GEMTEC
Consulting Engineers and Scientists

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9 August 2012

File: 6489.07-L01

via e-mail Garth.Holder@pwgsc-tpsgc.gc.ca

Public Works and Government Services Canada
1045 Main Street, Unit 100
Moncton, NB
E1C 1H1

DRAFT

Attention: Garth Holder, Project Manager

Re: Marine Test Pit Investigation – McEachern's Point, NB, Harbour Channel And Gully Entrance (Call Up EC015-110732/001/PWB)

GEMTEC Limited was retained by Public Works and Government Services Canada to undertake a marine test pit investigation in the McEachern's Point Wharf channel and the Gully entrances. We understand that the test pit data will be used to determine dredging methods. The purpose of this investigation was to assess the soils in the channel. This report contains a summary of the fieldwork carried out.

Fifteen test pits (TP) were excavated on 24 and 25 July 2012 in the McEachern's Point channel. The work was carried out in the presence of one of our geotechnical technologists using a self propelled floating dredge plan, Amphibex, equipped with an excavator using a 1 cubic meter hydraulic bucket subcontracted to ECO Technologies. Fourteen of the fifteen test pits were excavated to minimum elevation of –2.5 metres chart datum (CD). Test pit 11 was excavated to elevation –2.2 metres CD where a compact grey sand and gravel was encountered. Based on observations in the field the excavator (Amphibex) was suitable to excavate all soils encountered with the exception of the grey sand and gravel encountered at TP 11 at an approximate elevation of –2.0 metres CD.

Test pit locations were provided by PWGSC. GEMTEC Limited guided the excavator and surveyed the test pit locations in the field using a Topcon HiPer L1 GPS. All elevations on appended test pit logs are based on chart datum and are referenced to benchmark 88B9004 with a published elevation of +3.120 metres at the McEachern's Point wharf.

Descriptive terms and detailed test pit logs, site photos, and test pit coordinates are attached (Attachments A, B and C, respectively).

If you have any questions regarding our proposal contact the undersigned.

Harold McQuade, P.Eng
GEMTEC Limited

Attachments

(tds)

Attachment A

Descriptive Terms and Detailed Test Pit Logs

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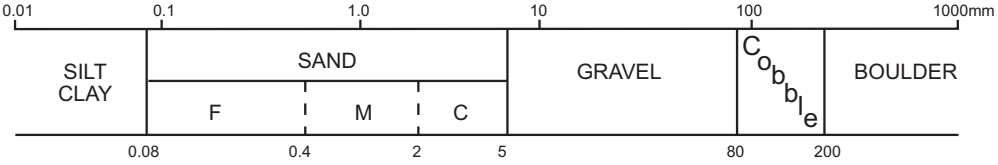
FREDERICTON, MONCTON, BATHURST, GRAND FALLS, SAINT JOHN, NB

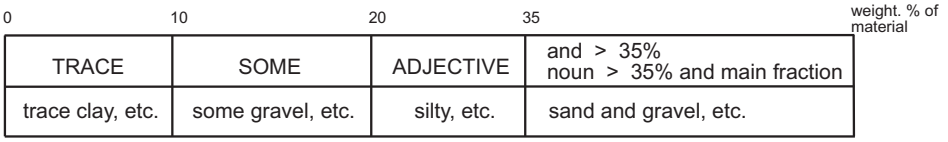
DESCRIPTIVE TERMS- BOREHOLE/TEST PIT LOG

SOILS

GRAIN SIZE



DESCRIPTIVE TERMINOLOGY



TRACE	SOME	ADJECTIVE	and > 35% noun > 35% and main fraction
trace clay, etc.	some gravel, etc.	silty, etc.	sand and gravel, etc.

