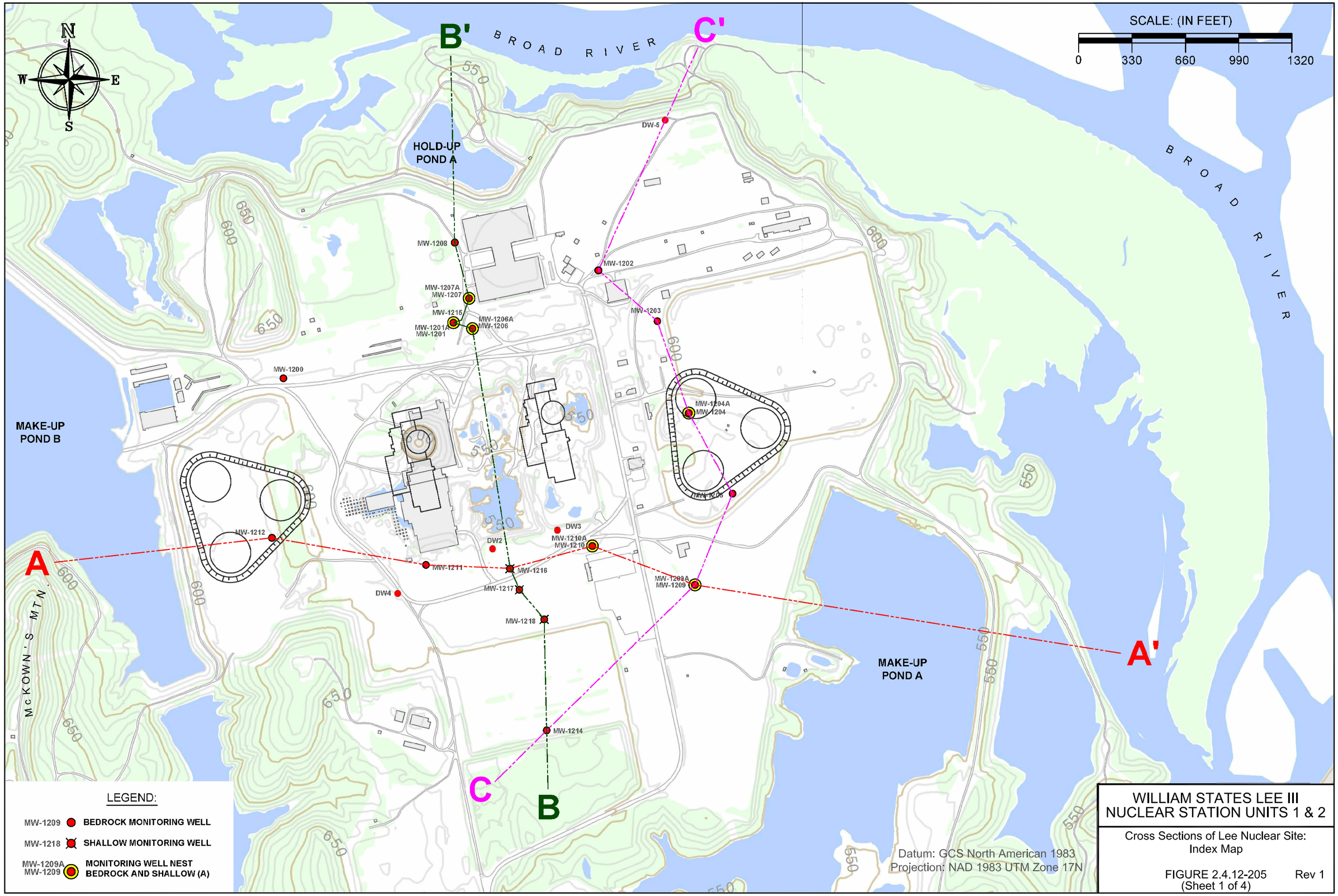


WLS
COL 2.4-4

WILLIAM STATES LEE III
NUCLEAR STATION UNITS 1 & 2

Cross Sections of Lee Nuclear Site:
Index Map

FIGURE 2.4.12-205 Rev 1
(Sheet 1 of 4)

