BURNSIDE

Appendix D
Testpit Logs

Test Pit Logs

TP-1

0 – 0.1 m	Organic layer – black, damp with fine roots
0.1 – 0.8 m	Sand – well sorted, damp to wet., medium grained. Water seepage at 0.5 m below surface.

TP-2

0 – 0.2 m	Organic layer – black, damp with fine roots
0.2 – 0.9 m	Sand – well sorted, medium grained, loose, damp. Clumps of black organics scattered in the sand making up approximately 10 percent
0.9 m	Permafrost

TP-3

0 – 0.2 m	Organic layer – black, damp with fine roots
0.2 – 0.8 m	Sand – slightly silty, light brown, well sorted, medium grained, loose, small patches of dark organics within sand, damp to wet. Water seepage into test pit at 0.4 m below surface.

TP-4

0 – 0.1 m	Organic layer – black, damp with fine roots
0.1 – 0.9 m	Sand – light brown, medium grained, well sorted, damp to wet. Occasional small clump of organics.

Sample collected from 0.5 m for geotechnical analysis

TP-5

0 – 0.1 m	Organic layer – black, damp with fine roots
0.1 – 0.8 m	Sand – brown, medium grained, well-sorted, damp, water seepage at approximately 0.7 m. Patches of black damp organics as 0.1 to 0.2 m sized clumps within the sand. Sample collected from 0.5 m for geotechnical analysis
0.8 m	Permafrost.

TP-6

0 – 0.1 m	Organic layer – black, damp with fine roots
0.1 – 0.8 m	Sand – light brown, damp, well sorted, medium grained. Water seepage at 0.7 m
0.8 m	Permafrost.

TP-7

0 – 0.1 m	organic layer – black, damp with fine roots
0.1 – 0.8 m	Sand – light brown, medium, grained, damp, loose, sides caving. Water seeping in at 0.7 m below surface.

Sample collected from 0.5 m for geotechnical analysis.

TP-MSW-1

0 – 0.2 m	Organic layer – black, damp, turf roots
0.2 – 0.8 m	Sand – well sorted, medium grained, loose, damp to wet. Water infill test pit to 0.2 m below surface. No evidence of landfill impacts
0.8 m	Permafrost.

Collected soil sample for geotechnical analysis at 0.5m. Collected groundwater water sample (MSW-1) for laboratory analysis.

TP-MSW-2

0 – 01. m	Organic layer – black, damp with turf roots
0.1 – 0.9 m	Sand – well sorted, medium grained, loose, damp. Water seepage fills test pit to 0.4 m. No evidence of any landfill related impact
0.9 m	Permafrost.

Soil sample collected for geotechnical analysis at 0.5 m. Groundwater sample (MSW-2) collected for laboratory analysis.

TP-8

0 – 0.1 m	Organic layer – black, damp
0.1 – 0.8 m	Sand – medium grained well sorted, loose, damp to wet
0.8 m	Permafrost.

TP-CON-1

0 – 0.1 m	Organic layer – disrupted by pervious surface disturbance
0.1 – 0.9 m	Sand with gravel – fine to coarse grained sand with scattered fine to coarse gravel and occasional cobble. Poorly sorted mixture of glacial deposition of a variety of rock types. Damp, loose, well drained to 0.5 m below surface. Water seepage at 0.5 m below surface

Dug next to contaminated soil stockpile. No evidence of staining or odours or impacts from the stockpiles.

0.9 m	Permafrost.

KUGLUKTUK SEWAGE LAGOON

SOIL LOG
OF
TEST PITS
AT
LAGOON FOOTPRINT

TEST PIT #	DEPTH, (m)	SOIL DESCRIPTION
TP 601	0.00 – 0.10	PEAT / MUSKEG: Brown, moist
	0.10 – 1.00	SAND: Dark brown, moist, coarse to fine-grained, numerous sub-angular cobbles.
	1.00 –1.80	SAND: Dark brown, moist, compact to dense, some silt, gravel sizes to 75mm, numerous sub-angular cobbles.
	1.80 – 2.60	SAND: as above but wet, more silt, dense, with cobbles to 250mm size - permafrost at 1.8m
		Discontinued @ 1.80 m
TP 602	0.00 - 0.10	PEAT / MUSKEG: Brown, moist
-35m north of north edge of road	0.10 – 0.80	SAND: Dark brown, moist, coarse to fine-grained, some silt, compact with gravel & cobbles.
		Discontinued @ 1.8m on possible bedrock
TP 603	0.00 – 0.30	PEAT / MUSKEG: Brown, moist
	0.30 – 1.50	SAND: Dark brown, moist, compact, coarse to fine-grained, some silt, some gravel sizes, cobbles to 250 mm throughout. Boulders at 1.5 m
		Discontinued @ 1.5 m

KUGLUKTUK SEWAGE LAGOON

SOIL LOG
OF
TEST PITS
AT
LAGOON FOOTPRINT

TEST PIT #	DEPTH, (m)	SOIL DESCRIPTION
TP 604	0.00 – 0.25	PEAT / MUSKEG: Brown, moist
	0.25 – 1.80	GRAVEL: Dark brown, moist, sandy, numerous cobbles, some boulders, compact to dense, (pit stays open, suitable as embankment material) - water seepage at 1.80 m Discontinued @ 1.80 m
TP 605	0.00 – 0.15	PEAT / MUSKEG: Brown, moist
	@ 0.15	BEDROCK: Fractured layers, peeled with great effort by backhoe Discontinued @ 0.15 m
TP 606	same as TP 605	
TP 607	same as TP 605	
TP 608 to 612	0.00 - 0.15	PEAT / MUSKEG: Brown, moist
	0.15 - 1.00	SAND: Typical to sand encountered in previous test pits 601 – 603, wet (surface moisture) Discontinued @ 1.0 m
TP 613	0.00 – 0.15	PEAT / MUSKEG: Brown, moist
	0.15 – 0.75	SAND: Typical to sand encountered - permafrost @ 0.75 m. Discontinued @ 0.75 m.

