

**TEST PIT BOREHOLE LOGS**  
Cambridge Bay, Nunavut

Date:	29-Aug-09	Easting:	493936	Test Pit: 1-09-1M	SAMPLES		NOTES/COMMENT
Logged by:	VDC	Northing:	7666738		RKL (ppm)	Analysis	
Method:	Backhoe						
Location:	Cambridge Bay Airport						
Work area:	APEC 1 - Screening Plant / Boneyard						
Depth (m)	Description				PHC	Monitoring well installed Riser: 0-0.9 m Screen: 0.9-1.7 m	
0-1.7	SANDY SILT and gravel, brown, stiff, dry; sampled at 0.9m (1-09-1M-1)			0			
EOT @ 1.7 m							

Date: 29-Aug-09		Easting: 493954		SAMPLES		NOTES/COMMENT
Logged by: VDC		Northing: 7666752		RK1 (ppm)	Analysis	
Method: Backhoe		Test Pit: 1-09-2M				
Location: Cambridge Bay Airport						
Work area: APEC 1 - Screening Plant / Boneyard						
Depth (m)	Description					
0.0-0.1	ORGANIC - black, fine			-	PHC, Metals, PCB/Pesticides, VOC, PAH, Glycol	Monitoring well installed Riser: 0-0.45 m Screen: 0.45-1.5 m
0.1-1.5	SILT - light brown, some gravel, trace sand, medium stiffness, moist; sampled between 0.5-1 m (1-09-2M-1)			0		
EOT @ 1.5 m - permafrost						

Date:	29-Aug-09	Easting:	493957	Test Pit: 1-09-3M	SAMPLES		NOTES/COMMENT
Logged by:	VDC	Northing:	7666771		RKI (ppm)	Analysis	
Method:	Backhoe						
Location:	Cambridge Bay Airport						
Work area:	APEC 1 - Screening Plant / Boneyard						
Depth (m)	Description				PHC, Metals	Monitoring well installed Riser: 0-0.45 m Screen: 0.45-1.3 m	
0.0-0.1	ORGANIC - black, fine			-			
0.1-1.3	SILT - light brown, trace sand, some gravel, medium stiffness, moist, water at bottom of test pit; sampled between 0.5-1 m (1-09-3M-1)			0			
	EOT @ 1.3 m - permafrost						

Date:	30-Aug-09	Easting:	493938	Test Pit: 1-09-4M	SAMPLES		NOTES/COMMENT
Logged by:	VDC	Northing:	7666751		RK1 (ppm)	Analysis	
Method:	Backhoe						
Location:	Cambridge Bay Airport						
Work area:	APEC 1 - Screening Plant / Boneyard						
Depth (m)	Description						
0.0-0.1	ORGANIC - black, fine, moist			-	1-09-4M-1 PHC, Metals	Monitoring well installed Riser: 0-0.6 m   Screen: 0.6-1.5 m	
0.1-1.5	SILT - light brown, some sand, some gravel & cobbles, medium stiff, moist; sampled between 0.5-1 m (1-09-4M-1 & 1-09-DUP-1)			0	1-09-DUP-1 PHC		
	EOT @ 1.5 m - permafrost						

Date:	29-Aug-09	Easting:	493935	Test Pit: 1-09-5M	SAMPLES		NOTES/COMMENT
Logged by:	VDC	Northing:	7666767		RK1 (ppm)	Analysis	
Method:	Backhoe						
Location:	Cambridge Bay Airport						
Work area:	APEC 1 - Screening Plant / Boneyard						
Depth (m)	Description						
0.0-0.1	ORGANIC - black, fine, moist			-	PHC, Metals, VOC	Monitoring well installed Riser: 0-0.35 m Screen: 0.35-1.2 m	
0.1-1.5	SILT - light brown, some sand, some gravel and cobbles, medium stiff, moist; sampled between 0.0-0.5 m (1-09-5M-1)			0			
	EOT @ 1.5 m - permafrost						

Date:	29-Aug-09	Easting:	493948	Test Pit: 1-09-6M	SAMPLES		NOTES/COMMENT
Logged by:	VDC	Northing:	7666759		RKI (ppm)	Analysis	
Method:	Backhoe						
Location:	Cambridge Bay Airport						
Work area:	APEC 1 - Screening Plant / Boneyard						
Depth (m)	Description						
0.0-0.1	ORGANIC			-	PHC, Metals, PCB,	Monitoring well installed	
0.1-1.3	SILT - light brown, some sand, some gravel & cobbles, medium stiff; sampled between 0.5-1 m (1-09-6M-1)			0	VOC, PAH, Sieve	Riser: 0-0.5 m	
	EOT @ 1.3 m					Screen: 0.5-1.3 m	

**Notes:**  
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EOT= End of Testpit  
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Date:	29-Aug-09	Easting:	493311	SAMPLES		NOTES/COMMENT
Logged by:	JK	Northing:	7666612	RKL (ppm)	Analysis	
Method:	Shovel & loader	Test Pit: 2-09-TP1				
Location:	Cambridge Bay Airport					
Work area:	APEC 2 - Shoreline Disposal Area					
Depth (m)	Description					
0.0-0.05	TOPSOIL - bushes, grasses, lichens, moss; SAND - greyish brown, medium-grained with some gravel			-	2-09-TP1-1 PCB	Organic layer at 0.4 m appears to be historical top of ground; Test pit was deepened by loader
0.05-0.4	SAND - dark grey/brown medium-grained with some silt and gravel; lenses of reddish-brown medium-grained sand; sample taken - 2-09-TP1-1			0	2-09-TP1-2 PHC, Metals, VOC	
0.4-0.5	ORGANIC - black sand with some gravel; sample taken - 2-09-TP1-2			0		
EOT @ 0.5 m						

Date: 29-Aug-09	Easting: 493293	SAMPLES		NOTES/COMMENT
Logged by: JK	Northing: 7666596	RKI (ppm)	Analysis	
Method: Shovel & loader	Test Pit: 2-09-TP2			
Location: Cambridge Bay Airport				
Work area: APEC 2 - Shoreline Disposal Area				
Depth (m)	Description			
0.0-0.05	TOPSOIL - bushes, grasses, lichens, moss	-	2-09-TP2-2	PHC, Metals, PCB/Pesticides, VOC, PAH
0.05-0.3	SAND - light grey, medium-grained with silt, some clay; sampled between 0.2-0.3 m (2-09-TP2-1)	0		
0.3-0.5	SAND - grey, fine-grained, with silt and clay, moist; sampled between 0.3-0.5 m (2-09-TP2-2)	0		
EOT @ 0.5 m				

Date: 29-Aug-09	Easting: 493281	SAMPLES		NOTES/COMMENT
Logged by: JK	Northing: 7666624	RKI (ppm)	Analysis	
Method: Shovel & loader	Test Pit: 2-09-TP3			
Location: Cambridge Bay Airport				
Work area: APEC 2 - Shoreline Disposal Area				
Depth (m)	Description			
0.0-0.1	SAND - light brown with gravel	-	2-09-TP3-1	PHC, Metals, PCB, VOC, PAH
0.1-0.7	SAND - lenses of light brown sand with gravel & grey clay with sand; samples taken from each lense between 0.1-0.7 m (2-09-TP3-1 & 2-09-TP3-2)	0		
EOT @ 0.7 m				

Date: 29-Aug-09	Easting: 493252	SAMPLES		NOTES/COMMENT
Logged by: JK	Northing: 7666600	RKI (ppm)	Analysis	
Method: Loader	Test Pit: 2-09-TP4			
Location: Cambridge Bay Airport				
Work area: APEC 2 - Shoreline Disposal Area				
Depth (m)	Description			
0.0-0.15	SILT/CLAY - light brown, trace fine sand, damp/moist, rootlets	-	PHC, Metals, VOC	Monitoring well installed w/ filter sock over screen Riser = 0.75 m Screen = 0.75 m
0.15-0.55	SAND - light brown, with gravel, trace clay, damp/moist	-		
0.55-0.9	GRAVEL - light brown, sandy, wet at 0.7 m; sampled (2-09-TP4)	0		
EOT @ 0.9 m				

Date: 29-Aug-09	Easting: 494885	SAMPLES		NOTES/COMMENT
Logged by: JS/ET	Northing: 7665891	RKI (ppm)	Analysis	
Method: Trowel	Test Pit: 2-09-TP5			
Location: Cambridge Bay Airport				
Work area: APEC 2 - Shoreline Disposal Area				
Depth (m)	Description			
0.0-0.4	SHALE - weathered chips and gravel, grey, dry	-	PHC, Metals, VOC	
0.4-0.6	SAND - silt and weathered shale, damp, moist, trace organic silt; sampled (2-09-TP5-1 & GR-2)	-		
EOT @ 0.6 m				

Date: 29-Aug-09	Easting: 494736	SAMPLES		NOTES/COMMENT
Logged by: JS/ET	Northing: 7666019	RKI (ppm)	Analysis	
Method: Trowel	Test Pit: 2-09-TP6			
Location: Cambridge Bay Airport				
Work area: APEC 2 - Shoreline Disposal Area				
Depth (m)	Description			
0.0-0.2	SHALE - weathered chips and gravel, grey, dry	-	PHC, Metals, VOC	
0.2-0.6	SAND - light brown with silt and weathered shale, damp/moist; sampled (2-09-TP6-1)	-		
EOT @ 0.6 m				

