



TEST BORING LOG

Project: Dominion Ash Pond Slope Evaluation
Bremo Power Station
Fluvanna County, Virginia

Boring Number: B-3A1
Contract Number: 09130163.00.03
Sheet: 1 of 2

Contractor: Fishburne Drilling, Inc.
Ashland, Virginia
Contractor Foreman: K. Dodson
Schnabel Representative: K. Megginson
Equipment: CME-55 (Track)
Method: 3-3/4" I.D. Hollow Stem Auger

Hammer Type: Auto Hammer (140 lb)
Dates Started: 9/28/09 **Finished:** 9/28/09
North: 37.711935 ft **East:** 78.293705 ft

Ground Surface Elevation: 112± (ft) **Total Depth:** 27.0 ft

Groundwater Observations

	Date	Time	Depth	Casing	Caved
Encountered	9/28	10:56 AM	---	---	---
Completion	9/28	10:56 AM	---	---	---
Casing Pulled	9/28	11:16 AM	---	---	---

DEPTH (ft)	MATERIAL DESCRIPTION	SYMBOL	ELEV (ft)	STRA TUM	SAMPLING		TESTS	REMARKS
					DEPTH	DATA		
	Auger probe to 6 ft; see B-3A for material description				5			
6.0	FILL, sampled as lean clay; moist, brown and dark brown, estimated <5% sand, contains mica	FILL	106.0	A		UD-1, UNDIST REC=20", 83%	PP = 3.00 tsf	6.0 - 8.0 ft: FILL
8.0	Auger probe to 23 ft; see B-3A for material description		104.0					
					10			
					15			
					20			
23.0	No sample recovered		89.0	B1		UD-2, UNDIST REC=0", 0%		

(continued)

TEST BORING LOG 09130163.00.03 BREMO LOGS.GPJ SCHNABEL DATA TEMPLATE 2008.07.06 GDT 2/5/10



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Boring Number: **B-3A1**
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DEPTH (ft)	MATERIAL DESCRIPTION	SYMBOL	ELEV (ft)	STRATUM	SAMPLING		TESTS	REMARKS
					DEPTH	DATA		
25.0	SANDY SILTY CLAY; moist, dark yellowish brown with mottles of gray, estimated 5 - 10% sand, contains mica	CL-ML	87.0	B1		UD-3, UNDIST REC=27", 113%	PP = 3.50 tsf	25.0 - 27.0 ft: ALLUVIUM
27.0			85.0					

Bottom of Boring at 27.0 ft.
Offset about 5 ft east of B-3A.
No noticeable change in ground surface elevation.
Boring backfilled with cement-bentonite grout on 9/28/09.



TEST BORING LOG

Project: Dominion Ash Pond Slope Evaluation
Bremo Power Station
Fluvanna County, Virginia

Boring Number: B-3B
Contract Number: 09130163.00.03
Sheet: 1 of 1

Contractor: Fishburne Drilling, Inc.
Ashland, Virginia
Contractor Foreman: K. Dodson
Schnabel Representative: K. Megginson
Equipment: CME-55 (Track)
Method: 2-1/4" I.D. Hollow Stem Auger

Hammer Type: Auto Hammer (140 lb)
Dates Started: 9/25/09 **Finished:** 9/25/09
North: 37.712128 ft **East:** 78.293739 ft

Ground Surface Elevation: 97± (ft) **Total Depth:** 24.2 ft

Groundwater Observations

	Date	Time	Depth	Casing	Caved
Encountered	9/25	12:15 PM	6.0'	---	---
Encountered	9/25	12:42 PM	23.0'	---	---
Completion	9/25	12:43 PM	20.0'	---	---
Casing Pulled	9/25	12:50 PM	18.5'	---	20.0'
After Drilling	9/28	8:39 AM	2.9'	---	15.8'

