# APPENDIX 'A' SOILS INVESTIGATION

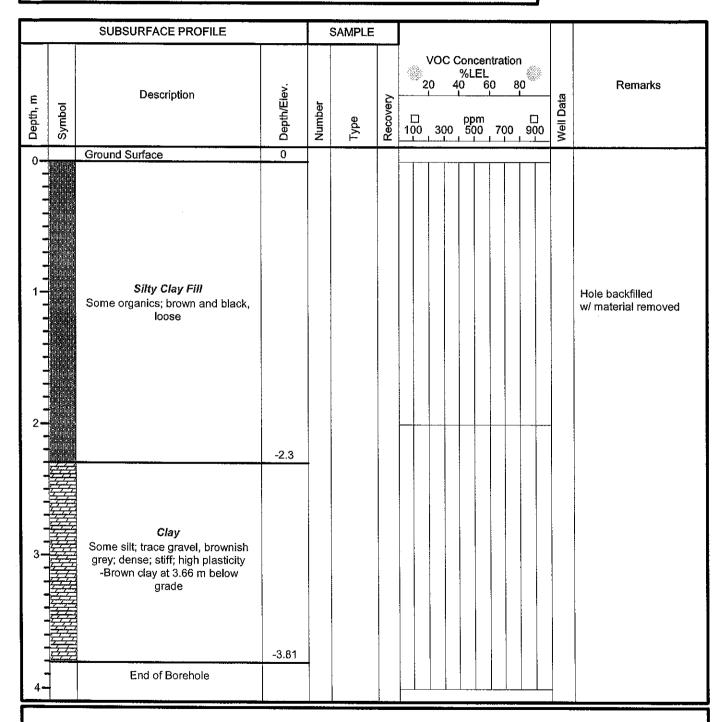
Log of Borehole: TP1

Project: Brookside Cemetary Site Expansion

Client: The City of Winnipeg

Inspector: HLF





Drilled By: City of Winnipeg

Drill Method: Testpit by a backhoe

Drill Date: November 23, 2005

Hole Size: NA

Dillon Consulting Limited 200 - 895 Waverley St. Winnipeg, Manitoba R3T 5P4 Datum:

Ground Elevation

Well Top Elevation

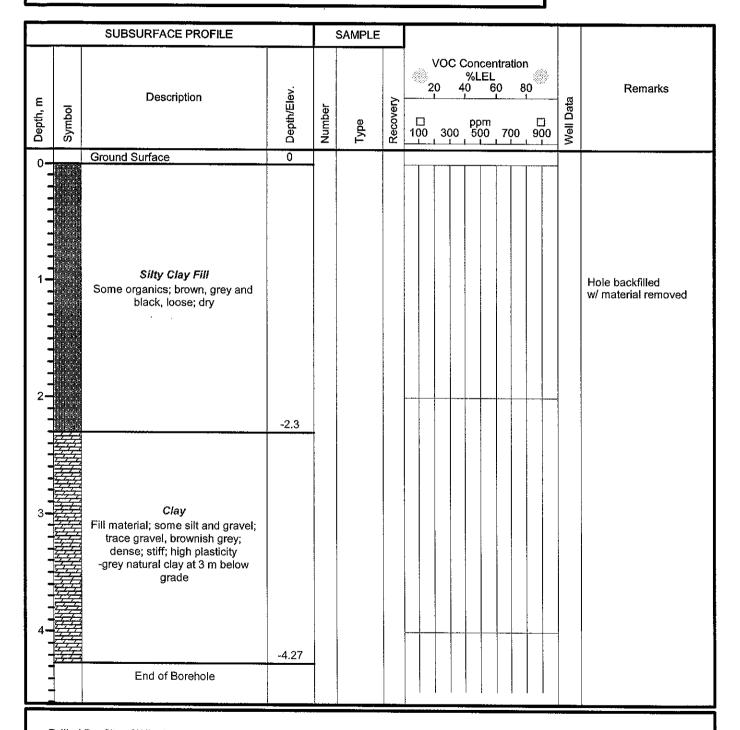
Log of Borehole: TP2

Project: Brookside Cemetary Site Expansion

Client: The City of Winnipeg

Inspector: HLF





Drilled By: City of Winnipeg

Drill Method: Testpit by a backhoe

Drill Date: November 23, 2005

Hole Size: NA

Dillon Consulting Limited 200 - 895 Waverley St. Winnipeg, Manitoba R3T 5P4 Datum:

Ground Elevation

Well Top Elevation

Log of Borehole: TP3

Project: Brookside Cemetary Site Expansion

Client: The City of Winnipeg

Inspector: HLF



-At 0.91 m below grade becomes grey and black; trace topsoil; stiff; dense  2-  -2.44  Clay Some silt; trace pebbles; brownish grey; dense; stiff; high plasticity  -3.66	SUBSURFACE PROFILE					SAMPLE			
Sitty Clay Fill  Some topsoil and organics; black and brown, loose; dry -At 0.91 m below grade becomes grey and black; trace topsoil; stiff; dense  2-  Clay  Some slit; trace pebbles; brownish grey; dense; stiff; high plasticity  -3.66	Depth, m	Symbol	Description Description		Number	Туре	Recovery		%LEL 20 40 60 80 Remarks
Sitty Clay Fill  Some topsoil and organics; black and brown, loose; dry -At 0.91 m below grade becomes grey and black; trace topsoil; stiff; dense  Clay  Some silt, trace pebbles; brownish grey; dense; stiff; high plasticity  -3.66	0		Ground Surface	0				T	
Some silt; trace pebbles; brownish grey; dense; stiff; high plasticity  -3.66	1-		Some topsoil and organics; black and brown, loose; dry -At 0.91 m below grade becomes grey and black; trace topsoil; stiff;	-2.44					Hole backfilled w/ material removed
□ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □	3-		Some silt; trace pebbles; brownish grey; dense; stiff; high	-3.66					