COMPACTNESS gravels, sands, tills

N, RANGE	0 - 4	4 - 10	10 - 30	30 - 50	> 50
DENSITY	V. LOOSE	LOOSE	MEDIUM	DENSE	V. DENSE

CONSISTENCY silt, clay

S, KPa	< 12.5	12.5 - 25	25 - 50	50 - 100	100 - 200
CONSISTENCY	V. SOFT	SOFT	MEDIUM	STIFF	V. STIFF

ROCK

RQD	OVERALL QUALITY	FRACTURE SPACING
0 - 25	VERY POOR	VERY CLOSE 20 - 60 mm
25 - 50	POOR	CLOSE 60 - 200 mm
50 - 75	FAIR	MODERATE 200 - 600 mm
75 - 90	GOOD	WIDE 600 - 2000 mm
90 - 100	EXCELLENT	VERY WIDE 2 - 6 m

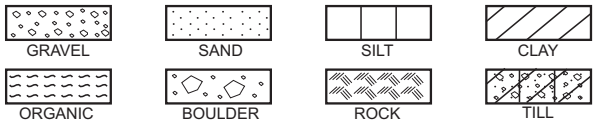
COMP. STR. MPa	1 - 5	5 - 25	25 - 50	50 - 100	100 - 250
DESCRIPTION	V. WEAK	WEAK	MODERATE	STRONG	V. STRONG

SAMPLE TYPES (location to scale on log)

S	SPLIT TUBE	G	SHOVEL
T	SHELBY TUBE	H	CARVED BLOCK
P	PISTON	K	SLOTTED
F	AUGER	V	IN SITU VANE
W	WASH	NR	NO RECOVERY

ROCK CORES A(30mm); B(41mm); N(54mm)

LOG SYMBOLS



WELL SYMBOLS

N - standard penetration test; blows by 475 J drop hammer to advance Std. 50mm O.D. split tube sampler 0.3m
RQD - percent of core consisting of hard, sound pieces in excess of 100mm long (excluding machine breaks)
RECOVERY - sample recovery expressed as percent or length
S - shear strength , kPa; vane ⊕ ; penetrometer ■; unconfined ○; Uc unconfined compressive strength
Sr - shear strength, remoulded; vane ⊗ ; penetrometer □
Dd - dry density; t/m^3
W - natural moisture content, percent ✳
PL - plastic limit, percent ⊢
LL - liquid limit, percent ⊣
ND - non detect, total petroleum hydrocarbons (TPH) not detected in soil

Groundwater Level ▼ ; Seepage ▽

Revised Oct, 2009
BHDESCRM-2009.CDR

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TEST PIT LOG

Client	Public Works and Governement Services Canada	Proj No. 6489.07	Test pit TP 1 (MP)
Project	Marine Test Pit Investigation	Date End 24.July.2012	Page 1 of 1
Location	McEachern's Point, NB		
Ground Level, m -1.60	Datum: Chart	Logged By TDS	

Undrained Shear Strength - kPa: 0, 25, 50, 75, 100

☐ Pocket Penetrometer <225 ■ Pocket Penetrometer
⊕ Field Vane Test ⊗ Remoulded
Water Content & Atterberg Limits (w_P, w, w_L)
Dynamic Penetration Test, blows/0.3m
Standard Penetration Test, blows/0.3m
0 10 20 30 40 50 60 70 80 90 100

DEPTH m	SAMPLE No	TYPE	N (RQD)	REC mm	LOG	DESCRIPTION
0						Black SILT some organics.
						1.00 -2.60
1						Brown SILT, some sand and organics.
						2.00 -3.60
2						End of Test Pit at elevation -3.60 metres chart datum as referenced to benchmark 88B9004 with a published elevation of +3.12 chart datum.

TEST PIT WITH GRAPH 648907.GPJ GEMTEC 2004.GDT 8/7/12

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TEST PIT LOG

Client	Public Works and Governement Services Canada	Proj No. 6489.07	Test pit TP 2 (MP)
Project	Marine Test Pit Investigation	Date End 24.July.2012	Page 1 of 1
Location	McEachern's Point, NB		
Ground Level, m -1.34	Datum: Chart	Logged By TDS	

Undrained Shear Strength - kPa
0 25 50 75 100
□ Pocket Penetrometer <225 ■ Pocket Penetrometer
⊕ Field Vane Test ⊗ Remoulded
Water Content & Atterberg Limits w_P w w_L
Dynamic Penetration Test, blows/0.3m
Standard Penetration Test, blows/0.3m
0 10 20 30 40 50 60 70 80 90 100

DEPTH m	SAMPLE No	TYPE	N (RQD)	REC mm	LOG	DESCRIPTION
0						Dark grey SILT some organics.
1						1.00 -2.34 Dark grey SILT some sand and organic layers (compressed sea weed).
2						2.00 -3.34 Dark grey SAND and GRAVEL, some cobbles.
						2.50 -3.84 End of Test Pit at elevation -3.84 metres chart datum as referenced to benchmark 88B9004 with a published elevation of +3.12 chart datum.