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Date: 29-Aug-09	Easting: 494623	SAMPLES		NOTES/COMMENT
Logged by: JS/ET	Northing: 7666122	RKI (ppm)	Analysis	
Method: Trowel	Test Pit: 2-09-TP7			
Location: Cambridge Bay Airport				
Work area: APEC 2 - Shoreline Disposal Area				
Depth (m)	Description			
0.0-0.2	SHALE - weathered chips and gravel, gret, dry	-	PHC, Metals, VOC	
0.2-0.4	SAND - light brown with silt and weathered shale, damp/moist; sampled (2-09-TP7-1)	-		
EOT @ 0.4 m				

Date: 29-Aug-09	Easting: 494467	SAMPLES		NOTES/COMMENT
Logged by: JS/ET	Northing: 7666255	RKI (ppm)	Analysis	
Method: Trowel	Test Pit: 2-09-TP8			
Location: Cambridge Bay Airport				
Work area: APEC 2 - Shoreline Disposal Area				
Depth (m)	Description			
0.0-0.3	SHALE - weathered with chips and gravel, grey, dry	-	PHC, Metals, Pesticides	
0.3-0.5	SHALE and trace sand, silt, damp/moist; sampled (2-09-TP8-1)	-		
EOT @ 0.5 m				

Date: 29-Aug-09	Easting: 494311	SAMPLES		NOTES/COMMENT
Logged by: JS/ET	Northing: 7666402	RKI (ppm)	Analysis	
Method: Trowel	Test Pit: 2-09-TP9			
Location: Cambridge Bay Airport				
Work area: APEC 2 - Shoreline Disposal Area				
Depth (m)	Description			
0.0-0.2	SHALE - weathered chips and gravel, grey, dry	-	PHC, Metals, PCBs, PAH	
0.2-0.4	SHALE chips and gravel with sand and silt, moist; sampled (2-09-TP9-1)	-		
EOT @ 0.4 m				

Date: 29-Aug-09	Easting: 494089	SAMPLES		NOTES/COMMENT	
Logged by: JS/ET	Northing: 7666523	Test Pit: 2-09-TP10	RKI (ppm)		Analysis
Method: Trowel					
Location: Cambridge Bay Airport					
Work area: APEC 2 - Shoreline Disposal Area					
Depth (m)	Description				
0.0-0.2	SHALE - weathered chips and gravel, grey, dry	-	PHC, Metals, VOC		
0.2-0.4	SILT - light brown, some sand, shale, damp/moist; sampled (2-09-TP10-1)	0			
EOT @ 0.4 m					

Date: 29-Aug-09	Easting: 493531	SAMPLES		NOTES/COMMENT
Logged by: VDC/ET	Northing: 7666776	RKI (ppm)	Analysis	
Method: Backhoe	Test Pit: 3-09-1			
Location: Cambridge Bay Airport				
Work area: APEC 3 - Former Fire Training Area				
Depth (m)	Description			
0.0-0.45	SAND and gravel, some silt, grey, loose, clay, boulder at 0.45 m; sampled (3-09-1-1 & 3-09-DUP-1)	0	PHC, VOC, PAH, PFOS	
EOT @ 0.45 m - boulder				

Date: 29-Aug-09	Easting: 493554	SAMPLES		NOTES/COMMENT
Logged by: VDC/ET	Northing: 7666787	RKI (ppm)	Analysis	
Method: Backhoe	Test Pit: 3-09-2			
Location: Cambridge Bay Airport				
Work area: APEC 3 - Former Fire Training Area				
Depth (m)	Description			
0.0-0.5	SAND and gravel, brown, some organics, silty, loose, moist; sampled (3-09-2-1)	0	3-09-2-1 Sieve	
0.5-1.5	SILT - some gravel, grey, stiff, dry; sampled (3-09-2-2)	0	3-09-2-2 PHC	
EOT @ 1.5 m				

Date: 29-Aug-09	Easting: 493560	SAMPLES		NOTES/COMMENT
Logged by: VDC/ET	Northing: 7666757	RKI (ppm)	Analysis	
Method: Backhoe	Test Pit: 3-09-3			
Location: Cambridge Bay Airport				
Work area: APEC 3 - Former Fire Training Area				
Depth (m)	Description			
0.0-0.5	SAND and gravel, brown, silt, some organics, loose, moist; sampled (3-09-3-1)	0	3-09-3-2	
0.5-1.5	SANDY SILT, brown, some gravel, stiff, dry; sampled (3-09-3-2)	0	PHC, PFOS	
EOT @ 1.5 m				

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Date: 29-Aug-09		Easting: 493567		SAMPLES		NOTES/COMMENT
Logged by: VDC/ET		Northing: 7666774		RK1 (ppm)	Analysis	
Method: Backhoe		Test Pit: 3-09-4M				
Location: Cambridge Bay Airport						
Work area: APEC 3 - Former Fire Training Area						
Depth (m)	Description					
0.0-0.5	SAND and gravel, brown, some organics, some silt, moist; sampled (3-09-4M-1)			15	3-09-4M-2	Monitoring well installed Riser: 0-0.6 m Screen: 0.6-2.1 m
0.5-2.0	SANDY SILT - grey, some gravel, moist, stiff, strong hydrocarbon odour and staining, sampled (3-09-4M-2)			5	PHC, Sieve 3-09-4M-3	
2.0-2.1	SANDY SILT - grey, some gravel, moist, stiff, strong hydrocarbon odour and staining, wet at 2 m; sampled (3-09-4M-3)			150	PHC, PCB, VOC, PAH, PFOS	
EOT @ 2.1 m						

Date: 29-Aug-09	Easting: 493599	SAMPLES		NOTES/COMMENT
Logged by: VDC/ET	Northing: 7666746	RK1 (ppm)	Analysis	
Method: Backhoe	Test Pit: 3-09-5M			
Location: Cambridge Bay Airport				
Work area: APEC 3 - Former Fire Training Area				
Depth (m)	Description			
0.0-0.5	SAND and gravel, brown, some organics, trace silt, loose, moist; sampled (3-09-5M-1)	0	3-09-5M-2 PHC	Monitoring well installed Riser: 0-0.6 m Screen: 0.6-2.1 m
0.5-1.0	SAND - medium-grained, light brown, some gravel, very loose, moist, slight hydrocarbon odour; sampled between 0.5-1.0 m (3-09-5M-2)	15		
1.0-2.1	CLAY/SILT - grey, some gravel, stiff, moist to wet at 1.5 m; sampled (3-09-5M-3)	0		
EOT @ 2.1 m - permafrost				

Date: 29-Aug-09	Easting: 493591	Test Pit: 3-09-6M	SAMPLES		NOTES/COMMENT
Logged by: VDC/ET	Northing: 7666730		RK1 (ppm)	Analysis	
Method: Backhoe					
Location: Cambridge Bay Airport					
Work area: APEC 3 - Former Fire Training Area					
Depth (m)	Description				
0.0-0.5	SAND and gravel, brown, loose, moist; sampled (3-09-6M-1)	0	3-09-6M-2	Monitoring well installed Riser: 0-0.3 m Screen: 0.3-1.8 m	
0.5-1.0	SILTY SAND - brown, gravel, loose, moist; sampled (3-09-6M-2)	0	PHC, PFOS		
1.0-2.0	SILTY SAND - brown, some gravel, loose, wet @ 1.5 m, hydrocarbon staining and odour @ 1.5 m; sampled (3-09-6M-3 & 3-09-DUP-2)	0	3-09-DUP-2 PHC		
EOT @ 2.0 m					

Date: 30-Aug-09	Easting: 495240	Test Pit: 4A-09-1M	SAMPLES		NOTES/COMMENT
Logged by: VDC/ET	Northing: 7666203		RK1 (ppm)	Analysis	
Method: Backhoe					
Location: Cambridge Bay Airport					
Work area: APEC 4 - Former F.H. Ross Tank Farm					
Depth (m)	Description				
0.0-1.6	SILTY SAND - brown, some gravel, moist, loose, hydrocarbon staining & odour; sampled at 0.5-1 m (4A-09-1M-1)	0		PHC	Monitoring well installed Riser: 0-0.85 m Screen: 0.85-1.6 m
EOT @ 1.6 m - permafrost					

Date: 30-Aug-09	Easting: 495243	Test Pit: 4A-09-2M	SAMPLES		NOTES/COMMENT
Logged by: VDC/ET	Northing: 7666189		RK1 (ppm)	Analysis	
Method: Backhoe					
Location: Cambridge Bay Airport					
Work area: APEC 4 - Former F.H. Ross Tank Farm					
Depth (m)	Description				
0.0-1.5	SILTY SAND and gravel, brown, loose, water @ 0.5 m, organic layer observed @ 0.5 m (0.1 m thick); sampled between 0.6-1 m (4A-09-2M-1 & 4A-09-DUP-1)	0		PHC	Monitoring well installed Riser: 0-0.75 m Screen: 0.75-1.5 m
EOT @ 1.5 m - permafrost					