Drilled By: City of Winnipeg

Drill Method: Testpit by a backhoe

Drill Date: November 23, 2005

Hole Size: NA

Dillon Consulting Limited 200 - 895 Waverley St. Winnipeg, Manitoba R3T 5P4 Datum:

Ground Elevation

Well Top Elevation

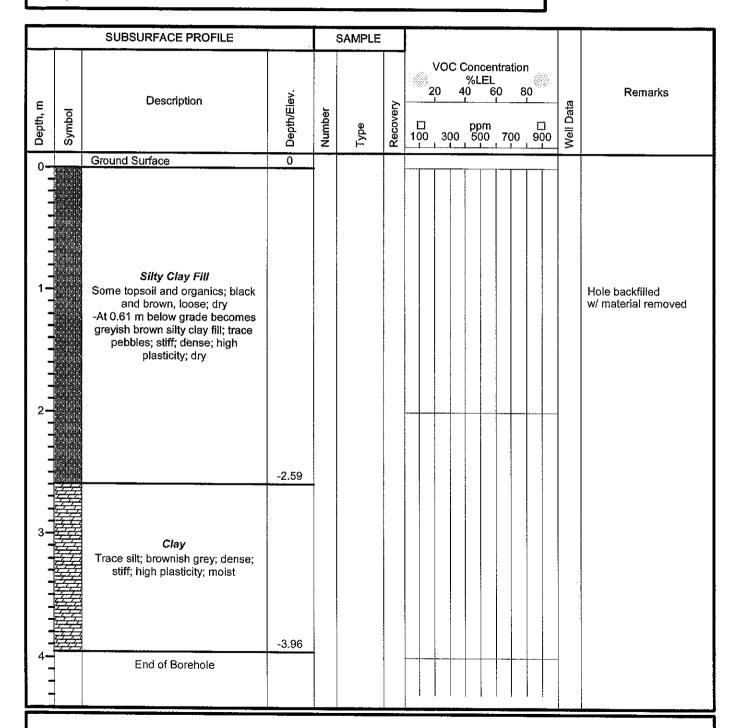
Log of Borehole: TP4

Project: Brookside Cemetary Site Expansion

Client: The City of Winnipeg

Inspector: HLF





Drilled By: City of Winnipeg

Drill Method: Testpit by a backhoe

Drill Date: November 23, 2005

Hole Size: NA

Dillon Consulting Limited 200 - 895 Waverley St. Winnipeg, Manitoba R3T 5P4 Datum:

**Ground Elevation** 

Well Top Elevation

Log of Borehole: TP5

Project: Brookside Cemetary Site Expansion

Client: The City of Winnipeg

Inspector: HLF



SUBSURFACE PROFILE				SAMPLE			Τ	
Depth, m	Symbol	Symbol Description		Number	Туре	Recovery		VOC Concentration %LEL 20 40 60 80  □ ppm □ 100 300 500 700 900    Strict   Strict
0-	Ground Surface					T		
1		Sitty Clay Fill  Some topsoil and organics; black and grey, loose; dry  -At 0.76 m below grade becomes greyish brown silty clay fill; trace pebbles; stiff; dense; high plasticity; dry	-2.44					Hole backfilled w/ material removed
3		Clay Trace silt and pebbles; greyish brown; dense; stiff; high plasticity; moist	-3.66					
		and or poronoid						

Drilled By: City of Winnipeg

Drill Method: Testpit by a backhoe

Drill Date: November 23, 2005

Hole Size: NA

Dillon Consulting Limited 200 - 895 Waverley St. Winnipeg, Manitoba R3T 5P4 Datum:

Ground Elevation

Well Top Elevation



## TABLE 1 BROOKSIDE CEMETERY, 055-392 PLASTICITY INDEX TEST DATA

Sample Identification	Liquid Limit	Plastic Limit	Plasticity Index	% Retained on 0.425 mm Sieve	
TP1 - 7"	91	24	67	1.1	
TP3 - 11"	76	18	58	1.9	

### Notes:

1. Test conducted in accordance with ASTM D4318 Method B (single point liquid limit).

2. Sample was air-dried during sample preparation.

## TABLE 2 BROOKSIDE CEMETERY, 055-392 PARTICLE SIZE ANALYSIS TEST DATA

Sample	Gravel. %		Sand, %		Silt. %	Clay, % < 0.005 mm	Colloids, % < 0.001 mm
Identification	75 to 4.75 mm	Coarse <4.75 to 2.0 mm	Medium <2.0 to 0.425 mm	Fine <0.425 to 0.075 mm	<0.075 to 0.005 mm		
TP1 - 7"	0.0	0.0	1.1	4.9	1.1	92.9	87.3
TP3 - 11"	0.7	0.4	0.8	2.3	19.2	76.6	52.5

### Notes:

1. Test conducted in accordance with ASTM D422.

2. A high speed stirring device was used for 1 minute to disperse the test sample.

3. The percentage of colloids is also included in the clay size fraction.