



TEST BORING LOG

Project: Calvert Cliffs Nuclear Power Plant
Calvert County, Maryland

Boring Number: **B-308**
Contract Number: 06120048
Sheet: 2 of 5

DEPTH (FT)	STRATA DESCRIPTION	CLASS.	ELEV. (FT)	WL	SAMPLING		TESTS	REMARKS
					DEPTH	DATA		
	wet, orange, with organic matter, trace fine gravel.	SM						
30.0	CLAYEY SAND, fine to medium grained, moist, dark gray.	SC	77.1		30	2+2+3 N =5 REC =14"		
35.0	SANDY LEAN CLAY, fine, moist, dark gray.	CL	72.1		35	2+2+3 N =5 REC =18"		
					40	2+3+2 N =5 REC =18"		
					45	REC =24"	PP=3.00 tsf	
	contains mica.				50	4+5+6 N =11 REC =18"		
					55	REC =16"	PP=3.25 tsf	
	<i>continued on next page</i>							

TEST BORING LOG 06120048 PLOG SPT 300 & 400.GPJ SCHNABEL.GDT 3/6/08

Comments:

1. Boring backfilled with cement/bentonite grout through tremie pipe upon completion.
2. * = See Appendix I for additional lab testing data.



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Calvert County, Maryland

Boring Number: **B-308**
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DEPTH (FT)	STRATA DESCRIPTION	CLASS.	ELEV. (FT)	WL	SAMPLING		TESTS	REMARKS
					DEPTH	DATA		
60.0	SILTY SAND, fine to medium grained, moist, dark gray, with cemented sand.	CL	47.1		5+7+7	N =14 REC =18"		
		SM			60			
65.0	CLAYEY SAND, fine grained, moist, gray, with fine to coarse shell fragments, moderate HCl reaction.	SC	42.1			REC =0"		
73.5	SILTY SAND, fine to medium grained, moist, dark gray, with cemented sand. gray, with fine to coarse shell fragments, strong HCl reaction.	SM	33.6		17+21+50/5"	N =71/11" REC =16"		
					50/4"	N =50/4" REC =1"		
				75				
					50/4"	N =50/4" REC =1"		
				80				
83.5	CLAYEY SAND, fine to medium grained, moist, gray, with fine to coarse shell fragments, moderate HCl reaction.	SC	23.6		50/2"	N =50/2" REC =0"		
					50/5"	N =50/5" REC =1"		
				90				

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Boring Number: **B-308**
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DEPTH (FT)	STRATA DESCRIPTION	CLASS.	ELEV. (FT)	WL	SAMPLING		TESTS	REMARKS
					DEPTH	DATA		
93.5	SILTY SAND, fine grained, moist, dark greenish gray, with fine to coarse shell fragments, moderate HCl reaction. contains mica.	SC	13.6					
		SM						
					95	7+14+14 N =28 REC =18"		
					100	9+11+14 N =25 REC =18"		
103.5	CLAYEY SAND, fine to medium grained, moist, greenish gray.	SC	3.6					
		SM						
					105	4+7+13 N =20 REC =18"		
					110	3+5+7 N =12 REC =18"		
113.5	SILTY SAND, fine to medium grained, moist, light gray, with fine to coarse shell fragments, strong HCl reaction. greenish gray and white. trace fine to coarse shell fragments, <i>continued on next page</i>	SC	-6.4					
		SM						
					115	15+24+50/4" N =74/10" REC =15"		
					120	34+29+23 N =52 REC =18"		
						10+19+21		

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DEPTH (FT)	STRATA DESCRIPTION	CLASS.	ELEV. (FT)	WL	SAMPLING		TESTS	REMARKS
					DEPTH	DATA		
	strong HCl reaction.	SM						
128.5	CLAYEY SAND, fine to medium grained, moist, trace fine shell fragments, weak HCl reaction	SC	-21.4		125	N =40 REC =18"		
133.5	SANDY SILT, fine to medium grained, moist, greenish gray, trace fine to medium shell fragments, weak HCl reaction where shell fragments are present	ML	-26.4		130	9+10+21 N =31 REC =18"		
138.5	SILTY SAND, fine to medium grained, moist, greenish gray, few fine to coarse shell fragments, strong HCl reaction.	SM	-31.4		135	9+13+22 N =35 REC =18"		
					140	10+10+15 N =25 REC =18"		
					145	7+10+16 N =26 REC =18"		
150.0	BOTTOM OF BORING @ 150.0 FT.		-42.9		150	10+17+30 N =47 REC =18"		

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Project: Calvert Cliffs Nuclear Power Plant
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Boring Number: **B-309**
Contract Number: 06120048
Sheet: 1 of 5

Boring Contractor: CONNELLY AND ASSOCIATES, INC.
FREDERICK, MARYLAND
Boring Foreman: D. Reese
Drilling Method: Mud Rotary
Drilling Equipment: CME-75 (Truck)
Schnabel Representative: M. Arles
Dates Started: 5/11/06 **Finished:** 5/12/06
Location: Northing: 216949.24 ft
Easting: 960890.7 ft
Ground Surface Elevation: 100.1 (feet)

Groundwater Observations

	Date	Time	Depth	Casing	Caved
Start of day	5/12	---	12.5'	14.0'	---
Start of day	5/15	---	21.5'	14.0'	---

TEST BORING LOG 06120048 PLOG SPT 300 & 400.GPJ SCHNABEL.GDT 3/6/08

DEPTH (FT)	STRATA DESCRIPTION	CLASS.	ELEV. (FT)	WL	SAMPLING		TESTS	REMARKS
					DEPTH	DATA		
0.4	ROOTMAT AND TOPSOIL.		99.7					
	Clayey Sand FILL, fine to medium grained, moist, brownish orange.	FILL				2+2+2 N = 4 REC = 17"		Drill hollow stem auger Fill, water loss and hole collapse, drillers cased auger to 14' to keep hole open
2.0	Poorly graded sand FILL, fine to coarse grained, moist, brownish orange, contains wood fragments, with clay, trace silt.	FILL	98.1			WOH/18" N = WOH/18" REC = 11"		
		FILL			5	1+WOR +WOR N = WOR REC = 4"		
7.0	Silty Sand FILL, fine to coarse grained, moist, grayish brown, contains wood fragments.	FILL	93.1			WOH/18" N = WOH/18" REC = 18"		
	wet, brown, trace gravel.	FILL						
11.0	SILTY SAND, fine to coarse grained, moist, brown, trace gravel.	SM	89.1			WOH+2+2 N = 4 REC = 18"		
12.0	SANDY LEAN CLAY, fine to coarse, moist, brown.	CL	88.1			2+2+3 N = 5 REC = 13"	PP=0.25 tsf	
17.0	POORLY GRADED SAND WITH SILT AND GRAVEL, fine to coarse grained, moist, orangeish brown.	SP-SM	83.1			7+10+11 N = 21 REC = 17"		
	orange.					9+14+8 N = 22 REC = 14"		
24.8	<i>continued on next page</i>		75.3		25			

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DEPTH (FT)	STRATA DESCRIPTION	CLASS.	ELEV. (FT)	WL	SAMPLING		TESTS	REMARKS
					DEPTH	DATA		
27.0	SILTY SAND, fine to medium grained, moist, orange.	SM	73.1					
	CLAYEY SAND, fine to medium grained, moist, dark gray.	SC						
					30	1+3+2 N =5 REC =18"		
32.0	SANDY LEAN CLAY, fine, moist, dark gray.	CL	68.1					
					35	REC =23"		
							PP=2.50 tsf	
					40	4+4+6 N =10 REC =18"		
	trace sand.							
					45	REC =24"	PP=3.75 tsf	
	gray.							
					50	3+4+7 N =11 REC =18"		
52.0	CLAYEY SAND, fine to medium grained, moist, greenish gray.	SC	48.1					
					55	REC =23"		
57.0	POORLY GRADED SAND WITH CLAY, fine to medium grained, moist, grayish <i>continued on next page</i>	SP-SC	43.1					

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DEPTH (FT)	STRATA DESCRIPTION	CLASS.	ELEV. (FT)	WL	SAMPLING		TESTS	REMARKS
					DEPTH	DATA		
	green, with fine to coarse shell fragments (15-20%), HCl+, contains cemented sand.	SP-SC				31+50/3" N =50/3" REC =10"		
62.0	CLAYEY SAND, fine to medium grained, moist, grayish green, 1/4" layers of clay and sand.	SC	38.1			6+12+16 N =28 REC =18"		
67.0	POORLY GRADED SAND, fine to medium grained, moist, grayish green, trace silt, with fine to medium shell fragments (0-10%).	SP	33.1			50/3" N =50/3" REC =4"		
72.0	POORLY GRADED SAND WITH SILT, fine to medium grained, moist, green and white, with fine to coarse shell fragments (30-40%), HCl+.	SP-SM	28.1			23+19+14 N =33 REC =16"		
	greenish gray, with fine to coarse shell fragments (10-20%).					50/4" N =50/4" REC =2"		
	with fine to coarse shell fragments (15-30%).					8+17+22 N =39 REC =18"		
						9+10+9 N =19 REC =18"		
	<i>continued on next page</i>							

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DEPTH (FT)	STRATA DESCRIPTION	CLASS.	ELEV. (FT)	WL	SAMPLING		TESTS	REMARKS
					DEPTH	DATA		
	trace fine to medium shell fragments (<1%).	SP-SM			95	6+7+8 N =15 REC =18"		
					100	3+3+4 N =7 REC =18"		
	grayish green, with fine to coarse shell fragments (15-30%).				105	5+6+11 N =17 REC =18"		
107.0	SILTY SAND, fine to medium grained, moist, grayish green, with fine to coarse shell fragments (30-40%).	SM	-6.9		110	23+10+26 N =36 REC =18"		
112.0	POORLY GRADED SAND WITH SILT, fine to medium grained, moist, grayish green, with fine to coarse shell fragments (10-15%), with silt, HCl+.	SP-SM	-11.9		115	9+9+14 N =23 REC =18"		
					120	5+6+7 N =13 REC =18"		
122.0	POORLY GRADED SAND, fine to medium grained, moist, green, trace silt.	SP	-21.9			8+8+10		
	<i>continued on next page</i>							

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DEPTH (FT)	STRATA DESCRIPTION	CLASS.	ELEV. (FT)	WL	SAMPLING		TESTS	REMARKS
					DEPTH	DATA		
		SP						
127.0	SILTY SAND, fine to medium grained, moist, green, trace fine to medium shell fragments (0-5%).	SM	-26.9		125	N = 18 REC = 18"		
					130	7+7+9 N = 16 REC = 18"		
132.0	POORLY GRADED SAND WITH SILT, fine to medium grained, moist, green, trace fine to medium shell fragments (0-5%), HCl+.	SP-SM	-31.9		135	5+7+7 N = 14 REC = 18"		
	with fine to coarse shell fragments (10-25%).				140	4+6+8 N = 14 REC = 18"		
					145	5+6+9 N = 15 REC = 18"		
147.0	SILTY SAND, fine to medium grained, moist, green, trace fine to medium shell fragments (0-10%).	SM	-46.9					
150.0	BOTTOM OF BORING @ 150.0 FT.		-49.9		150	5+7+8 N = 15 REC = 18"		

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Boring Contractor: CONNELLY AND ASSOCIATES, INC.
FREDERICK, MARYLAND
Boring Foreman: D. Bender
Drilling Method: Mud Rotary
Drilling Equipment: CME-550
Schnabel Representative: K. Bell
Dates Started: 6/15/06 **Finished:** 6/15/06
Location: Northing: 217081.4 ft
Easting: 960616.6 ft
Ground Surface Elevation: 91.6 (feet)

Groundwater Observations

	Date	Time	Depth	Casing	Caved
Encountered	6/15	---	48.5'	---	---

DEPTH (FT)	STRATA DESCRIPTION	CLASS.	ELEV. (FT)	WL	SAMPLING		TESTS	REMARKS
					DEPTH	DATA		
0.5	ROOTMAT AND TOPSOIL.		91.1					
2.0	POORLY GRADED SAND WITH CLAY, fine to medium grained, moist, orangeish brown, trace gravel.	SP-SC	89.6			1+1+1 N =2 REC =6"		
	CLAYEY SAND, fine to medium grained, moist, orangeish brown, trace root fragments, trace gravel, moderate cementation. yellowish brown	SC				3+4+4 N =8 REC =18"		
5						4+3+5 N =8 REC =16"		
7.0	POORLY GRADED SAND WITH CLAY, fine to coarse grained, moist, yellowish brown, trace gravel.	SP-SC	84.6			4+6+6 N =12 REC =15"		
10.0	SILTY SAND, fine to medium grained, moist, yellowish brown and orangeish brown.	SM	81.6			3+6+6 N =12 REC =5"		start of mud rotary drilling
13.0	SANDY LEAN CLAY, wet, yellowish brown and gray.	CL	78.6			1+1+2 N =3 REC =18"		
						2+2+2 N =4 REC =18"		color change in mud tub from orangeish brown to gray
						2+2+3 N =5 REC =18"		
	<i>continued on next page</i>							

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DEPTH (FT)	STRATA DESCRIPTION	CLASS.	ELEV. (FT)	WL	SAMPLING		TESTS	REMARKS
					DEPTH	DATA		
		CL						
32.0	ELASTIC SILT, moist, gray, trace sand.	MH	59.6		30	2+4+5 N =9 REC =18"		
37.0	CLAYEY SAND, fine to medium grained, moist, gray.	SC	54.6		35	3+6+7 N =13 REC =17"		Harder drilling
	strong cementation				40	4+5+7 N =12 REC =18"		
47.0	SILTY SAND, fine to coarse grained, wet, gray, trace fine to medium shell fragments, 2-5%, HCl reaction weak.	SM	44.6	▽	45	11+21+50/5" N =71/11" REC =16"		Harder drilling
					50	50/5" N =50/5" REC =5"		
					55	50/4" N =50/4" REC =4"		
	<i>continued on next page</i>							Rig chatter

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DEPTH (FT)	STRATA DESCRIPTION	CLASS.	ELEV. (FT)	WL	SAMPLING		TESTS	REMARKS
					DEPTH	DATA		
	gray and white, with fine to coarse shell fragments, 60-70%, HCl reaction strong	SM				10+13+9 N =22 REC =18"		
62.0	CLAYEY SILT, moist, greenish gray.	ML	29.6			4+50 N =50 REC =12"		Harder drilling Rig chatter
	No recovery.					50/2" N =50/2" REC =0"		Harder drilling/rig chatter
72.0	CLAYEY SAND, fine to medium grained, wet, greenish gray and white, contains fine to coarse shell fragments, 20-30%, HCl reaction moderate.	SC	19.6			5+7+10 N =17 REC =18"		
						REC =15"		
	trace fine to medium shell fragments, 2-5%, HCl reaction weak.					5+6+8 N =14 REC =18"		
						4+4+8 N =12 REC =18"		
	<i>continued on next page</i>							

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DEPTH (FT)	STRATA DESCRIPTION	CLASS.	ELEV. (FT)	WL	SAMPLING		TESTS	REMARKS
					DEPTH	DATA		
	white and gray, with fine to coarse shell fragments, 60-70%, strong cementation, HCl reaction strong.	SC				95	50/5" N =50/5" REC =4"	Rig chatter
	contains fine to medium shell fragments, 10-20%, HCl reaction moderate.						27+27+26 N =53 REC =18"	Rig chatter
100.0	BOTTOM OF BORING @ 100.0 FT.		-8.4			100		

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Boring Contractor: CONNELLY AND ASSOCIATES, INC.
FREDERICK, MARYLAND

Boring Foreman: D. Bender

Drilling Method: Mud Rotary

Drilling Equipment: CME-550X (ATV)

Schnabel Representative: K. Bell

Dates Started: 5/15/06 Finished: 5/16/06

Location: Northing: 217268.61 ft
Easting: 960771.76 ft

Ground Surface Elevation: 58.4 (feet)

Groundwater Observations

	Date	Time	Depth	Casing	Caved
Encountered	5/15	---	23.5'	---	---
Start of day	5/16	---	10.0'	---	---

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DEPTH (FT)	STRATA DESCRIPTION	CLASS.	ELEV. (FT)	WL	SAMPLING		TESTS	REMARKS
					DEPTH	DATA		
0.8	ROOTMAT AND TOPSOIL. POORLY GRADED SAND WITH SILT, fine to medium grained, moist, yellowish brown, trace root fragments. yellowish brown and brown, with wood fragments.	SP-SM	57.6		1+1+1 N=2 REC=14"			
					4+3+2 N=5 REC=8"			
					5 1+3+5 N=8 REC=0"			
7.0	FAT CLAY with sand, moist, orangeish brown and gray, trace root fragments.	CH	51.4		2+4+5 N=9 REC=12"			
					10 1+3+5 N=8 REC=17"			
12.0	SILTY SAND, fine to medium grained, moist, gray. gray and greenish gray.	SM	46.4		15 6+9+10 N=19 REC=20"			
					20 4+5+9 N=14 REC=20"			
22.0	POORLY GRADED SAND WITH SILT, fine to medium grained, wet, gray and greenish gray. <i>continued on next page</i>	SP-SM	36.4	∇	25 10+15+17 N=32 REC=15"		Harder drilling	

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DEPTH (FT)	STRATA DESCRIPTION	CLASS.	ELEV. (FT)	WL	SAMPLING		TESTS	REMARKS
					DEPTH	DATA		
	trace fine to medium shell fragments, HCl reaction weak.	SP-SM				30	23+17+15 N =32 REC =14"	
32.0	SILTY SAND, fine to medium grained, wet, gray and white, with fine to coarse shell fragments, HCl reaction strong.	SM	26.4			35	11+11+18 N =29 REC =12"	
37.0	SANDY LEAN CLAY, moist, greenish gray, trace fine to coarse shell fragments, HCl reaction moderate.	CL	21.4			40	28+22+50/3" N =72/9" REC =21"	
42.0	CLAYEY SAND, fine to coarse grained, wet, oliveish gray and gray, trace fine to coarse shell fragments, HCl reaction moderate, weak cementation.	SC	16.4			45	11+19+17 N =36 REC =17"	Harder drilling
47.0	SILTY SAND, fine to medium grained, wet, greenish gray and white, trace fine to coarse shell fragments, HCl reaction weak.	SM	11.4			50	4+4+6 N =10 REC =14"	
						55	4+4+5 N =9 REC =14"	
<i>continued on next page</i>								

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DEPTH (FT)	STRATA DESCRIPTION	CLASS.	ELEV. (FT)	WL	SAMPLING		TESTS	REMARKS
					DEPTH	DATA		
	greenish gray.	SM			60	2+3+5 N =8 REC =17"		
					65	4+4+7 N =11 REC =18"		
67.0	CLAYEY SAND, fine to medium grained, wet, light gray and white, with fine to coarse shell fragments, HCl reaction strong.	SC	-8.6		70	50/3" N =50/3" REC =2"		
72.0	SILTY SAND, fine to medium grained, wet, greenish gray, trace fine to coarse shell fragments, HCl reaction moderate.	SM	-13.6		75	18+17+23 N =40 REC =17"		
	HCl reaction weak.				80	8+12+15 N =27 REC =18"		
	greenish gray and white, HCl reaction moderate.				85	9+8+10 N =18 REC =18"		
87.0	SANDY ELASTIC SILT, wet, gray and greenish gray.	MH	-28.6		90	6+7+10 N =17 REC =18"		
	<i>continued on next page</i>							

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DEPTH (FT)	STRATA DESCRIPTION	CLASS.	ELEV. (FT)	WL	SAMPLING		TESTS	REMARKS
					DEPTH	DATA		
	trace fine to medium shell fragments (5%), HCl reaction weak.	MH			95	6+8+12 N =20 REC =18"		Resumed drilling 5/16/06 @ 7:15am
	greenish gray				100	7+14+12 N =26 REC =18"		
102.0	SILTY SAND, fine to medium grained, wet, greenish gray and white, and fine to coarse shell fragments (35-45%), HCl reaction strong.	SM	-43.6		105	11+12+31 N =43 REC =20"		
107.0	LEAN CLAY with sand, wet, greenish gray and white, trace fine to medium shell fragments (2-5%), HCl reaction moderate.	CL	-48.6		110	7+7+10 N =17 REC =19"		
	trace fine to medium shell fragment (5-10%).				115	5+7+10 N =17 REC =19"		
	trace fine to medium shell fragments <i>continued on next page</i>				120	5+7+9		

TEST BORING LOG 06120048 PLOG SPT 300 & 400.GPJ SCHNABEL.GDT 3/6/08

Comments:

- Boring backfilled with cement/bentonite grout through tremie pipe upon completion.
- * = See Appendix I for additional lab testing data.



