

Field Permeability Test Results

200 Series continued from sheet _____ of _____

DN 609, ELEV. 794.5, 6+30, 78' U.S.
 Logged by: H. R. Marien 1/13-14/66
 Drilling Equipment: Sprague & Henwood 40 CL

DN 212, ELEV. 863.0, 3+25, 225' U.S.
 Logged by: H. R. Marien 1/10/66
 Drilling Equipment: Sprague & Henwood CL

Hole Depth From To	Description of Materials	Type Bit Used	From Ft.	To Ft.	% Rec.
0.0 6.0	Earth boring	NX1	6.0	7.5	100
6.0 7.0	Siltstone, highly weathered, olive, iron stains, core is gravel size, poor recovery.	"	7.5	10.0	100
7.0 13.6	Siltstone, weathered, fractured, brn-olive-gry, highly fractured, iron, stains, 25% core is fine gravel size, dip equals 60°, soft, pieces from 0.05' to 0.2' long.	"	10.0	12.5	76
13.6 20.0	Sandstone, med. grained, slightly weathered olive, orange staining, slightly weathered in general, highly weathered from 18.0 to 20.0' pieces from 0.5' to 0.05' long, moderately soft.	"	12.5	17.5	91
20.0 30.0	Sandstone, med. to fine grained, gry, hard to very hard, slightly weathered, fractured, iron stains, pieces from small brn pits produce speckled effect to 22.0', soft silty sandstone, gry, 29.5 to 30.0 lense?	"	17.5	19.3	100
		"	21.0	21.6	100
		"	21.8	26.6	100

Hole No.	Type of Test	Depth of Test (ft.)	Coefficient of Permeability (ft. per day)
1	Permeability	4.5-6.0	4.2
	"	6.0-7.5	0.4
	"	8.3-9.0	14.0
	Pressure	9.0-14.0	0.87
	"	13.0-18.0	1.16
2	Permeability	6.0-10.5	200+?
	"	10.5-12.0	157.1
	Pressure	16.5-21.5	23.5
	"	21.5-26.5	17.8
	"	23.0-28.5	0.14
3	Permeability	3.0-8.0	15.4
	"	8.0-12.2	27.0
	Pressure	12.2-17.2	10.6
	"	17.2-22.2	0.43
	"	20.0-25.0	1.29
4 50° angle*	Pressure	25.0-39.0	0.022
	"	10.0-15.0	0.96
	"	15.0-20.0	2.65
	"	19.0-24.0	3.45
	"	23.0-28.0	0.079
5	Permeability	5.0-10.0	20.9
	Pressure	10.0-15.0	16.9
	"	15.0-20.0	48.8
	"	20.0-25.0	127.0
	"	25.0-30.0	17.8
6 214	Pressure	30.0-34.0	5.02
	Permeability	13.0-15.0	3.86
	Permeability	4.0-6.0	0.85
	Permeability	3.5-11.0	9.8
	Pressure	11.0-16.0	1.22
306	"	16.0-21.0	0.392
	"	21.0-26.0	0.464
	"	26.0-30.0	0.4
	Permeability	3.5-7.5	2.93
	"	7.5-13.9	2.95
308 60° angle	Pressure	15.0-20.0	0.18
	"	20.0-25.0	0.61
	"	25.0-30.0	0.45
	"	30.0-35.0	0.43
	"	35.0-40.0	3.21
309	Permeability	40.0-46.0	0.25
	Pressure	6.0-12.5	1.74
	"	12.5-17.5	8.0
	"	17.5-23.0	0.98
	"	3.0-5.0	0.23
603	Permeability	5.0-7.0	Essentially zero
	Pressure	12.0-17.0	1.79
	"	12.0-25.0	1.54
	"	21.5-26.5	0.72
	"	26.5-32.0	0.42
604	Permeability	2.8-11.6	4.7
	Pressure	11.6-16.6	7.8
	"	14.6-19.6	3.14
	"	19.6-23.0	3.4
	Pressure	10.0-15.0	2.31
605 60° angle	"	15.0-20.0	0.24
	"	20.0-25.0	1.1
	"	25.0-30.0	1.68
	"	30.0-35.0	0.481
	"	35.0-40.0	0.209
606	Permeability	40.0-49.0	0.40
	Pressure	4.5-8.5	0.53
	"	8.5-13.5	0.49
	"	13.5-18.5	0.75
	"	18.5-23.5	0.53
607	Permeability	23.5-28.5	0.23
	"	28.5-33.5	0.01
	"	33.5-38.5	1.03
	"	38.5-45.0	0.65
	Pressure	11.0-13.0	39.5
608	Pressure	13.0-18.0	2.3
	"	18.0-25.0	0.86
	Pressure	25.0-30.0	24.9
	"	30.0-35.0	10.6
	Permeability	6.0-10.0	400+ approx.
609	"	8.0-10.0	364.0
	"	10.0-12.5	168.0
	Pressure	10.5-15.5	66.0
	"	15.5-20.5	180.0
	"	20.5-25.5	40.0
610	Permeability	25.5-30.0	0.051
	Permeability	10.0-15.0	281+ approx.
	Pressure	15.0-20.0	11.2
	"	20.0-25.0	0.605
	"	25.0-30.0	0.48