Date: 30-Aug-09	Easting: 495230	Test Pit: 4A-09-3M	SAMPLES		NOTES/COMMENT
Logged by: VDC/ET	Northing: 7666211		RK1 (ppm)	Analysis	
Method: Backhoe					
Location: Cambridge Bay Airport					
Work area: APEC 4 - Former F.H. Ross Tank Farm					
Depth (m)	Description				
0.0-1.3	SILTY SAND and gravel, grey, moist, loose, hydrocarbon staining and colour from 0.5 m to 1.3 m; sampled between 0.5-1 m (4A-09-3M-1)	240		PHC, Metals, VOC, PAH	Monitoring well installed Riser: 0-0.5 m Screen: 0.5-1.3 m
EOT @ 1.3 m - permafrost					

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Date: 30-Aug-09	Easting: 495217	SAMPLES		NOTES/COMMENT
Logged by: VDC/ET	Northing: 7666198	RKI (ppm)	Analysis	
Method: Backhoe	Test Pit: 4A-09-4			
Location: Cambridge Bay Airport				
Work area: APEC 4 - Former F.H. Ross Tank Farm				
Depth (m)	Description			
0.0-2.0	SAND & GRAVEL, light brown, loose, some boulders, dry, strong hydrocarbon staining and odour below 0.5 m; sampled @ 2.0 m (4A-09-4-1)	1150	PHC, Metals, VOC, PAH	
EOT @ 2.0 m				

Date: 30-Aug-09	Easting: 495214	SAMPLES		NOTES/COMMENT
Logged by: VDC/ET	Northing: 7666186	RKI (ppm)	Analysis	
Method: Backhoe	Test Pit: 4A-09-5			
Location: Cambridge Bay Airport				
Work area: APEC 4 - Former F.H. Ross Tank Farm				
Depth (m)	Description			
0.0-1.5	SAND & GRAVEL - light brown, loose, dry, some boulders, moderate hydrocarbon staining between 0.5-1.5 m; sampled @ 1.5 m (4A-09-5-1)	420	PHC, Metals, VOC, PAH	
EOT @ 1.5 m				

Date: 30-Aug-09	Easting: 495235	SAMPLES		NOTES/COMMENT
Logged by: VDC/ET	Northing: 7666216	RKI (ppm)	Analysis	
Method: Backhoe	Test Pit: 4A-09-6			
Location: Cambridge Bay Airport				
Work area: APEC 4 - Former F.H. Ross Tank Farm				
Depth (m)	Description			
0.0-1.8	SAND & GRAVEL - light brown, some silt, some boulders, dry, hydrocarbon staining and odour @ 1 m; sampled between 0.5-1 m (4A-09-6-1) and between 1-1.5 m (4A-09-6-2)	0	4A-09-6-1 - PHC 4A-09-6-2 - PHC	
EOT @ 1.8 m				

Date: 30-Aug-09	Easting: 495245	SAMPLES		NOTES/COMMENT
Logged by: VDC/ET	Northing: 7666212	RKI (ppm)	Analysis	
Method: Backhoe	Test Pit: 4A-09-7			
Location: Cambridge Bay Airport				
Work area: APEC 4 - Former F.H. Ross Tank Farm				
Depth (m)	Description			
0.0-1.8	SAND & GRAVEL - light brown, some silt, medium loose, dry, thin organic layer between 1-1.1 m; sampled @ 1.5 m (4A-09-7-1)	0	PHC	
	EOT @ 1.8 m			

Date: 30-Aug-09	Easting: 495205	SAMPLES		NOTES/COMMENT
Logged by: VDC/ET	Northing: 7666175	RKI (ppm)	Analysis	
Method: Backhoe	Test Pit: 4A-09-8			
Location: Cambridge Bay Airport				
Work area: APEC 4 - Former F.H. Ross Tank Farm				
Depth (m)	Description			
0.0-1.7	SAND & GRAVEL - brown, some silt, some boulders, loose, dry, hydrocarbon staining and odour below 1 m; sampled between 1-1.7 m (4A-09-8-1)	60	PHC	
EOT @ 1.7 m				

Date:	30-Aug-09	Easting:	495335	SAMPLES		NOTES/COMMENT
Logged by:	JS/JK	Northing:	7666410	RKI (ppm)	Analysis	
Method:	Backhoe	Test Pit: 5-09-TP1				
Location:	Cambridge Bay Airport					
Work area:	APEC 5 - Former AST north of maintenance building					
Depth (m)	Description					
0.0-0.2	SANDY GRAVEL - trace clay, light grey/brown, dry, compacted			-	5-09-TP1-1 PHC, Metals, VOC, PAH	
0.2-0.5	SANDY GRAVEL - light brown, dry, with cobbles and shale fragments; sampled (5-09-TP1-1)			0		
0.5-0.6	ORGANICS - dark brown, dry; sampled (5-09-TP1-2)			0		
0.6-1.4	CLAY - grey, damp/moist, with coarse sand and cobbles; sampled (5-09-TP1-3)			0		
EOT @ 1.4 m						

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Date:	30-Aug-09	Easting:	495344	SAMPLES		NOTES/COMMENT
Logged by:	JS/JK	Northing:	7666402	5-09-TP2	Analysis	
Method:	Backhoe					
Location:	Cambridge Bay Airport					
Work area:	APEC 5 - Former AST north of maintenance building					
Depth (m)	Description			OVM (ppm)		
0.0-0.2	SANDY GRAVEL - trace clay, light grey/brown, dry, compacted			-	5-09-TP2-1 PHC, Metals, VOC, PAH	
0.2-0.5	SANDY GRAVEL - light brown with cobbles and shale fragments; sampled (5-09-TP2-1)			0		
0.5-0.7	Lenses of organics, dark brown, dry; sampled (5-09-TP2-2)			5		
0.7-1.1	CLAY - grey, damp, with coarse sand and cobbles; sampled (5-09-TP2-3)			30		
1.1-1.5	COBBLES/BEDROCK - grey, dry, with sand					
EOT @ 1.5 m						

Date:	30-Aug-09	Easting:	495352	SAMPLES		NOTES/COMMENT
Logged by:	JS/JK	Northing:	7666408	OVM (ppm)	Analysis	
Method:	Backhoe	Test Pit: 5-09-TP3				
Location:	Cambridge Bay Airport					Monitoring well installed Riser: 0-0.25 m Screen: 0.25-2.06 m
Work area:	APEC 5 - Former AST north of maintenance building					
Depth (m)	Description					
0.0-0.2	SANDY GRAVEL - light grey/brown, trace clay, dry, compacted			-	5-09-TP3-1 PHC, Metals, VOC, PAH	
0.2-0.5	SANDY GRAVEL - light brown, dry, with cobbles and shale fragments, hydrocarbon odour; sampled (5-09-TP3-1)			0		
0.5-0.6	ORGANICS - dark brown; sampled (5-09-TP3-2)			0		
0.6-1.5	CLAY - light grey/brown, damp, with coarse sand and cobbles; sampled (5-09-TP3-3)			0		
1.5-2.2	SHALE - grey, weathered with some clay and trace coarse sand, dry			-		
EOT @ 2.2 m						

Date:	30-Aug-09	Easting:	495343	SAMPLES		NOTES/COMMENT
Logged by:	JS/JK	Northing:	7666417	OVM (ppm)	Analysis	
Method:	Backhoe	Test Pit: 5-09-TP4				
Location:	Cambridge Bay Airport					
Work area:	APEC 5 - Former AST north of maintenance building					
Depth (m)	Description					
0.0-0.3	SANDY GRAVEL - light grey/brown, trace clay, dry, compacted			-	5-09-TP4-3 PHC, Metals, VOC, PAH	
0.3-1.0	SANDY GRAVEL - light brown, with cobbles and shale fragments, dry; sampled (5-09-TP4-1)			5		
1.0-1.2	ORGANICS - dark brown; sampled (5-09-TP4-2)			10		
1.2-1.8	SILT TILL - light brown, travel clay, gravel and sand, damp; sampled (5-09-TP4-3)			-		
1.8-2.2	SHALE - grey, weathered shale and bedrock, dry with trace clay and coarse sand			-		
EOT @ 2.2 m						

Date:	30-Aug-09	Easting:	495305	SAMPLES		NOTES/COMMENT
Logged by:	JS/JK	Northing:	7666327	OVM (ppm)	Analysis	
Method:	Backhoe	Test Pit: 6-09-TP1				
Location:	Cambridge Bay Airport					
Work area:	APEC 6 - Beside maintenance building					
Depth (m)	Description					
0.0-0.1	GRAVELLY SAND with rootlets, light grey/brown; sampled (6-09-TP1-1)			0	6-09-TP1-3	Monitoring well installed Riser: 0-0.5 m Screen: 0.5-1.876 m
0.1-0.2	TOPSOIL - organic silt, dark brown, damp, rootlets; sampled (6-09-TP1-2)			0	PHC, Metals,	
0.2-1.5	SANDY SILT with fractured shale and boulders, wet at 0.8 m (6-09-TP1-3)			0	VOC, PAH	
EOT @ 1.5 m						

Date:	30-Aug-09	Easting:	493780	SAMPLES		NOTES/COMMENT
Logged by:	JS/JK	Northing:	7667081	OVM (ppm)	Analysis	
Method:	Backhoe	Test Pit: BG-1				
Location:	Cambridge Bay Airport					
Work area:	Approx. 1 km west of airport terminal building on main road					
Depth (m)	Description					
0.0-0.15	PEAT - dark brown and fibrous, spongy, damp, cold			-	Metals	
0.15-0.6	SANDY SILT - light brown, with gravel and weathered shale at 0.5 m; sampled at 0.3 m (BG-1)			-		
EOT @ 0.6 m						