TEST BORING LOG

Project: Calvert Cliffs Nuclear Power Plant
Calvert County, Maryland

Boring Number: **B-311**
Contract Number: 06120048
Sheet: 5 of 5

DEPTH (FT)	STRATA DESCRIPTION	CLASS.	ELEV. (FT)	WL	SAMPLING		TESTS	REMARKS
					DEPTH	DATA		
	(2-5%), HCl reaction weak.	CL						
	greenish gray.							
132.0	FAT CLAY with sand, moist, greenish gray and gray.	CH	-73.6					
	trace fine to medium shell fragments (<5%), HCl reaction weak.							
	trace fine to medium shell fragments (5%).							
	trace fine to medium shell fragments (<5%).							
150.0	BOTTOM OF BORING @ 150.0 FT.		-91.6					

TEST BORING LOG 06120048 PLOG SPT 300 & 400.GPJ SCHNABEL.GDT 3/6/08

Comments:

1. Boring backfilled with cement/bentonite grout through tremie pipe upon completion.
2. * = See Appendix I for additional lab testing data.



TEST BORING LOG

Project: Calvert Cliffs Nuclear Power Plant
Calvert County, Maryland

Boring Number: **B-312**
Contract Number: 06120048
Sheet: 1 of 4

Boring Contractor: CONNELLY AND ASSOCIATES, INC.
FREDERICK, MARYLAND
Boring Foreman: D. Bender
Drilling Method: Mud Rotary
Drilling Equipment: CME-550X (ATV)
Schnabel Representative: K. Bell
Dates Started: 5/18/06 **Finished:** 5/18/06
Location: Northing: 217293 ft
Easting: 960740 ft
Ground Surface Elevation: 55.3 (feet)

Groundwater Observations

	Date	Time	Depth	Casing	Caved
Encountered	5/18	---	23.5'	---	---

DEPTH (FT)	STRATA DESCRIPTION	CLASS.	ELEV. (FT)	WL	SAMPLING		TESTS	REMARKS
					DEPTH	DATA		
0.5	ROOTMAT AND TOPSOIL.		54.8					
2.0	POORLY GRADED SAND WITH SILT, fine to medium grained, moist, yellowish brown, trace root fragments.	SP-SM				woh+1+2 N=3 REC=15"		
	FAT CLAY, moist, yellowish brown and orangeish brown, trace sand and root fragments.	CH	53.3			2+3+4 N=7 REC=11"		
	orangeish brown and gray, trace wood fragments.					3+4+5 N=9 REC=0"		
						2+3+3 N=6 REC=13"		
						REC=21"	PP=>4.5 tsf	Color change in tub from yellow brown to gray
12.0	ELASTIC SILT with sand, moist, dark gray.	MH	43.3			3+4+8 N=12 REC=18"		
17.0	SILTY SAND, fine to medium grained, moist, dark gray and black, organic odor, weakly cemented with no HCl reaction.	SM	38.3			38+50/5" N=50/5" REC=10"		Color change in tub from gray to brown
22.0	POORLY GRADED SAND WITH SILT, fine to coarse grained, wet, light gray, trace fine to medium shell fragments (2-5%), HCl reaction weak.	SP-SM	33.3			50 REC=10"		
	<i>continued on next page</i>							

TEST BORING LOG 06120048 PLOG SPT 300 & 400.GPJ SCHNABEL.GDT 3/6/08

Comments:

1. Boring backfilled with cement/bentonite grout through tremie pipe upon completion.
2. * = See Appendix I for additional lab testing data.



TEST BORING LOG

Project: Calvert Cliffs Nuclear Power Plant
Calvert County, Maryland

Boring Number: **B-312**
Contract Number: 06120048
Sheet: 2 of 4

DEPTH (FT)	STRATA DESCRIPTION	CLASS.	ELEV. (FT)	WL	SAMPLING		TESTS	REMARKS
					DEPTH	DATA		
	trace fine to medium shell fragments (5-10%), HCl reaction weak.	SP-SM				30	50/5" N =50/5" REC =5"	
32.0	ELASTIC SILT with sand, wet, gray, trace organic matter and fine to medium shell fragments (2-5%), HCl reaction weak.	MH	23.3			35	4+4+6 N =10 REC =15"	
						40	REC =0"	Rig chatter
42.0	SILTY SAND, fine to coarse grained, wet, greenish gray and gray, trace fine to coarse shell fragments (15-20%), HCl reaction moderate.	SM	13.3			45	4+6+12 N =18 REC =18"	
	greenish gray and white.					50	6+8+14 N =22 REC =17"	
	greenish gray, trace fine to coarse shell fragments (10-15%).					55	6+5+8 N =13 REC =17"	
57.0	CLAYEY SAND, fine to medium grained, wet, greenish gray, trace fine to <i>continued on next page</i>	SC	-1.7					

TEST BORING LOG 06120048 PLOG SPT 300 & 400.GPJ SCHNABEL.GDT 3/6/08

Comments:

1. Boring backfilled with cement/bentonite grout through tremie pipe upon completion.
2. * = See Appendix I for additional lab testing data.



TEST BORING LOG

Project: Calvert Cliffs Nuclear Power Plant
Calvert County, Maryland

Boring Number: **B-312**
Contract Number: 06120048
Sheet: 3 of 4

DEPTH (FT)	STRATA DESCRIPTION	CLASS.	ELEV. (FT)	WL	SAMPLING		TESTS	REMARKS
					DEPTH	DATA		
	medium shell fragments (2-5%), HCl reaction weak.	SC				60	3+4+5 N =9 REC =15"	
62.0	SANDY FAT CLAY, wet, greenish gray, trace fine to coarse shell fragments (30-40%), HCl reaction strong.	CH	-6.7			65	5+7+11 N =18 REC =18"	
67.0	SILTY SAND, fine to coarse grained, wet, gray and white, with cemented sand, HCl reaction strong.	SM	-11.7					Rig chatter
69.5	CLAYEY SAND, fine to coarse grained, wet, greenish gray and white, trace fine to coarse shell fragments (30-40%), HCl reaction strong.	SC	-14.2			70	47+10+7 N =17 REC =16"	
	fine to medium grained, greenish gray and light gray, trace fine to medium shell fragments (5-15%), HCl reaction moderate.					75	17+26+29 N =55 REC =18"	
77.0	SANDY ELASTIC SILT, wet, greenish gray, trace fine to coarse shell fragments (10-20%), HCl reaction moderate.	MH	-21.7			80	4+6+11 N =17 REC =17"	
	greenish gray and white, trace fine to medium shell fragments (5-10%), HCl reaction weak.					85	7+8+13 N =21 REC =18"	
	with sand, trace fine to medium shell fragments (2-5%).					90	7+9+12 N =21 REC =20"	
	<i>continued on next page</i>							

TEST BORING LOG 06120048 PLOG SPT 300 & 400.GPJ SCHNABEL.GDT 3/6/08

Comments:

1. Boring backfilled with cement/bentonite grout through tremie pipe upon completion.
2. * = See Appendix I for additional lab testing data.



TEST BORING LOG

Project: Calvert Cliffs Nuclear Power Plant
Calvert County, Maryland

Boring Number: **B-312**
Contract Number: 06120048
Sheet: 4 of 4

DEPTH (FT)	STRATA DESCRIPTION	CLASS.	ELEV. (FT)	WL	SAMPLING		TESTS	REMARKS
					DEPTH	DATA		
		MH						
					95	5+9+3 N =12 REC =20"		
						REC =12"	PP=>4.5 tsf	
100.5	BOTTOM OF BORING @ 100.5 FT.		-45.2		100			

TEST BORING LOG 06120048 PLOG SPT 300 & 400.GPJ SCHNABEL.GDT 3/6/08

Comments:

1. Boring backfilled with cement/bentonite grout through tremie pipe upon completion.
2. * = See Appendix I for additional lab testing data.



TEST BORING LOG

Project: Calvert Cliffs Nuclear Power Plant
Calvert County, Maryland

Boring Number: B-313
Contract Number: 06120048
Sheet: 1 of 5

Boring Contractor: UNI-TECH DRILLING MALAGA, NEW JERSEY Boring Foreman: J. Blemings Drilling Method: Mud Rotary Drilling Equipment: CME-750 (ATV) Schnabel Representative: K. Megginson Dates Started: 5/19/06 Finished: 5/22/06 Location: Northing: 217372.34 ft Easting: 960713.67 ft Ground Surface Elevation: 50.7 (feet)	Groundwater Observations					
		Date	Time	Depth	Casing	Caved
	Encountered	5/19	---	8.7'	---	---
	Start of day	5/22	---	20.0'	---	---
	Start of day	5/23	---	0.0'	---	---
	Water Reading	7/27	---	20.3'	---	---

DEPTH (FT)	STRATA DESCRIPTION	CLASS.	ELEV. (FT)	WL	SAMPLING		TESTS	REMARKS
					DEPTH	DATA		
0.5	Forest litter, rootmat and topsoil.		50.2			WOH+1+1 N =2 REC =13"	w=9.9% *	
2.0	SILTY SAND, fine to coarse grained, moist, brown, contains root fragments.	SM	48.7			WOH+2+1 N =3 REC =10"	w=11.8% LL=19 PL=14 *	
4.5	Sandy SILTY CLAY, fine to medium grained, moist, light brown, trace organic matter, contains root fragments.	CL-ML	46.2			2+4+4 N =8 REC =18"	w=27.6% LL=67 PL=21 *	
7.5	FAT CLAY, moist, light orangeish brown and light brown, trace fine to medium sand.	CH	43.2			3+4+6 N =10 REC =13"	w=15.1% LL=30 PL=17 *	
8.7	Sandy LEAN CLAY, light gray and orangeish brown, with fine to medium sand.	CL	42.0	▽		2+3+3 N =6 REC =17"	w=27% *	*Slight drill rig chatter from 11.5 to 13.5 ft.
9.5	SILTY SAND, fine to medium grained, wet, grayish brown and brown.	SM	41.2			2+2+2 N =4 REC =16"	w=31.5% *	
	SANDY SILT, fine to medium, wet, light grayish brown and orangeish brown.	ML				4+11+15 N =26 REC =16"	w=23.1% *	
17.0	light grayish brown, yellowish brown and orangeish brown, trace mica.					16+17+10 N =27 REC =15"	w=21.1% LL=NP PL=NP	
22.0	POORLY GRADED SAND, fine to medium grained, wet, light brown, with silt.	SP-SM	33.7					
	SILTY SAND, fine to medium grained, wet, dark orangeish brown.	SM	28.7					

TEST BORING LOG 06120048 PLOG SPT 300 & 400.GPJ SCHNABEL.GDT 3/6/08

continued on next page

Comments:

1. Ground water observation well OW-313B installed in boring upon completion.
2. * = See Appendix I for additional lab testing data.
3. Ground water observation well OW-313A installed at nearby location.



TEST BORING LOG

Project: Calvert Cliffs Nuclear Power Plant
Calvert County, Maryland

Boring Number: **B-313**
Contract Number: 06120048
Sheet: 2 of 5

DEPTH (FT)	STRATA DESCRIPTION	CLASS.	ELEV. (FT)	WL	SAMPLING		TESTS	REMARKS
					DEPTH	DATA		
	gray, mostly fine to coarse shell fragments ($\pm 60\%$), strong HCl reaction, contains black particles ($< 1/16$ inch).	SM				11+14+14 N = 28 REC = 16"	w=18.2% LL=NP PL=NP *	
32.0	SANDY LEAN CLAY, moist, gray, with fine to medium sand, weak HCl reaction.	CL	18.7					
33.9	SILTY SAND, fine to medium grained, moist, gray, mostly strongly cemented sand ($\pm 95\%$), moderate HCl reaction.	SM	16.8			50 REC = 6"	w=28.1% LL=38 PL=21 *	*Switched to 3-7/8" Tri-cone roller bit below 33.5 ft. *Very to extremely difficult rotary advancement from 34 to 35.5 ft (strong rig chatter). *Moderate difficulty with rotary advancement from 35.5 to 37.5 ft. *Very difficult rotary advancement from 37.5 to 38 ft (moderate to strong rig chatter). *Moderate to difficult rotary advancement from 40.5 to 41 ft (moderate rig chatter).
	wet, oliveish gray, little fine to coarse shell fragments ($\pm 30\%$), contains cemented sand pockets, strong HCl reaction.					24+50/4" N = 50/4" REC = 10"	w=17.1% *	
41.0	SANDY SILT, fine to medium grained, wet, gray, few fine to coarse shell fragments ($\pm 10\%$), contains silty sand pockets, weak HCl reaction.	ML	9.7			4+5+6 N = 11 REC = 18"	w=29.3% LL=34 PL=27 *	
47.0	SILTY SAND, fine to medium grained, wet, greenish gray and gray, few fine to coarse shell fragments ($\pm 10\%$), moderate HCl reaction.	SM	3.7			6+7+8 N = 15 REC = 18"	w=27.9% *	
52.0	SILTY SAND, fine to medium grained, wet, greenish gray and gray, weak HCl reaction, contains black particles ($< 1/16$ inch). trace fine to medium shell fragments ($\pm 5\%$) below 54.8 ft.	SM	-1.3			5+6+9 N = 15 REC = 18"	w=31.5% LL=NP PL=NP *	**Resumed drilling at 8:40 AM on 5/22/06.
<i>continued on next page</i>								

TEST BORING LOG 06120048 PLOG SPT 300 & 400.GPJ SCHNABEL.GDT 3/6/08

Comments:

1. Ground water observation well OW-313B installed in boring upon completion.
2. * = See Appendix I for additional lab testing data.
3. Ground water observation well OW-313A installed at nearby location.



TEST BORING LOG

Project: Calvert Cliffs Nuclear Power Plant
Calvert County, Maryland

Boring Number: **B-313**
Contract Number: 06120048
Sheet: 3 of 5

DEPTH (FT)	STRATA DESCRIPTION	CLASS.	ELEV. (FT)	WL	SAMPLING		TESTS	REMARKS
					DEPTH	DATA		
	light greenish gray and gray, trace fine to coarse shell fragments (±5%).	SM				3+5+9 N =14 REC =18"		
62.0	SANDY LEAN CLAY, fine to medium, wet, gray and light gray, mostly fine to coarse shell fragments (±60%), contains clayey sand pockets, strong HCl reaction.	CL	-11.3			11+14+50/5" N =64/11" REC =17"	w=26.2% LL=33 PL=17 *	*Moderate to difficult rotary advancement from 65 to 67 ft (moderate to strong rig chatter).
67.0	SILTY SAND, fine to medium grained, wet, gray, little fine to medium shell fragments (±20%), strong HCl reaction.	SM	-16.3			6+13+22 N =35 REC =18"		
72.0	SANDY SILT, fine to medium, moist, light greenish gray and gray, trace fine to coarse shell fragments (±5%), moderate HCl reaction.	ML	-21.3			5+10+16 N =26 REC =18"	w=28.4% *	
77.0	CLAYEY SAND, fine to medium grained, moist, greenish gray, few fine to coarse shell fragments (±10%), contains cemented shell pockets and strongly cemented sand layer from 77.7 to 77.8 ft, strong HCl reaction.	SC	-26.3			50/4" N =50/4" REC =4"		
82.0	SANDY ELASTIC SILT, fine to medium, moist, greenish gray, trace mica, weak HCl reaction.	MH	-31.3			5+6+13 N =19 REC =18"	w=37.3% *	
87.0	ELATIC SILT, moist, light greenish gray, trace fine to medium sand, mica and fine to medium shell fragments (±1%), weak HCl reaction.	MH	-36.3			7+9+12 N =21 REC =18"	w=55% LL=98 PL=47 *	
<i>continued on next page</i>								

TEST BORING LOG 06120048 PLOG SPT 300 & 400.GPJ SCHNABEL.GDT 3/6/08

Comments:

1. Ground water observation well OW-313B installed in boring upon completion.
2. * = See Appendix I for additional lab testing data.
3. Ground water observation well OW-313A installed at nearby location.



TEST BORING LOG

Project: Calvert Cliffs Nuclear Power Plant
Calvert County, Maryland

Boring Number: **B-313**
Contract Number: 06120048
Sheet: 4 of 5

DEPTH (FT)	STRATA DESCRIPTION	CLASS.	ELEV. (FT)	WL	SAMPLING		TESTS	REMARKS
					DEPTH	DATA		
92.0	LEAN CLAY, gray, with fine to medium sand, trace mica, weak HCl reaction, trace fine to coarse shell fragments (\pm 5%).	MH CL	-41.3			REC =14"	w=35.6% LL=49 PL=25 PP=>4.5 tsf *	*Shelby tube sampler push from 93.5 to 94.7 ft.
97.0	SANDY SILT, moist, dark gray, some fine to coarse shell fragments (\pm 40%), trace mica, weak HCl reaction.	ML	-46.3			8+13+18 N =31 REC =18"	w=32.4% LL=42 PL=28 *	
102.0	SANDY ELASTIC SILT, fine to medium, moist, dark greenish gray, trace fine to medium shell fragments (\pm 5%), trace mica, moderate HCl reaction.	MH	-51.3			6+8+12 N =20 REC =18"	w=43.4% LL=70 PL=45 *	
	trace fine to medium sand and mica, moderate HCl reaction.					6+10+11 N =21 REC =18"	w=57.7% LL=106 PL=55 *	
	with fine to medium sand, trace mica and fine to coarse shell fragments (\pm 5%), moderate HCl reaction.					6+10+12 N =22 REC =18"	w=44.3% LL=72 PL=46 *	
	weak HCl reaction.					5+8+11 N =19 REC =18"	w=43.5% LL=81 PL=42 *	*Considered pushing tube at 118.5 ft, but drilling resistance increased from 117.5 to 118.5 ft.
122.0	CLAYEY SAND, dark greenish gray, trace mica, contains indurated sandy silt pockets, weak HCl reaction. <i>continued on next page</i>	SC	-71.3			REC =10"	w=33.1%	*Shelby tube

TEST BORING LOG 06120048 PLOG SPT 300 & 400.GPJ SCHNABEL.GDT 3/6/08

Comments:

1. Ground water observation well OW-313B installed in boring upon completion.
2. * = See Appendix I for additional lab testing data.
3. Ground water observation well OW-313A installed at nearby location.



TEST BORING LOG

Project: Calvert Cliffs Nuclear Power Plant
Calvert County, Maryland

Boring Number: **B-313**
Contract Number: 06120048
Sheet: 5 of 5

DEPTH (FT)	STRATA DESCRIPTION	CLASS.	ELEV. (FT)	WL	SAMPLING		TESTS	REMARKS
					DEPTH	DATA		
127.0	ELASTIC SILT, dark greenish gray, trace mica, contains indurated sandy silt pockets, weak HCL reaction.	SC	-76.3		125		LL=44 PL=26 PP=>4.5 tsf *	sampler push from 123.5 to 124.3 ft.
		MH			130	7+9+12 N =21 REC =18"	w=66% LL=132 PL=60 *	
					135	8+10+11 N =21 REC =18"	w=69.1% *	*Relatively slow rotary advancement below 135 ft.
					140	7+8+12 N =20 REC =18"	w=62.9% LL=106 PL=51 *	
142.0	Sandy FAT CLAY, moist, greenish gray, trace fine to medium sand, and mica, weak HCL reaction.	CH	-91.3		145	7+11+14 N =25 REC =18"	w=49.1% *	
						150	7+12+14 N =26 REC =18"	w=49.4% LL=103 PL=30 *
150.0	BOTTOM OF BORING @ 150.0 FT.		-99.3					

TEST BORING LOG 06120048 PLOG SPT 300 & 400.GPJ SCHNABEL.GDT 3/6/08

Comments:

1. Ground water observation well OW-313B installed in boring upon completion.
2. * = See Appendix I for additional lab testing data.
3. Ground water observation well OW-313A installed at nearby location.