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TEST PIT LOG

Client	Public Works and Governement Services Canada	Proj No. 6489.07	Test pit TP 3 (MP)
Project	Marine Test Pit Investigation	Date End 24.July.2012	Page 1 of 1
Location	McEachern's Point, NB		
Ground Level, m -1.00	Datum: Chart	Logged By TDS	

Undrained Shear Strength - kPa
0 25 50 75 100
□ Pocket Penetrometer <225 ■ Pocket Penetrometer
⊕ Field Vane Test ⊗ Remoulded
Water Content & Atterberg Limits w_P w w_L
Dynamic Penetration Test, blows/0.3m
Standard Penetration Test, blows/0.3m
0 10 20 30 40 50 60 70 80 90 100

DEPTH m	SAMPLE No	TYPE	N (RQD)	REC mm	LOG	DESCRIPTION
0						Grey SILT, some organics, trace gravel.
						0.80 -1.80
1						Grey SILT, some sand and organics.
						1.20 -2.20
						Dark grey SAND, trace gravel and organics.
2						2.00 -3.00
						End of Test Pit at elevation -3.00 metres chart datum as referenced to benchmark 88B9004 with a published elevation of +3.12 chart datum.

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TEST PIT LOG

Client	Public Works and Governement Services Canada	Proj No. 6489.07	Test pit TP 4 (MP)
Project	Marine Test Pit Investigation	Date End 24.July.2012	Page 1 of 1
Location	McEachern's Point, NB		
Ground Level, m -1.21	Datum: Chart	Logged By TDS	

Undrained Shear Strength - kPa
0 25 50 75 100
□ Pocket Penetrometer <225 ■ Pocket Penetrometer
⊕ Field Vane Test ⊗ Remoulded
Water Content & Atterberg Limits w_P w w_L
Dynamic Penetration Test, blows/0.3m
Standard Penetration Test, blows/0.3m
0 10 20 30 40 50 60 70 80 90 100

DEPTH m	SAMPLE No	TYPE	N (RQD)	REC mm	LOG	DESCRIPTION
0						Dark grey SILT, some sand and organics.
						1.00 -2.21
1						Brown SAND with some gravel and cobbles and intermitent organic layers (compressed sea weed).
						1.50 -2.71
						SAND and GRAVEL, some cobbles.
2						2.10 -3.31
						End of Test Pit at elevation -3.31 metres chart datum as referenced to benchmark 88B9004 with a published elevation of +3.12 chart datum.

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TEST PIT LOG

Client	Public Works and Governement Services Canada	Proj No. 6489.07	Test pit TP 5 (MP)
Project	Marine Test Pit Investigation	Date End 24.July.2012	Page 1 of 1
Location	McEachern's Point, NB		
Ground Level, m -1.29	Datum: Chart	Logged By TDS	

Undrained Shear Strength - kPa: 0, 25, 50, 75, 100
□ Pocket Penetrometer <225 ■ Pocket Penetrometer
⊕ Field Vane Test ⊗ Remoulded
Water Content & Atterberg Limits w_P w w_L
Dynamic Penetration Test, blows/0.3m
Standard Penetration Test, blows/0.3m
0, 10, 20, 30, 40, 50, 60, 70, 80, 90, 100

DEPTH m	SAMPLE No	TYPE	N (RQD)	REC mm	LOG	DESCRIPTION
0						Dark grey SILT, some organics.
1						1.20 -2.49 Grey SAND, some gravel and cobbles. - Sand medium to dense compact at 1.6 metres. 1.90 -3.19 End of Test Pit at elevation -3.19 metres chart datum as referenced to benchmark 88B9004 with a published elevation of +3.12 chart datum.