Date:	30-Aug-09	Easting:	493497	SAMPLES		NOTES/COMMENT
Logged by:	JS/JK	Northing:	7667026	OVM (ppm)	Analysis	
Method:	Backhoe	Test Pit: BG-2				
Location:	Cambridge Bay Airport					
Work area:	Approx. 2 km west of airport terminal building, 500 m west of end of runway					
Depth (m)	Description					
0.0-0.1	PEAT - dark brown, fibrous, spongy, damp			-	Metals	
0.1-0.5	SAND - light brown, medium-grained with gravel and weathered shale below 0.45 m; sampled @ 0.4 cm (BG-2); duplicate sample (BG-3)			-		
EOT @ 0.5 m						

**Notes:**  
GR= Grab Sample  
EOT= End of Testpit  
OVM = Organic Vapour Measurement

## **APPENDIX D**


### **Site Photos**


APEC 1 – Screening Plant; Phase I/II ESA Cambridge Bay, Nunavut		1748-0901
<b>Photo ID:</b> 1		
<b>Date:</b> August 29, 2009		
<b>Direction:</b> N		
<b>Description:</b> Excavation of test pit 1-09-2M in APEC 1		

APEC 1 – Screening Plant; Phase I/II ESA Cambridge Bay, Nunavut		1748-0901
<b>Photo ID:</b> 2		
<b>Date:</b> August 29, 2009		
<b>Direction:</b> NE		
<b>Description:</b> Monitoring wells 1-09-2M and 1-093M at APEC 1		



## PHOTOGRAPHIC LOG

APEC 2 – Shoreline Disposal Area; Phase I/II ESA Cambridge Bay, Nunavut		1748-0901
Photo ID: 3		
Date: September 2, 2009		
Direction: S		
<p><b>Description:</b> Location of test pit 2-09TP-5 at APEC 2.</p>		

APEC 2 – Shoreline Disposal Area; Phase I/II ESA Cambridge Bay, Nunavut		1748-0901
Photo ID: 4		
Date: September 2, 2009		
Direction: S		
<p><b>Description:</b> Location of test pit 2-09TP-5 at APEC 2.</p>		


## PHOTOGRAPHIC LOG

APEC 3 – Former Fire Training Area; Phase I/II ESA Cambridge Bay, Nunavut		1748-0901
Photo ID: 5		
Date: August 29, 2009		
Direction: S		
<b>Description:</b> Excavation of test pit 3-09-2 at APEC 3		

APEC 3 – Former Fire Training Area; Phase I/II ESA Cambridge Bay, Nunavut		1748-0901
Photo ID: 6		
Date: August 29, 2009		
Direction: NE		
<b>Description:</b> Installation of monitoring well 3-09-4M at APEC 3		




## PHOTOGRAPHIC LOG


APEC 4 – Former F.H. Ross Tank Farm; Phase I/II ESA Cambridge Bay, Nunavut		1748-0901
Photo ID: 7		
Date: August 30, 2009		
Direction: N		
<p><b>Description:</b> View of APEC 4, with the airport terminal building in the background</p>		

APEC 4 – Former F.H. Ross Tank Farm; Phase I/II ESA Cambridge Bay, Nunavut		1748-0901
Photo ID: 8		
Date: August 30, 2009		
Direction: N		
<p><b>Description:</b> Excavation of test pit 4-09-7 at APEC 4</p>		



## PHOTOGRAPHIC LOG

APEC 5 – Former AST north of T-5; Phase I/II ESA Cambridge Bay, Nunavut		1748-0901
Photo ID: 9		
Date: August 30, 2009		
Direction: NE		
<b>Description:</b> Monitoring well 5-09-MW3 at APEC 5		

Background Sampling ; Phase I/II ESA Cambridge Bay, Nunavut		1748-0901
Photo ID: 10		
Date: August 30, 2009		
Direction: E		
<b>Description:</b> Test pit at background location BG-1		

**APPENDIX G**  
**Analytical Results**

# Cambridge Bay Phase II/III Sampling Plan

## SOIL SAMPLING

	Sample Date	Station ID	Easting (UTM)	Northing (UTM)	Media	On hold	PHC	PCB	Metals	VOC	PAH	Pest.	Glycol	TOC	Sieve
APEC 1 - Screening Plant / Boneyard	29-Aug-09	1-09-1M-1	493936	7666738	SOIL		*								
	29-Aug-09	1-09-2M-1	493954	7666752	SOIL		*	*	*	*	*	*	*		
	29-Aug-09	1-09-3M-1	493957	7666771	SOIL		*		*						
	30-Aug-09	1-09-4M-1	493938	7666751	SOIL		*		*						
	30-Aug-09	1-09-5M-1	493935	7666767	SOIL		*		*	*					
	30-Aug-09	1-09-6M-1	493948	7666759	SOIL		*	*	*	*	*				*
APEC 2 - Shoreline Disposal Area	29-Aug-09	2-09-TP1-1	493311	7666612	SOIL			*							
	29-Aug-09	2-09-TP1-2	493311	7666612	SOIL		*		*	*					
	29-Aug-09	2-09-TP2-1	493293	7666596	SOIL	*									
	29-Aug-09	2-09-TP2-2	493293	7666596	SOIL		*		*	*	*	*			
	29-Aug-09	2-09-TP3-1	493281	7666624	SOIL		*		*	*	*				
	29-Aug-09	2-09-TP3-2	493281	7666624	SOIL	*									
	29-Aug-09	2-09-TP4	493252	7666600	SOIL		*		*	*					
	29-Aug-09	2-09-TP5-1	494885	7665891	SOIL		*		*	*					
	29-Aug-09	GR-2	494885	7665891	SOIL		*		*	*					
	29-Aug-09	2-09-TP6-1	494736	7666019	SOIL		*		*	*					
	29-Aug-09	2-09-TP7-1	494623	7666122	SOIL		*		*	*					
APEC 3 - Former Fire Fighting Training Area	29-Aug-09	2-09-TP8-1	494467	7666255	SOIL		*		*			*			
	29-Aug-09	2-09-TP9-1	494311	7666402	SOIL		*	*	*		*				
	29-Aug-09	2-09-TP10-1	494089	7666523	SOIL		*		*	*					
	29-Aug-09	3-09-1-1	493531	7666776	SOIL		*			*	*				
	29-Aug-09	3-09-2-1	493554	7666787	SOIL										*
	29-Aug-09	3-09-2-2	493554	7666787	SOIL		*								
	29-Aug-09	3-09-3-1	493560	7666757	SOIL	*									
	29-Aug-09	3-09-3-2	493560	7666757	SOIL		*								
	29-Aug-09	3-09-4M-1	493567	7666774	SOIL	*									
	29-Aug-09	3-09-4M-2	493567	7666774	SOIL		*								*
	29-Aug-09	3-09-4M-3	493567	7666774	SOIL		*	*		*	*				
	29-Aug-09	3-09-DUP-1	493531	7666776	SOIL		*	*		*	*				
	29-Aug-09	3-09-5M-1	493599	7666746	SOIL	*									
	29-Aug-09	3-09-5M-2	493599	7666746	SOIL		*								
APEC 4 - Former F.H. Ross Tank Site	29-Aug-09	3-09-5M-3	493599	7666746	SOIL	*									
	29-Aug-09	3-09-6M-1	493591	7666730	SOIL	*									
	29-Aug-09	3-09-6M-2	493591	7666730	SOIL	*									
	29-Aug-09	3-09-6M-3	493591	7666730	SOIL		*								
	29-Aug-09	3-09-DUP-2	493591	7666730	SOIL		*								
	30-Aug-09	4A-09-1M-1	495240	7666203	SOIL		*								
	30-Aug-09	4A-09-2M-1	495243	7666189	SOIL		*								
	30-Aug-09	4A-09-3M-1	495230	7666211	SOIL		*		*	*	*				
	30-Aug-09	4A-09-DUP-1	495243	7666189	SOIL		*								
APEC 5 - Former AST	30-Aug-09	4A-09-4-1	495217	7666198	SOIL		*		*	*	*				
	30-Aug-09	4A-09-5-1	495214	7666186	SOIL		*		*	*	*				
	30-Aug-09	4A-09-6-1	495235	7666216	SOIL		*								
	30-Aug-09	4A-09-6-2	495235	7666216	SOIL		*								
	30-Aug-09	4A-09-7-1	495245	7666212	SOIL		*								
	30-Aug-09	4A-09-8-1	495205	7666175	SOIL		*								
	30-Aug-09	5-09-TP1-1	495335	7666410	SOIL		*		*	*	*				
	30-Aug-09	5-09-TP1-2	495335	7666410	SOIL	*									
	30-Aug-09	5-09-TP1-3	495335	7666410	SOIL	*									
	30-Aug-09	5-09-TP2-1	495344	7666402	SOIL		*		*	*	*				
	30-Aug-09	5-09-TP2-2	495344	7666402	SOIL	*									
	30-Aug-09	5-09-TP2-3	495344	7666402	SOIL	*									
	30-Aug-09	5-09-TP3-1	495352	7666408	SOIL		*		*	*	*				
APEC 6 - Building T-4	30-Aug-09	5-09-TP3-2	495352	7666408	SOIL	*									
	30-Aug-09	5-09-TP3-3	495352	7666408	SOIL	*									
	30-Aug-09	5-09-TP3-4	495352	7666408	SOIL	*									
	30-Aug-09	5-09-TP4-1	495343	7666417	SOIL	*									
	30-Aug-09	5-09-TP4-2	495343	7666417	SOIL	*									
	30-Aug-09	5-09-TP4-3	495343	7666417	SOIL		*		*	*	*				
	30-Aug-09	6-09-TP1-1	495305	7666327	SOIL	*									
	30-Aug-09	6-09-TP1-2	495305	7666327	SOIL	*									
	30-Aug-09	6-09-TP1-3	495305	7666327	SOIL		*		*	*	*				