Hole Depth From To	Description of Materials	Unif. Soil Class	STANDARD PENETRATION Blows Per 6"	Type	SAMPLES From To Ft. % Rec.
0.0 10.5	Bulldozer had scraped away 0.4' of topsoil & 2.0' of GM, 60% gravel, 25% sand, and 15% fines.	SM	100	SPT	1 Jar 0.0 0.5 100
	Gravel, sandy, brn, moist to slightly moist, 15% low plastic fines, 25% well graded sand, gravel is well graded, 5% cobbles & boulders, coarse particles olive siltstone.	GM	20-21-19-17	"	2 " 4.5 6.5 80
			13-11-11-12	"	3 " 7.5 8.5 80
			9-20-58-79	"	4 " 8.5 10.5 70
				"	5 " 0.5 2.5 40
				"	6 " 2.5 4.5 10
				"	7 " 10.5 12.5 100
				"	8 " 12.5 16.0 100
				"	9 " 16.0 20.2

DN 213, ELEV. 870.4, 3+70, 85' U.S.
 Logged by: H. R. Marien 1/11/66
 Drilling Equipment: Sprague & Henwood

Hole Depth From To	Description of Materials	Unif. Soil Class	STANDARD PENETRATION Blows Per 6"	Type	SAMPLES From To Ft. % Rec.
0.0 0.5	Topsoil, roots, etc.	SM	18-4-2-5	SPT	1 Jar 0.0 2.0 50
0.5 4.0	Sand, gravelly with silt, brn, dry to slightly moist, 15% low plastic fines, 25% well graded gravel, coarse particles are olive siltstone.	SM	16-17-19-17	"	2 " 2.0 4.0 80
			32-51-30-27	"	3 " 4.0 6.0 85
			30-17-20-13	"	4 " 6.0 8.0 80
			31-04-86-100	"	5 " 8.0 10.0 85
				"	6 " 10.0 14.5 96
				"	7 " 14.5 18.5 100
				"	8 " 18.5 21.5 100
				"	9 " 21.5 26.0 100
				"	10 " 26.0 30.0 100
				"	11 " 30.0 33.3 100
				"	12 " 33.3 36.0 92
10.0 50.0	Siltstone, highly weathered, olive, fractured, gry siltstone from 34.4 to 35.4, 10% core sand size particles, black and orange iron stains, becomes slightly gry with depth, soft.				13 " 36.0 38.0 100
					14 " 38.0 40.0 100
					15 " 40.0 45.0 100
					16 " 45.0 50.0 100

DN 214, ELEV. 847.5, 4+60, Centerline
 Logged by: H. R. Marien
 Drilling Equipment: Sprague & Henwood 40 CL

Hole Depth From To	Description of Materials	Unif. Soil Class	STANDARD PENETRATION Blows Per 6"	Type	SAMPLES From To Ft. % Rec.
0.0 0.6	Topsoil, roots, etc.	SM	9-11-10-23	SPT	1 Jar 0.0 2.0 80
0.6 2.0	Silt, sandy with gravel, brn, moist, 25% gravel, 20% sand, coarse particles are olive siltstone and are soft, fines are low plastic.	SM	100/0.4	"	2 " 2.0 4.0 100
				"	3 " 4.0 6.0 95
				"	4 " 6.0 7.0 30
				"	5 " 7.0 8.0 100
				"	6 " 8.0 11.5 40
				"	7 " 11.5 14.5 100
				"	8 " 14.5 19.5 80
				"	9 " 19.5 24.0 30
				"	10 " 24.0 26.0 100
				"	11 " 26.0 30.0 75
7.0 25.8	Siltstone, highly weathered, olive, iron stains 0.4' piece of tan hard sandstone from 7.0 to 7.4, 25% core sand size, 35% gravel size, rest is pieces 0.2' to 0.3' long, soft.				12 " 26.0 30.0 100
25.8 30.0	Sandstone, lt. gry, weathered, hard, speckled appearance, 60° dip, thin bedded, pieces 0.1' to 1.4' long.				13 " 30.0 30.0 100

Soil descriptions and classifications are based on physical examination and may be subject to change following laboratory testing. The percentages of gravel, sand and fines in the matrix are estimated on the basis of 100% passing 3-inches.

*Angles for angle holes are taken from the vertical and depths of these holes are measured along the angle given.

BRIAR CREEK WATERSHED
 FLOODWATER RETARDING DAM PA-498
 COLUMBIA & LUZERNE COUNTIES, PENNSYLVANIA
 LOGS OF DRILL HOLES & TEST PITS

U. S. DEPARTMENT OF AGRICULTURE
 SOIL CONSERVATION SERVICE

Date: _____ Approved by: _____
 Designed: H. R. MARIEN Title: _____
 Drawn: _____ Title: _____
 Traced: _____ Sheet: _____ Drawing No.: _____
 Checked: *H. Johnson* 8-2-66 No. 22 of 23 PA-498-P