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TEST PIT LOG

Client	Public Works and Governement Services Canada	Proj No. 6489.07	Test pit TP 6 (MP)
Project	Marine Test Pit Investigation	Date End 24.July.2012	Page 1 of 1
Location	McEachern's Point, NB		
Ground Level, m -1.16	Datum: Chart	Logged By TDS	

Undrained Shear Strength - kPa
0 25 50 75 100
□ Pocket Penetrometer <225 ■ Pocket Penetrometer
⊕ Field Vane Test ⊗ Remoulded
Water Content & Atterberg Limits w_P w w_L
Dynamic Penetration Test, blows/0.3m
Standard Penetration Test, blows/0.3m
0 10 20 30 40 50 60 70 80 90 100

DEPTH m	SAMPLE No	TYPE	N (RQD)	REC mm	LOG	DESCRIPTION	
0						Grey SILT, some organics.	
						0.20	-1.36
						Grey silty SAND, some cobbles.	
						0.70	-1.86
						Brown SAND, some gravel and cobbles.	
1						1.20	-2.36
						Grey Sand, some gravel and cobbles.	
2						2.10	-3.26
						End of Test Pit at elevation -3.26 metres chart datum as referenced to benchmark 88B9004 with a published elevation of +3.12 chart datum.	

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TEST PIT LOG

Client	Public Works and Governement Services Canada	Proj No. 6489.07	Test pit TP 7 (MP)
Project	Marine Test Pit Investigation	Date End 24.July.2012	Page 1 of 1
Location	McEachern's Point, NB		
Ground Level, m -0.85	Datum: Chart	Logged By TDS	

Undrained Shear Strength - kPa
0 25 50 75 100
□ Pocket Penetrometer <225 ■ Pocket Penetrometer
⊕ Field Vane Test ⊗ Remoulded
Water Content & Atterberg Limits w_P w w_L
Dynamic Penetration Test, blows/0.3m
Standard Penetration Test, blows/0.3m
0 10 20 30 40 50 60 70 80 90 100

DEPTH m	SAMPLE No	TYPE	N (RQD)	REC mm	LOG	DESCRIPTION
0						Dark SILT, some organics (Wood and sea shells)
					0.15 -1.00	Brown sity SAND, trace gravel and wood debris.
1					1.00 -1.85	Brown SAND, some gravel and cobbles with trace to some boulders (300 - 400 mm)
2					2.00 -2.85	End of Test Pit at elevation -2.85 metres chart datum as referenced to benchmark 88B9004 with a published elevation of +3.12 chart datum.

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TEST PIT LOG

Client	Public Works and Governement Services Canada	Proj No. 6489.07	Test pit TP 8 (MP)
Project	Marine Test Pit Investigation	Date End 24.July.2012	Page 1 of 1
Location	McEachern's Point, NB		
Ground Level, m -0.75	Datum: Chart	Logged By TDS	

Undrained Shear Strength - kPa
0 25 50 75 100
□ Pocket Penetrometer <225 ■ Pocket Penetrometer
⊕ Field Vane Test ⊗ Remoulded
Water Content & Atterberg Limits w_P w w_L
Dynamic Penetration Test, blows/0.3m
Standard Penetration Test, blows/0.3m
0 10 20 30 40 50 60 70 80 90 100

DEPTH m	SAMPLE No	TYPE	N (RQD)	REC mm	LOG	DESCRIPTION
0						Grey SAND and GRAVEL trace organics.
						0.40 -1.15
						Brown SAND with organic layering (compressed sea weed)
						0.60 -1.35
						Orange brown SAND with some gravel.
1						1.10 -1.85
						Grey SAND and GRAVEL with some cobbles and trace to some boulder (300 to 540 mm)
2						2.00 -2.75
						End of Test Pit at elevation -2.75 metres chart datum as referenced to benchmark 88B9004 with a published elevation of +3.12 chart datum.

