

Bellefonte Nuclear Plant, Units 3 & 4
COL Application
Part 2, FSAR

LITHOTECTONIC UNIT	LITHOSTRATIGRAPHY	MECHANICAL ROLE
4	<u>Ouachita-Alleghanian synorogenic clastic wedge and equivalent foreland facies</u> PENNSYLVANIAN Pottsville Fm. (sandstone-mudstone-coal) MISSISSIPPIAN <u>clastic-wedge facies on southwest</u> Parkwood Fm. (sandstone-mudstone) Floyd Shale <u>foreland facies on northeast</u> Bangor Limestone Hartselle Sandstone Pride Mountain Fm. (mudstone-sandstone)	passive translation above stiff layer; local upper level detachments
3	<u>discontinuous variable shallow-marine facies, internal unconformities</u> MISSISSIPPIAN Tusculumbia Limestone Fort Payne Chert DEVONIAN Chattanooga Shale Frog Mountain Sandstone SILURIAN Red Mountain Fm. (sandstone-mudstone-hematite) MIDDLE AND UPPER ORDOVICIAN <u>distal facies of Taconic clastic wedge on east</u> Sequatchie Fm. (mudstone) Colvin Mountain Sandstone Greensport Fm. (mudstone) Athens Shale Lenoir--Little Oak Limestone <u>foreland facies on west</u> Chickamauga Limestone	passive translation above stiff layer; local upper-level detachment (e.g., Coosa deformed belt)
2	<u>passive-margin carbonate shelf</u> UPPER CAMBRIAN--LOWER ORDOVICIAN Knox Group (dolostone-limestone-chert)	regional stiff layer
1	<u>synrift facies, Birmingham graben (Ouachita rift)</u> LOWER AND MIDDLE CAMBRIAN Conasauga Fm. (shale-limestone-dolostone) Rome Fm. (shale-sandstone-limestone) <u>early postrift facies, Blue Ridge rift</u> LOWER CAMBRIAN Shady Dolomite Chilhowee Group (sandstone)	regional basal decollement; mushwad regional basal decollement in some thrust sheets southeast of Helena thrust sheet
	<u>crystalline basement rocks</u> PRECAMBRIAN	

(Reference 245)