# Cambridge Bay Phase II/III Sampling Plan

	Sample Date	Station ID	Easting (UTM)	Northing (UTM)	Media	On hold	PHC	PCB	Metals	VOC	PAH	Pest.	Glycol	TOC	Sieve
Vegetation	02-Sep-09	1-09-VG1	493943	7666744	VG				*						
	02-Sep-09	1-09-VG2	493962	7666763	VG				*						
	02-Sep-09	2-09-VG1	493305	7666612	VG				*						
	02-Sep-09	2-09-VG2	493300	7666591	VG				*						
	02-Sep-09	2-09-VG3	493300	7666591	VG				*						
	02-Sep-09	3-09-VG1	493544	7666775	VG				*						
	02-Sep-09	3-09-VG2	493587	7666769	VG				*						
Background Samples	30-Aug-09	BG-1	493780	7667081	SOIL				*						
	30-Aug-09	BG-2	493497	7667026	SOIL				*						
	30-Aug-09	BG-3	493497	7667026	SOIL				*						
	02-Sep-09	BG-VG1	493782	7667103	VG				*						

## GROUNDWATER SAMPLING

	Sample Date	Station ID	Easting (UTM)	Northing (UTM)	Media	On hold	PHC	PCB	Metals	Hg	VOC	PAH	Pest.	Glycol
APEC 1 - Screening Plant / Boneyard	01-Sep-09	1-09-1M	493936	7666738	GW		*		*	*	*			
	01-Sep-09	1-09-2M	493954	7666752	GW		*		*	*	*			
	01-Sep-09	1-09-3M	493957	7666771	GW		*		*	*	*		*	
	-	1-09-4M	493938	7666751	GW		no GW sample - not enough water in well							
	01-Sep-09	1-09-5M	493935	7666767	GW		*		*	*	*	*		*
	01-Sep-09	FR-2	493935	7666767	GW		*		*	*	*	*		*
	01-Sep-09	1-09-6M	493948	7666759	GW		*	*	*	*	*			
	01-Sep-09	FR-3	493948	7666759	GW		*	*	*	*	*			
APEC 2 - Shoreline	02-Sep-09	2-09-MW4	493252	7666600	GW		*	*	*	*	*	*	*	*
APEC 3 - Fire Fighting Training Area	02-Sep-09	3-09-4M	493567	7666774	GW		*		*	*	*	*		
	02-Sep-09	3-09-5M	493599	7666746	GW		*		*	*	*	*		
	02-Sep-09	3-09-6M	493591	7666730	GW		*		*	*	*	*		
APEC 4 - Former F.H. Ross Tank Site	02-Sep-09	4-09-SW1	495219	7666151	SW		*		*	*	*	*		
	02-Sep-09	4-09-1M	495240	7666203	GW		*		*	*	*	*		
	02-Sep-09	4-09-2M	495243	7666189	GW		*		*	*	*	*		
	02-Sep-09	4-09-3M	495230	7666211	GW		*		*	*	*	*		
APEC 5 - Former AST	01-Sep-09	5-09-MW3	495352	7666408	GW		*		*	*	*	*		
APEC 6 - Building T-4	01-Sep-09	6-09-MW1	495305	7666327	GW		*		*	*	*	*		
	01-Sep-09	FR-1	495305	7666327	GW		*		*	*	*	*		

Sampling Depths  
Cambridge Bay, Nunavut

**SOIL**

Station ID	Sample ID	Dup ID	Depth Top (m)	Depth Bottom (m)
1-09-1M	1-09-1M-1		0.8	1
1-09-2M	1-09-2M-1		0.5	1
1-09-3M	1-09-3M-1		0.5	1
1-09-4M	1-09-4M-1	1-09-DUP-1	0.5	1
1-09-5M	1-09-5M-1		0	0.5
1-09-6M	1-09-6M-1		0.5	1
2-09-TP1	2-09-TP1-1		0.05	0.4
2-09-TP1	2-09-TP1-2		0.4	0.5
2-09-TP2	2-09-TP2-1		0.2	0.3
2-09-TP2	2-09-TP2-2		0.3	0.5
2-09-TP3	2-09-TP3-1		0.1	0.7
2-09-TP3	2-09-TP3-2		0.1	0.7
2-09-TP4	2-09-TP4-1		0.15	0.55
2-09-TP4	2-09-TP4-2		0.55	0.9
2-09-TP5	2-09-TP5-1	GR-2	0.4	0.6
2-09-TP6	2-09-TP6-1		0.2	0.6
2-09-TP7	2-09-TP7-1		0.2	0.4
2-09-TP8	2-09-TP8-1		0.3	0.5
2-09-TP9	2-09-TP9-1		0.2	0.4
2-09-TP10	2-09-TP10-1		0.2	0.4
3-09-1	3-09-1-1	3-09-DUP-1	0	0.45
3-09-2	3-09-2-1		0	0.5
3-09-2	3-09-2-2		0.5	1.5
3-09-3	3-09-3-1		0	0.5
3-09-3	3-09-3-2		0.5	1.5
3-09-4M	3-09-4M-1		0	0.5
3-09-4M	3-09-4M-2		0.5	2
3-09-4M	3-09-4M-3		2	2.1
3-09-5M	3-09-5M-1		0	0.5
3-09-5M	3-09-5M-2		0.5	1
3-09-5M	3-09-5M-3		1	2.1
3-09-6M	3-09-6M-1		0	0.5
3-09-6M	3-09-6M-2		0.5	1
3-09-6M	3-09-6M-3		1	2
4A-09-1M	4A-09-1M-1		0.5	1
4A-09-2M	4A-09-2M-1		0.6	1
4A-09-3M	4A-09-3M-1		0.5	1
4A-09-4	4A-09-4-1		1.9	2
4A-09-5	4A-09-5-1		1.3	1.5
4A-09-6	4A-09-6-1		0.5	1
4A-09-6	4A-09-6-2		1	1.5
4A-09-7	4A-09-7-1		1.3	1.5
4A-09-8	4A-09-8-1		1	1.7
5-09-TP1	5-09-TP1-1		0.2	0.5
5-09-TP1	5-09-TP1-2		0.5	0.6
5-09-TP1	5-09-TP1-3		0.6	1.4
5-09-TP2	5-09-TP2-1		0.2	0.5
5-09-TP2	5-09-TP2-2		0.5	0.7
5-09-TP2	5-09-TP2-3		0.7	1.1
5-09-TP3	5-09-TP3-1		0.2	0.5
5-09-TP3	5-09-TP3-2		0.5	0.6
5-09-TP3	5-09-TP3-3		0.6	1.5
5-09-TP4	5-09-TP4-1		0.3	1.2
5-09-TP4	5-09-TP4-2		1.2	1.8
6-09-TP1	6-09-TP1-1		0	0.1
6-09-TP1	6-09-TP1-2		0.1	0.2
6-09-TP1	6-09-TP1-3		0.2	1.5
BG-1	BG-1		0.15	0.6
BG-2	BG-2	BG-3	0.3	0.5

Sampling Depths  
Cambridge Bay, Nunavut

**WATER**

Station ID	Sample ID	Dup ID	Depth Top (m)	Depth Bottom (m)
1-09-1M	1-09-1M		1.476	2.237
1-09-2M	1-09-2M		1.308	2.006
1-09-3M	1-09-3M		1.117	1.967
1-09-4M	1-09-4M		0.688	1.86
1-09-5M	1-09-5M	FR-2	0.795	1.531
1-09-6M	1-09-6M	FR-3	1.115	1.835
2-09-MW4	2-09-MW4		1.056	1.506
3-09-4M	3-09-4M		1.864	2.812
3-09-5M	3-09-5M		1.946	2.641
3-09-6M	3-09-6M		1.954	2.506
4A-09-1M	4A-09-1M		1.152	2.24
4A-09-2M	4A-09-2M		0.726	2.129
4A-09-3M	4A-09-3M		0.911	2.035
4-09-SW1	4-09-SW1		0	0.3
5-09-MW3	5-09-MW3		1.63	2.06
6-09-MW1	6-09-MW1	FR-1	0.712	1.876

**VEGETATION**

Station ID	Sample ID	Dup ID	Depth Top (m)	Depth Bottom (m)
1-09-VG1	1-09-VG1		0	0
1-09-VG2	1-09-VG2		0	0
2-09-VG1	2-09-VG1		0	0
2-09-VG2	2-09-VG2	2-09-VG3	0	0
3-09-VG1	3-09-VG1		0	0
3-09-VG2	3-09-VG2		0	0

Table 1-1: APEC 1 Soil Analysis for Polycyclic Aromatic Hydrocarbons (PAHs)  
Cambridge Bay Airport, Cambridge Bay, Nunavut