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TEST PIT LOG

Client	Public Works and Governement Services Canada	Proj No. 6489.07	Test pit TP 9 (MP)
Project	Marine Test Pit Investigation	Date End 24.July.2012	Page 1 of 1
Location	McEachern's Point, NB		
Ground Level, m -1.28	Datum: Chart	Logged By TDS	

Undrained Shear Strength - kPa
0 25 50 75 100
□ Pocket Penetrometer <225 ■ Pocket Penetrometer
⊕ Field Vane Test ⊗ Remoulded
Water Content & Atterberg Limits w_P w w_L
Dynamic Penetration Test, blows/0.3m
Standard Penetration Test, blows/0.3m
0 10 20 30 40 50 60 70 80 90 100

DEPTH m	SAMPLE No	SAMPLE TYPE	SAMPLE N (RQD)	SAMPLE REC mm	LOG	DESCRIPTION
0						Grey SAND some gravel with trace organics.
						0.30 -1.58
						Peat
						0.45 -1.73
						Brown sitly SAND, some organics, trace gravel and trace to some cobbles.
1						1.20 -2.48
						Grey SAND and GRAVEL with trace to some cobbles.
						1.90 -3.18
2						End of Test Pit at elevation -3.10 metres chart datum as referenced to benchmark 88B9004 with a published elevation of +3.12 chart datum.

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TEST PIT LOG

Client	Public Works and Governement Services Canada	Proj No. 6489.07	Test pit TP 10 (MP)
Project	Marine Test Pit Investigation	Date End 24.July.2012	Page 1 of 1
Location	McEachern's Point, NB		
Ground Level, m -0.02	Datum: Chart	Logged By TDS	

Undrained Shear Strength - kPa: 0, 25, 50, 75, 100
□ Pocket Penetrometer <225 ■ Pocket Penetrometer
⊕ Field Vane Test ⊗ Remoulded
Water Content & Atterberg Limits w_P w w_L
Dynamic Penetration Test, blows/0.3m
Standard Penetration Test, blows/0.3m
0 10 20 30 40 50 60 70 80 90 100

DEPTH m	SAMPLE No	TYPE	N (RQD)	REC mm	LOG	DESCRIPTION
0						Grey SAND trace gravel and some cobbles.
						0.45 -0.47
						Peat
1						1.10 -1.12
						Compact brown SAND
						1.60 -1.62
						Brown to grey SAND and GRAVEL, some cobbles
2						
3						3.60 -3.62
						End of Test Pit at elevation -3.62 metres chart datum as referenced to benchmark 88B9004 with a published elevation of +3.12 chart datum.

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TEST PIT LOG

Client	Public Works and Governement Services Canada	Proj No. 6489.07	Test pit TP 11 (MP)
Project	Marine Test Pit Investigation	Date End 24.July.2012	Page 1 of 1
Location	McEachern's Point, NB		
Ground Level, m -0.15	Datum: Chart	Logged By TDS	

Undrained Shear Strength - kPa: 0, 25, 50, 75, 100
☐ Pocket Penetrometer <225 ■ Pocket Penetrometer
⊕ Field Vane Test ⊗ Remoulded
Water Content & Atterberg Limits (w_P, w, w_L)
Dynamic Penetration Test, blows/0.3m
Standard Penetration Test, blows/0.3m
0 10 20 30 40 50 60 70 80 90 100

DEPTH m	SAMPLE No	SAMPLE TYPE	SAMPLE N (RQD)	SAMPLE REC mm	LOG	DESCRIPTION
0						Brown sitly SAND, trace to some gravel.
						0.15 -0.30
						Brown SAND and GRAVEL, some cobbles and boulders.
						0.45 -0.60
						Peat
1						1.00 -1.15
						Grey to brown silty sand some gravel and cobbles, trace organics.
						- Sand compact at 1.8 metres.
2						2.00 -2.15
						End of Test Pit at elevation --2.15 metres chart datum as referenced to benchmark 88B9004 with a published elevation of +3.12 chart datum.

