



DESCRIPTION OF GEOLOGIC UNITS

<p>Tt TERRACE DEPOSITS AND UPLAND SEDIMENT - Gravel, clayey sand, and sand and minor iron-oxide cemented sandstone.</p>	<p>PPg GRANITIC ROCK (Pennsylvanian to Permian, 265-325 m.y.) - Megacrystic to equigranular.</p>	<p>CZmd METAMUDSTONE AND META-ARGILLITE - Bedding plane and axial planar cleavage common; interbedded with metasandstone, metaconglomerate, and metavolcanic rock.</p>
<p>Tpy YORKTOWN FORMATION AND DUPLIN FORMATION, UNDIVIDED - Yorktown Formation: Fossiliferous clay with varying amounts of fine-grained sand, bluish gray, shell material commonly concentrated in lenses; mainly in area north of Neuse River. Duplin Formation: Shelly, medium- to coarse-grained sand, sandy marl, and limestone, bluish gray; mainly in area south of Neuse River.</p>	<p>PPmg FOLIATED TO MASSIVE GRANITIC ROCK (Pennsylvanian to Permian, 270-320 m.y.) - Megacrystic to equigranular.</p>	<p>CZph PHYLLITE AND SCHIST - Locally laminated and pyritic; includes phyllonite, sheared fine-grained metasediment, and metavolcanic rock.</p>
<p>Tec CASTLE HAYNE FORMATION - Comfort Member and New Hanover Member, undivided. Comfort Member: Bryozoan-echinoid skeletal limestone, locally dolomitized, solution cavities common. New Hanover Member: Phosphate-pebble conglomerate, micritic, thin; restricted to basal part of Castle Hayne Formation in southeastern counties.</p>	<p>PzZg METAMORPHOSED GABBRO AND DIORITE - Foliated to massive.</p>	<p>CZve METAVOLCANIC EPICLASTIC ROCK - Metamorphosed argillite, mudstone, volcanic sandstone, conglomerate, and volcanic rock.</p>
<p>Kb BLACK CREEK FORMATION - Clay gray to black, lignitic; contains thin beds and laminae of fine-grained micaceous sand and thick lenses of cross-bedded sand. Glauconitic, fossiliferous clayey sand lenses in upper part.</p>	<p>PzZu META-ULTRAMAFIC ROCK - Metamorphosed dunite and peridotite; serpentinite, soapstone, and other altered ultramafic rock. Only larger bodies shown.</p>	<p>CZmv MAFIC METAVOLCANIC ROCK - Metamorphosed basalt flows and tuffs, dark green to black; interbedded with felsic and intermediate metavolcanic rock and metamudstone.</p>
<p>Kc CAPE FEAR FORMATION - Sandstone and sandy mudstone, yellowish gray to bluish gray, mottled red to yellowish orange, indurated, graded and laterally continuous bedding, blocky clay, faint cross-bedding, feldspar and mica common.</p>	<p>CZam AMPHIBOLITE - Metamorphosed mafic extrusive and intrusive rock; includes hornblende gneiss, thin layers of mica schist, and small non-layered masses of metadiorite and metagabbro.</p>	
<p>Km MIDDENDORF FORMATION - Sand, sandstone, and mudstone, gray to pale gray with an orange cast, mottled; clay balls and iron-cemented concretions common, beds laterally discontinuous, cross bedding common.</p>	<p>CZbg BIOTITE GNEISS AND SCHIST- Inequigranular and megacrystic; in places contains garnet; interlayered and gradational with mica schist and amphibolite; includes small masses of granitic rock.</p>	
<p>Jd DIABASE - Dikes, gray to black.</p>	<p>CZc VOLCANIC METACONGLOMERATE - Includes metagraywacke and metamudstone.</p>	
<p>TRc CHATHAM GROUP (undivided) - Conglomerate, fanglomerate, sandstone, and mudstone.</p>	<p>CZfg FELSIC MICA GNEISS - Interlayered with graphitic mica schist and mica-garnet schist, commonly with kyanite; minor hornblende gneiss.</p>	
<p>TRcc CUMNOCK FORMATION - Sandstone and mudstone, gray to black; coal beds and carbonaceous shale. Grades into Pekin and Sanford formations.</p>	<p>CZfv FELSIC METAVOLCANIC ROCK - Metamorphosed dacitic to rhyolitic flows and tuffs, light gray to greenish gray; interbedded with mafic and intermediate metavolcanic rock, meta-argillite, and metamudstone.</p>	
<p>TRcp PEKIN FORMATION - Conglomerate, sandstone, and mudstone.</p>	<p>CZg METAMORPHOSED GRANITIC ROCK (Late Proterozoic to late Cambrian, 520-650m.y.) - Megacrystic, well-foliated, locally contains hornblende.</p>	
<p>TRcs SANFORD FORMATION - Conglomerate, fanglomerate, sandstone, and mudstone.</p>	<p>CZig INJECTED GNEISS - Biotite gneiss and schist intruded by numerous sills and dikes of granite, pegmatite, and apatite; minor hornblende gneiss.</p>	
	<p>CZlg LINEATED-FELSIC MICA GNEISS - White to pink with strong lineation of muscovite-biotite streaks and prismatic quartz aggregates; planar foliation and layering weak; minor mica schist and hornblende gneiss.</p>	
	<p>CZiv INTERMEDIATE METAVOLCANIC ROCK - Metamorphosed andesitic tuffs and flows, medium to dark grayish green; minor felsic and mafic metavolcanic rock.</p>	

Progress Energy Carolinas
**Shearon Harris Nuclear Power Plant
 Units 2 and 3**
Part 3, Environmental Report
 New Hill, North Carolina

Site Vicinity Geologic Map
 (40-km [25-mi.] Radius)

FIGURE 2.6-2 (SHEET 2 OF 2)

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