Area ID	CCME Soil (Residential)	CCME Soil (Commercial)	APEC 1	APEC 1
Station ID			1-09-2M	1-09-6M
Field label			1-09-2M-1	1-09-6M-1
Duplicate ID				
Date			29/Aug/09	30/Aug/09
Lab report ID			A947822	A947822
Depth (m)			0.5 – 1	0.5 – 1
Acenaphthene	-	-	<0.01	<0.01
Acenaphthylene	-	-	<0.01	<0.01
Anthracene	-	-	<0.01	<0.01
Benzo(a)anthracene	1	10	<0.01	<0.01
Benzo(a)pyrene	0.7	0.7	<0.01	<0.01
Benzo(b+j)fluoranthene	-	-	<0.01	<0.01
Benzo(g,h,i)perylene	-	-	<0.02	<0.02
Benzo(k)fluoranthene	1	10	<0.01	<0.01
Chrysene	-	-	<0.01	<0.01
Dibenz(a,h)anthracene	1	10	<0.02	<0.02
Fluoranthene	-	-	<0.01	<0.01
Fluorene	-	-	<0.01	<0.01
High molecular weight PAHs	-	-	<0.02	<0.02
Indeno(1,2,3-cd)pyrene	1	10	<0.02	<0.02
Low molecular weight PAHs	-	-	<0.01	<0.01
2-Methylnaphthalene	-	-	<0.01	<0.01
Naphthalene	0.6	22	<0.01	<0.01
Phenanthrene	5	50	<0.01	<0.01
Pyrene	10	100	<0.01	<0.01
Total PAHs	-	-	<0.02	<0.02

#### Notes

All units in ug/g, unless otherwise noted.

" - " indicates that there is no applicable regulation or analyses were not performed.

Red cells indicates parameter exceeds CCME Canadian Environmental Quality Guidelines for commercial land use (coarse soil).

Residential land use guidelines for coarse soil are shown for comparison purposes only.



Table 1-2: APEC 1 Soil Analysis for Petroleum Hydrocarbons (PHCs)  
Cambridge Bay Airport, Cambridge Bay, Nunavut

Area ID	CCME Soil (Residential)	CCME Soil (Commercial)	APEC 1	APEC 1	APEC 1	APEC 1	APEC 1	Relative Percent Difference (%)	APEC 1	APEC 1
Station ID			1-09-1M	1-09-2M	1-09-3M	1-09-4M	1-09-4M		1-09-5M	1-09-6M
Field label			1-09-1M-1	1-09-2M-1	1-09-3M-1	1-09-4M-1	1-09-DUP-1		1-09-5M-1	1-09-6M-1
Duplicate ID						1-09-DUP-1	1-09-4M-1			
Date			29/Aug/09	29/Aug/09	29/Aug/09	30/Aug/09	30/Aug/09		30/Aug/09	30/Aug/09
Lab report ID			A947822	A947822	A947822	A947822	A947822		A947822	A947822
Depth (m)			0.8 – 1	0.5 – 1	0.5 – 1	0.5 – 1	0.5 – 1		0 – 0.5	0.5 – 1
Moisture content	-	-	7.4	9.1	9.5	11.0	11.0	0.0	8.6	10.0
Benzene	0.03	0.03	<0.005	<0.005	<0.005	<0.005	<0.005	NC	<0.005	<0.005
Ethylbenzene	0.082	0.082	<0.01	<0.01	<0.01	<0.01	<0.01	NC	<0.01	<0.01
Toluene	0.37	0.37	<0.05	<0.03	<0.05	<0.05	<0.05	NC	<0.03	<0.03
m+p-Xylene	-	-	<0.1	<0.1	<0.1	<0.1	<0.1	NC	<0.1	<0.1
o-Xylene	-	-	<0.1	<0.1	<0.1	<0.1	<0.1	NC	<0.1	<0.1
Xylenes (total)	11	11	<0.1	<0.1	<0.1	<0.1	<0.1	NC	<0.1	<0.1
F1 (C6-C10)	30*	320	-	<10	-	-	-	NC	<10	<10
F1 (C6-C10) minus BTEX	30*	320	<10	<10	<10	<10	<10	NC	<10	<10
F2 (C10-C16)	150*	260	<10	<10	<10	<10	<10	NC	<10	<10
F3 (C16-C34)	300*	1700	<10	<10	<10	<10	<10	NC	10	<10
F4 (C34-C50)	2800*	3300	<10	<10	<10	<10	<10	NC	<10	<10
Reached Baseline at C50	-	-	Yes	Yes	Yes	Yes	Yes	NC	Yes	Yes

#### Notes

All units in ug/g, unless otherwise noted.

" - " indicates that there is no applicable regulation or analyses were not performed.

Red cells indicates parameter exceeds CCME Canadian Environmental Quality Guidelines for commercial land use (coarse soil).

" \* " indicates that the guideline is CCME Canada-Wide Standards for Petroleum Hydrocarbons (CWS for PHC)

Residential land use guidelines for coarse soil are shown for comparison purposes only.

"NC" indicates that the relative percent difference (%) was not calculated for this parameter

Table 1-3: APEC 1 Soil Analysis for Volatile Organic Compounds (VOCs)  
Cambridge Bay Airport, Cambridge Bay, Nunavut

Area ID	CCME Soil (Residential)	CCME Soil (Commercial)	APEC 1	APEC 1	APEC 1	APEC 1	APEC 1	Relative Percent Difference (%)	APEC 1	APEC 1
Station ID			1-09-1M	1-09-2M	1-09-3M	1-09-4M	1-09-4M		1-09-5M	1-09-6M
Field label			1-09-1M-1	1-09-2M-1	1-09-3M-1	1-09-4M-1	1-09-DUP-1		1-09-5M-1	1-09-6M-1
Duplicate ID							1-09-DUP-1			
Date			29/Aug/09	29/Aug/09	29/Aug/09	30/Aug/09	30/Aug/09		30/Aug/09	30/Aug/09
Lab report ID			A947822	A947822	A947822	A947822	A947822		A947822	A947822
Depth (m)			0.8 – 1	0.5 – 1	0.5 – 1	0.5 – 1	0.5 – 1		0 – 0.5	0.5 – 1
Benzene	0.03	0.03	<0.005	<0.005	<0.005	<0.005	<0.005	NC	<0.005	<0.005
Bromodichloromethane	-	-	-	<0.05	-	-	-	NC	<0.05	<0.05
Bromoform	-	-	-	<0.05	-	-	-	NC	<0.05	<0.05
Bromomethane	-	-	-	<0.3	-	-	-	NC	<0.3	<0.3
Carbon tetrachloride	5	50	-	<0.03	-	-	-	NC	<0.03	<0.03
Chlorobenzene	1	10	-	<0.03	-	-	-	NC	<0.03	<0.03
Chlorodibromomethane	-	-	-	<0.05	-	-	-	NC	<0.05	<0.05
Chloroethane	-	-	-	<0.1	-	-	-	NC	<0.1	<0.1
Chloroform	5	50	-	<0.05	-	-	-	NC	<0.05	<0.05
Chloromethane	-	-	-	<0.1	-	-	-	NC	<0.1	<0.1
1,2-Dichlorobenzene	1	10	-	<0.03	-	-	-	NC	<0.03	<0.03
1,3-Dichlorobenzene	1	10	-	<0.03	-	-	-	NC	<0.03	<0.03
1,4-Dichlorobenzene	1	10	-	<0.03	-	-	-	NC	<0.03	<0.03
1,1-Dichloroethane	5	50	-	<0.03	-	-	-	NC	<0.03	<0.03
1,2-Dichloroethane	5	50	-	<0.03	-	-	-	NC	<0.03	<0.03
1,1-Dichloroethene	5	50	-	<0.03	-	-	-	NC	<0.03	<0.03
cis-1,2-Dichloroethene	-	-	-	<0.03	-	-	-	NC	<0.03	<0.03
trans-1,2-Dichloroethene	-	-	-	<0.03	-	-	-	NC	<0.03	<0.03
Dichloromethane	5	50	-	<0.1	-	-	-	NC	<0.1	<0.1
1,2-Dichloropropane	5	50	-	<0.03	-	-	-	NC	<0.03	<0.03
cis-1,3-Dichloropropene	-	-	-	<0.05	-	-	-	NC	<0.05	<0.05
trans-1,3-Dichloropropene	-	-	-	<0.05	-	-	-	NC	<0.05	<0.05
Ethylbenzene	0.082	0.082	<0.01	<0.01	<0.01	<0.01	<0.01	NC	<0.01	<0.01
Ethylene dibromide	-	-	-	<0.03	-	-	-	NC	<0.03	<0.03
Methyl-tert-butylether	-	-	<0.1	<0.1	<0.1	<0.1	<0.1	NC	<0.1	<0.1
Styrene	5	50	<0.1	<0.1	<0.1	<0.1	<0.1	NC	<0.1	<0.1
1,1,1,2-Tetrachloroethane	-	-	-	<0.03	-	-	-	NC	<0.03	<0.03
1,1,2,2-Tetrachloroethane	5	50	-	<0.03	-	-	-	NC	<0.03	<0.03
Tetrachloroethene	5	50	-	<0.03	-	-	-	NC	<0.03	<0.03
Toluene	0.37	0.37	<0.05	<0.03	<0.05	<0.05	<0.05	NC	<0.03	<0.03
1,1,1-Trichloroethane	5	50	-	<0.03	-	-	-	NC	<0.03	<0.03
1,1,2-Trichloroethane	5	50	-	<0.03	-	-	-	NC	<0.03	<0.03
Trichloroethene	5	50	-	<0.01	-	-	-	NC	<0.01	<0.01
Trichlorofluoromethane	-	-	-	<0.2	-	-	-	NC	<0.2	<0.2
Vinyl chloride	-	-	-	<0.08	-	-	-	NC	<0.08	<0.08
m+p-Xylene	-	-	<0.1	<0.1	<0.1	<0.1	<0.1	NC	<0.1	<0.1
o-Xylene	-	-	<0.1	<0.1	<0.1	<0.1	<0.1	NC	<0.1	<0.1
Xylenes (total)	11	11	<0.1	<0.1	<0.1	<0.1	<0.1	NC	<0.1	<0.1

#### Notes

All units in ug/g, unless otherwise noted.