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TEST PIT LOG

Client	Public Works and Governement Services Canada	Proj No. 6489.07	Test pit TP 12 (MP)
Project	Marine Test Pit Investigation	Date End 24.July.2012	Page 1 of 1
Location	McEachern's Point, NB		
Ground Level, m -1.03	Datum: Chart	Logged By TDS	

Undrained Shear Strength - kPa: 0, 25, 50, 75, 100

☐ Pocket Penetrometer <225 ■ Pocket Penetrometer
⊕ Field Vane Test ⊗ Remoulded
Water Content & Atterberg Limits (w_P, w, w_L)
Dynamic Penetration Test, blows/0.3m
Standard Penetration Test, blows/0.3m

0 10 20 30 40 50 60 70 80 90 100

DEPTH m	SAMPLE No	SAMPLE TYPE	SAMPLE N (RQD)	SAMPLE REC mm	LOG	DESCRIPTION
0						Brown SAND, some cobbles and organics.
						0.50 -1.53
						Peat
						0.70 -1.73
1						Brown silty SAND, some cobbles and trace organcis with intermitent peat layers.
						1.50 -2.53
						End of Test Pit at elevation -2.53 metres chart datum as referenced to benchmark 88B9004 with a published elevation of +3.12 chart datum.

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TEST PIT LOG

Client	Public Works and Governement Services Canada	Proj No. 6489.07	Test pit TP 13 (MP)
Project	Marine Test Pit Investigation	Date End 24.July.2012	Page 1 of 1
Location	McEachern's Point, NB		
Ground Level, m -1.22	Datum: Chart	Logged By TDS	

Undrained Shear Strength - kPa: 0, 25, 50, 75, 100

☐ Pocket Penetrometer <225 ■ Pocket Penetrometer
⊕ Field Vane Test ⊗ Remoulded
Water Content & Atterberg Limits (w_P, w, w_L)
Dynamic Penetration Test, blows/0.3m
Standard Penetration Test, blows/0.3m

0 10 20 30 40 50 60 70 80 90 100

DEPTH m	SAMPLE No	SAMPLE TYPE	SAMPLE N (RQD)	SAMPLE REC mm	LOG	DESCRIPTION	
0						Brown SAND and GRAVEL some cobbles.	
						0.50	-1.72
						Peat	
						0.80	-2.02
1						Grey SAND and GRAVEL, some cobbles and trace organics.	
						1.20	-2.42
						Grey SAND, trace to some gravel. Sand compact at 1.2 metres.	
						1.60	-2.82
						End of Test Pit at elevation -2.82 metres chart datum as referenced to benchmark 88B9004 with a published elevation of +3.12 chart datum.	

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TEST PIT LOG

Client	Public Works and Governement Services Canada	Proj No. 6489.07	Test pit TP 14 (MP)
Project	Marine Test Pit Investigation	Date End 24.July.2012	Page 1 of 1
Location	McEachern's Point, NB		
Ground Level, m -0.90	Datum: Chart	Logged By TDS	

Undrained Shear Strength - kPa
0 25 50 75 100
□ Pocket Penetrometer <225 ■ Pocket Penetrometer
⊕ Field Vane Test ⊗ Remoulded
Water Content & Atterberg Limits w_P w w_L
Dynamic Penetration Test, blows/0.3m
Standard Penetration Test, blows/0.3m
0 10 20 30 40 50 60 70 80 90 100

DEPTH m	SAMPLE No	TYPE	N (RQD)	REC mm	LOG	DESCRIPTION
0						Brown SAND and GRAVEL with some cobbles and boulders.
1						- flat boulders in excess of 300 mm observed. - Sand content increses with depth.
1.70						-2.60 End of Test Pit at elevation -2.60 metres chart datum as referenced to benchmark 88B9004 with a published elevation of +3.12 chart datum.

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TEST PIT LOG

Client	Public Works and Governement Services Canada	Proj No. 6489.07	Test pit TP 15 (MP)
Project	Marine Test Pit Investigation	Date End 24.July.2012	Page 1 of 1
Location	McEachern's Point, NB		
Ground Level, m -1.40	Datum: Chart	Logged By TDS	

Undrained Shear Strength - kPa: 0, 25, 50, 75, 100

□ Pocket Penetrometer <225 ■ Pocket Penetrometer
⊕ Field Vane Test ⊗ Remoulded
Water Content & Atterberg Limits (w_P, w, w_L)
Dynamic Penetration Test, blows/0.3m
Standard Penetration Test, blows/0.3m
0, 10, 20, 30, 40, 50, 60, 70, 80, 90, 100