HISTORICAL TOPOGRAPHIC DATA FROM USGS BLACKSBURG SOUTH SC QUADRANGLE MAP (DATED 1971).
HISTORICAL WATER LEVEL DATA FROM CHEROKEE PSAR AND ER

A

A'

700' ELEVATION AMSL

600'

500'

HISTORIC GROUND SURFACE

CUT

WELLS 1211, 1216, 1210, AND 1209 ARE WITHIN THE FORMER EAST-FLOWING DRAINAGE WAY ON THE ORIGINAL TOPOGRAPHIC SURFACE EAST OF 1209, SECTION FOLLOWS AXIS OF 1971 TOPOGRAPHIC VALLEY, FIRST NE THEN TO SE

1212 1211 1216 1210 1209

1210A 1209A

McKOWN'S MTN RIDGE

MAKE-UP POND B

608 LEVEL

1973 HISTORIC WATER

PRESENT GROUND SURFACE

MAXIMUM PROJECTED STATIC WATER LEVEL

FILL

569

535

163

2930

476

2339

77

MAKE-UP POND A

547

495

522

BROAD RIVER

511

488

1902

2618

870

WELL-BORING KEY

TOC
GL
CASING
FILL
SOIL & SAPROLITE
SCREEN
AQUIFER TEST ZONE
91
K IN FEET/YEAR
BOTTOM OF WELL
PARTIALLY DECOMPOSED AND WEATHERED BROKEN ROCK - AUGER REFUSAL
BOTTOM OF BORING
CRYSTALLINE ROCK RQD>80

Elevation Units are ft. amsl

584 MAXIMUM PROJECTED STATIC WATER LEVEL
511 NOVEMBER 2006 WATER LEVEL
500 1973 HISTORICAL WATER LEVEL

0
25'
50'

Approximate Scale
0 500' 1000' 1500'

THIS FIGURE ILLUSTRATES GENERAL HYDROLOGIC CONDITIONS AT LEE NUCLEAR SITE.

Aquifer Characteristics

Material	K (cm/s)	Effective Porosity
Fill Material	1.2×10^{-4}	9%
Soil and Saprolite	4.5×10^{-4}	20%
Partially Weathered Rock	1.4×10^{-3}	8%

Well construction details are provided in Table 2.4.12-201.

WLS COL 2.4-4

WILLIAM STATES LEE III NUCLEAR STATION UNITS 1 & 2

Cross Sections of Lee Nuclear Site: A - A'

FIGURE 2.4.12-205 (Sheet 2 of 4)