TEST BORING LOG

Project: Calvert Cliffs Nuclear Power Plant
Calvert County, Maryland

Boring Number: **B-314**
Contract Number: 06120048
Sheet: 1 of 4

Boring Contractor: CONNELLY AND ASSOCIATES, INC.
FREDERICK, MARYLAND
Boring Foreman: D. Bender
Drilling Method: Mud Rotary
Drilling Equipment: CME-550X (ATV)
Schnabel Representative: K. Bell
Dates Started: 5/16/06 **Finished:** 5/17/06
Location: Northing: 217321.89 ft
Easting: 960654.5 ft
Ground Surface Elevation: 52.8 (feet)

Groundwater Observations					
	Date	Time	Depth	Casing	Caved
Encountered	5/16	---	3.5'	---	---
Start of day	5/17	---	10.5'	---	---

DEPTH (FT)	STRATA DESCRIPTION	CLASS.	ELEV. (FT)	WL	SAMPLING		TESTS	REMARKS
					DEPTH	DATA		
0.4	ROOTMAT AND TOPSOIL.		52.4					
	SILTY SAND, fine to medium grained, moist, yellowish brown, trace silt and root fragments. fine to coarse grained, wet, trace gravel.	SM				WOH/18" N = WOH/18" REC =6"	w=9.7% *	
3.5	FAT CLAY with sand, moist, orangeish brown and gray, trace root fragments.	CH	49.3	▽		2+2+5 N =7 REC =15"	w=14.1% LL=NP PL=NP *	
					5	1+2+3 N =5 REC =12"	w=35% LL=73 PL=25 *	
						2+4+5 N =9 REC =19"	w=41.2% LL=59 PL=21 *	Started drilling 5/17/06 @ 7:30am
					10	5+7+9 N =16 REC =19"	w=26.2% LL=73 PL=25 *	Color change in tub, yellow/brown to gray below 10 ft.
13.5	CLAYEY SAND, moist, light gray and gray.	SC	39.3		15	REC =12"	w=25.9% LL=54 PL=11 PP=>4.5 tsf *	
17.0	SILTY SAND, fine to medium grained, wet, greenish gray and white, trace fine to medium shell fragments (5%), HCl reaction weak.	SM	35.8		20	26+50/5" N =50/5" REC =11"	w=24.2% *	Harder drilling at 16.5 ft.
22.0	SILTY SAND, fine to medium grained, wet, light gray and white, trace fine to medium shell fragments (5-10%), HCl reaction moderate.	SM	30.8		25	29+50/5" N =50/5" REC =13"	w=22.6% LL=NP PL=NP	
	<i>continued on next page</i>							

TEST BORING LOG 06120048 PLOG SPT 300 & 400.GPJ SCHNABEL.GDT 3/6/08

Comments:

- Boring backfilled with cement/bentonite grout through tremie pipe upon completion.
- * = See Appendix I for additional lab testing data.



TEST BORING LOG

Project: Calvert Cliffs Nuclear Power Plant
Calvert County, Maryland

Boring Number: **B-314**
Contract Number: 06120048
Sheet: 2 of 4

DEPTH (FT)	STRATA DESCRIPTION	CLASS.	ELEV. (FT)	WL	SAMPLING		TESTS	REMARKS
					DEPTH	DATA		
27.0	SILTY SAND, fine to coarse grained, wet, gray and white, with fine to coarse shell fragments (60-70%), HCl reaction strong.	SM	25.8		30	10+10+17 N =27 REC =15"	w=20.3% *	Rig chatter at 36.5 ft.
32.0		SM						
32.0	Sandy LEAN CLAY with sand, moist, greenish gray.	CL	20.8		35	3+4+6 N =10 REC =20"	w=25.4% LL=42 PL=22 *	
37.0	SILTY SAND, fine to medium grained, wet, gray and greenish gray, trace fine to coarse shell fragments (25-30%), HCl reaction strong, (50-60% medium to coarse grained shell fragments from 39.9-40.0 ft).	SM	15.8		40	5+5+50/3" N =55/9" REC =19"	w=26.8% LL=NP PL=NP *	
					45	4+4+7 N =11 REC =16"	w=31.9% *	
					50	5+9+7 N =16 REC =18"	w=25.4% *	
52.0	SILTY SAND, fine to medium grained, wet, gray and greenish gray, trace fine to medium shell fragments (2-5%), HCl reaction weak.	SM	0.8		55	4+4+6 N =10 REC =18"	w=32.8% LL=NP PL=NP *	
57.0	POORLY GRADED SAND, trace silt, fine to medium grained, wet, gray and <i>continued on next page</i>	SP	-4.2					

TEST BORING LOG 06120048 PLOG SPT 300 & 400.GPJ SCHNABEL.GDT 3/6/08

Comments:

1. Boring backfilled with cement/bentonite grout through tremie pipe upon completion.
2. * = See Appendix I for additional lab testing data.



TEST BORING LOG

Project: Calvert Cliffs Nuclear Power Plant
Calvert County, Maryland

Boring Number: **B-314**
Contract Number: 06120048
Sheet: 3 of 4

DEPTH (FT)	STRATA DESCRIPTION	CLASS.	ELEV. (FT)	WL	SAMPLING		TESTS	REMARKS	
					DEPTH	DATA			
	greenish gray, trace fine to medium shell fragments (2-5%), HCl reaction weak.	SP				60	3+4+6 N =10 REC =16"	w=33% LL=NP PL=NP *	
62.0	SANDY FAT CLAY with sand, wet, greenish gray and white, trace fine to coarse shell fragments (35-45%), HCl reaction strong.	CH	-9.2			65	3+5+8 N =13 REC =18"	w=40.3% LL=59 PL=24 *	
67.0	SANDY SILT, fine to coarse grained, wet, greenish gray and white, trace fine to medium shell fragments (10-15%), HCl reaction moderate.	ML	-14.2			70	5+11+17 N =28 REC =18"	w=19.5% LL=NP PL=NP *	Rig chatter at 67.5 ft.
	fine to medium grained, gray and greenish gray, trace fine to medium shell fragments (2-5%), HCl reaction weak.					75	8+13+16 N =29 REC =15"	w=27.9% LL=NP PL=NP *	
	greenish gray and white, trace fine to medium shell fragments (20-30%), HCl reaction moderate.					80	13+50/5" N =50/5" REC =16"	w=36.5% LL=NP PL=NP *	
83.5	SANDY ELASTIC SILT, trace fine to medium shell fragments (15-20%), HCl reaction moderate.	MH	-30.7			85	5+7+11 N =18 REC =18"	w=41.2% LL=57 PL=36 *	
87.0	SANDY FAT CLAY, wet, greenish gray and, trace fine to medium shell fragments (<5%), HCl reaction weak, (strongly cemented lense at 89.6 ft exhibits strong HCl reaction).	CH	-34.2			90	8+10+15 N =25 REC =18"	w=34.3% LL=68 PL=20 *	
	<i>continued on next page</i>								

TEST BORING LOG 06120048 PLOG SPT 300 & 400.GPJ SCHNABEL.GDT 3/6/08

Comments:

1. Boring backfilled with cement/bentonite grout through tremie pipe upon completion.
2. * = See Appendix I for additional lab testing data.



TEST BORING LOG

Project: Calvert Cliffs Nuclear Power Plant
Calvert County, Maryland

Boring Number: **B-314**
Contract Number: 06120048
Sheet: 4 of 4

DEPTH (FT)	STRATA DESCRIPTION	CLASS.	ELEV. (FT)	WL	SAMPLING		TESTS	REMARKS
					DEPTH	DATA		
92.0	SILTY SAND, fine to medium grained, wet, greenish gray, trace fine to medium shell fragments (5-10%), HCl reaction moderate. greenish gray and white, trace fine to medium shell fragments (20-30%), trace organic matter, HCl reaction strong. BOTTOM OF BORING @ 100.0 FT.	CH	-39.2					
		SM						
					95	7+12+15 N =27 REC =18"	w=36.4% *	
100.0			-47.2		100	7+9+14 N =23 REC =18"	w=31% *	

TEST BORING LOG 06120048 PLOG SPT 300 & 400.GPJ SCHNABEL.GDT 3/6/08

Comments:

1. Boring backfilled with cement/bentonite grout through tremie pipe upon completion.
2. * = See Appendix I for additional lab testing data.



TEST BORING LOG

Project: Calvert Cliffs Nuclear Power Plant
Calvert County, Maryland

Boring Number: **B-315**
Contract Number: 06120048
Sheet: 1 of 4

Boring Contractor: CONNELLY AND ASSOCIATES, INC.
FREDERICK, MARYLAND
Boring Foreman: D. Bender
Drilling Method: Mud Rotary
Drilling Equipment: CME-550X (ATV)
Schnabel Representative: K. Bell
Dates Started: 5/19/06 **Finished:** 5/22/06
Location: Northing: 217184.68 ft
Easting: 960559.43 ft
Ground Surface Elevation: 65.5 (feet)

Groundwater Observations

	Date	Time	Depth	Casing	Caved
Encountered	5/22	---	14.0'	---	---

DEPTH (FT)	STRATA DESCRIPTION	CLASS.	ELEV. (FT)	WL	SAMPLING		TESTS	REMARKS
					DEPTH	DATA		
0.8	ROOTMAT AND TOPSOIL.							
	POORLY GRADED SAND WITH SILT, fine to coarse grained, moist, yellowish brown and orangeish brown, trace root fragments. trace gravel.	SP-SM	64.7			1+1+1 N=2 REC=12"		
						3+4+4 N=8 REC=17"		
					5	4+6+8 N=14 REC=17"		
						6+6+7 N=13 REC=14"	w=5.6% *	
10.0	SILTY SAND, fine to coarse grained, moist, yellowish brown and orangeish brown, trace gravel. fine to medium grained, wet, gray.	SM	55.5			8+8+9 N=17 REC=16"		
						4+7+6 N=13 REC=15"	w=28.3% *	Resumed drilling on 5/22/06 at 8.30am.
17.0	CLAYEY SAND, moist, gray, trace sand.	SC	48.5			4+7+8 N=15 REC=18"	w=28.3% *	
						REC=14"	w=23.3% LL=41 PL=11	
	continued on next page							

TEST BORING LOG 06120048 PLOG SPT 300 & 400.GPJ SCHNABEL.GDT 3/6/08

- Comments:**
- Boring backfilled with cement/bentonite grout through tremie pipe upon completion.
 - * = See Appendix I for additional lab testing data.



TEST BORING LOG

Project: Calvert Cliffs Nuclear Power Plant
Calvert County, Maryland

Boring Number: **B-315**
Contract Number: 06120048
Sheet: 2 of 4

DEPTH (FT)	STRATA DESCRIPTION	CLASS.	ELEV. (FT)	WL	SAMPLING		TESTS	REMARKS
					DEPTH	DATA		
25.0	SILTY SAND, fine to medium grained, wet, gray and white, trace fine to coarse shell fragments (30-40%), HCl reaction moderate.	SM	40.5				PP=>4.5 tsf *	
						26+21+22 N =43 REC =18"	w=27.6% *	
						38+44+42 N =86 REC =14"		
	fine to coarse grained, light gray and white, with fine to coarse shell fragments (60-70%), HCl reaction strong.					14+16+16 N =32 REC =14"	w=22.2% LL=NP PL=NP *	
42.0	SILTY SAND, fine to medium grained, moist, greenish gray and gray, trace organic matter.	SM	23.5					
						3+4+4 N =8 REC =18"		
	strong cementation, HCl reaction strong.					50 REC =6"		Rig chatter at 46.5 ft.
53.5	SANDY SILT, light gray and white, trace fine to coarse shell fragments (10-20%), HCl reaction moderate.	ML	12.0				w=25.6% LL=NP PL=NP *	
	<i>continued on next page</i>					5+7+8 N =15 REC =17"		

TEST BORING LOG 06120048 PLOG SPT 300 & 400.GPJ SCHNABEL.GDT 3/6/08

Comments:

1. Boring backfilled with cement/bentonite grout through tremie pipe upon completion.
2. * = See Appendix I for additional lab testing data.



TEST BORING LOG

Project: Calvert Cliffs Nuclear Power Plant
Calvert County, Maryland

Boring Number: **B-315**
Contract Number: 06120048
Sheet: 3 of 4

DEPTH (FT)	STRATA DESCRIPTION	CLASS.	ELEV. (FT)	WL	SAMPLING		TESTS	REMARKS
					DEPTH	DATA		
63.5	trace fine to coarse shell fragments (35-45%), HCl reaction strong .	ML	2.0		60	6+8+8 N =16 REC =16"	w=29.4% LL=NP PL=NP *	Rig chatter at 61 ft.
	POORLY GRADED SAND WITH SILT, greenish gray, trace fine to medium shell fragments (5-10%), HCl reaction weak.	SP-SM			65	5+5+9 N =14 REC =15"		
73.5	SANDY FAT CLAY, trace fine to medium shell fragments (20-30%), HCl reaction moderate, green.	CH	-8.0		70	4+4+6 N =10 REC =18"	w=36.3% LL=58 PL=18 *	
77.0	SILTY SAND, fine to coarse grained, wet, light gray and white, trace fine to coarse shell fragments (20-30%), strong HCl reaction, cemented layer from 79' to 79.9 ft.	SM	-11.5		75	4+5+6 N =11 REC =20"		
87.0	fine to medium grained, greenish gray, trace fine to medium shell fragments (2-5%), HCl reaction weak.	MH	-21.5		80	16+41+9 N =50 REC =18"	w=29.6% LL=NP PL=NP *	
	SANDY ELASTIC SILT, wet, greenish gray and white, trace fine to medium shell fragments (20-30%), HCl reaction moderate.				85	7+10+10 N =20 REC =19"		
	<i>continued on next page</i>				90	6+7+13 N =20 REC =18"		

TEST BORING LOG 06120048 PLOG SPT 300 & 400.GPJ SCHNABEL.GDT 3/6/08

Comments:

- Boring backfilled with cement/bentonite grout through tremie pipe upon completion.
- * = See Appendix I for additional lab testing data.



TEST BORING LOG

Project: Calvert Cliffs Nuclear Power Plant
Calvert County, Maryland

Boring Number: **B-315**
Contract Number: 06120048
Sheet: 4 of 4

DEPTH (FT)	STRATA DESCRIPTION	CLASS.	ELEV. (FT)	WL	SAMPLING		TESTS	REMARKS
					DEPTH	DATA		
92.0	SILTY SAND, fine to medium grained, wet, greenish gray, trace fine to medium shell fragments (2-5%), HCl reaction weak.	MH	-26.5				w=35.6% *	
		SM						
						95	5+7+11 N =18 REC =18"	
							7+11+12 N =23 REC =19"	
100.0	BOTTOM OF BORING @ 100.0 FT.		-34.5			100		

TEST BORING LOG 06120048 PLOG SPT 300 & 400.GPJ SCHNABEL.GDT 3/6/08

Comments:

1. Boring backfilled with cement/bentonite grout through tremie pipe upon completion.
2. * = See Appendix I for additional lab testing data.



TEST BORING LOG

Project: Calvert Cliffs Nuclear Power Plant
Calvert County, Maryland

Boring Number: **B-316**
Contract Number: 06120048
Sheet: 1 of 4

Boring Contractor: CONNELLY AND ASSOCIATES, INC.
FREDERICK, MARYLAND
Boring Foreman: D. Reese
Drilling Method: Mud Rotary
Drilling Equipment: CME-75
Schnabel Representative: M. Arles
Dates Started: 5/3/06 **Finished:** 5/3/06
Location: Northing: 216767.16 ft
Easting: 960864.35 ft
Ground Surface Elevation: 108.1 (feet)

Groundwater Observations

	Date	Time	Depth	Casing	Caved
Encountered	5/4	---	24.0'	---	---

DEPTH (FT)	STRATA DESCRIPTION	CLASS.	ELEV. (FT)	WL	SAMPLING		TESTS	REMARKS
					DEPTH	DATA		
0.5	ROOTMAT AND TOPSOIL.		107.6			2+3+4 N = 7 REC = 18"		Auger
2.5	POORLY GRADED SAND WITH CLAY, fine to medium grained, moist, brown, contains root fragments.	SP-SC	105.6			2+2+2 N = 4 REC = 16"	w=19.1% LL=35 PL=16 PP=2.00 tsf *	changed to 3 7/8" roller bit
	SANDY LEAN CLAY, moist, brown.	CL			5	2+1+2 N = 3 REC = 11"		
	fine to coarse grained, moist, brown.					2+1+1 N = 2 REC = 10"	w=14.5% *	
10.5	SILTY SAND, fine to medium grained, moist, yellowish brown.	SM	97.6			2+3+2 N = 5 REC = 12"		
13.5	POORLY GRADED SAND WITH SILT, fine to coarse grained, moist, brownish orange.	SP-SM	94.6			6+8+8 N = 16 REC = 12"		
18.5	CLAYEY SAND, fine to coarse grained, moist, orangeish white.	SC	89.6			3+3+4 N = 7 REC = 12"		
23.5	POORLY GRADED SAND WITH SILT, fine to medium grained, wet, orangeish brown, . <i>continued on next page</i>	SP-SM	84.6	▽		3+4+5 N = 9 REC = 15"	w=20% LL=NP PL=NP	

TEST BORING LOG 06120048 PLOG SPT 300 & 400.GPJ SCHNABEL.GDT 3/6/08

- Comments:**
- Boring backfilled with cement/bentonite grout through tremie pipe upon completion.
 - * = See Appendix I for additional lab testing data.



TEST BORING LOG

Project: Calvert Cliffs Nuclear Power Plant
Calvert County, Maryland

Boring Number: **B-316**
Contract Number: 06120048
Sheet: 2 of 4

DEPTH (FT)	STRATA DESCRIPTION	CLASS.	ELEV. (FT)	WL	SAMPLING		TESTS	REMARKS
					DEPTH	DATA		
		SP-SM					*	
	brownish orange, 1" clay seam				30	3+5+3 N =8 REC =12"		1" clay seam
					35	2+3+3 N =6 REC =18"	w=20.1% LL=43 PL=17 *	
38.5	SANDY LEAN CLAY, moist, dark gray.	CL	69.6		40	1+3+2 N =5 REC =18"	w=28.5% *	
	with sand.				45	REC =24"	w=28.6% LL=44 PL=16 PP=2.00 tsf *	
48.5	SANDY ELASTIC SILT, moist, dark gray, trace sand.	MH	59.6		50	3+4+4 N =8 REC =18"	w=38.0% PP=1.50 tsf *	
53.5	LEAN CLAY, moist, dark gray, with sand.	CL	54.6		55	REC =24"	w=26.2% LL=33 PL=11 PP=3.25 tsf *	
	<i>continued on next page</i>							

TEST BORING LOG 06120048 PLOG SPT 300 & 400.GPJ SCHNABEL.GDT 3/6/08

Comments:

- Boring backfilled with cement/bentonite grout through tremie pipe upon completion.
- * = See Appendix I for additional lab testing data.



TEST BORING LOG

Project: Calvert Cliffs Nuclear Power Plant
Calvert County, Maryland

Boring Number: **B-316**
Contract Number: 06120048
Sheet: 3 of 4

DEPTH (FT)	STRATA DESCRIPTION	CLASS.	ELEV. (FT)	WL	SAMPLING		TESTS	REMARKS
					DEPTH	DATA		
58.5	CLAYEY SAND, fine to medium grained, moist, dark gray.	SC	49.6		60	5+5+6 N =11 REC =18"	w=24.4% *	
	greenish gray, trace cemented sand.				65	9+10+13 N =23 REC =17"	w=31.3% *	changed to 2 15/16" roller bit Harder drilling
68.5	SILTY SAND, fine to medium grained, moist, gray, with silt, trace fine to medium shell fragments, moderate HCl reaction.	SM	39.6		70	42+50/4" N =50/4" REC =10"	w=19.8% *	softer drilling
73.5	POORLY GRADED SAND, fine to medium grained, moist, gray, trace fine to medium shell fragments, trace clay, moderate HCl reaction.	SP	34.6		75	50/5.5" N =50/5.5" REC =6"	w=21.2% *	
	with fine to coarse shell fragments, strong HCl reaction.				80	50/2" N =50/2"		
	with fine to coarse shell fragments, strong HCl reaction, 1" cemented sand frag.				85	50/3" N =50/3" REC =1"		Rig chatter
	trace fine to medium shell fragments, moderate HCl reaction.				90	50/3" N =50/3" REC =1"		
	<i>continued on next page</i>							

TEST BORING LOG 06120048 PLOG SPT 300 & 400.GPJ SCHNABEL.GDT 3/6/08

Comments:

1. Boring backfilled with cement/bentonite grout through tremie pipe upon completion.
2. * = See Appendix I for additional lab testing data.



TEST BORING LOG

Project: Calvert Cliffs Nuclear Power Plant
Calvert County, Maryland

Boring Number: **B-316**
Contract Number: 06120048
Sheet: 4 of 4

DEPTH (FT)	STRATA DESCRIPTION	CLASS.	ELEV. (FT)	WL	SAMPLING		TESTS	REMARKS
					DEPTH	DATA		
93.5	CLAYEY SAND, fine to medium grained, moist, grayish green, with silt, with fine to coarse shell fragments, moderate HCl reaction. trace medium to coarse shell fragments, weak HCl reaction.	SP	14.6					Easier drilling
		SC				5+5+7 N =12 REC =18"	w=32% *	
100.0	BOTTOM OF BORING @ 100.0 FT.		8.1			6+5+8 N =13 REC =18"	w=27.7% *	

TEST BORING LOG 06120048 PLOG SPT 300 & 400.GPJ SCHNABEL.GDT 3/6/08

Comments:

1. Boring backfilled with cement/bentonite grout through tremie pipe upon completion.
2. * = See Appendix I for additional lab testing data.



