

		REGIONAL EVENTS	EFFECT AT SITE AND SITE AREA	
MESOZOIC		Intrusion of diabase dikes	diabase dikes	
		Opening of Atlantic basin; extensional tectonics	← K-Ar Potassium feldspar, 219 Ma	
PALEOZOIC	PERMIAN			
		Ma 245		
	CARBONIFEROUS	LATE	286 <i>Alleghanian Orogenesis</i> ; rapid unroofing and cooling	← K-Ar hornblende, 290 Ma ← Rb-Sr biotite, 291 Ma ← K-Ar biotite, 296 Ma
		EARLY	Emplacement of Charlotte Terrane over Inner Piedmont; development of Central Piedmont shear zone	Most likely timing for D ₃ , D ₄ and D ₅ followed by lower greenschist overprint
	DEVONIAN	LATE	362	①
		MIDDLE	382.5	
		EARLY	394	
	SILURIAN	LATE	418	②
		EARLY	424	
	ORDOVICIAN	LATE	443	
MIDDLE		458		
EARLY		468		
CAMBRIAN	LATE	490		
	MIDDLE	500		
	EARLY	510		
NEOPROTEROZOIC		535 <i>Virgilian Orogenesis</i> with fabric development and metamorphism to Upper Greenschist to Amphibolite facies; followed by Stage III mafic intrusions?	D ₁ and D ₂ deformation with development of upper greenschist to amphibolite facies assemblages	
		550		
		Gondwana Island Arc (Stage II) Accumulation of volcanic pile with intrusion of granodiorite-tonalite followed by clastic and carbonate sedimentation	Development of Site Area stratigraphy	

Compiled from PSAR Project 81 (1974), Schaeffer (1981), Hibbard et al. (2002), Hatcher et al. (2007)

- ① Middle Devonian – Early Mississippian subduction of Laurentia beneath Carolina Superterrane;
OR
② Possible Late Ordovician – Silurian subduction of Carolina beneath Laurentia

WLS COL 2.5-1

WILLIAM STATES LEE III
NUCLEAR STATION UNITS 1 & 2

Site Area Geochronology Chart

FIGURE 2.5.1-223 Rev 2