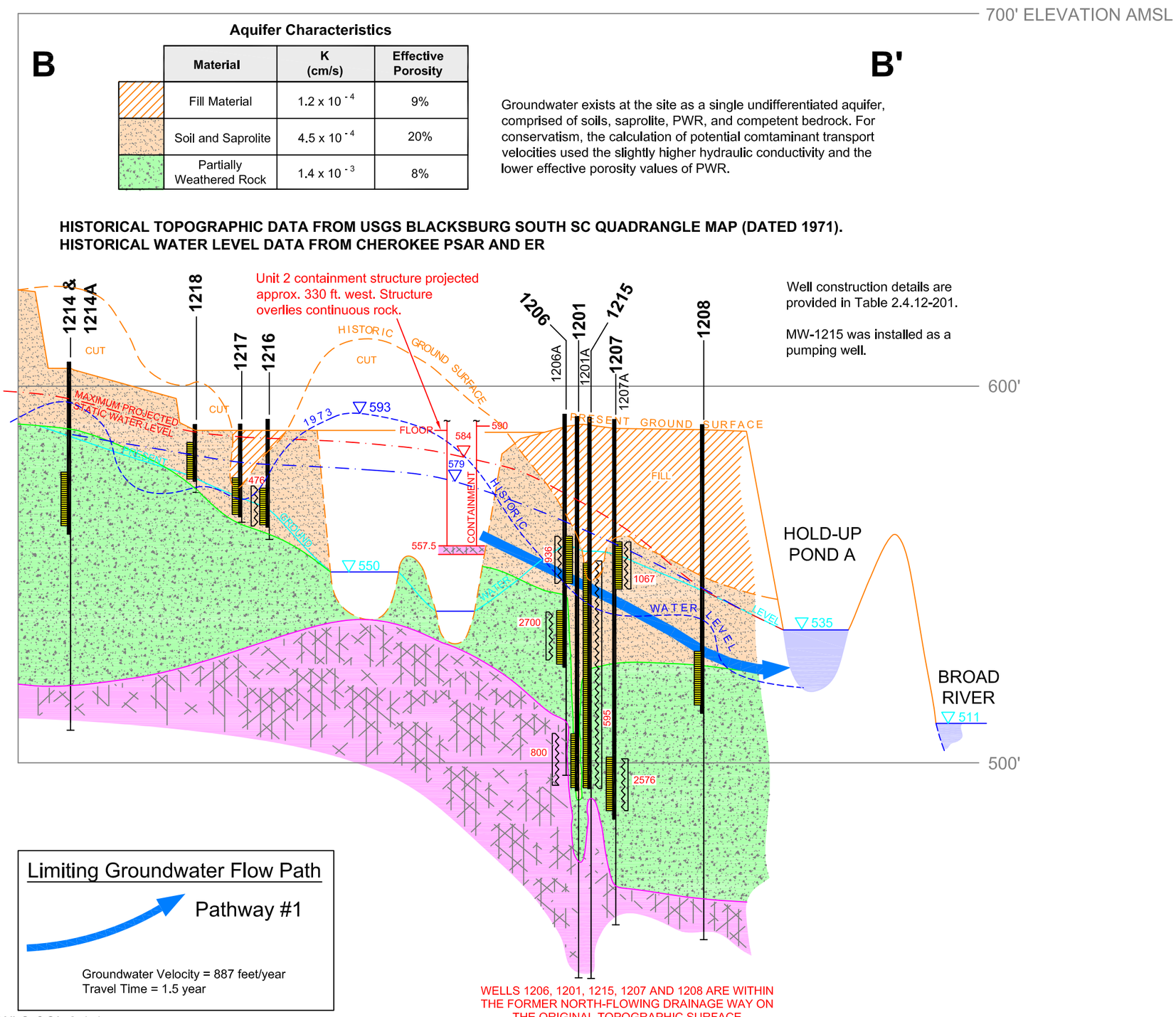
Rev 2

Aquifer Characteristics

	Material	K (cm/s)	Effective Porosity
	Fill Material	1.2×10^{-4}	9%
	Soil and Saprolite	4.5×10^{-4}	20%
	Partially Weathered Rock	1.4×10^{-3}	8%

Groundwater exists at the site as a single undifferentiated aquifer, comprised of soils, saprolite, PWR, and competent bedrock. For conservatism, the calculation of potential comtaminant transport velocities used the slightly higher hydraulic conductivity and the lower effective porosity values of PWR.