TEST BORING LOG

Project: Calvert Cliffs Nuclear Power Plant
Calvert County, Maryland

Boring Number: **B-317**
Contract Number: 06120048
Sheet: 1 of 4

Boring Contractor: CONNELLY AND ASSOCIATES, INC.
FREDERICK, MARYLAND

Boring Foreman: D. Reese

Drilling Method: Mud Rotary

Drilling Equipment: CME-75

Schnabel Representative: M. Arles

Dates Started: 5/4/06 **Finished:** 5/8/06

Location: Northing: 217094.7 ft
Easting: 961249.2 ft

Ground Surface Elevation: 94.4 (feet)

Groundwater Observations

	Date	Time	Depth	Casing	Caved
Start of day	5/8	---	21.0'	4.5'	---

DEPTH (FT)	STRATA DESCRIPTION	CLASS.	ELEV. (FT)	WL	SAMPLING		TESTS	REMARKS
					DEPTH	DATA		
0.5	ROOTMAT AND TOPSOIL.		93.9			2+2+2 N =4 REC =12"		Hollow stem auger
2.0	POORLY GRADED SAND WITH CLAY, trace fine gravel, fine to coarse grained, moist, brown, contains root fragments.	SP-SC	92.4			1+1+1 N =2 REC =12"		
4.5	CLAYEY SAND, fine to coarse grained, moist, orangeish brown.	SC	89.9			1+2+3 N =5 REC =12"		
7.0	POORLY GRADED SAND, with fine gravel, medium to coarse grained, moist, orangeish brown.	SP	87.4			2+5+7 N =12 REC =14"		
9.5	CLAYEY SAND, with siltfine to coarse grained, moist, brownish orange.	SP-SM	84.9			4+5+6 N =11 REC =12"		
12.5	POORLY GRADED SAND WITH SILT, fine to medium grained, moist, brownish orange.	SC	81.9			6+7+7 N =14 REC =12"		
22.0	fine to coarse grained, orange.	SP-SM	72.4			2+2+3 N =5 REC =18"		
24.5	SANDY SILT, fine to medium, moist, orange.	ML	69.9				w=28.4% PP=1.25 tsf *	1" clay layer Finer sand
	SANDY LEAN CLAY, fine to medium, continued on next page	CL						

TEST BORING LOG 06120048 PLOG SPT 300 & 400.GPJ SCHNABEL.GDT 3/6/08

- Comments:**
- Boring backfilled with cement/bentonite grout through tremie pipe upon completion.
 - * = See Appendix I for additional lab testing dat.



TEST BORING LOG

Project: Calvert Cliffs Nuclear Power Plant
Calvert County, Maryland

Boring Number: **B-317**
Contract Number: 06120048
Sheet: 2 of 4

DEPTH (FT)	STRATA DESCRIPTION	CLASS.	ELEV. (FT)	WL	SAMPLING		TESTS	REMARKS
					DEPTH	DATA		
	moist, gray.	CL					PP=1.5, 1.2 tsf	
	dark gray.				30	REC =24"	w=31.7% LL=27 PL=19 PP=2.25 tsf *	lean clay
32.0	SANDY FAT CLAY, fine to medium, moist, dark gray, Pockets of more/less sand.	CH	62.4		35	2+3+3 N=6 REC =18"	w=30.2% PP=1.25, 1.0 tsf *	
	dark gray, trace sand.				40	REC =24"	PP=3.50 tsf	
	gray.				45	4+6+7 N=13 REC =18"	PP=3.5, 3.75 tsf	
47.0	SANDY LEAN CLAY, fine to medium grained, moist, grayish green.	CL	47.4		50	REC =22"	w=22.8% LL=35 PL=17 *	
51.0	POORLY GRADED SAND WITH SILT, contains cemented sand, fine to medium grained, moist, dark brownish orange.	SP-SM	43.4		55	50/4" N =50/4" REC =1"		2 15/16" OD roller bit
	<i>continued on next page</i>							

TEST BORING LOG 06120048 PLOG SPT 300 & 400.GPJ SCHNABEL.GDT 3/6/08

Comments:

- Boring backfilled with cement/bentonite grout through tremie pipe upon completion.
- * = See Appendix I for additional lab testing dat.



TEST BORING LOG

Project: Calvert Cliffs Nuclear Power Plant
Calvert County, Maryland

Boring Number: **B-317**
Contract Number: 06120048
Sheet: 3 of 4

DEPTH (FT)	STRATA DESCRIPTION	CLASS.	ELEV. (FT)	WL	SAMPLING		TESTS	REMARKS
					DEPTH	DATA		
61.0	light orangeish brown.	SP-SM	33.4		60	16+12+50/4" N =62/10" REC =14"	w=26% *	Harder drilling
	CLAYEY SAND, fine to medium grained, moist, gray.	SC		65	28+50/4" N =50/4" REC =5"			
	trace shell fragments, contains cemented sand, shell frag fine to coarse size, moderate HCl reaction.			70	5+50/1" N =50/1" REC =4"			
	wet, greenish white, with fine to coarse shell fragments, strong HCl reaction.			75	8+50/5" N =50/5" REC =11"	w=22.3% *		
77.0	SILTY SAND, fine to medium grained, moist, green, 15% medium to coarse shell frag, strong HCl reaction.	SM	17.4		80	4+6+7 N =13 REC =18"		
	contains cemented sand, 25% medium to coarse shell frag, strong HCl reaction.				85	9+10+13 N =23 REC =18"		
87.0	POORLY GRADED SAND WITH SILT, fine to medium grained, moist, green, trace shell fragments, 5% f-m shell frag.	SP-SM	7.4		90	5+6+8 N =14 REC =18"		
	<i>continued on next page</i>							

TEST BORING LOG 06120048 PLOG SPT 300 & 400.GPJ SCHNABEL.GDT 3/6/08

Comments:

- Boring backfilled with cement/bentonite grout through tremie pipe upon completion.
- * = See Appendix I for additional lab testing dat.



TEST BORING LOG

Project: Calvert Cliffs Nuclear Power Plant
Calvert County, Maryland

Boring Number: **B-317**
Contract Number: 06120048
Sheet: 4 of 4

DEPTH (FT)	STRATA DESCRIPTION	CLASS.	ELEV. (FT)	WL	SAMPLING		TESTS	REMARKS
					DEPTH	DATA		
		SP-SM						
					95	3+5+5 N =10 REC =18"		
	20-30% medium to coarse shell frag, moderate HCl reaction.							
100.0	BOTTOM OF BORING @ 100.0 FT.		-5.6		100	9+11+20 N =31 REC =18"		

TEST BORING LOG 06120048 PLOG SPT 300 & 400.GPJ SCHNABEL.GDT 3/6/08

Comments:

1. Boring backfilled with cement/bentonite grout through tremie pipe upon completion.
2. * = See Appendix I for additional lab testing dat.



TEST BORING LOG

Project: Calvert Cliffs Nuclear Power Plant
Calvert County, Maryland

Boring Number: **B-318**
Contract Number: 06120048
Sheet: 1 of 7

Boring Contractor: UNI-TECH DRILLING MALAGA, NEW JERSEY Boring Foreman: J. Blemings Drilling Method: Mud Rotary Drilling Equipment: CME-750 (ATV) Schnabel Representative: M. Arles Dates Started: 6/2/06 Finished: 6/5/06 Location: Northing: 217019.3 ft Easting: 961227.2 ft Ground Surface Elevation: 97.8 (feet)	Groundwater Observations					
	Date	Time	Depth	Casing	Caved	
	Encountered	6/2	---	20.0'	0.0'	---
	Start of day	6/3	---	0.0'	0.0'	---
	Start of day	6/4	---	31.0'	0.0'	---
	Start of day	6/5	---	31.0'	0.0'	---

DEPTH (FT)	STRATA DESCRIPTION	CLASS.	ELEV. (FT)	WL	SAMPLING		TESTS	REMARKS
					DEPTH	DATA		
0.5	CRUSHED STONE.		97.3			5+5+8 N =13 REC =15"		
2.0	POORLY GRADED SAND WITH CLAY, fine to coarse grained, dry, brown.	SP-SC						
	POORLY GRADED SAND, fine to coarse grained, moist, orange, trace gravel.	SP	95.8			5+6+5 N =11 REC =15"		
	yellowish orange				5	5+5+5 N =10 REC =12"		
7.0	POORLY GRADED SAND WITH SILT, fine to coarse grained, moist, yellowish orange.	SP-SM	90.8			4+6+6 N =12 REC =12"		
	with gravel, 1/8" orange layers with more silt.					5+7+8 N =15 REC =16"		
						11+18+7 N =25 REC =14"		
18.0	FINE TO COARSE SANDY SILT, wet, orange.	ML	79.8			5+6+7 N =13 REC =12"		
	moist, mottled orange and gray.					2+1+1 N =2 REC =18"		
	<i>continued on next page</i>							

TEST BORING LOG 06120048 PLOG SPT 300 & 400.GPJ SCHNABEL.GDT 3/6/08

Comments:

1. Boring backfilled with cement/bentonite grout through tremie pipe upon completion.
2. Downhole Geophysical Testing Performed on 6/5/2006.
3. * = See Appendix I for additional lab testing data.



TEST BORING LOG

Project: Calvert Cliffs Nuclear Power Plant
Calvert County, Maryland

Boring Number: **B-318**
Contract Number: 06120048
Sheet: 2 of 7

DEPTH (FT)	STRATA DESCRIPTION	CLASS.	ELEV. (FT)	WL	SAMPLING		TESTS	REMARKS	
					DEPTH	DATA			
27.0	FINE TO MEDIUM SANDY LEAN CLAY, moist, dark gray.	ML	70.8						
		CL							
					30	2+2+3 N =5 REC =18"			
33.0	FAT CLAY, moist, dark gray, with sand. 3" Clayey sand layer	CH	64.8						
						35	3+4+4 N =8 REC =18"		
						40	4+4+4 N =8 REC =18"		
					45	4+8+9 N =17 REC =18"			
					50	7+8+12 N =20 REC =18"		50' Start of day 6/3	
53.0	CLAYEY SAND, fine to medium grained, moist, dark gray. Cemented sand lenses 55-58'	SC	44.8						
					55	5+8+9 N =17 REC =18"			
57.0	POORLY GRADED SAND, fine to medium grained, moist, reddish orange, <i>continued on next page</i>	SP	40.8						

TEST BORING LOG 06120048 PLOG SPT 300 & 400.GPJ SCHNABEL.GDT 3/6/08

Comments:

1. Boring backfilled with cement/bentonite grout through tremie pipe upon completion.
2. Downhole Geophysical Testing Performed on 6/5/2006.
3. * = See Appendix I for additional lab testing data.



TEST BORING LOG

Project: Calvert Cliffs Nuclear Power Plant
Calvert County, Maryland

Boring Number: **B-318**
Contract Number: 06120048
Sheet: 3 of 7

DEPTH (FT)	STRATA DESCRIPTION	CLASS.	ELEV. (FT)	WL	SAMPLING		TESTS	REMARKS
					DEPTH	DATA		
	1/4" red lenses.	SP				50/2" N =50/2" REC =2"		
63.0	POORLY GRADED SAND WITH SILT, fine to medium grained, moist, gray.	SP-SM	34.8			50/2" N =50/2" REC =2"		
67.0	POORLY GRADED SAND, fine to medium grained, moist, gray, 1/8" and smaller clay lenses.	SP	30.8			50/5" N =50/5" REC =5"		
73.0	CLAYEY SAND, fine to medium grained, moist, gray, with silt, contains cemented sand, 80% cemented sand.	SC	24.8			50/3" N =50/3" REC =2"		
77.0	SILTY SAND, fine to medium grained, moist, green and white, with fine to coarse shell fragments, strong HCl reaction, 60-70% shell frag.	SM	20.8			15+8+15 N =23 REC =18"		
	green, 15-25% shell frag.					5+8+12 N =20 REC =18"		
87.0	POORLY GRADED SAND WITH SILT, fine to medium grained, moist, green, strong HCl reaction, 15-20% shell frag.	SP-SM	10.8			7+11+16 N =27 REC =18"		
	<i>continued on next page</i>							

TEST BORING LOG 06120048 PLOG SPT 300 & 400.GPJ SCHNABEL.GDT 3/6/08

Comments:

1. Boring backfilled with cement/bentonite grout through tremie pipe upon completion.
2. Downhole Geophysical Testing Performed on 6/5/2006.
3. * = See Appendix I for additional lab testing data.



TEST BORING LOG

Project: Calvert Cliffs Nuclear Power Plant
Calvert County, Maryland

Boring Number: **B-318**
Contract Number: 06120048
Sheet: 4 of 7

DEPTH (FT)	STRATA DESCRIPTION	CLASS.	ELEV. (FT)	WL	SAMPLING		TESTS	REMARKS
					DEPTH	DATA		
	trace fine to coarse shell fragments, moderate HCl reaction, 5-10% shell frag.	SP-SM				6+10+12 N =22 REC =18"		
97.0	SILTY SAND, fine to medium grained, moist, green, trace fine to medium shell fragments, moderate HCl reaction, 0-5% shell frag.	SM	0.8			5+6+11 N =17 REC =18"		
	green and white, with fine to coarse shell fragments, strong HCl reaction, 75-80% shell frag.					10+13+33 N =46 REC =18"		104' thicker shell beds
107.0	POORLY GRADED SAND WITH SILT, with fine to coarse shell fragments, , fine to medium grained, moist, green, strong HCl reaction, 50-60% shell frag.	SP-SM	-9.2			13+22+30 N =52 REC =18"		
	25-35% shell frag.					7+12+19 N =31 REC =18"		
117.0	SILTY SAND, fine to medium grained, moist, green, with fine to coarse shell fragments, strong HCl reaction, 10-20% shell frag.	SM	-19.2			9+12+14 N =26 REC =18"		
	trace fine to coarse shell fragments, <i>continued on next page</i>					6+10+13		

TEST BORING LOG 06120048 PLOG SPT 300 & 400.GPJ SCHNABEL.GDT 3/6/08

Comments:

1. Boring backfilled with cement/bentonite grout through tremie pipe upon completion.
2. Downhole Geophysical Testing Performed on 6/5/2006.
3. * = See Appendix I for additional lab testing data.



TEST BORING LOG

Project: Calvert Cliffs Nuclear Power Plant
Calvert County, Maryland

Boring Number: **B-318**
Contract Number: 06120048
Sheet: 5 of 7

DEPTH (FT)	STRATA DESCRIPTION	CLASS.	ELEV. (FT)	WL	SAMPLING		TESTS	REMARKS
					DEPTH	DATA		
	moderate HCl reaction, 0-5% shell frag.	SM			125	N = 23 REC = 18"		
					130	8+11+12 N = 23 REC = 18"		
	with fine to coarse shell fragments, strong HCl reaction, 10-20% shell frag.				135	8+10+12 N = 22 REC = 18"		
	45-55% shell frag.				140	10+17+15 N = 32 REC = 18"		
	trace fine to medium shell fragments, weak HCl reaction, 0-5% shell frag.				145	5+7+10 N = 17 REC = 18"		
	contains shell fragments.				150	REC = 3"		Shelby tube pushed
					155	6+8+10 N = 18 REC = 18"		150' Start of day 6/4
continued on next page								

TEST BORING LOG 06120048 PLOG SPT 300 & 400.GPJ SCHNABEL.GDT 3/6/08

Comments:

1. Boring backfilled with cement/bentonite grout through tremie pipe upon completion.
2. Downhole Geophysical Testing Performed on 6/5/2006.
3. * = See Appendix I for additional lab testing data.



TEST BORING LOG

Project: Calvert Cliffs Nuclear Power Plant
Calvert County, Maryland

Boring Number: **B-318**
Contract Number: 06120048
Sheet: 6 of 7

DEPTH (FT)	STRATA DESCRIPTION	CLASS.	ELEV. (FT)	WL	SAMPLING		TESTS	REMARKS
					DEPTH	DATA		
157.0	FINE TO MEDIUM SANDY SILT, moist, green, trace fine to medium shell fragments, weak HCl reaction, 0-5% shell frag.	ML	-59.2					
						160	4+5+7 N =12 REC =18"	
						165	4+7+8 N =15 REC =18"	
167.0	ELASTIC SILT, moist, green, trace sand.	MH	-69.2					
						170	6+7+12 N =19 REC =18"	
	with clay.					175	4+8+13 N =21 REC =18"	
	moist, green, with clay.					180	4+8+9 N =17 REC =18"	
182.0	LEAN CLAY, with silt, moist, green.	CL	-84.2					
						185	6+10+13 N =23 REC =18"	
187.0	ELASTIC SILT, moist, green.	MH	-89.2					
						190	4+5+10 N =15 REC =18"	
	<i>continued on next page</i>							

TEST BORING LOG 06120048 PLOG SPT 300 & 400.GPJ SCHNABEL.GDT 3/6/08

Comments:

1. Boring backfilled with cement/bentonite grout through tremie pipe upon completion.
2. Downhole Geophysical Testing Performed on 6/5/2006.
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TEST BORING LOG

Project: Calvert Cliffs Nuclear Power Plant
Calvert County, Maryland

Boring Number: **B-318**
Contract Number: 06120048
Sheet: 7 of 7

DEPTH (FT)	STRATA DESCRIPTION	CLASS.	ELEV. (FT)	WL	SAMPLING		TESTS	REMARKS
					DEPTH	DATA		
	oliveish green, trace sand.	MH						
	with sand.							
200.0	BOTTOM OF BORING @ 200.0 FT.		-102.2					
					195	8+9+13 N =22 REC =18"		
					200	5+6+9 N =15 REC =18"		

TEST BORING LOG 06120048 PLOG SPT 300 & 400.GPJ SCHNABEL.GDT 3/6/08

Comments:

1. Boring backfilled with cement/bentonite grout through tremie pipe upon completion.
2. Downhole Geophysical Testing Performed on 6/5/2006.
3. * = See Appendix I for additional lab testing data.



TEST BORING LOG

Project: Calvert Cliffs Nuclear Power Plant
Calvert County, Maryland

Boring Number: **B-319**
Contract Number: 06120048
Sheet: 1 of 4

Boring Contractor: UNI-TECH DRILLING
MALAGA, NEW JERSEY
Boring Foreman: J. Blemings
Drilling Method: Mud Rotary
Drilling Equipment: CME-750 (ATV)
Schnabel Representative: K. Megginson
Dates Started: 5/5/06 **Finished:** 5/8/06
Location: Northing: 216963.62 ft
Easting: 961123.01 ft
Ground Surface Elevation: 102.9 (feet)

Groundwater Observations

	Date	Time	Depth	Casing	Caved
Encountered	5/5	---	10.5'	---	---
Start of day	5/8	---	26.0'	---	---

DEPTH (FT)	STRATA DESCRIPTION	CLASS.	ELEV. (FT)	WL	SAMPLING		TESTS	REMARKS
					DEPTH	DATA		
0.3	ROOTMAT AND TOPSOIL.	SP-SM	102.6			3+4+2 N =6 REC =12"		
	POORLY GRADED SAND WITH SILT, fine to coarse grained, moist, brown, contains clayey sand pockets.					3+3+4 N =7 REC =10"	w=5.7% *	
5.0	POORLY GRADED SAND, wet, brown	SP	97.9		5	4+6+6 N =12 REC =11"		
						5+5+8 N =13 REC =11"	w=4.7% LL=NP PL=NP *	
10.0	POORLY GRADED SAND WITH SILT, light yellowish brown and light grayish brown	SP-SM	92.9	▽	10	6+6+7 N =13 REC =10"		
					15	5+5+7 N =12 REC =10"	w=7.6% *	
	orangeish brown, trace fine gravel.				20	8+9+8 N =17 REC =7"		
23.5	CLAYEY SAND, trace gravel, yellowish brown, contains clayey sand lenses (<1/4 inch thick).	SC	79.4			5+3+2 N =5 REC =15"	w=19.8% *	
24.8	<i>continued on next page</i>		78.1		25			

TEST BORING LOG 06120048 PLOG SPT 300 & 400.GPJ SCHNABEL.GDT 3/6/08

Comments:

- Boring backfilled with cement/bentonite grout through tremie pipe upon completion.
 - Downhole Geophysical Testing Performed on 6/5/2006.
 - * = See Appendix I for additional lab testing data.
- Ground water observation wells OW-319A and OW-319B installed at nearby locations.