KUGLUKTUK SEWAGE LAGOON
SOIL LOG
OF
TEST PITS
AT
LAGOON FOOTPRINT

BORE HOLE #	**DEPTH TO BEDROCK (m)**
BH 614 (at TP 602)	1.75 - (drilled to 2.0m)
BH 615 (east of TP 605)	1.65 – (drilled to 1.8m)
BH 616 (NE of TP 606, east of TP 607)	0.75 – (drilled to 1.2m)

SOURCE: Beach Ridge (running east/west) North of Lagoon Footprint

TEST PIT #	**DEPTH, (m)**	**SOIL DESCRIPTION**
TP 617 (east end)	0.00 – 0.10	PEAT / MUSKEG: Brown, moist
	0.10 – 0.90	SAND: Dark brown, moist, fine-grained, clean, loose to compact. - permafrost at 0.9m
		Discontinued @ 0.9 m
TP 618 (west of TP 617)	0.00 – 0.23	PEAT / MUSKEG: Brown, moist
	0.23 – 1.00	SAND: Dark brown, moist, medium to fine-grained, clean, loose to compact. - permafrost at 1.0 m
		Discontinued @ 1.0 m
TP 619 (west of TP 618)	same as TP 618	

KUGLUKTUK SEWAGE LAGOON
SOIL LOG
OF
TEST PITS
AT
LAGOON FOOTPRINT

SOURCE: Beach Ridge (running east/west) North of Lagoon Footprint

TEST PIT #	DEPTH, (m)	SOIL DESCRIPTION
TP 620 (NW of TP 619, along creek edge)	0.00 – 0.23	PEAT / MUSKEG: Brown, moist
	0.23 – 0.75	SAND: Dark brown moist, medium to fine-grained, clean, loose to compact - changes to grey/brown at 0.75 m - water seepage at 0.75 m Discontinued @ 0.75 m

SOIL LOG
OF
TEST PITS
AT
PROPOSED BORROW SOURCES

SOURCE: Northeast of Heart Lake at Face of Rock Ridge, North Side of Road

TEST PIT #	**DEPTH, (m)**	**SOIL DESCRIPTION**
TP 621	0.00 – 0.23	PEAT/ MUSKEG: Brown, moist
	0.23 – 0.75	CLAY: Dark brown, moist, firm, medium to high plastic. - permafrost at 0.75 m
		Discontinued at 0.75 m
TP 622	0.00 – 0.23	PEAT/ MUSKEG: Brown. Moist
	0.23 – 0.75	CLAY: Dark brown, moist, stiff, high plastic. - permafrost at 0.75 m
		Discontinued at 0.75 m

SOURCE: Plateau East of Hearth Lake, approx. 2.9 km east of Lagoon site

TEST PIT #	**DEPTH, (m)**	**SOIL DESCRIPTION**
TP 623	0.00 – 0.23	PEAT / MUSKEG: Brown, moist
	0.23 – 0.90	SAND: Dark brown, moist to wet, uniform, fine-grained, trace silt - permafrost at 0.90 m - sample #623R1 @ 0.23 – 0.90 m
		Discontinued @ 0.90 m
TP 624 (east of TP 623)	0.00 – 0.15	PEAT / MUSKEG: Brown. moist
	0.15 – 0.75	SAND: Dark brown, moist to wet, uniform, fine-grained, clean - permafrost at 0.75 m - sample #624R1 @ 0.15 – 0.75 m Discontinued @ 0.75 m

KUGLUKTUK SEWAGE LAGOON

SOIL LOG
OF
TEST PITS
AT
PROPOSED BORROW SOURCES

SOURCE: West of Road at End of Runway.

TEST PIT #	DEPTH, (m)	SOIL DESCRIPTION
TP 625 (exist. borrow off road's edge)	0.00 – 2.40	SAND: Dark brown, moist, fine-grained, uniform, clean - sample #625R1
	2.40 – 3.60	CLAY: Dark brown, wet, stiff, high plastic - sample #625R2 @ 2.4 – 3.6 m
		Discontinued @ 3.6 m

SOURCE: West of Road at End of Runway. (cont'd)

TEST PIT #	DEPTH, (m)	SOIL DESCRIPTION
TP 626 (west of TP 625)	0.00 – 0.15	PEAT / MUSKEG: Brown, moist
	0.15 – 0.75	SAND: Dark brown, moist, fine-grained, uniform, clean, - permafrost @ 0.75 m - sample #626R1 @ 0.15 – 0.75 m Discontinued @ 0.75 m

SOURCE: Existing borrow pit along SE side of runway

TEST PIT #	DEPTH, (m)	SOIL DESCRIPTION
TP 627 (exist. bank of pit)	0.00 – 2.00	SAND: Dark brown, damp, medium to fine-grained, clean.
(exist. pit floor)	2.00 – 3.00	SAND: Dark grey, moist to wet, coarse to fine-grained, clean - water seepage @ 3.0 m - TP sloughing at 1.0m below pit floor - sample \$627R1 @ 2.0 – 3.0 m Discontinued @ 3.0 m