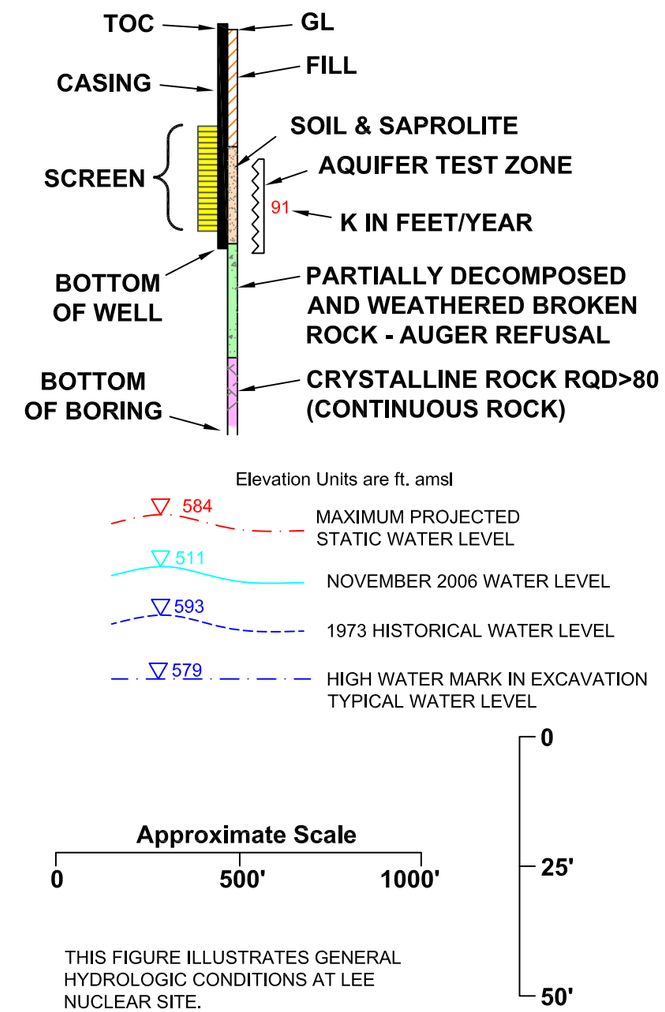
HISTORICAL TOPOGRAPHIC DATA FROM USGS BLACKSBURG SOUTH SC QUADRANGLE MAP (DATED 1971).
HISTORICAL WATER LEVEL DATA FROM CHEROKEE PSAR AND ER



Well construction details are provided in Table 2.4.12-201.

MW-1215 was installed as a pumping well.

WELL-BORING KEY



THIS FIGURE ILLUSTRATES GENERAL HYDROLOGIC CONDITIONS AT LEE NUCLEAR SITE.

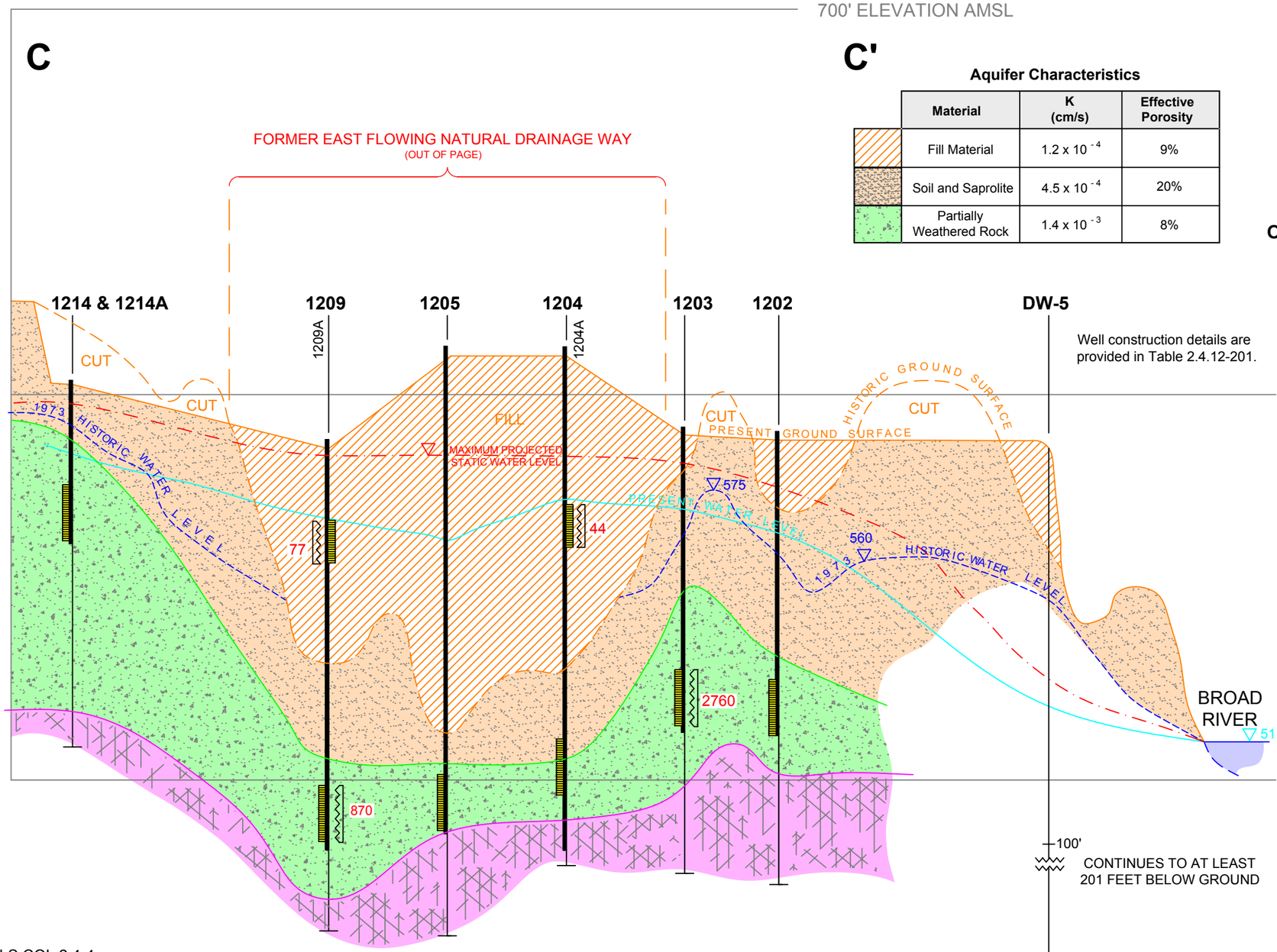
WILLIAM STATES LEE III NUCLEAR STATION UNITS 1 & 2