DEPTH (ft)	MATERIAL DESCRIPTION	SYMBOL	ELEV (ft)	STRA TUM	SAMPLING		TESTS	REMARKS
					DEPTH	DATA		
0.2	Rootmat and topsoil		96.8	A		S-1, SPT 3+4+4+4 REC=24", 100%	PP >4.50 tsf	0.0 - 2.0 ft: FILL
2.0	FILL, sampled as lean clay; moist, reddish brown, estimated <5% sand, contains roots	FILL	95.0			S-2, SPT 2+1+2+3 REC=18", 75%	LL = 48 PL = 27 MC = 38.3% % Passing #200 = 90.8 PP = 0.50 tsf PP = 1.75 tsf	2.0 - 23.0 ft: ALLUVIUM
	LEAN CLAY; moist, brown and dark grayish brown, estimated <5% sand, contains organics Change: brown and light brown	CL		5		S-3, SPT 2+2+2+2 REC=24", 100%		
6.0	FAT CLAY; wet, brown and light brown, estimated <5% sand, contains rock fragments	CH	91.0			S-4, SPT 3+5+7+8 REC=0.7", 3%	PP <0.25 tsf	
8.0	ELASTIC SILT WITH SAND; moist, brown and light gray, contains mica, rock fragments	MH	89.0		10	S-5, SPT 2+4+6+8 REC=24", 100%	PP = 2.75 tsf	
12.0	SANDY ELASTIC SILT; moist, brown, contains mica	MH	85.0	B1	15	S-6, SPT 3+3+4+5 REC=24", 100%	PP = 0.75 tsf	
17.0	ELASTIC SILT; moist, brown and gray, estimated 5 - 10% sand, contains mica	MH	80.0		20	S-7, SPT 2+2+4+3 REC=24", 100%	PP = 0.75 tsf	
21.0	SILTY GRAVEL; wet, brown and gray	GM	76.0	B2				21.0 - 23.0 ft: Auger chatter
23.0	DISINTEGRATED ROCK, sampled as sandy silt; wet, brownish gray and orangish brown, estimated 30 - 45% mica	DR	74.0	C		S-8, SPT 15+53+47/3" REC=16", 107%		23.0 - 24.2 ft: RESIDUAL SCHIST
24.2			72.8					

Bottom of Boring at 24.2 ft.
Boring backfilled with cement-bentonite grout on 9/28/09.



TEST BORING LOG

Project: Dominion Ash Pond Slope Evaluation
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Boring Number: B-4A
Contract Number: 09130163.00.03
Sheet: 1 of 2

Contractor: Fishburne Drilling, Inc.
Ashland, Virginia
Contractor Foreman: K. Dodson
Schnabel Representative: K. Megginson
Equipment: CME-55 (Track)
Method: 3-3/4" I.D. Hollow Stem Auger

Hammer Type: Auto Hammer (140 lb)
Dates Started: 9/23/09 **Finished:** 9/23/09
North: 37.711191 ft **East:** 78.295486 ft

Ground Surface Elevation: 112± (ft) **Total Depth:** 40.5 ft

Groundwater Observations

	Date	Time	Depth	Casing	Caved
Encountered	9/23	2:26 PM	33.0'	---	---
Completion	9/23	2:34 PM	39.5'	---	---
Casing Pulled	9/23	3:00 PM	38.0'	---	---
After Drilling	9/23	3:15 PM	30.3'	---	36.7'
After Drilling	9/24	8:15 AM	21.0'	---	28.1'
After Drilling	9/24	3:39 PM	20.4'	---	27.5'
After Drilling	9/25	10:21 AM	21.0'	---	29.0'

DEPTH (ft)	MATERIAL DESCRIPTION	SYMBOL	ELEV (ft)	STRA TUM	SAMPLING		TESTS	REMARKS
					DEPTH	DATA		
0.5	Crushed stone	FILL	111.5	A		S-1, SPT 10+8+9+8 REC=24", 100%	PP >4.50 tsf	0.0 - 22.0 ft: FILL
	FILL, sampled as fat clay; moist, brown and light brown, estimated <5% sand, contains roots, mica					S-2, SPT 4+7+9+9 REC=16", 67%	MC = 18.3% PP >4.50 tsf	
4.0	FILL, sampled as lean clay; moist, brown and grayish brown, estimated <5% sand, contains mica, and rock fragments		108.0		5	UD-1, UNDIST REC=8", 33%	PP >4.50 tsf	
						S-3, SPT 3+3+6+6 REC=24", 100%	LL = 43 PL = 23 MC = 21.1% % Passing #200 = 91.3 PP = 3.75 tsf	
		FILL		A	10	S-4, SPT 2+4+5+5 REC=16", 67%		
12.0	FILL, sampled as fat clay; moist, brown and light brown, estimated <5% sand, contains mica		100.0			S-5, SPT 3+4+6+7 REC=24", 100%	PP = 3.50 tsf	
					15			
	Change: brown and dark grayish brown				20	S-6, SPT 2+4+6+8 REC=20", 83%	PP = 2.50 tsf	
22.0	CLAYEY SAND, fine grained sand; moist, brown, contains mica	SC	90.0	B2		S-7, SPT 3+4+4+5 REC=24", 100%	PP = 1.25 tsf	22.0 - 37.0 ft: ALLUVIUM

