



LEGEND

- HAR Sites
- HNP
- Main Dam
- Major Highways
- 8-km (5-mi.) Radius from Site
- 1-km (0.6-mi.) Radius from Site
- Faults (dashed where inferred, dotted where concealed)  
(Ebasco, 1975, CP&L, 1983, NCGS, 1985, Wooten et al., 1996, Harding Lawson, 1997, NCGS, 2006, and this study)  
HF - Harris Fault  
SBPF - South Borrow Pit Fault  
W8 - W8 Fault  
W82 - W82 Fault
- Point Fault (NCGS, 2006)
- Folds (dashed where inferred, dotted where concealed) (NCGS, 2006)
- Dikes (dashed where inferred)  
(CP&L, 1983, NCGS, 1985, Wooten et al., 1996, Harding Lawson, 1997, NCGS, 2006, and Technos, this study)

**Geology A (NCGS, 1985)**  
(Original Mapping Scale: 1:1,250,000)  
See Figure 2.5.1-230, Sheet 2 for Description of Geologic Units

Tt	TRcc	CZbg	CZg
Km	TRcp	CZfg	CZiv
TRc	TRcs	CZfv	CZve

**Geology B (NCGS, 2006)**  
(Detailed Mapping Available for the New Hill and Cokesbury Quadrangles, Scale 1:24,000)  
See Figure 2.5.1-231, Sheet 2 for Description of Geologic Units

Qal	Trcs/si2	CZbm
Jd	Trcs/s	CZbr3
Trcc	PzZbg2	CZmv
Trcs	CZbg	
Trcs/c	CZbl	

- Strike and Dip of Bedding
- Inclined Foliation
- Inclined Secondary Cleavage

**Shearon Harris Nuclear Power Plant  
Units 2 and 3  
Part 2, Final Safety Analysis Report**  
New Hill, North Carolina

Site Area Geologic Maps  
(8-km [5-mi.] Radius)

## DESCRIPTION OF GEOLOGIC UNITS SHOWN IN FIGURE 2.5.1-231, SHEET 1

<b>CZbg</b>	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.
<b>CZbl</b>	METAMORPHOSED LEUCOGRANITE OF THE BUCKHORN DAM INTRUSIVE SUITE - Light-colored, medium- to coarse-grained rocks with poorly developed foliation; composed mainly of plagioclase, quartz, and microcline with minor amounts of chlorite, sericite, epidote, biotite, and opaque minerals. The color index is usually less than 5.
<b>CZbm</b>	METAMORPHOSED MAFIC ROCKS - Metagabbro and metadiorite: Dark green, coarse- to fine-grained, variably foliated rocks composed mainly of epidote, chlorite, hornblende (and/or actinolite), plagioclase, opaque minerals, and minor quartz.
<b>CZbr3</b>	BIG LAKE-RAVEN ROCK SCHIST 3 - Light tan to orange brown, fine- to medium-grained, white mica schist to gneiss.
<b>CZmv</b>	MAFIC METAVOLCANIC ROCK - Metamorphosed basalt flows and tuffs, dark green to black; interbedded with felsic and intermediate metavolcanic rock and metamudstone.
<b>Jd</b>	JURASSIC DIABASE DIKES
<b>PzZbg2</b>	DUNCAN METAGRANITE - Light pinkish gray, medium-grained, nonfoliated to weakly foliated, leucocratic (CI<10) garnet- and epidote-bearing biotite metagranite.

Source: NCGS (2006)

<b>Trcc</b>	CONGLOMERATE - Reddish brown to dark brown, irregularly bedded, poorly sorted, cobble to boulder conglomerate. Consists of >50% conglomerate. Clasts are mostly felsic and intermediate metavolcanic rocks, quartz, epidote, bluish gray quartz crystal tuff, muscovite schist, and rare metagranitic material.
<b>Trcs</b>	INTERBEDDED SANDSTONE/PEBBLY SANDSTONE (Lithofacies Association II - Reddish brown to dark brown, irregularly bedded to massive, poorly to moderately sorted, medium- to coarse-grained, muddy lithic arkoses, with occasional, matrix-supported granules and pebbles as 1 to 5 cm basal layers.
<b>Trcs/si2</b>	SANDSTONE WITH INTERBEDDED SILTSTONE (Lithofacies Association II - Whitish yellow to grayish pink to pale red, coarse- to very coarse grained, trough cross-bedded lithic arkose that fines upward through yellow to reddish brown, burrowed, rooted siltstone.
<b>Trcsi/s</b>	SILTSTONE WITH INTERBEDDED SANDSTONE Lithofacies Association II - Reddish brown, extensively bioturbated, muscovite-bearing siltstone interbedded with tan to brown, fine- to medium-grained, muscovite-bearing, arkosic sandstone, usually less than one meter thick.
<b>Trcs/c</b>	SANDSTONE WITH INTERBEDDED CONGLOMERATE Lithofacies Association II - Reddish brown to dark brown, irregularly bedded, poorly sorted, coarse-grained to pebbly, muddy lithic sandstones with interbedded pebble to cobble conglomerate.
<b>Qal</b>	QUATERNARY ALLUVIUM

Progress Energy Carolinas

**Shearon Harris Nuclear Power Plant  
Units 2 and 3  
Part 2, Final Safety Analysis Report**  
New Hill, North Carolina

Site Area Geologic Maps  
(8-km [5-mi.] Radius)

FIGURE 2.5.1-231 (SHEET 2 OF 2) Rev. 1