio	Deposition of sandstone, siltstones and shales advancing to deep Gulf of Mexico basin	Sedimentation recording calc-alkaline volcanism in Mexico and southwestern portions of the Gulf of Mexico catchment	
		Vicksburg Group	Offlapping deltaic depositional sequences of sandstones, siltstones and shales prograding to continental margin	Large amounts of sedimentary input in Late Paleocene to Early Eocene from early Larimide Orogeny	
Eocene		Jackson Group			
		Claiborne Group			
Paleocene		Wilcox Group	Increasing amounts of terrigenous input derived from western sources	Probable initial influences of Larimide Orogeny	
		Midway Group			
Late Cretaceous		Gulf Series	Navarro Group	Shelf carbonate and terrigenous clastic sequences affected by cyclic sea-level fluctuations; terrigenous material provided by periodic uplift of crustal blocks	
	Taylor Group				
	Austin Group				
Early Cretaceous	Comanche Series	Eagle Ford Group	Widespread unconformity at base	Continental and marine deposition with tectonically stable conditions and continued subsidence	
		Woodbine Group			
		Washita Group			
		Del Rio			
		Georgetown			
		Kiamichi			
		Frederick-sburg Group			
		Edwards Formation			
		Comanche Peak Formation			
		Walnut Formation			
Paluxy Formation					
Late Jurassic	Gulf Series	Trinity Group	Thick sequence of upward coarsening terrigenous clastics	Transgression maximum with clastic input from prograding delta systems. Development of unconformity at top.	
		Glen Rose Formation			
		Travis Peak/Twin Mountains Formation			
Late Jurassic	Gulf Series	Cotton Valley Group	Terrigenous clastics, carbonates and evaporites	Widespread transgression due to thermal relaxation of the crust	
		Haynesville Formation and equivalents/members			
		Smackover Formation			
Late Jurassic	Gulf Series	Norphiet Formation	Carbonate and calcareous shales	Basal coarse clastic facies	
Jurassic Upper - Middle	Gulf Series	Werner Anhydrite - Louann Salt	Widespread development shallow bodies of hypersaline water periodically replenished from Pacific Ocean resulting in evaporite deposits primarily of either anhydrite or halite	Beginning of thermal relaxation of the crust following rifting and crustal thinning	Gulf of Mexico Formation
Late Triassic to mid-Jurassic	Gulf Series	Eagle Mills Formation	Deposition of non-marine clastics and basaltic volcanics in isolate basins	Initiation of Gulf of Mexico formation with rifting of Pangea with deposition of rift facies sediments and volcanics.	Gulf of Mexico Formation
Permian	WOLFCAMP VIRGIL	Cisco Group	Deposition in waning phases of Ouachita orogeny and successor basins	Syn- Post orogenic Ouachita deposition	Ouachita Orogenic Phase
Pennsylvanian	MISSOURI	Canyon Group	Shallow water clastic deposition with decreased paleoslopes	Syn-orogenic Ouachita clastic wedge	
		Strawn Group			
		Atoka Group			
Mississippian	MORROWAN	Marble Falls and Comyn Formations	Shallow water carbonate deposited over and along flanks of crustal arches	Deposition in basin and in shallow water associated with crustal arching front of foredeep and westerly advancing synorogenic deltas	
		Barnet Formation			
		Chapple Formation			
		OSAGEN			
Cambrian - Ordovician	CANADIAN	Viola and Simpson Formations and equivalents	Carbonate dominated stable platform sequence; minor amounts of Upper Ordovician, Silurian, Devonian and Lower Mississippian preserved in karst at top of Ellenburger.	Laurentian shelf	
		Ellenburger Group			
		Wilberns and Riley Formations			
Pre-Cambrian	N/A	Wachita Mountains Igneous Province	Rift related bimodal plutonic and volcanic suite, early mafic phase with late silicic phase	Magmatic series in core of the Southern Oklahoma Aulacogen marks initial rifting of Rodinia	
		Llano Series	Middle Proterozoic (1232 - 1301 Ma) metaigneous and metasedimentary terrane intruded by post-kinematic plutons (1116-1070 Ma).	Crystalline Grenville basement	Laurentian Platform Basement - Cover

Figure 2.5.1-203 Regional Stratigraphy