TEST BORING LOG

Project: Calvert Cliffs Nuclear Power Plant
Calvert County, Maryland

Boring Number: **B-319**
Contract Number: 06120048
Sheet: 2 of 4

DEPTH (FT)	STRATA DESCRIPTION	CLASS.	ELEV. (FT)	WL	SAMPLING		TESTS	REMARKS
					DEPTH	DATA		
27.0	SANDY FAT CLAY, fine to medium, wet, light gray and dark brown.	CH	75.9					
29.5	CLAYEY SAND, fine to medium grained, wet, mottled yellowish brown and light gray (high percentage of fines).	SC						
	SANDY LEAN CLAY, fine to medium, wet, gray, trace mica.	CL	73.4					
					30	WOH/18" N = WOH/18" REC = 18"	w=24.5% *	
					35	REC = 24"	w=29.2% LL=49 PL=12 PP=2.75 tsf *	*Shelby tube sampler push from 33.5 to 35.5 ft.
37.0	FAT CLAY, moist, gray, trace sand, and mica.	CH	65.9					
					40	WOH+3+5 N = 8 REC = 18"	w=27.9% *	
					45	REC = 20"	w=32.1% LL=58 PL=13 PP=3.25 tsf *	*Shelby tube sampler push from 43.5 to 45.2 ft.
	light gray.				50	4+4+8 N = 12 REC = 18"	w=38.6% LL=79 PL=27 *	
					55	REC = 4"	PP=4.25 tsf	*Shelby tube sampler push from 53.5 to 54.3 ft.
57.0	FINE TO MEDIUM SILT, with sand, moist, gray and dark greenish gray, <i>continued on next page</i>	ML	45.9					

TEST BORING LOG 06120048 PLOG SPT 300 & 400.GPJ SCHNABEL.GDT 3/6/08

Comments:

1. Boring backfilled with cement/bentonite grout through tremie pipe upon completion.
 2. Downhole Geophysical Testing Performed on 6/5/2006.
 3. * = See Appendix I for additional lab testing data.
- Ground water observation wells OW-319A and OW-319B installed at nearby locations.



TEST BORING LOG

Project: Calvert Cliffs Nuclear Power Plant
Calvert County, Maryland

Boring Number: **B-319**
Contract Number: 06120048
Sheet: 3 of 4

DEPTH (FT)	STRATA DESCRIPTION	CLASS.	ELEV. (FT)	WL	SAMPLING		TESTS	REMARKS
					DEPTH	DATA		
62.0	trace mica, contains indurated lean clay pockets.	ML	40.9		60	7+10+17 N =27 REC =18"	w=26.7% LL=40 PL=32 *	
	SILTY SAND, fine to medium grained, moist, brown.	SM		65	50/5" N =50/5" REC =1"			
				70	50/4" N =50/4" REC =1"			
	gray, trace mica.				75	31+36+50/3" N =86/9" REC =13"	w=17.5% *	**Resumed drilling at 8:30 AM on 5/8/06.
	wet, gray and light gray, mostly fine to coarse shell fragments (±80%), strong HCl reaction, (shell fragments up to 1/2 inch in size).				80	50/5" N =50/5" REC =1"		
	light gray, mostly strongly cemented sand (±90%), weak HCl reaction.				85	32+43+50/3" N =93/9" REC =11"	w=18.2% *	*Slight to moderate drill rig vibrations at 82 ft.
light oliveish gray and light gray, few fine to coarse shell fragments (±10%), moderate HCl reaction, strong cementation.			90	6+6+9 N =15 REC =18"	w=29.8% PP=0.25 tsf *	*Moderately difficult drilling below 85 ft.		
<i>continued on next page</i>								

TEST BORING LOG 06120048 PLOG SPT 300 & 400.GPJ SCHNABEL.GDT 3/6/08

Comments:

- Boring backfilled with cement/bentonite grout through tremie pipe upon completion.
 - Downhole Geophysical Testing Performed on 6/5/2006.
 - * = See Appendix I for additional lab testing data.
- Ground water observation wells OW-319A and OW-319B installed at nearby locations.



TEST BORING LOG

Project: Calvert Cliffs Nuclear Power Plant
Calvert County, Maryland

Boring Number: **B-319**
Contract Number: 06120048
Sheet: 4 of 4

DEPTH (FT)	STRATA DESCRIPTION	CLASS.	ELEV. (FT)	WL	SAMPLING		TESTS	REMARKS
					DEPTH	DATA		
		SM						
	moderate HCl reaction.				95	6+7+11 N =18 REC =18"		
100.0	BOTTOM OF BORING @ 100.0 FT.		2.9		100	6+7+11 N =18 REC =18"	w=30% LL=NP PL=NP *	

TEST BORING LOG 06120048 PLOG SPT 300 & 400.GPJ SCHNABEL.GDT 3/6/08

Comments:

- Boring backfilled with cement/bentonite grout through tremie pipe upon completion.
 - Downhole Geophysical Testing Performed on 6/5/2006.
 - * = See Appendix I for additional lab testing data.
- Ground water observation wells OW-319A and OW-319B installed at nearby locations.



TEST BORING LOG

Project: Calvert Cliffs Nuclear Power Plant
Calvert County, Maryland

Boring Number: **B-320**
Contract Number: 06120048
Sheet: 1 of 5

Boring Contractor: CONNELLY AND ASSOCIATES, INC.
FREDERICK, MARYLAND
Boring Foreman: D. Reese
Drilling Method: Mud Rotary
Drilling Equipment: CME-75 (Truck)
Schnabel Representative: M. Arles
Dates Started: 5/8/06 **Finished:** 5/8/06
Location: Northing: 216943.5 ft
Easting: 961044.1 ft
Ground Surface Elevation: 106.4 (feet)

Groundwater Observations

	Date	Time	Depth	Casing	Caved
Encountered	5/8	---	28.0'	3.5'	---
Start of day	5/9	---	11.3'	3.5'	---

DEPTH (FT)	STRATA DESCRIPTION	CLASS.	ELEV. (FT)	WL	SAMPLING		TESTS	REMARKS
					DEPTH	DATA		
0.5	ROOTMAT AND TOPSOIL. POORLY GRADED SAND WITH SILT, fine to medium grained, moist, brown, contains root fragments. no observable root fragments.	SP-SM	105.9			1+2+2 N = 4 REC = 18"		
4.5	CLAYEY SAND, fine to coarse grained, moist, brownish orange, with fine gravel.	SC	101.9			2+3+3 N = 6 REC = 18"	w=10.4% *	
7.0	POORLY GRADED SAND, fine to coarse grained, moist, brownish orange. with gravel. reddish orange. orange. orangeish white. <i>continued on next page</i>	SP	99.4			3+3+5 N = 8 REC = 16"		
						5+6+7 N = 13 REC = 13"	w=6.3% *	
						5+7+8 N = 15 REC = 14"		
						6+8+7 N = 15 REC = 12"		
						10+12+10 N = 22 REC = 14"	w=9.1% *	
						8+14+11 N = 25 REC = 15"		

TEST BORING LOG 06120048 PLOG SPT 300 & 400.GPJ SCHNABEL.GDT 3/6/08

- Comments:**
- Boring backfilled with cement/bentonite grout through tremie pipe upon completion.
 - * = See Appendix I for additional lab testing data.



TEST BORING LOG

Project: Calvert Cliffs Nuclear Power Plant
Calvert County, Maryland

Boring Number: **B-320**
Contract Number: 06120048
Sheet: 2 of 5

DEPTH (FT)	STRATA DESCRIPTION	CLASS.	ELEV. (FT)	WL	SAMPLING		TESTS	REMARKS
					DEPTH	DATA		
27.0		SP						
	POORLY GRADED SAND WITH SILT, fine to coarse grained, wet, orange.	SP-SM	79.4	▽				
29.5		SM	76.9		30	7+5+4 N =9 REC =18"		
	SILTY SAND, fine to medium grained, wet, orange.							
32.0		SC	74.4					
	CLAYEY SAND, moist, dark gray.				35	WOH+1+2 N =3	w=26.1% LL=33 PL=18 *	
	with sand.				40	REC =24"	w=29.4% LL=36 PL=16 PP=1.50 tsf *	
42.0		CH	64.4					
	SANDY FAT CLAY, moist, dark gray, with sand.				45	2+2+3 N =5 REC =18"	w=30% LL=56 PL=19 *	
	fine to medium grained, moist, dark gray.				50	REC =18"	w=34.4% LL=59 PL=19 *	
	trace sand.				55	5+6+7 N =13 REC =18"	w=34.9% LL=69 PL=24 *	
57.0		SM	49.4					
	SILTY SAND, fine to medium grained, moist, greenish gray. <i>continued on next page</i>							

TEST BORING LOG 06120048 PLOG SPT 300 & 400.GPJ SCHNABEL.GDT 3/6/08

Comments:

- Boring backfilled with cement/bentonite grout through tremie pipe upon completion.
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TEST BORING LOG

Project: Calvert Cliffs Nuclear Power Plant
Calvert County, Maryland

Boring Number: **B-320**
Contract Number: 06120048
Sheet: 3 of 5

DEPTH (FT)	STRATA DESCRIPTION	CLASS.	ELEV. (FT)	WL	SAMPLING		TESTS	REMARKS
					DEPTH	DATA		
		SM				5+7+7 N =14 REC =18"		
62.0	POORLY GRADED SAND WITH SILT, fine to medium grained, moist, reddish gray, contains snail shell fragments.	SP-SM	44.4					
64.0	POORLY GRADED SAND, fine to medium grained, moist, orangeish red, trace silt, 10% fine to medium shell fragments.	SP	42.4			13+24+20 N =44 REC =18"		
64.5		SP-SM	41.9					
67.0	POORLY GRADED SAND, fine to medium grained, moist, greenish gray, with silt.	SM	39.4					
	SILTY SAND, fine to medium grained, moist, brownish yellow.						50/3" N =50/3" REC =2"	
	grayish green, contains cemented sand, 30-40% fine to medium shell fragments, HCl+.						w=18.8% *	
	5% fine to medium shell fragments.					50/2" N =50/2" REC =2"		
						50/1" N =50/1" REC =0"		
87.0	CLAYEY SAND, fine to medium grained, moist, gray, 50% cemented sand.	SC	19.4			50/2" N =50/2" REC =0"		

TEST BORING LOG 06120048 PLOG SPT 300 & 400.GPJ SCHNABEL.GDT 3/6/08

continued on next page

Comments:

1. Boring backfilled with cement/bentonite grout through tremie pipe upon completion.
2. * = See Appendix I for additional lab testing data.



TEST BORING LOG

Project: Calvert Cliffs Nuclear Power Plant
Calvert County, Maryland

Boring Number: **B-320**
Contract Number: 06120048
Sheet: 4 of 5

DEPTH (FT)	STRATA DESCRIPTION	CLASS.	ELEV. (FT)	WL	SAMPLING		TESTS	REMARKS
					DEPTH	DATA		
92.0	SILTY SAND, fine to medium grained, moist, green, trace silt, with 10-20% fine to coarse shell fragments, HCl+.	SC	14.4					
	fine to medium grained.	SM						
	fine to medium grained, moist, dark green, with silt.							
	20-30% fine to coarse shell fragments, HCl+ below 109.7.							
112.0	SANDY LEAN CLAY, fine to medium grained, wet, dark green and white, contains cemented sand, 25-35% fine to coarse shell fragments, HCl+.	CL	-5.6					
119.5	20-30% fine to coarse shell fragments.							
	SILTY SAND, fine to medium grained, moist, dark green, 0-5% fine to medium shell fragments.	SM	-13.1					
	<i>continued on next page</i>							

TEST BORING LOG 06120048 PLOG SPT 300 & 400.GPJ SCHNABEL.GDT 3/6/08

Comments:

- Boring backfilled with cement/bentonite grout through tremie pipe upon completion.
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TEST BORING LOG

Project: Calvert Cliffs Nuclear Power Plant
Calvert County, Maryland

Boring Number: **B-320**
Contract Number: 06120048
Sheet: 5 of 5

DEPTH (FT)	STRATA DESCRIPTION	CLASS.	ELEV. (FT)	WL	SAMPLING		TESTS	REMARKS
					DEPTH	DATA		
124.5	ELASTIC SILT, fine to medium grained, moist, green, with silt, 25-35% fine to coarse shell fragments, HCl+. dark green.	MH	-18.1		125	N = 19 REC = 18"	w=34.1% LL=50 PL=30 *	
130					7+8+10 N = 18 REC = 18"			
132.0	CLAYEY SAND, fine to medium grained, moist, dark green.	SC	-25.6		135	7+7+9 N = 16 REC = 18"		
137.0	SILTY SAND, fine to medium grained, moist, dark green, 0-10% fine to medium shell fragments. 10-30% fine to coarse shell fragments.	SM	-30.6		140	4+6+8 N = 14 REC = 18"	w=37% *	
145					5+6+6 N = 12 REC = 18"			
150					5+7+7 N = 14 REC = 18"			
150.0	BOTTOM OF BORING @ 150.0 FT.		-43.6					

TEST BORING LOG 06120048 PLOG SPT 300 & 400.GPJ SCHNABEL.GDT 3/6/08

Comments:

- Boring backfilled with cement/bentonite grout through tremie pipe upon completion.
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TEST BORING LOG

Project: Calvert Cliffs Nuclear Power Plant
Calvert County, Maryland

Boring Number: **B-321**
Contract Number: 06120048
Sheet: 1 of 5

Boring Contractor: CONNELLY AND ASSOCIATES, INC.
FREDERICK, MARYLAND
Boring Foreman: D. Bender
Drilling Method: Mud Rotary
Drilling Equipment: CME-550
Schnabel Representative: K. Bell
Dates Started: 6/5/06 **Finished:** 6/6/06
Location: Northing: 217152.5 ft
Easting: 960333.2 ft
Ground Surface Elevation: 70.7 (feet)

Groundwater Observations					
	Date	Time	Depth	Casing	Caved
Encountered	6/5	---	13.5'	---	---
Start of day	6/6	---	15.0'	---	---

DEPTH (FT)	STRATA DESCRIPTION	CLASS.	ELEV. (FT)	WL	SAMPLING		TESTS	REMARKS
					DEPTH	DATA		
0.5	ROOTMAT AND TOPSOIL.		70.2					
	CLAYEY SAND, trace gravel, fine to medium grained, moist, yellowish brown, trace wood fragments, trace root fragments.	SC				1+2+2 N=4 REC =12"		
						3+3+4 N=7 REC =17"	w=9.7% *	
4.5	POORLY GRADED SAND WITH SILT, fine to medium grained, moist, orangeish brown, trace root fragments.	SP-SM	66.2		5	7+7+8 N=15 REC =18"	w=7.4% *	
7.0	SANDY LEAN CLAY, moist, orangeish brown and gray, trace root fragments.	CL	63.7			3+2+2 N=4 REC =18"	w=25.2% *	
10.0	SANDY FAT CLAY, moist, orangeish brown and gray.	CH	60.7		10	1+1+2 N=3 REC =18"	w=36.2% LL=55 PL=20 *	
13.0	CLAYEY SAND, fine to medium grained, wet, gray.	SC	57.7	▽		1+2+3 N=5 REC =18"	w=30% *	
					15	2+4+7 N=11 REC =18"	w=29.7% *	
23.5	LEAN CLAY, moist, gray	CL	47.2			REC =18"	w=26.2% LL=45 PL=18	
	<i>continued on next page</i>							

TEST BORING LOG 06120048 PLOG SPT 300 & 400.GPJ SCHNABEL.GDT 3/6/08

Comments:

- Boring backfilled with cement/bentonite grout through tremie pipe upon completion.
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TEST BORING LOG

Project: Calvert Cliffs Nuclear Power Plant
Calvert County, Maryland

Boring Number: **B-321**
Contract Number: 06120048
Sheet: 2 of 5

TEST BORING LOG 06120048 PLOG SPT 300 & 400.GPJ SCHNABEL.GDT 3/6/08

DEPTH (FT)	STRATA DESCRIPTION	CLASS.	ELEV. (FT)	WL	SAMPLING		TESTS	REMARKS
					DEPTH	DATA		
		CL					PP=3.50 tsf *	
27.0	SILTY SAND, wet, gray.	SM	43.7					
					30	3+4+7 N =11 REC =18"	w=27% LL=47 PL=29 *	
33.0	POORLY GRADED SAND WITH SILT, fine to coarse grained, wet, gray, strong cementation, platy structure.	SP-SM	37.7					
					35	39+50/3" N =50/3" REC =10"	w=30.9% *	
	white, with fine to coarse shell fragments, 50-60%, HCl reaction strong.				40	15+17+31 N =48 REC =16"	w=27.1% *	
					45	9+9+7 N =16 REC =18"	w=26% *	
47.0	ELASTIC SILT with sand, gray, trace fine to medium shell fragments, 2-5%, HCl reaction weak	MH	23.7					
					50	4+4 N =4	w=35.1% *	
52.0	SILTY SAND, fine to medium grained, wet, light gray and greenish gray, contains fine to coarse shell fragments, 20-30%, HCl reaction strong, weak cementation.	SM	18.7					
					55	30+11+10 N =21 REC =18"	w=25% LL=NP PL=NP *	
	fine to medium grained, wet, greenish gray, trace fine to coarse shell <i>continued on next page</i>							

Comments:

- Boring backfilled with cement/bentonite grout through tremie pipe upon completion.
- * = See Appendix I for additional lab testing data.



TEST BORING LOG

Project: Calvert Cliffs Nuclear Power Plant
Calvert County, Maryland

Boring Number: **B-321**
Contract Number: 06120048
Sheet: 3 of 5

DEPTH (FT)	STRATA DESCRIPTION	CLASS.	ELEV. (FT)	WL	SAMPLING		TESTS	REMARKS
					DEPTH	DATA		
	fragments, 5-10%, HCl reaction moderate.	SM				4+4+6 N =10 REC =18"	w=27.4% *	
	gray and white, trace fine to coarse shell fragments, 20-30%, HCl reaction strong, strong cementation.					8+9+14 N =23 REC =18"	w=27.6% *	
	trace fine to medium shell fragments, 2-5%, HCl reaction weak.					4+7+9 N =16 REC =18"	w=28.4% *	
						REC =24"	w=28.5% LL=NP PL=NP PP=3.75 tsf *	
						4+6+12 N =18 REC =18"	w=34.9% *	
	fine to medium grained, wet, light gray and white, contains fine to medium shell fragments, 20-30%, HCl reaction strong, strong cementation.					22+16+9 N =25 REC =17"	w=20.6% *	
	fine to medium grained, wet, gray, trace fine to medium shell fragments, 2-5%, HCl reaction weak.					6+12+18 N =30 REC =18"	w=31% *	
<i>continued on next page</i>								

TEST BORING LOG 06120048 PLOG SPT 300 & 400.GPJ SCHNABEL.GDT 3/6/08

Comments:

1. Boring backfilled with cement/bentonite grout through tremie pipe upon completion.
2. * = See Appendix I for additional lab testing data.



TEST BORING LOG

Project: Calvert Cliffs Nuclear Power Plant
Calvert County, Maryland

Boring Number: **B-321**
Contract Number: 06120048
Sheet: 4 of 5

DEPTH (FT)	STRATA DESCRIPTION	CLASS.	ELEV. (FT)	WL	SAMPLING		TESTS	REMARKS
					DEPTH	DATA		
92.0	CLAYEY SAND, wet, gray, trace fine to medium shell fragments, 2-5%, HCl reaction weak.	SM	-21.3					
		SC			95	4+8+12 N =20 REC =18"	w=36.9% LL=59 PL=26 *	
97.0	SILTY SAND, wet, greenish gray. Remarks 105 ft: Resumed Drilling on 6/6/06 @ 7:15 am	SM	-26.3					
					100	4+9+13 N =22 REC =18"	w=36.1% *	
					105	7+10+13 N =23 REC =17"	w=58.2% *	Resumed Drilling on 6/6/06 @ 7:15 am
					110	5+7+11 N =18 REC =18"	w=42.6% *	
					115	5+4+9 N =13 REC =18"	w=34.6% *	
					120	5+8+13 N =21 REC =18"	w=39.8% *	
						6+9+15	w=43.1%	

continued on next page

TEST BORING LOG 06120048 PLOG SPT 300 & 400.GPJ SCHNABEL.GDT 3/6/08

Comments:

1. Boring backfilled with cement/bentonite grout through tremie pipe upon completion.
2. * = See Appendix I for additional lab testing data.