" - " indicates that there is no applicable regulation or analyses were not performed.

Red cells indicates parameter exceeds CCME Canadian Environmental Quality Guidelines for commercial land use (coarse soil).

Residential land use guidelines for coarse soil are shown for comparison purposes only.

"NC" indicates that the relative percent difference (%) was not calculated for this parameter

Table 1-4: Soil Analysis for Polychlorinated Biphenyls (PCB)  
Cambridge Bay Airport, Cambridge Bay, Nunavut

Area ID	CCME Soil Commercial Guidelines	APEC 1	APEC 1
Station ID		1-09-2M	1-09-6M
Field Label		1-09-2M-1	1-09-6M-1
Duplicate ID			
Sampling Date		29/08/2009	29/08/2009
Lab Report ID		DP3378	DP3379
Depth (m)		0.5 - 1.0	0.5 - 1.0
Inorganics			
Moisture (%)	-	9.8	8.7
PCBs			
Aroclor 1262	-	<0.01	<0.01
Aroclor 1016	-	<0.01	<0.01
Aroclor 1221	-	<0.01	<0.01
Aroclor 1232	-	<0.01	<0.01
Aroclor 1242	-	<0.01	<0.01
Aroclor 1248	-	<0.01	<0.01
Aroclor 1254	-	<0.01	<0.01
Aroclor 1260	-	<0.01	<0.01
Aroclor 1268	-	<0.01	<0.01
Total PCB	-	<0.01	<0.01
Surrogate Recovery (%)			
2,4,5,6-Tetrachloro-m-xylene (%)	-	76	83
Decachlorobiphenyl (%)	-	79	80

**Notes**

All units in ug/g.

"-" indicates that there is no applicable regulation or analyses were not performed.

Red cells indicates parameter exceeds CCME Canadian Environmental Quality Guidelines for commercial land use in coarse-grained soils

Table 1-5: APEC 1 Soil Analysis for Glycols  
Cambridge Bay Airport, Cambridge Bay, Nunavut

Area ID	CCME Soil (Residential)	CCME Soil (Commercial)	APEC 1
Station ID			1-09-2M
Field label			1-09-2M-1
Duplicate ID			
Date			29/Aug/09
Lab report ID			A947822
Depth (m)			0.5 – 1
Diethylene glycol	-	-	<10
Ethylene glycol	960	960	<10
Propylene glycol	-	-	<10
Tetraethylene glycol	-	-	<10
Triethylene glycol	-	-	<10

**Notes**

All units in ug/g, unless otherwise noted.

" - " indicates that there is no applicable regulation or analyses were not performed.

Red cells indicates parameter exceeds CCME Canadian Environmental Quality Guidelines for commercial land use (coarse soil).

Residential land use guidelines for coarse soil are shown for comparison purposes only.

Table 1-6: APEC 1 Soil Analysis for Metals  
Cambridge Bay Airport, Cambridge Bay, Nunavut

Area ID	Station ID	Field label	Duplicate ID	Date	Lab report ID	Depth (m)	CCME Soil (Residential)	CCME Soil (Commercial)	APEC 1 1-09-2M	APEC 1 1-09-3M	APEC 1 1-09-4M	APEC 1 1-09-5M	APEC 1 1-09-6M
							6 to 8	6 to 8	8.39	8.10	8.28	7.87	8.17
							-	-	7100	7540	8490	3540	8170
							20	40	<0.1	<0.1	<0.1	<0.1	<0.1
							12	12	1.3	1.2	1.7	1.0	1.9
							500	2000	37.3	35.2	40.3	21.7	38.6
							4	8	0.5	0.5	0.5	0.2	0.4
							-	-	<0.1	<0.1	<0.1	<0.1	<0.1
							10	22	<0.05	<0.05	<0.05	<0.05	<0.05
							-	-	42600	31700	35600	44800	49100
							64	87	18	14	21	7	18
							50	300	5.4	5.6	5.2	3.1	5.7
							63	91	12.2	23.8	12.0	16.5	12.3
							-	-	12500	10700	13700	7990	12500
							140	260	5.1	4.9	4.9	3.5	5.1
							-	-	26300	19500	23200	24300	29000
							-	-	231.0	192.0	229.0	187.0	247.0
							6.6	24	<0.05	<0.05	<0.05	<0.05	<0.05
							10	40	0.5	0.2	0.4	0.3	0.3
							50	50	12.4	11.8	12.2	6.2	13.1
							-	-	3180	3990	3320	1520	3470
							1	2.9	<0.5	<0.5	<0.5	<0.5	<0.5
							20	40	0.06	0.06	0.06	<0.05	0.06
							-	-	310	266	337	143	310
							-	-	27.7	23.5	25.1	20.2	26.5
							1	1	0.12	0.15	0.12	0.08	0.14
							50	300	0.3	0.3	0.4	0.1	0.3
							-	-	415	219	562	157	433
							130	130	28	20	33	15	28
							200	360	21	13	23	7	19
							-	-	5.7	5.9	5.8	2.1	5.6

#### Notes

All units in ug/g, unless otherwise noted.

" - " indicates that there is no applicable regulation or analyses were not performed.

Red cells indicates parameter exceeds CCME Canadian Environmental Quality Guidelines for commercial land use (coarse soil).

Residential land use guidelines for coarse soil are shown for comparison purposes only.

Table 1-7: APEC 1 Grain Size Analysis in Soil  
Cambridge Bay Airport, Cambridge Bay, Nunavut

Area ID	CCME Soil Commercial	APEC 1
Station ID		1-09-6M
Field label		1-09-6M-1
Duplicate ID		
Date		30/Aug/09
Lab report ID		A947822
Depth (m)		0.5 – 1
<200 mesh (>.075 mm)	-	36.4
>200 mesh (<.075 mm)	-	63.6

**Notes**

All units in ug/g, unless otherwise noted.

" - " indicates that there is no applicable regulation or analyses were not performed.

Red cells indicates parameter exceeds CCME Canadian Environmental Quality Guidelines for commercial land use (coarse soil).

Residential land use guidelines for coarse soil are shown for comparison purposes only.

Table 1-8: APEC 1 Groundwater Analysis for Polycyclic Aromatic Hydrocarbons (PAHs)  
Cambridge Bay Airport, Cambridge Bay, Nunavut

Area ID	BC CSR (Marine)	APEC 1	APEC 1	APEC 1	Duplicate Evaluation	
Station ID		1-09-4M	1-09-5M	1-09-5M	Reportable Detection Level (RDL)	Relative Percent Difference (%)
Field label		1-09-4M	1-09-5M	FR-2		
Duplicate ID			FR-2	1-09-5M		
Date		1/Sep/09	1/Sep/09	1/Sep/09		
Lab report ID		A948731	A948731	A948731		
Acenaphthene	60	<0.10	<0.10	<0.10	0.1	NC
Acenaphthylene	-	<0.10	<0.10	<0.10	0.1	NC
Acridine	0.5	<0.20	<0.20	<0.20	0.2	NC
Anthracene	1	<0.010	<0.010	0.029	0.010	NC
Benzo(a)anthracene	1	<0.0085	<0.0085	<0.0085	0.085	NC
Benzo(a)pyrene	0.1	<0.0075	<0.0075	<0.0075	0.0075	NC
Benzo(b+j)fluoranthene	-	<0.0085	<0.0085	<0.0085	0.0085	NC
Benzo(e)pyrene	-	<0.050	<0.050	<0.050	0.05	NC
Benzo(g,h,i)perylene	-	<0.0085	<0.0085	<0.0085	0.0085	NC
Benzo(k)fluoranthene	-	<0.0085	<0.0085	<0.0085	0.0085	NC
Chrysene	1	<0.0085	<0.0085	<0.0085	0.0085	NC
Dibenz(a,h)anthracene	-	<0.0075	<0.0075	<0.0075	0.0075	NC
Fluoranthene	2	<0.040	<0.040	<0.040	0.04	NC
Fluorene	120	<0.050	<0.050	<0.050	0.05	NC
Indeno(1,2,3-cd)pyrene	-	<0.0085	<0.0085	<0.0085	0.0085	NC
2-Methylnaphthalene	-	<0.10	<0.10	<0.10	0.1	NC
Naphthalene	10	<0.10	<0.10	<0.10	0.1	NC
Perylene	-	<0.050	<0.050	<0.050	0.05	NC
Phenanthrene	3	<0.050	<0.050	<0.050	0.05	NC
Pyrene	0.2	<0.020	<0.020	<0.020	0.02	NC
Quinoline	34	<0.20	<0.20	<0.20	0.2	NC

#### Notes

All units in ug/L unless otherwise indicated

"-" indicates that there is no applicable regulation or analyses were not performed.