Cross Sections of Lee Nuclear Site: B - B'

FIGURE 2.4.12-205 (Sheet 3 of 4)

Rev 2

HISTORICAL TOPOGRAPHIC DATA FROM USGS BLACKSBURG SOUTH SC QUADRANGLE MAP (DATED 1971).
HISTORICAL WATER LEVEL DATA FROM CHEROKEE PSAR AND ER

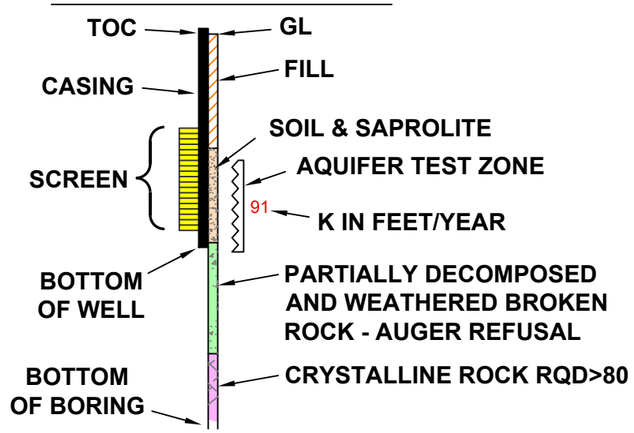


Aquifer Characteristics

	Material	K (cm/s)	Effective Porosity
	Fill Material	1.2×10^{-4}	9%
	Soil and Saprolite	4.5×10^{-4}	20%
	Partially Weathered Rock	1.4×10^{-3}	8%

Well construction details are provided in Table 2.4.12-201.

WELL-BORING KEY



Elevation Units are ft. amsl

584 MAXIMUM PROJECTED STATIC WATER LEVEL

511 NOVEMBER 2006 WATER LEVEL

500 1973 HISTORICAL WATER LEVEL

Approximate Scale

0 500' 1000' 1500'

0 25' 50'

THIS FIGURE ILLUSTRATES GENERAL HYDROLOGIC CONDITIONS AT LEE NUCLEAR SITE.

WLS COL 2.4-4

WILLIAM STATES LEE III
NUCLEAR STATION UNITS 1 & 2

Cross Sections of Lee Nuclear Site:
C - C'

FIGURE 2.4.12-205
(Sheet 4 of 4)

Rev 2