TEST BORING LOG

Project: Calvert Cliffs Nuclear Power Plant
Calvert County, Maryland

Boring Number: **B-321**
Contract Number: 06120048
Sheet: 5 of 5

DEPTH (FT)	STRATA DESCRIPTION	CLASS.	ELEV. (FT)	WL	SAMPLING		TESTS	REMARKS
					DEPTH	DATA		
125.0	SANDY ELASTIC SILT, wet, greenish gray, trace fine to medium shell fragments, 5-10%, HCl reaction moderate	SM	-54.3		125	N =24 REC =18"	*	
		MH			130	8+11+15 N =26 REC =17"	w=49.5% *	
	ELASTIC SILT, moist, greenish gray, trace sand				135	5+7+11 N =18 REC =18"	w=42.3% *	
					140	6+7+11 N =18 REC =18"	w=39.7% *	
					145	7+10+14 N =24 REC =18"	w=60.2% *	
					150	7+12+15 N =27 REC =18"	w=66% *	
150.0	BOTTOM OF BORING @ 150.0 FT.		-79.3					

TEST BORING LOG 06120048 PLOG SPT 300 & 400.GPJ SCHNABEL.GDT 3/6/08

Comments:

1. Boring backfilled with cement/bentonite grout through tremie pipe upon completion.
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TEST BORING LOG

Project: Calvert Cliffs Nuclear Power Plant
Calvert County, Maryland

Boring Number: B-322
Contract Number: 06120048
Sheet: 1 of 4

Boring Contractor: UNI-TECH DRILLING
MALAGA, NEW JERSEY
Boring Foreman: J. Blemings
Drilling Method: Mud Rotary
Drilling Equipment: CME-750 (ATV)
Schnabel Representative: K. Megginson
Dates Started: 5/18/06 **Finished:** 5/18/06
Location: Northing: 217170.03 ft
Easting: 960202.65 ft
Ground Surface Elevation: 89.9 (feet)

Groundwater Observations					
	Date	Time	Depth	Casing	Caved
Encountered	5/18	---	10.5'	---	---

DEPTH (FT)	STRATA DESCRIPTION	CLASS.	ELEV. (FT)	WL	SAMPLING		TESTS	REMARKS
					DEPTH	DATA		
0.4	Forest litter, rootmat and topsoil.	SM	89.5			1+2+2 N = 4 REC = 14"		
	SILTY SAND, fine to medium grained, moist, brown.							
	stratified brown and light brown				5	3+3+4 N = 7 REC = 13"		
						3+3+4 N = 7 REC = 10"	*	
7.0	CLAYEY SAND, fine to coarse grained, moist, brown, contains fat clay pockets.	SC	82.9			2+4+4 N = 8 REC = 12"		
9.5	SILTY SAND, fine to medium grained, wet, dark yellowish brown, contains lean clay lenses (<1/8 inch).	SM	80.4	▽	10	5+8+10 N = 18 REC = 15"		
	dark yellowish brown and yellowish brown.						15	4+4+5 N = 9 REC = 13"
17.0	CLAYEY SAND, fine to medium grained, wet, mottled dark yellowish brown and light gray.	SC	72.9			WOH/18" N = WOH/18" REC = 18"		
22.0	SANDY LEAN CLAY, fine to medium, moist, gray, trace mica.	CL	67.9			2+2+4 N = 6 REC = 18"		
	<i>continued on next page</i>				25			

TEST BORING LOG 06120048 PLOG SPT 300 & 400.GPJ SCHNABEL.GDT 3/6/08

- Comments:**
- Boring backfilled with cement/bentonite grout through tremie pipe upon completion.
 - * = See Appendix I for additional lab testing data.



TEST BORING LOG

Project: Calvert Cliffs Nuclear Power Plant
Calvert County, Maryland

Boring Number: **B-322**
Contract Number: 06120048
Sheet: 2 of 4

DEPTH (FT)	STRATA DESCRIPTION	CLASS.	ELEV. (FT)	WL	SAMPLING		TESTS	REMARKS
					DEPTH	DATA		
	with fine to medium sand.	CL				REC =28"	PP=2.75 tsf	*Shelby tube sampler push from 28.5 to 30.5 ft.
32.0	FAT CLAY, moist, light greenish gray and gray, trace fine to medium sand and mica, contains silty sand lenses.	CH	57.9			2+3+5 N =8 REC =18"		
37.0	SILTY SAND, fine to medium grained, wet, gray.	SM	52.9			REC =27"	PP=NP tsf	*Shelby tube sampler push 38.5 from 39.9 ft.
42.0	ELASTIC SILT, moist, light greenish gray, trace fine sand, and mica.	MH	47.9			5+7+9 N =16 REC =18"	PP=3.50 tsf	
47.0	CLAYEY SAND, fine to medium grained, moist, gray, trace mica.	SC	42.9			REC =10"	PP=NP tsf	*Shelby tube sampler push from 48.5 to 49.3 ft.
52.0	SANDY SILT, fine to medium, moist, gray, trace mica.	ML	37.9			19+34+50/5" N =84/11" REC =17"		*Switched to 3-7/8" O.D. Tri-cone roller bit below 53.5 ft. *Sampler refusal at 54.9 ft. *Difficult to very difficult rotary advancement
57.0	SILTY SAND, fine to medium grained, wet, gray, trace fine to medium shell <i>continued on next page</i>	SM	32.9					

TEST BORING LOG 06120048 PLOG SPT 300 & 400.GPJ SCHNABEL.GDT 3/6/08

Comments:

1. Boring backfilled with cement/bentonite grout through tremie pipe upon completion.
2. * = See Appendix I for additional lab testing data.



TEST BORING LOG

Project: Calvert Cliffs Nuclear Power Plant
Calvert County, Maryland

Boring Number: **B-322**
Contract Number: 06120048
Sheet: 3 of 4

DEPTH (FT)	STRATA DESCRIPTION	CLASS.	ELEV. (FT)	WL	SAMPLING		TESTS	REMARKS
					DEPTH	DATA		
62.0	fragments (±5%), contains black particles (1/16 inch), strong HCl reaction (strong HCl reaction with shell fragments only).	SM	27.9		60	31+50 N =50 REC =10"		from 55.5 to 56 ft. *Moderate to difficult rotary advancement below 57 ft.
	LEAN CLAY, moist, gray, trace fine to medium sand, and mica, weak HCl reaction.	CL		65	6+7+9 N =16 REC =18"			
72.0	with fine to medium sand.		17.9		70	3+4+6 N =10 REC =18"		*Moderate to difficult rotary advancement below 72 ft (moderate to strong rig chatter). *Very difficult rotary advancement from 75 to 76 ft (strong rig chatter). *Moderately difficult rotary advancement from 76 to 78 ft. *Very difficult rotary advancement from 78 to 78.5 ft (strong rig chatter).
	CLAYEY SAND, fine to medium grained, moist, greenish gray, trace fine to coarse shell fragments (±5%), contains indurated clayey sand layers from 73.5 to 73.8 ft, strong HCl reaction. contains strongly cemented sand layer from 73.8 to 74 ft.	SC		75	50/5" N =50/5" REC =5"			
78.5	SILTY SAND, fine to medium grained, wet, gray, few fine to coarse shell fragments (±10%), strong HCl reaction.	SM	11.4		80	7+9+11 N =20 REC =18"		
	dark greenish gray, little fine to coarse shell fragments (±20%), moderate HCl reaction.			85	12+13+13 N =26 REC =18"			
	light greenish gray, trace fine to medium shell fragments (±5%), weak HCl reaction.			90	7+11+14 N =25 REC =18"			
<i>continued on next page</i>								

TEST BORING LOG 06120048 PLOG SPT 300 & 400.GPJ SCHNABEL.GDT 3/6/08

Comments:

1. Boring backfilled with cement/bentonite grout through tremie pipe upon completion.
2. * = See Appendix I for additional lab testing data.



TEST BORING LOG

Project: Calvert Cliffs Nuclear Power Plant
Calvert County, Maryland

Boring Number: **B-322**
Contract Number: 06120048
Sheet: 4 of 4

DEPTH (FT)	STRATA DESCRIPTION	CLASS.	ELEV. (FT)	WL	SAMPLING		TESTS	REMARKS
					DEPTH	DATA		
92.0	CLAYEY SAND, fine to medium grained, wet, gray, trace mica, weak HCl reaction. blueish gray and gray, trace fine to coarse shell fragments (±5%).	SM	-2.1					
		SC						
					95	5+7+14 N =21 REC =18"		
100.0	BOTTOM OF BORING @ 100.0 FT.		-10.1		100	4+5+11 N =16 REC =18"		

TEST BORING LOG 06120048 PLOG SPT 300 & 400.GPJ SCHNABEL.GDT 3/6/08

Comments:

1. Boring backfilled with cement/bentonite grout through tremie pipe upon completion.
2. * = See Appendix I for additional lab testing data.



TEST BORING LOG

Project: Calvert Cliffs Nuclear Power Plant
Calvert County, Maryland

Boring Number: **B-323**
Contract Number: 06120048
Sheet: 1 of 7

Boring Contractor: UNI-TECH DRILLING MALAGA, NEW JERSEY Boring Foreman: J. Blemings Drilling Method: Mud Rotary Drilling Equipment: CME-750 (ATV) Schnabel Representative: M. Arles Dates Started: 6/7/06 Finished: 6/14/06 Location: Northing: 217027.97 ft Easting: 960060.86 ft Ground Surface Elevation: 107.5 (feet)	Groundwater Observations					
	Date	Time	Depth	Casing	Caved	
	Encountered	6/7	---	18.5'	0.0'	---
	Start of Day	6/8	---	0.0'	0.0'	---
	Start of day	6/12	---	20.0'	0.0'	---
	Start of Day	6/13	---	0.0'	0.0'	---

DEPTH (FT)	STRATA DESCRIPTION	CLASS.	ELEV. (FT)	WL	SAMPLING		TESTS	REMARKS
					DEPTH	DATA		
4.5	POORLY GRADED SAND, fine grained, moist, orange.	SP	103.0		1+1+3	N = 4 REC = 16"	w=5% *	0-4' drag bit
	fine to coarse, with gravel.				3+3+6	N = 9 REC = 13"		
10.0	POORLY GRADED SAND WITH SILT, moist, orange	SP-SM	97.5		7+9+8	N = 17 REC = 12"	w=13% *	
					9+11+10	N = 21 REC = 14"		
17.0	POORLY GRADED SAND WITH SILT, fine to medium grained, moist, yellow.	SP-SM	90.5		7+9+11	N = 20 REC = 15"	w=16.2% *	15-45' orange mud return
					6+9+9	N = 18		
22.0	SILTY SAND, fine to coarse grained, wet, orange and brown, with silt, 1/8" color lenses.	SM	85.5	▽	10+20+20	N = 40 REC = 17"	w=11.9% LL=NP PL=NP *	
					2+2+2	N = 4 REC = 16"		
	CLAYEY SAND, fine to coarse grained, wet, orange and red, 1/4" pink clay lenses.	SC						
	<i>continued on next page</i>							

TEST BORING LOG 06120048 PLOG SPT 300 & 400.GPJ SCHNABEL.GDT 3/6/08

Comments:

- Boring backfilled with cement/bentonite grout through tremie pipe upon completion.
- Downhole Geophysical Testing Performed on 6/14/2006
- * = See Appendix I for additional lab testing data.
- Ground water observation well OW-323 installed at nearby location.



TEST BORING LOG

Project: Calvert Cliffs Nuclear Power Plant
Calvert County, Maryland

Boring Number: **B-323**
Contract Number: 06120048
Sheet: 2 of 7

DEPTH (FT)	STRATA DESCRIPTION	CLASS.	ELEV. (FT)	WL	SAMPLING		TESTS	REMARKS
					DEPTH	DATA		
27.0	POORLY GRADED SAND, fine to coarse grained, wet, orange, trace gravel.	SC	80.5		30	8+9+10 N =19	w=17.6% *	
		SP						
32.0	POORLY GRADED SAND WITH SILT, fine to coarse grained, wet, orange	SP-SM	75.5		35	7+8+9 N =17 REC =13"		
	SILT, wet, gray, with sand. mottled grayish orange.	ML	65.5		40	8+15+9 N =24 REC =17"	w=20.7% *	
42.0								
	SANDY FAT CLAY, fine to medium, moist, dark gray. no sand, very stiff.	CH	60.5		45	8+9+9 N =18 REC =18"		45-70' grayish mud return
47.0								
					50	3+2+5 N =7 REC =18"	w=28.1% LL=50 PL=17 *	
					55	3+3+4 N =7 REC =18"		

TEST BORING LOG 06120048 PLOG SPT 300 & 400.GPJ SCHNABEL.GDT 3/6/08

continued on next page

Comments:

1. Boring backfilled with cement/bentonite grout through tremie pipe upon completion.
2. Downhole Geophysical Testing Performed on 6/14/2006
3. * = See Appendix I for additional lab testing data.
4. Ground water observation well OW-323 installed at nearby location.



TEST BORING LOG

Project: Calvert Cliffs Nuclear Power Plant
Calvert County, Maryland

Boring Number: **B-323**
Contract Number: 06120048
Sheet: 3 of 7

DEPTH (FT)	STRATA DESCRIPTION	CLASS.	ELEV. (FT)	WL	SAMPLING		TESTS	REMARKS
					DEPTH	DATA		
		CH				1+4+6 N =10 REC =18"	w=35.1% LL=65 PL=22 *	
	with sand.					6+10+12 N =22 REC =18"		
67.0	CLAYEY SAND, fine to medium grained, moist, green.	SC	40.5			8+12+12 N =24 REC =18"	w=29% LL=46 PL=24 *	70' greenish mud return 71' harder drilling
71.0	POORLY GRADED SAND WITH SILT, fine to coarse grained, moist, dark green, with fine to coarse shell fragments, strong HCl reaction.	SP-SM	36.5			34+50/3" N =50/3" REC =6"		
77.0	FINE TO MEDIUM SANDY LEAN CLAY, moist, green, with fine to coarse shell fragments, strong HCl reaction, 60-70% shell frag. trace sand, no shells. moist, green, contains fine to coarse shell fragments, moderate HCl reaction.	CL	30.5			5+5+7 N =12 REC =18"		
						REC =16"	w=36.2% LL=42 PL=20 *	
88.0	SILTY SAND, fine to medium grained, moist, green, with fine to coarse shell fragments, strong HCl reaction, 50-60% shell frag . <i>continued on next page</i>	SM	19.5			30+33+15 N =48 REC =18"		

TEST BORING LOG 06120048 PLOG SPT 300 & 400.GPJ SCHNABEL.GDT 3/6/08

Comments:

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2. Downhole Geophysical Testing Performed on 6/14/2006
3. * = See Appendix I for additional lab testing data.
4. Ground water observation well OW-323 installed at nearby location.



TEST BORING LOG

Project: Calvert Cliffs Nuclear Power Plant
Calvert County, Maryland

Boring Number: **B-323**
Contract Number: 06120048
Sheet: 4 of 7

DEPTH (FT)	STRATA DESCRIPTION	CLASS.	ELEV. (FT)	WL	SAMPLING		TESTS	REMARKS
					DEPTH	DATA		
	30-40% shell frag.	SM			95	24+16+33 N =49 REC =18"	w=26.3% LL=NP PL=NP *	
102.0	POORLY GRADED SAND WITH SILT, fine to medium grained, moist, green, with fine to coarse shell fragments, strong HCl reaction, 20-30% shell frag.	SP-SM	5.5		100	4+8+11 N =19 REC =18"		
					105	8+12+14 N =26 REC =18"	w=28.6% LL=NP PL=NP *	
107.0	SILTY SAND, fine to medium grained, moist, green, trace fine to medium shell fragments, moderate HCl reaction, 0-5% shell frag.	SM	0.5		110	3+6+9 N =15 REC =18"		110' more sandy drilling
					115	4+7+12 N =19 REC =18"	w=30.2% *	116' hard layer shells
	with fine to coarse shell fragments, strong HCl reaction, 70-80% shell frag.				120	50/5" N =50/5" REC =5"		118.5 switch to roller bit 118.5 rig chatter
	<i>continued on next page</i>					10+50/5"	w=19.4%	

TEST BORING LOG 06120048 PLOG SPT 300 & 400.GPJ SCHNABEL.GDT 3/6/08

Comments:

- Boring backfilled with cement/bentonite grout through tremie pipe upon completion.
- Downhole Geophysical Testing Performed on 6/14/2006
- * = See Appendix I for additional lab testing data.
- Ground water observation well OW-323 installed at nearby location.



TEST BORING LOG

Project: Calvert Cliffs Nuclear Power Plant
Calvert County, Maryland

Boring Number: **B-323**
Contract Number: 06120048
Sheet: 5 of 7

DEPTH (FT)	STRATA DESCRIPTION	CLASS.	ELEV. (FT)	WL	SAMPLING		TESTS	REMARKS
					DEPTH	DATA		
		SM				125' X N =50/5" REC =11"	*	125' start of day 6/8/06
	trace fine to coarse shell fragments, moderate HCl reaction, 0-10% shell frag.					130' X 8+15+25 N =40 REC =18"		
	with fine to coarse shell fragments, strong HCl reaction, 10-20% shell frag.					135' X 9+12+15 N =27 REC =18"	w=33.1% *	
138.0	POORLY GRADED SAND WITH SILT, fine to medium grained, moist, green, trace fine to medium shell fragments, weak HCl reaction, 0-5% shell frag.	SP-SM	-30.5			140' X 6+9+20 N =29 REC =18"		
142.0	SANDY ELASTIC SILT, fine to medium grained, moist, green, trace fine to medium shell fragments, weak HCl reaction, 0-5% shell frag.	MH	-34.5			145' X 7+10+13 N =23 REC =18"	w=48.3% LL=73 PL=38 *	144.5 switch to drag bit
						150' X 10+12+15 N =27 REC =18"		
153.0	SILT with sand, fine to medium grained, moist, green, with fine to coarse shell fragments, strong HCl reaction, 60-70% shell frag.	ML	-45.5			155' X 11+17+27 N =44 REC =18"	w=31.3% LL=39 PL=30 *	
	<i>continued on next page</i>							

TEST BORING LOG 06120048 PLOG SPT 300 & 400.GPJ SCHNABEL.GDT 3/6/08

Comments:

- Boring backfilled with cement/bentonite grout through tremie pipe upon completion.
- Downhole Geophysical Testing Performed on 6/14/2006
- * = See Appendix I for additional lab testing data.
- Ground water observation well OW-323 installed at nearby location.



TEST BORING LOG

Project: Calvert Cliffs Nuclear Power Plant
Calvert County, Maryland

Boring Number: **B-323**
Contract Number: 06120048
Sheet: 6 of 7

DEPTH (FT)	STRATA DESCRIPTION	CLASS.	ELEV. (FT)	WL	SAMPLING		TESTS	REMARKS
					DEPTH	DATA		
	trace fine to coarse shell fragments, 0-10% shell frag.	ML				6+10+12 N =22 REC =18"		
163.0	FINE TO MEDIUM SANDY ELASTIC SILT, moist, green.	MH	-55.5			7+12+16 N =28 REC =18"	w=54.2% *	
167.0	SILTY SAND, fine to medium grained, moist, green, with fine to coarse shell fragments, strong HCl reaction, 10-20% shell frag.	SM	-59.5			7+8+13 N =21 REC =18"		
172.0	SANDY FAT CLAY, moist, green, with sand, moderate HCl reaction.	CH	-64.5			6+8+13 N =21 REC =18"	w=44% LL=97 PL=31 *	
179.2	SAND, fine to coarse grained, moist, grayish green, with silt.	SP-SM	-71.7			REC =0"		180' Start of day 6/12/06
182.0	FAT CLAY, trace sand, moist, green.	CH	-74.5			8+11+16 N =27 REC =18"	w=68.3% LL=124 PL=33 *	
	<i>continued on next page</i>					7+11+12 N =23 REC =18"		

TEST BORING LOG 06120048 PLOG SPT 300 & 400.GPJ SCHNABEL.GDT 3/6/08

Comments:

- Boring backfilled with cement/bentonite grout through tremie pipe upon completion.
- Downhole Geophysical Testing Performed on 6/14/2006
- * = See Appendix I for additional lab testing data.
- Ground water observation well OW-323 installed at nearby location.



TEST BORING LOG

Project: Calvert Cliffs Nuclear Power Plant
Calvert County, Maryland

Boring Number: **B-323**
Contract Number: 06120048
Sheet: 7 of 7

DEPTH (FT)	STRATA DESCRIPTION	CLASS.	ELEV. (FT)	WL	SAMPLING		TESTS	REMARKS
					DEPTH	DATA		
195.0	SANDY ELASTIC SILT, trace fine to medium shell fragments, 0-5% shell frag.	MH	-87.5		195	7+11+14 N =25 REC =18"	w=58.1% LL=116 PL=36 *	
200.0	BOTTOM OF BORING @ 200.0 FT.		-92.5		200	7+11+12 N =23 REC =18"	w=52.9% LL=97 PL=62 *	

TEST BORING LOG 06120048 PLOG SPT 300 & 400.GPJ SCHNABEL.GDT 3/6/08

Comments:

1. Boring backfilled with cement/bentonite grout through tremie pipe upon completion.
2. Downhole Geophysical Testing Performed on 6/14/2006
3. * = See Appendix I for additional lab testing data.
4. Ground water observation well OW-323 installed at nearby location.