DEPTH m	SAMPLE No	SAMPLE TYPE	SAMPLE N (RQD)	SAMPLE REC mm	LOG	DESCRIPTION
0						Brown SAND and GRAVEL with COBBLES and BOULDERS (300 to 600 mm)
						1.50 -2.90
						Grey to orange brown silty SAND, trace organics with trace to some cobbles.
						1.70 -3.10
						End of Test Pit at elevation -3.10 metres chart datum as referenced to benchmark 88B9004 with a published elevation of +3.12 chart datum.
1						

TEST PIT WITH GRAPH 648907.GPJ GEMTEC 2004.GDT 8/7/12

Attachment B

Select Site Photos

Photo 1 - ECO Technologies Aphibian Excavator at McEachern's Point Wharf.

Photo 2 - Amphibian excavator in McEachern's point channel.

Photo 3 - Manual sounding undertaken at test pit locations.

Photo 4 - Depth during excavation tracked by sounding measurments on inside of excavtor arm.

Photo 5 - Dark silt with organics encountered at TP 1 - McEachern's Point (Elev. –1.60 to –2.60 CD).

Photo 6 - Dark grey silt encountered at TP 2 - MaEachern's Point (Elevation –1.34 to –2.34 CD).

Photo 7 - Dark silt with some organics some gravel encountered at TP 3 - McEachern's Point (Elevation –1.00 to –1.80 CD).

Photo 8 - Organics present in silt layer at TP 4 - McEachern's Point (Elevation –1.21 to –2.21 CD).

Photo 9 - Dark grey silt with some organics at TP 5 - McEachern's Point (Elevation – 1.29 to –2.49 CD).

Photo 10 - Grey silty sand with some cobbles encountered at TP 6 - McEachern's Point (Elevation –1.86 to –2.36 CD).

Photo 11 - Brown silty sand with trace gravel and wood debris encountered at TP 7 - McEachern's Point (Elevation –1.00 to –1.85 CD).

Photo 12 - Orange brown sand with some gravel encountered at TP 8 – McEachern's Point (Elevation – 1.35 to –1.85 CD).

Photo 13 - Peat encountered at TP 9 - McEachern's Point (Elevation –1.58 to –1.73 CD).

Photo 14 - Thick peat layer encountered at TP 10 - MaEachern's Point (Elevation – 0.47 to –1.12 CD).

Photo 15 - Thick layer of peat encountered at TP 11 - McEachern's Point (Elevation –0.60 to –1.15 CD).

Photo 16 - Brown sand with some cobbles and organics encountered at TP 12 - McEachern's Point (Elevation –1.03 to –1.53 CD).

Photo 17 - Brown sand and gravel with cobbles and organics encountered at TP 13 - McEacherns Point (Elevation –1.22 to –1.72 CD).

Photo 18 - Brown sand and gravel with some cobbles and flat boulders encountered at TP 14 - McEachern's Point (Elevation –0.90 to –2.60 CD).

Photo 19 - Brown sand and gravel with cobbles and boulders encountered at TP 15 - McEachern's Point (Elevation –1.40 to –2.90 CD).

Attachment C

Test Pit Coordinates

McEachern's Point Test Pit Coordinates

BH	TP Elevation (m)	TP Depth (m)	Easting*	Northing*
TP 1	-1.60	2.0	353875.951	5243795.767
TP 2	-1.34	2.5	354070.820	5243840.621
TP 3	-1.00	2.0	354269.138	5243865.852
TP 4	-1.21	2.1	354467.249	5243841.906
TP 5	-1.29	1.9	354622.036	5243725.570
TP 6	-1.16	2.1	354571.356	5243534.053
TP 7	-0.85	2.0	354496.453	5243348.880
TP 8	-0.75	2.0	354486.602	5243150.972
TP 9	-1.28	1.9	354526.640	5243059.337
TP 10	-0.02	3.6	354554.303	5243017.686
TP 11	-0.15	2.0	354581.965	5242976.036
TP 12	-1.03	1.5	354600.528	5242928.798
TP 13	-1.22	1.6	354618.952	5242881.915
TP 14	-0.90	1.7	354637.320	5242835.172
TP 15	-1.40	1.7	354655.442	5242789.058