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TEST BORING LOG 09130163.00.03 BREMO LOGS.GPJ SCHNABEL DATA TEMPLATE 2008_07_06.GDT 2/5/10



Boring Number:	B-4A
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TEST BORING LOG 09130163.00.03 BREMO LOGS.GPJ SCHNABEL DATA TEMPLATE 2008_07_06.GDT 2/5/10



TEST BORING LOG

Project: Dominion Ash Pond Slope Evaluation
Bremo Power Station
Fluvanna County, Virginia

Boring Number: B-4B
Contract Number: 09130163.00.03
Sheet: 1 of 1

Contractor: Fishburne Drilling, Inc.
Ashland, Virginia
Contractor Foreman: K. Dodson
Schnabel Representative: K. Megginson
Equipment: CME-55 (Track)
Method: 2-1/4" I.D. Hollow Stem Auger

Hammer Type: Auto Hammer (140 lb)
Dates Started: 9/28/09 **Finished:** 9/28/09
North: 37.711769 ft **East:** 78.295442 ft

Ground Surface Elevation: 92± (ft) **Total Depth:** 18.5 ft

Groundwater Observations

	Date	Time	Depth	Casing	Caved
Encountered ▽	9/28	1:12 PM	8.0'	---	---
Completion ▼	9/28	1:12 PM	17.5'	---	---
Casing Pulled ▼	9/28	1:18 PM	17.0'	---	18.4'

DEPTH (ft)	MATERIAL DESCRIPTION	SYMBOL	ELEV (ft)	STRA TUM	SAMPLING		TESTS	REMARKS
					DEPTH	DATA		
0.3	Rootmat and topsoil	FILL	91.7	A		S-1, SPT 1+2+1+2 REC=19", 79%	PP = 0.25 tsf	0.0 - 2.0 ft: FILL 0.5 ft: Observed pooled water at ground surface
2.0	FILL, sampled as elastic silt with sand; moist, reddish brown, contains roots		90.0			S-2, SPT 1+1+2+2 REC=24", 100%	PP = 0.25 tsf	2.0 - 17.8 ft: ALLUVIUM
3.0	ELASTIC SILT; moist, brown and grayish brown, estimated <5% sand	MH	89.0	5		S-3, SPT 1+1+3+3 REC=17", 71%	PP = 1.75 tsf	
4.0	LEAN CLAY; moist, dark gray and reddish brown, estimated <5% sand, contains mica	CL	88.0			S-4, SPT 1+2+2+2 REC=24", 100%	PP = 1.25 tsf	
6.0	FAT CLAY; moist, dark gray and brown, estimated <5% sand, contains mica, organics	CH	86.0			S-5, SPT 1+1+2+2 REC=16", 67%	LL = 47 PL = 27 MC = 34.1% % Passing #200 = 84.5 PP = 1.25 tsf PP = 0.25 tsf	
	LEAN CLAY WITH SAND; moist, brown and gray, contains mica	CL				S-6, SPT 2+2+3+2 REC=24", 100%	PP = 0.25 tsf	
	Change: wet, gray and brown			B1	10			
	Change: moist, gray with mottles of brown							
17.8								
18.5	DISINTEGRATED ROCK, sampled as poorly graded gravel; moist, black, estimated <5% silt, estimated 50 - 100% rock fragments	DR	74.2	C		S-7, SPT 100/3"		17.8 - 18.5 ft: RESIDUAL SCHIST
			73.5			S-8, SPT 100/0"		17.8 - 18.0 ft: Auger chatter

Bottom of Boring at 18.5 ft.
Auger refusal at 18.5 ft.
Boring backfilled with cement-bentonite grout upon completion.

18.5 ft: Sampler
refusal at 18.5 ft