TEST BORING LOG

Project: Calvert Cliffs Nuclear Power Plant
Calvert County, Maryland

Boring Number: B-324
Contract Number: 06120048
Sheet: 1 of 4

Boring Contractor: CONNELLY AND ASSOCIATES, INC.
FREDERICK, MARYLAND
Boring Foreman: W. Wolfe
Drilling Method: Mud Rotary
Drilling Equipment: CME-550 (ATV)
Schnabel Representative: K. Bell
Dates Started: 7/12/06 **Finished:** 7/14/06
Location: Northing: 216906.4 ft
Easting: 960114.44 ft
Ground Surface Elevation: 105.2 (feet)

Groundwater Observations

	Date	Time	Depth	Casing	Caved
Encountered	7/13	---	27.0'	---	---
Start of Day	7/14	---	25.0'	---	---

TEST BORING LOG 06120048 PLOG SPT 300 & 400.GPJ SCHNABEL.GDT 3/6/08

DEPTH (FT)	STRATA DESCRIPTION	CLASS.	ELEV. (FT)	WL	SAMPLING		TESTS	REMARKS
					DEPTH	DATA		
0.6	ROOTMAT AND TOPSOIL.							
	POORLY GRADED SAND WITH SILT, fine to coarse grained, moist, yellowish brown, trace gravel. yellowish brown and reddish brown	SP-SM	104.6			1+2+1 N=3 REC=10"		
						2+2+2 N=4 REC=13"		
				5		2+2+3 N=5 REC=12"		
						3+4+4 N=8 REC=15"		
				10		1+1+3 N=4 REC=11"		
12.0	SILTY SAND, fine to coarse grained, moist, orangeish brown, trace gravel.	SM	93.2			4+4+5 N=9 REC=16"		
				15		3+4+5 N=9 REC=16"		
17.0	POORLY GRADED SAND WITH SILT, fine to medium grained, moist, yellowish brown and orangeish brown, trace gravel.	SP-SM	88.2			5+7+7 N=14 REC=10"		
19.5	SILTY SAND, fine to coarse grained, moist, orangeish brown and yellowish brown, trace gravel.	SM	85.7		20	3+4+7 N=11 REC=15"		
22.0	CLAYEY SAND, fine to medium grained, wet, orangeish brown and reddish brown.	SC	83.2			5+4+5 N=9 REC=9"		
	<i>continued on next page</i>				25			

Comments:

1. Boring backfilled with cement/bentonite grout through tremie pipe upon completion.
2. * = See Appendix I for additional lab testing data.



TEST BORING LOG

Project: Calvert Cliffs Nuclear Power Plant
Calvert County, Maryland

Boring Number: **B-324**
Contract Number: 06120048
Sheet: 2 of 4

DEPTH (FT)	STRATA DESCRIPTION	CLASS.	ELEV. (FT)	WL	SAMPLING		TESTS	REMARKS
					DEPTH	DATA		
	Remarks 27 ft. Resumed drilling on 7-13-06 @ 7:00 am	SC				3+2+2 N =4 REC =10"		Resumed drilling on 7-13-06 @ 7:00 am
						2+2+3 N =5 REC =11"		
30.0	POORLY GRADED SAND WITH SILT, fine to medium grained, wet, orangeish brown.	SP-SM	75.2			3+4+5 N =9 REC =7"		
						4+6+7 N =13 REC =10"		
34.5	CLAYEY SAND, fine to coarse grained, wet, orangeish brown and yellowish brown.	SC	70.7			6+6+10 N =16 REC =12"		
	orangeish brown and reddish brown, trace gravel					3+5+7 N =12 REC =18"		
38.5	SANDY FAT CLAY, moist, orangeish brown and reddish brown, iron staining, strong cementation. gray	CH	66.7			1+2+3 N =5 REC =18"		
						2+2+3 N =5 REC =18"		
						2+2+3 N =5 REC =18"		
						3+3+3 N =6 REC =18"		
	black cemented sand lenses					2+4+4 N =8 REC =18"		
52.0	SILTY SAND, fine to medium grained, wet, gray.	SM	53.2			10+18+28 N =46 REC =18"		
54.5	FAT CLAY, moist, gray, trace sand.	CH	50.7			3+4+5 N =9 REC =18"		
						3+4+7		

TEST BORING LOG 06120048 PLOG SPT 300 & 400.GPJ SCHNABEL.GDT 3/6/08

continued on next page

Comments:

1. Boring backfilled with cement/bentonite grout through tremie pipe upon completion.
2. * = See Appendix I for additional lab testing data.



TEST BORING LOG

Project: Calvert Cliffs Nuclear Power Plant
Calvert County, Maryland

Boring Number: **B-324**
Contract Number: 06120048
Sheet: 3 of 4

DEPTH (FT)	STRATA DESCRIPTION	CLASS.	ELEV. (FT)	WL	SAMPLING		TESTS	REMARKS
					DEPTH	DATA		
		CH				N =11 REC =18"		
					60	REC =21"	PP=>4.5 tsf	
62.5	SANDY LEAN CLAY, wet, gray.	CL	42.7			4+5+7 N =12 REC =18"		
64.5	SANDY FAT CLAY, moist, light gray.	CH	40.7		65	5+6+10 N =16 REC =18"		
67.0	SILTY SAND, fine to medium grained, wet, gray, strong cementation.	SM	38.2			13+36+50/4" N =86/10" REC =16" REC =22"		
	gray and white, with fine to coarse shell fragments, 50-60%, HCl reaction strong					23+16+26 N =42 REC =18"		
74.5	SANDY ELASTIC SILT, wet, gray and white, contains fine to coarse shell fragments, 30-40%, HCl reaction strong.	MH	30.7		75	4+7+9 N =16 REC =18"		
	greenish gray, trace sand, trace fine to medium shell fragments, 2-5%, HCl reaction weak					4+5+6 N =11 REC =18"		
	trace organic matter				80	4+5+6 N =11 REC =18"		
84.5	SILTY SAND, fine to medium grained, wet, greenish gray and white, with fine to coarse shell fragments, 50-60%, strong cementation, HCl reaction strong.	SM	20.7			3+3+4 N =7 REC =18"		
	contains fine to coarse shell fragments, 40-50%, strong cementation, HCl reaction strong				85	50/5" N =50/5" REC =5" REC =3"		
						19+12+13 N =25 REC =18"		
					90	9+19+50/4" N =69/10"		
	<i>continued on next page</i>							

TEST BORING LOG 06120048 PLOG SPT 300 & 400.GPJ SCHNABEL.GDT 3/6/08

Comments:

1. Boring backfilled with cement/bentonite grout through tremie pipe upon completion.
2. * = See Appendix I for additional lab testing data.



TEST BORING LOG

Project: Calvert Cliffs Nuclear Power Plant
Calvert County, Maryland

Boring Number: **B-324**
Contract Number: 06120048
Sheet: 4 of 4

DEPTH (FT)	STRATA DESCRIPTION	CLASS.	ELEV. (FT)	WL	SAMPLING		TESTS	REMARKS
					DEPTH	DATA		
101.5	contains fine to coarse shell fragments, 30-40%	SM	3.7			REC =16"		
					5+7+9 N =16 REC =18"			
	contains fine to coarse shell fragments, 20-30%, HCl reaction moderate				95	5+6+11 N =17 REC =18"		
	gray and white, contains fine to coarse shell fragments, 10-20%					9+13+16 N =29 REC =18"		
					100	4+6+10 N =16 REC =18"		
	BOTTOM OF BORING @ 101.5 FT.							

TEST BORING LOG 06120048 PLOG SPT 300 & 400.GPJ SCHNABEL.GDT 3/6/08

Comments:

1. Boring backfilled with cement/bentonite grout through tremie pipe upon completion.
2. * = See Appendix I for additional lab testing data.



TEST BORING LOG

Project: Calvert Cliffs Nuclear Power Plant
Calvert County, Maryland

Boring Number: **B-325**
Contract Number: 06120048
Sheet: 1 of 4

Boring Contractor: CONNELLY AND ASSOCIATES, INC.
FREDERICK, MARYLAND
Boring Foreman: D. Bender
Drilling Method: Mud Rotary
Drilling Equipment: CME-550X (ATV)
Schnabel Representative: K. Bell
Dates Started: 5/23/06 **Finished:** 5/23/06
Location: Northing: 216948.98 ft
Easting: 960549.73 ft
Ground Surface Elevation: 85.0 (feet)

Groundwater Observations

	Date	Time	Depth	Casing	Caved
Encountered	5/23	---	23.5'	---	---

DEPTH (FT)	STRATA DESCRIPTION	CLASS.	ELEV. (FT)	WL	SAMPLING		TESTS	REMARKS
					DEPTH	DATA		
0.6	ROOTMAT AND TOPSOIL.							
	POORLY GRADED SAND WITH SILT, fine to coarse grained, moist, yellowish brown, trace root fragments, trace gravel. orangeish brown.	SP-SM	84.4			1 REC =12"		
4.0	SILTY SAND, fine to coarse grained, moist, orangeish brown and reddish brown, trace gravel. orangeish brown and gray, fine to medium grained. trace root fragments. gray and orangeish gray.	SM	81.0			3+2+2 N =4 REC =18" 5 2+2+3 N =5 REC =18" 3+2+3 N =5 REC =17" 10 3+3+3 N =6 REC =11" 15 3+3+3 N =6 REC =17"		
17.0	FAT CLAY, moist, gray and greenish gray, trace sand. wet.	CH	68.0			20 2+3+3 N =6 REC =18" 25 2+3+4 N =7 REC =18"		Color change in tub from orangeish brown to gray at 14.5 ft.
	<i>continued on next page</i>							

TEST BORING LOG 06120048 PLOG SPT 300 & 400.GPJ SCHNABEL.GDT 3/6/08

- Comments:**
- Boring backfilled with cement/bentonite grout through tremie pipe upon completion.
 - * = See Appendix I for additional lab testing data.



TEST BORING LOG

Project: Calvert Cliffs Nuclear Power Plant
Calvert County, Maryland

Boring Number: **B-325**
Contract Number: 06120048
Sheet: 2 of 4

DEPTH (FT)	STRATA DESCRIPTION	CLASS.	ELEV. (FT)	WL	SAMPLING		TESTS	REMARKS
					DEPTH	DATA		
27.0	SILTY SAND, fine to medium grained, wet, gray and black.	CH	58.0		30	3+4+10 N =14 REC =16"		
32.0		SM						
32.0	FAT CLAY, moist, gray, trace sand.	CH	53.0		35	4+7+10 N =17 REC =18"		
37.0	CLAYEY SAND, fine to medium grained, moist, greenish gray and gray.	SC	48.0		40	6+9+17 N =26 REC =18"		
42.0	SILTY SAND, fine to coarse grained, moist, gray, trace fine to medium shell fragments (5-10%), HCl reaction weak. wet, gray and white trace fine to coarse shell fragments (50-60%), HCl reaction strong.	SM	43.0		45	31+50 N =50 REC =12"		Harder drilling at 42 ft.
					50	31+50 N =50 REC =12"		
					55	17+26+18 N =44 REC =14"		
57.0	SANDY ELASTIC SILT, wet, gray and greenish gray, trace fine to medium <i>continued on next page</i>	MH	28.0					

TEST BORING LOG 06120048 PLOG SPT 300 & 400.GPJ SCHNABEL.GDT 3/6/08

Comments:

1. Boring backfilled with cement/bentonite grout through tremie pipe upon completion.
2. * = See Appendix I for additional lab testing data.



TEST BORING LOG

Project: Calvert Cliffs Nuclear Power Plant
Calvert County, Maryland

Boring Number: **B-325**
Contract Number: 06120048
Sheet: 3 of 4

DEPTH (FT)	STRATA DESCRIPTION	CLASS.	ELEV. (FT)	WL	SAMPLING		TESTS	REMARKS
					DEPTH	DATA		
	shell fragments (2-5%), HCl reaction weak.	MH			60	2+4+6 N=10 REC =16"		Rig chatter at 60.5 ft.
62.0	CLAYEY SAND, fine to medium grained, wet, light gray and greenish gray, trace fine to coarse shell fragments (20-30%), HCl reaction moderate.	SC	23.0		65	36+10+12 N=22 REC =18"		
67.0	SILTY SAND, fine to coarse grained, wet, gray and greenish gray, trace fine to coarse shell fragments (10-20%), HCl reaction moderate.	SM	18.0		70	7+7+7 N=14 REC =18"		
					75	7+10+9 N=19 REC =17"		
	fine to medium grained, trace fine to medium shell fragments (<5%), HCl reaction weak.				80	6+7+10 N=17 REC =17"		
	trace fine to medium shell fragments, 2-5%, HCl reaction weak.				85	4+7+10 N=17 REC =18"		
87.0	SANDY ELASTIC SILT, wet, gray and white, trace fine to coarse shell fragments (15-25%), HCl reaction moderate.	MH	-2.0		90	5+5+7 N=12 REC =18"		
	<i>continued on next page</i>							

TEST BORING LOG 06120048 PLOG SPT 300 & 400.GPJ SCHNABEL.GDT 3/6/08

Comments:

1. Boring backfilled with cement/bentonite grout through tremie pipe upon completion.
2. * = See Appendix I for additional lab testing data.



TEST BORING LOG

Project: Calvert Cliffs Nuclear Power Plant
Calvert County, Maryland

Boring Number: **B-325**
Contract Number: 06120048
Sheet: 4 of 4

DEPTH (FT)	STRATA DESCRIPTION	CLASS.	ELEV. (FT)	WL	SAMPLING		TESTS	REMARKS
					DEPTH	DATA		
92.0	SILTY SAND, fine to medium grained, wet, light gray and, trace fine to coarse shell fragments (30-40%), HCl reaction moderate. gray, trace fine to medium shell fragments (2-5%), HCl reaction weak.	MH	-7.0					
		SM						
						8+6+8 N =14 REC =18"		
						6+10+9 N =19 REC =16"		
100.0	BOTTOM OF BORING @ 100.0 FT.		-15.0					

TEST BORING LOG 06120048 PLOG SPT 300 & 400.GPJ SCHNABEL.GDT 3/6/08

Comments:

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2. * = See Appendix I for additional lab testing data.



TEST BORING LOG

Project: Calvert Cliffs Nuclear Power Plant
Calvert County, Maryland

Boring Number: B-326
Contract Number: 06120048
Sheet: 1 of 4

Boring Contractor: UNI-TECH DRILLING MALAGA, NEW JERSEY Boring Foreman: J. Blemings Drilling Method: Mud Rotary Drilling Equipment: CME-750 (ATV) Schnabel Representative: K. Megginson Dates Started: 5/4/06 Finished: 5/4/06 Location: Northing: 216859.22 ft Easting: 960652.25 ft Ground Surface Elevation: 103.1 (feet)	Groundwater Observations					
	Date	Time	Depth	Casing	Caved	
	Encountered	5/4	---	13.5'	---	---

DEPTH (FT)	STRATA DESCRIPTION	CLASS.	ELEV. (FT)	WL	SAMPLING		TESTS	REMARKS		
					DEPTH	DATA				
0.5	Forest litter, rootmat and topsoil.	SP-SM	102.6	102.6	2+2+2	N = 4 REC = 18"	w=8.2% *			
	POORLY GRADED SAND WITH SILT, fine to medium grained, moist, light brown, contains root fragments.				3+2+4	N = 6 REC = 13"				
	fine to coarse grained.				5	4+4+3			N = 7 REC = 11"	
	fine to medium grained, stratified light brown and light orangeish brown.					7+6+11			N = 17 REC = 11"	
	fine to coarse grained, yellowish brown and grayish brown, trace fine gravel.					10			10+9+10	N = 19 REC = 12"
	fine to medium grained, light orangeish brown below 8.5 ft.									
	fine to coarse grained.									
	fine to medium grained, wet, light yellowish brown.			▽	5+5+6	N = 11 REC = 11"	w=12.2% *			
	orangeish brown and dark brown.				10+12+8	N = 20 REC = 10"				
23.5	SILTY SAND, fine to coarse grained, wet, light orangeish brown and light grayish brown. <i>continued on next page</i>	SM	79.6		25	5+2+2	N = 4 REC = 16"	w=22.7% *		

TEST BORING LOG 06120048 PLOG SPT 300 & 400.GPJ SCHNABEL.GDT 3/6/08

Comments:

1. Boring backfilled with cement/bentonite grout through tremie pipe upon completion.
2. * = See Appendix I for additional lab testing data.



TEST BORING LOG

Project: Calvert Cliffs Nuclear Power Plant
Calvert County, Maryland

Boring Number: **B-326**
Contract Number: 06120048
Sheet: 2 of 4

DEPTH (FT)	STRATA DESCRIPTION	CLASS.	ELEV. (FT)	WL	SAMPLING		TESTS	REMARKS
					DEPTH	DATA		
28.5	SANDY LEAN CLAY, fine to medium, wet, gray, contains silt pockets and mica.	CL	74.6		30	2+1+2 N=3 REC=18"		
	moist, with sand.				35	REC=24"	w=27.6% LL=41 PL=16 PP=2.00 tsf *	*Shelby tube sampler push from 33.5 to 35.5 ft.
38.5	FAT CLAY, moist, gray, trace fine to medium sand and mica.	CH	64.6		40	2+4+5 N=9 REC=18"		
43.5	ORGANIC CLAY, moist, gray, trace fine to medium sand and mica, contains fine to medium clayey sand pockets.	OH	59.6		45	REC=24"	w=33.9% LL=63 PL=22 PP=2.25 tsf *	*Shelby tube sampler push from 43.5 to 45.5 ft.
48.5	FAT CLAY, moist, gray and light gray, trace fine to medium, mica and organic matter (±1%).	CH	54.6		50	4+6+8 N=14 REC=18"		
53.5	SANDY LEAN CLAY, fine to medium, wet, gray, trace mica.	CL	49.6		55	REC=24"	PP=2.25 tsf	*Shelby tube sampler push from 53.5 to 55.5 ft.
continued on next page								

TEST BORING LOG 06120048 PLOG SPT 300 & 400.GPJ SCHNABEL.GDT 3/6/08

Comments:

- Boring backfilled with cement/bentonite grout through tremie pipe upon completion.
- * = See Appendix I for additional lab testing data.



TEST BORING LOG

Project: Calvert Cliffs Nuclear Power Plant
Calvert County, Maryland

Boring Number: **B-326**
Contract Number: 06120048
Sheet: 3 of 4

DEPTH (FT)	STRATA DESCRIPTION	CLASS.	ELEV. (FT)	WL	SAMPLING		TESTS	REMARKS
					DEPTH	DATA		
59.5	SILTY SAND, fine to medium grained, moist, gray, trace mica, contains cemented sand pockets.	CL	43.6		60	17+8+28 N =36 REC =16"	PP=2.00 tsf	
		SM						
63.5	POORLY GRADED SAND WITH SILT, fine to medium grained, moist, gray	SP-SM	39.6		65	50/3" N =50/3" REC =1"		
68.5	SILTY SAND, fine to medium grained, wet, gray, trace fine to medium shell fragments ($\pm < 5\%$), strong HCl reaction little fine to coarse shell fragments ($\pm 25\%$), contains clayey sand pockets. moist, light gray, mostly moderately cemented sand, weak HCl reaction. wet, oliveish gray and gray, trace fine to coarse shell fragments ($\pm 5\%$), strong HCl reaction.	SM	34.6		70	50/5" N =50/5" REC =1"		
					75	19+24+23 N =47 REC =12"		
					80	50/3" N =50/3" REC =4"		*Rotary advancement considerably slower below 78.5 ft (Moderately difficult rotary advancement). *Rotary advancement comparatively easier from 81 to 83 ft; moderately difficult rotary advancement below 83 ft.
					85	23+13+50/4" N =63/10" REC =14"		
88.5	CLAYEY SAND, fine to medium grained, wet, gray, trace fine to coarse shell fragments ($\pm 5\%$), strong HCl reaction. <i>continued on next page</i>	SC	14.6		90	9+7+12 N =19 REC =18"		*Switched to 3-7/8" O.D. Tri-cone roller bit below 88 ft.

TEST BORING LOG 06120048 PLOG SPT 300 & 400.GPJ SCHNABEL.GDT 3/6/08

Comments:

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2. * = See Appendix I for additional lab testing data.



TEST BORING LOG

Project: Calvert Cliffs Nuclear Power Plant
Calvert County, Maryland

Boring Number: **B-326**
Contract Number: 06120048
Sheet: 4 of 4

DEPTH (FT)	STRATA DESCRIPTION	CLASS.	ELEV. (FT)	WL	SAMPLING		TESTS	REMARKS
					DEPTH	DATA		
93.5	SILTY SAND, fine to medium grained, wet, gray, trace fine to medium shell fragments (±5%), strong HCl reaction.	SC	9.6		95	7+7+12 N =19 REC =18"		
		SM						
100.0	SILTY SAND, fine to medium grained, wet, gray, trace fine shell fragments (±1%), weak HCl reaction.		3.1		100	6+8+12 N =20 REC =16"		
	BOTTOM OF BORING @ 100.0 FT.							

TEST BORING LOG 06120048 PLOG SPT 300 & 400.GPJ SCHNABEL.GDT 3/6/08

Comments:

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TEST BORING LOG

Project: Calvert Cliffs Nuclear Power Plant
Calvert County, Maryland

Boring Number: **B-327**
Contract Number: 06120048
Sheet: 1 of 5

Boring Contractor: CONNELLY AND ASSOCIATES, INC.
FREDERICK, MARYLAND
Boring Foreman: D. Bender
Drilling Method: Mud Rotary
Drilling Equipment: CME-550
Schnabel Representative: K. Bell
Dates Started: 5/25/06 **Finished:** 5/26/06
Location: Northing: 216865.7 ft
Easting: 960573.37 ft
Ground Surface Elevation: 86.9 (feet)

Groundwater Observations					
	Date	Time	Depth	Casing	Caved
Encountered	5/25	---	28.0'	---	---
Start of day	5/26	---	38.0'	---	---

DEPTH (FT)	STRATA DESCRIPTION	CLASS.	ELEV. (FT)	WL	SAMPLING		TESTS	REMARKS
					DEPTH	DATA		
0.5	ROOTMAT AND TOPSOIL.		86.4					
2.0	SILTY SAND, fine to coarse grained, moist, brown and yellowish brown, trace root fragments.	SM	84.9			2+3+3 N=6 REC =11"		
4.5	POORLY GRADED SAND WITH SILT, fine to coarse grained, moist, yellowish brown and orangeish brown, trace root fragments.	SP-SM	82.4			2+3+3 N=6 REC =3"		
7.0	CLAYEY SAND, fine to coarse grained, moist, orangeish brown and reddish brown, trace root fragments.	SC	79.9		5	3+5+6 N=11 REC =12"		
13.0	SILTY SAND, fine to medium grained, moist, orangeish brown and gray.	SM	73.9			5+4+3 N=7 REC =18"		
17.0	CLAYEY SAND, fine to medium grained, moist, gray.	SC	69.9			3+2+1 N=3 REC =18"		
22.0	SANDY LEAN CLAY, moist, gray.	CL	64.9			3+4+3 N=7 REC =17"		
	SILTY SAND, fine to medium grained, moist, gray and light gray.	SM				2+3+3 N=6 REC =18"		
	<i>continued on next page</i>					3+3+4 N=7 REC =18"		

TEST BORING LOG 06120048 PLOG SPT 300 & 400.GPJ SCHNABEL.GDT 3/6/08

Comments:

1. Boring backfilled with cement/bentonite grout through tremie pipe upon completion.
2. * = See Appendix I for additional lab testing data.



TEST BORING LOG

Project: Calvert Cliffs Nuclear Power Plant
Calvert County, Maryland

Boring Number: **B-327**
Contract Number: 06120048
Sheet: 2 of 5

DEPTH (FT)	STRATA DESCRIPTION	CLASS.	ELEV. (FT)	WL	SAMPLING		TESTS	REMARKS
					DEPTH	DATA		
		SM						
				▽				
33.0	FAT CLAY, moist, light gray, trace sand.	CH	53.9		30	4+5+5 N =10 REC =18"		
37.0	SANDY SILT, moist, greenish gray and gray.	ML	49.9		35	5+6+4 N =10 REC =18"		
43.0	SILTY SAND, fine to medium grained, moist, gray and white, trace fine to medium shell fragments, 15-25%, HCl reaction weak. trace fine to medium shell fragments, >5%, HCl reaction weak, platy structure.	SM	43.9		40	4+4+5 N =9 REC =16"		Harder drilling
					45	27+50 N =50 REC =12"		Rig chatter
					50	13+50 N =50 REC =11"		
					55	50/5" N =50/5" REC =5"		
57.0	SANDY LEAN CLAY, moist, gray and greenish gray, trace fine to medium <i>continued on next page</i>	CL	29.9					

TEST BORING LOG 06120048 PLOG SPT 300 & 400.GPJ SCHNABEL.GDT 3/6/08

Comments:

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TEST BORING LOG

Project: Calvert Cliffs Nuclear Power Plant
Calvert County, Maryland

Boring Number: **B-327**
Contract Number: 06120048
Sheet: 3 of 5

DEPTH (FT)	STRATA DESCRIPTION	CLASS.	ELEV. (FT)	WL	SAMPLING		TESTS	REMARKS
					DEPTH	DATA		
62.0	shell fragments, 2-5%, HCl reaction weak.	CL	24.9		60	4+4+7 N =11 REC =18"		Rig chatter
	SILTY SAND, fine to medium grained, moist, greenish gray and gray, trace fine to medium shell fragments, 2-5, cementation, HCl reaction strong.	SM			65	50/4" N =50/4" REC =2"		
77.0	wet, trace fine to coarse shell fragments, 20-30%, HCl reaction moderate.	MH	9.9		70	5+5+7 N =12 REC =18"		Rig chatter
					75	7+8+8 N =16 REC =17"		
	ELASTIC SILT wet, greenish gray, trace fine to medium shell fragments, 2-5%, HCl reaction weak.				80	5+5+8 N =13 REC =16"		
87.0		SM	-0.1		85	4+4+8 N =12 REC =18"		
	SILTY SAND, fine to medium grained, wet, greenish gray, trace fine to coarse shell fragments, 20-30%, HCl reaction moderate.				90	4+8+12 N =20 REC =17"		

TEST BORING LOG 06120048 PLOG SPT 300 & 400.GPJ SCHNABEL.GDT 3/6/08

continued on next page

Comments:

1. Boring backfilled with cement/bentonite grout through tremie pipe upon completion.
2. * = See Appendix I for additional lab testing data.



TEST BORING LOG

Project: Calvert Cliffs Nuclear Power Plant
Calvert County, Maryland

Boring Number: **B-327**
Contract Number: 06120048
Sheet: 4 of 5

DEPTH (FT)	STRATA DESCRIPTION	CLASS.	ELEV. (FT)	WL	SAMPLING		TESTS	REMARKS
					DEPTH	DATA		
	fine to coarse grained, light gray and white, with fine to coarse shell fragments, 50-60%, strong cementation, HCl reaction strong.	SM			95	20+17+13 N =30 REC =18"		Rig chatter
					100	6+15+18 N =33 REC =16"		Rig chatter
					105	6+12+19 N =31 REC =18"		
107.0					FAT CLAY, wet, greenish gray, trace fine to medium shell fragments, 2-5%, HCl reaction weak.	CH	-20.1	
					110	5+7+12 N =19 REC =18"		
					115	REC =9"	w=44.3% LL=60 PL=24 PP=>4.5 tsf *	
					120	5+7+11 N =18 REC =18"		
122.0	SILTY SAND, fine to coarse grained, wet, light gray and white, trace fine to coarse shell fragments, 30-40%, strong cementation, HCl reaction strong. <i>continued on next page</i>	SM	-35.1			50/3"		

TEST BORING LOG 06120048 PLOG SPT 300 & 400.GPJ SCHNABEL.GDT 3/6/08

Comments:

- Boring backfilled with cement/bentonite grout through tremie pipe upon completion.
- * = See Appendix I for additional lab testing data.



TEST BORING LOG

Project: Calvert Cliffs Nuclear Power Plant
Calvert County, Maryland

Boring Number: **B-327**
Contract Number: 06120048
Sheet: 5 of 5

DEPTH (FT)	STRATA DESCRIPTION	CLASS.	ELEV. (FT)	WL	SAMPLING		TESTS	REMARKS
					DEPTH	DATA		
		SM				N =50/3" REC =2"		
						5+7+11 N =18 REC =0"		
						5+6+11 N =17 REC =18"		
						REC =10"	PP=>4.5 tsf	
						3+5+7 N =12 REC =18"		
						5+7+10 N =17 REC =18"		
150.0	BOTTOM OF BORING @ 150.0 FT.		-63.1					

fine to medium grained, moist, greenish gray and gray, trace fine to medium shell fragments, 2-5%, HCl reaction weak.

trace fine to medium shell fragments, 5-10%, HCl reaction weak.

Resumed drilling on 5/26/06 @ 7:20am

TEST BORING LOG 06120048 PLOG SPT 300 & 400.GPJ SCHNABEL.GDT 3/6/08

Comments:

1. Boring backfilled with cement/bentonite grout through tremie pipe upon completion.
2. * = See Appendix I for additional lab testing data.



TEST BORING LOG

Project: Calvert Cliffs Nuclear Power Plant
Calvert County, Maryland

Boring Number: **B-328**
Contract Number: 06120048
Sheet: 1 of 5

Boring Contractor: CONNELLY AND ASSOCIATES, INC.
FREDERICK, MARYLAND
Boring Foreman: D. Bender
Drilling Method: Mud Rotary
Drilling Equipment: CME-550
Schnabel Representative: K. Bell
Dates Started: 6/19/06 **Finished:** 6/20/06
Location: Northing: 216828.86 ft
Easting: 960493.21 ft
Ground Surface Elevation: 76.3 (feet)

Groundwater Observations					
	Date	Time	Depth	Casing	Caved
Encountered	6/19	---	9.0'	---	---
Start of day	6/20	---	9.0'	---	---

DEPTH (FT)	STRATA DESCRIPTION	CLASS.	ELEV. (FT)	WL	SAMPLING		TESTS	REMARKS
					DEPTH	DATA		
0.2	ROOTMAT AND TOPSOIL. POORLY GRADED SAND WITH SILT, fine to medium grained, moist, yellowish brown, trace root fragments.	SP-SM	76.1			2+1+2 N=3 REC=16"		
4.5	SANDY LEAN CLAY, moist, orangeish brown and gray, trace root fragments.	CL	71.8			2+2+4 N=6 REC=15"	w=4.5% LL=NP PL=NP *	
7.0	SANDY FAT CLAY, trace sand, wet, gray.	CH	69.3			2+3+3 N=6 REC=18"		
						2+2+2 N=4 REC=18"	w=30% *	
						3+3+4 N=7 REC=18"	w=28.8% LL=59 PL=17 *	start of mud rotary drilling
13.0	FAT CLAY, trace sand, moist, gray.		63.3			2+3+4 N=7 REC=18"		color change in mud tub from orangeish brown to gray
18.5	ELASTIC SILT, gray	MH	57.8			5+4+6 N=10 REC=18"	w=35.1% LL=64 PL=36 *	
23.5	FAT CLAY, dark green	CH	52.8			4+6+9 N=15 REC=18"	w=33% LL=77 PL=28	
	<i>continued on next page</i>							

TEST BORING LOG 06120048 PLOG SPT 300 & 400.GPJ SCHNABEL.GDT 3/6/08

- Comments:**
- Boring backfilled with cement/bentonite grout through tremie pipe upon completion.
 - * = See Appendix I for additional lab testing data.
 - Ground water observation well OW-328 installed at nearby location.



TEST BORING LOG

Project: Calvert Cliffs Nuclear Power Plant
Calvert County, Maryland

Boring Number: **B-328**
Contract Number: 06120048
Sheet: 2 of 5

DEPTH (FT)	STRATA DESCRIPTION	CLASS.	ELEV. (FT)	WL	SAMPLING		TESTS	REMARKS
					DEPTH	DATA		
27.0	CLAYEY SAND, contains shells, moist, gray and black.	CH	49.3				*	Harder drilling
		SC			30	7+9+14 N =23 REC =18"	w=30.5% LL=40 PL=21 *	
32.0	POORLY GRADED SAND WITH SILT, fine to medium grained, wet, gray, contains fine to coarse shell fragments, 30-40%, HCl reaction strong. gray and white, with fine to coarse shell fragments, 50-60%.	SP-SM	44.3					
					35	33+34+50/4" N =84/10" REC =16"	w=18.2% *	
					40	50/4" N =50/4" REC =4"	w=22.6% *	
47.0	CLAYEY SILT, moist, greenish gray, strong cementation, HCl reaction strong.	ML	29.3					harder drilling/ heavy rig chatter
					50	10+15+50/1" N =65/7" REC =12"	w=25.8% *	
52.0	SILTY SAND, fine to medium grained, wet, greenish gray, contains fine to coarse shell fragments, 25-35% , HCl reaction strong.	SM	24.3					Rig chatter
					55	5+5+21 N =26 REC =18"	w=24% *	
	<i>continued on next page</i>							

TEST BORING LOG 06120048 PLOG SPT 300 & 400.GPJ SCHNABEL.GDT 3/6/08

Comments:

1. Boring backfilled with cement/bentonite grout through tremie pipe upon completion.
2. * = See Appendix I for additional lab testing data.
3. Ground water observation well OW-328 installed at nearby location.



TEST BORING LOG

Project: Calvert Cliffs Nuclear Power Plant
Calvert County, Maryland

Boring Number: **B-328**
Contract Number: 06120048
Sheet: 3 of 5

DEPTH (FT)	STRATA DESCRIPTION	CLASS.	ELEV. (FT)	WL	SAMPLING		TESTS	REMARKS
					DEPTH	DATA		
61.0	ORGANIC SILT, wet, greenish gray, contains fine to coarse shell fragments, 25-35%, HCl reaction, strong.	SM	15.3		60	5+5+8 N =13 REC =18"		
		OH			65	REC =24"	w=44.2% LL=72 PL=41 *	
67.0	SILTY SAND, fine to medium grained, wet, greenish gray, trace fine to medium shell fragments, 2-5%, HCl reaction weak.	SM	9.3		70	4+6+9 N =15 REC =18"	w=29.4% LL=NP PL=NP *	
					75	4+4+7 N =11 REC =18"	w=32.2% LL=NP PL=NP *	
	greenish gray and white, with fine to coarse shell fragments, 50-60%, strong cementation, HCl reaction strong.				80	8+18+28 N =46 REC =18"		Rig chatter
85.0	SANDY ELASTIC SILT, green	MH	-8.7		85	8+16+50/5" N =66/11" REC =16"	w=21.2% LL=NP PL=NP *	Rig chatter
					90	9+10+16 N =26 REC =18"	w=34% LL=47 PL=31 *	
	<i>continued on next page</i>							

TEST BORING LOG 06120048 PLOG SPT 300 & 400.GPJ SCHNABEL.GDT 3/6/08

Comments:

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TEST BORING LOG

Project: Calvert Cliffs Nuclear Power Plant
Calvert County, Maryland

Boring Number: **B-328**
Contract Number: 06120048
Sheet: 4 of 5

DEPTH (FT)	STRATA DESCRIPTION	CLASS.	ELEV. (FT)	WL	SAMPLING		TESTS	REMARKS
					DEPTH	DATA		
		MH						
						REC =13"		
					95			
						5+6+12 N =18 REC =18"	w=38.2% LL=53 PL=34 *	softer drilling
102.0	SILTY SAND, wet, greenish gray, trace fine to medium shell fragments, 2-5%, HCl reaction weak.	SM	-25.7					
						6+9+12 N =21 REC =18"	w=62.7% *	
					105			
						5+8+13 N =21 REC =18"		Resumed drilling on 6/20/06 @ 7:30am
112.0	SANDY ELASTIC SILT, fine to medium grained, wet, greenish gray, contains fine to coarse shell fragments, 20-30%, HCl reaction strong.	MH	-35.7					
						6+7+14 N =21 REC =18"	w=30.5% *	
					115			
117.0	ELASTIC SILT, moist, greenish gray, trace fine to medium shell fragments, 5-10%, HCl reaction weak.	MH	-40.7					
						5+6+8 N =14 REC =18"	w=44.7% *	softer drilling
					120			
						REC =11"	w=45.6%	
	<i>continued on next page</i>							

TEST BORING LOG 06120048 PLOG SPT 300 & 400.GPJ SCHNABEL.GDT 3/6/08

Comments:

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TEST BORING LOG

Project: Calvert Cliffs Nuclear Power Plant
Calvert County, Maryland

Boring Number: **B-328**
Contract Number: 06120048
Sheet: 5 of 5

DEPTH (FT)	STRATA DESCRIPTION	CLASS.	ELEV. (FT)	WL	SAMPLING		TESTS	REMARKS
					DEPTH	DATA		
	oliveish gray	MH			125		LL=72 PL=45 PP=>4.5 tsf *	
					130	5+7+10 N =17 REC =18"		
					135	6+6+9 N =15 REC =18"	w=48.2% LL=70 PL=51 *	
					140	6+7+9 N =16 REC =18"		
					145	5+7+8 N =15 REC =18"	w=59.3% *	
					150	6+8+11 N =19 REC =18"	w=74.8% LL=134 PL=100 *	
150.0	BOTTOM OF BORING @ 150.0 FT.		-73.7					

TEST BORING LOG 06120048 PLOG SPT 300 & 400.GPJ SCHNABEL.GDT 3/6/08

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TEST BORING LOG

Project: Calvert Cliffs Nuclear Power Plant
Calvert County, Maryland

Boring Number: **B-329**
Contract Number: 06120048
Sheet: 1 of 4

Boring Contractor: CONNELLY AND ASSOCIATES, INC.
FREDERICK, MARYLAND
Boring Foreman: D. Bender
Drilling Method: Mud Rotary
Drilling Equipment: CME-550
Schnabel Representative: K. Bell
Dates Started: 6/13/06 **Finished:** 6/15/06
Location: Northing: 216800.38 ft
Easting: 960379.43 ft
Ground Surface Elevation: 74.8 (feet)

Groundwater Observations

	Date	Time	Depth	Casing	Caved
Encountered	6/13	---	33.5'	---	---
Start of day	6/14	---	28.0'	---	---
Start of Day	6/15	---	30.0'	---	---

DEPTH (FT)	STRATA DESCRIPTION	CLASS.	ELEV. (FT)	WL	SAMPLING		TESTS	REMARKS
					DEPTH	DATA		
0.5	ROOTMAT AND TOPSOIL.		74.3					
	POORLY GRADED SAND WITH SILT, fine to coarse grained, moist, yellowish brown, trace root fragments.	SP-SM				2+2+2 N=4 REC=5"		
2.5	CLAYEY SAND, fine to medium grained, moist, orangeish brown.	SC	72.3			3+4+4 N=8 REC=10"		
4.5	SILTY SAND, fine to medium grained, moist, orangeish brown.	SM	70.3		5	3+4+4 N=8 REC=18"		
7.0	SANDY FAT CLAY, moist, gray.	CH	67.8			3+3+3 N=6 REC=18"		
					10	1+4+6 N=10 REC=18"		
					15	2+3+3 N=6 REC=18"		Softer drilling
17.0	ELASTIC SILT with sand, moist, gray.	MH	57.8			3+4+5 N=9 REC=18"		
22.0	SANDY SILT, moist, gray.	ML	52.8			4+6+8 N=14 REC=18"		
	<i>continued on next page</i>				25			

TEST BORING LOG 06120048 PLOG SPT 300 & 400.GPJ SCHNABEL.GDT 3/6/08

Comments:

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TEST BORING LOG

Project: Calvert Cliffs Nuclear Power Plant
Calvert County, Maryland

Boring Number: **B-329**
Contract Number: 06120048
Sheet: 2 of 4

DEPTH (FT)	STRATA DESCRIPTION	CLASS.	ELEV. (FT)	WL	SAMPLING		TESTS	REMARKS
					DEPTH	DATA		
		ML						
32.0	SILTY SAND, fine to medium grained, wet, light gray.	SM	42.8	▽	30	5+8+13 N =21 REC =18"		
	gray and white, contains fine to medium shell fragments, 10-20%, HCl reaction moderate				35	13+27+33 N =60 REC =18"		
42.0	CLAYEY SILT, moist, gray, trace fine to medium shell fragments, 2-5%, HCl reaction weak.	ML	32.8		40	18+21+31 N =52 REC =13"		
					45	3+4+6 N =10 REC =18"		
47.0	SILTY SAND, fine to coarse grained, wet, gray, with fine to coarse shell fragments, 40-50%, strong cementation, HCl reaction strong.	SM	27.8		50	50/4" N =50/4" REC =2"		Rig chatter
52.0	CLAYEY SAND, fine to medium grained, wet, light gray, with fine to coarse shell fragments, 40-50%, strong cementation, HCl reaction strong.	SC	22.8		55	11+30+33 N =63 REC =17"		
57.0	SILTY SAND, fine to medium grained, wet, greenish gray, contains fine to <i>continued on next page</i>	SM	17.8					

TEST BORING LOG 06120048 PLOG SPT 300 & 400.GPJ SCHNABEL.GDT 3/6/08

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TEST BORING LOG

Project: Calvert Cliffs Nuclear Power Plant
Calvert County, Maryland

Boring Number: **B-329**
Contract Number: 06120048
Sheet: 3 of 4

TEST BORING LOG 06120048 PLOG SPT 300 & 400.GPJ SCHNABEL.GDT 3/6/08

DEPTH (FT)	STRATA DESCRIPTION	CLASS.	ELEV. (FT)	WL	SAMPLING		TESTS	REMARKS
					DEPTH	DATA		
	coarse shell fragments, 20-30%, HCl reaction moderate.	SM				 4+5+6 N =11 REC =18"		
						 REC =22"		
						 5+5+10 N =15 REC =18"		
						 REC =24"		
	with fine to coarse shell fragments, 60-70%, strong cementation, HCl reaction strong					 50/3" N =50/3" REC =2"		
	contains fine to coarse shell fragments, 30-40%					 14+50 N =50 REC =10"		Rig chatter
87.0	CLAYEY SAND, fine to medium grained, wet, greenish gray, trace fine to medium shell fragments, 5-10%, HCl reaction moderate.	SC	-12.2			 10+12+24 N =36 REC =18"		Resumed drilling on 6/15/06 @ 7:00am
	<i>continued on next page</i>							

Comments:

1. Boring backfilled with cement/bentonite grout through tremie pipe upon completion.
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