Red cells indicates parameter exceeds CSR – B.C. Reg. 343/2008.

"NC" indicates that the relative percent difference (%) was not calculated for this parameter



Table 1-9: APEC 1 Groundwater Analysis for Petroleum Hydrocarbons (PHCs)  
Cambridge Bay Airport, Cambridge Bay, Nunavut

Area ID	BC CSR (Marine)	APEC 1	APEC 1	APEC 1	APEC 1	APEC 1	APEC 1	APEC 1	Duplicate Evaluation	
Station ID		1-09-1M	1-09-2M	1-09-3M	1-09-4M	1-09-5M	1-09-6M	1-09-6M	Reportable Detection Level (RDL)	Relative Percent Difference (%)
Field label		1-09-1M	1-09-2M	1-09-3M	1-09-4M	1-09-5M	1-09-6M	FR-3		
Duplicate ID							FR-3	1-09-6M		
Date		1/Sep/09	1/Sep/09	1/Sep/09	1/Sep/09	1/Sep/09	1/Sep/09	1/Sep/09		
Lab report ID		A948731	A948731	A948731	A948731	A948731	A948731	A948731		
Benzene	1000	<0.4	<0.4	<0.4	<0.4	<0.4	<0.4	<0.4	0.4	NC
Ethylbenzene	2500	<0.4	<0.4	<0.4	<0.4	<0.4	<0.4	<0.4	0.4	NC
Toluene	3300	1.0	1.8	1.9	2.3	1.0	0.9	1.7	0.4	NC
m+p-Xylene	-	<0.8	<0.8	<0.8	<0.8	<0.8	<0.8	<0.8	0.8	NC
o-Xylene	-	<0.4	<0.4	<0.4	<0.4	<0.4	<0.4	<0.4	0.4	NC
Xylenes (total)	-	<0.8	<0.8	<0.8	<0.8	<0.8	<0.8	<0.8	0.8	NC
F1 (C6-C10) minus BTEX	-	<100	<100	<100	<100	<100	<100	<100	100	NC
F2 (C10-C16)	-	<100	<100	<100	<100	<100	<100	<100	100	NC
F3 (C16-C34)	-	<100	<100	<100	<100	<100	<100	<100	100	NC
F4 (C34-C50)	-	<100	<100	<100	<100	<100	<100	<100	100	NC
Reached Baseline at C50	-	Yes	Yes	Yes	Yes	Yes	Yes	Yes	NC	NC

**Notes**

All units in ug/L unless otherwise indicated

"-" indicates that there is no applicable regulation or analyses were not performed.

Red cells indicates parameter exceeds CSR – B.C. Reg. 343/2008.

"NC" indicates that the relative percent difference (%) was not calculated for this parameter

Table 1-10: APEC 1 Groundwater Analysis for Volatile Organic Compounds (VOCs)  
Cambridge Bay Airport, Cambridge Bay, Nunavut

Area ID	BC CSR (Marine)	APEC 1	APEC 1	APEC 1	APEC 1	APEC 1	APEC 1	APEC 1	Duplicate Evaluation	
Station ID		1-09-1M	1-09-2M	1-09-3M	1-09-4M	1-09-5M	1-09-6M	1-09-6M	Reportable Detection Level (RDL)	Relative Percent Difference (%)
Field label		1-09-1M	1-09-2M	1-09-3M	1-09-4M	1-09-5M	1-09-6M	FR-3		
Duplicate ID								FR-3		
Date		1/Sep/09	1/Sep/09	1/Sep/09	1/Sep/09	1/Sep/09	1/Sep/09	1/Sep/09		
Lab report ID		A948731	A948731	A948731	A948731	A948731	A948731	A948731		
Benzene	1000	<0.4	<0.4	<0.4	<0.4	<0.4	<0.4	<0.4	0.4	NC
Bromodichloromethane	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.5	NC
Bromoform	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.5	NC
Bromomethane	-	<2	<2	<2	<2	<2	<2	<2	2	NC
Carbon tetrachloride	130	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.5	NC
Chlorobenzene	120	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.5	NC
Chlorodibromomethane	-	<1	<1	<1	<1	<1	<1	<1	1	NC
Chloroethane	-	<1	<1	<1	<1	<1	<1	<1	1	NC
Chloroform	20	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.5	NC
Chloromethane	-	<2	<2	<2	51	<2	<2	<2	2	NC
1,2-Dichlorobenzene	420	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.5	NC
1,3-Dichlorobenzene	1500	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.5	NC
1,4-Dichlorobenzene	260	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.5	NC
1,1-Dichloroethane	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.5	NC
1,2-Dichloroethane	1000	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.5	NC
1,1-Dichloroethene	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.5	NC
cis-1,2-Dichloroethene	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.5	NC
trans-1,2-Dichloroethene	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.5	NC
Dichloromethane	980	<2	<2	<2	<2	<2	<2	<2	2	NC
1,2-Dichloropropane	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.5	NC
cis-1,3-Dichloropropene	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.5	NC
trans-1,3-Dichloropropene	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.5	NC
Ethylbenzene	2500	<0.4	<0.4	<0.4	<0.4	<0.4	<0.4	<0.4	0.4	NC
Ethylene dibromide	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.5	NC
Methyl-tert-butylether	4400	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.5	NC
Styrene	720	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.5	NC
1,1,1,2-Tetrachloroethane	-	<2	<2	<2	<2	<2	<2	<2	2	NC
1,1,2,2-Tetrachloroethane	-	<2	<2	<2	<2	<2	<2	<2	2	NC
Tetrachloroethene	1100	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.5	NC
Toluene	3300	1.0	1.8	1.9	2.3	1.0	0.9	1.7	0.4	NC
Total Trihalomethanes	-	<2	<2	<2	<2	<2	<2	<2	2	NC
1,2,3-Trichlorobenzene	80	<1	<1	<1	<1	<1	<1	<1	1	NC
1,2,4-Trichlorobenzene	54	<1	<1	<1	<1	<1	<1	<1	1	NC
1,3,5-Trichlorobenzene	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.5	NC
1,1,1-Trichloroethane	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.5	NC
1,1,2-Trichloroethane	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.5	NC
Trichloroethene	200	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.5	NC
Trichlorofluoromethane	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.5	NC
Vinyl chloride	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.5	NC
m+p-Xylene	-	<0.8	<0.8	<0.8	<0.8	<0.8	<0.8	<0.8	0.8	NC
o-Xylene	-	<0.4	<0.4	<0.4	<0.4	<0.4	<0.4	<0.4	0.4	NC
Xylenes (total)	-	<0.8	<0.8	<0.8	<0.8	<0.8	<0.8	<0.8	0.8	NC

#### Notes

All units in ug/L unless otherwise indicated

"-" indicates that there is no applicable regulation or analyses were not performed.

Red cells indicates parameter exceeds CSR – B.C. Reg. 343/2008.

"NC" indicates that the relative percent difference (%) was not calculated for this parameter

Table 1-11: APEC 1 Groundwater Analysis for Polychlorinated Biphenyls (PCBs)  
Cambridge Bay Airport, Cambridge Bay, Nunavut

Area ID	BC CSR (Marine)	APEC 1	APEC 1	Duplicate Evaluation	
Station ID		1-09-6M	1-09-6M	Reportable Detection Level (RDL)	Relative Percent Difference (%)
Field label		1-09-6M	FR-3		
Duplicate ID		FR-3	1-09-6M		
Date		1/Sep/09	1/Sep/09		
Lab report ID		A948731	A948731		
Aroclor 1016	-	<0.050	<0.050	0.05	NC
Aroclor 1221	-	<0.050	<0.050	0.05	NC
Aroclor 1232	-	<0.050	<0.050	0.05	NC
Aroclor 1242	-	<0.050	<0.050	0.05	NC
Aroclor 1248	-	<0.050	<0.050	0.05	NC
Aroclor 1254	-	<0.050	<0.050	0.05	NC
Aroclor 1260	-	<0.050	<0.050	0.05	NC
Aroclor 1262	-	<0.050	<0.050	0.05	NC
Aroclor 1268	-	<0.050	<0.050	0.05	NC

**Notes**

All units in ug/L unless otherwise indicated

"-" indicates that there is no applicable regulation or analyses were not performed.

Red cells indicates parameter exceeds CSR – B.C. Reg. 343/2008.

"NC" indicates that the relative percent difference (%) was not calculated for this parameter

Table 1-12: APEC 1 Groundwater Analysis for Glycols  
Cambridge Bay Airport, Cambridge Bay, Nunavut

Area ID	BC CSR (Marine)	APEC 1	APEC 1	Duplicate Evaluation	
Station ID		1-09-5M	1-09-5M	Reportable Detection Level (RDL)	Relative Percent Difference (%)
Field label		1-09-5M	FR-2		
Duplicate ID		FR-2	1-09-5M		
Date		1/Sep/09	1/Sep/09		
Lab report ID		A948731	A948731		
Diethylene glycol	-	<10000	<10000	10000	NC
Ethylene glycol	1920000	<10000	<10000	10000	NC
Propylene glycol	5000000	<10000	<10000	10000	NC
Tetraethylene glycol	-	<10000	<10000	10000	NC
Triethylene glycol	-	<10000	<10000	10000	NC

**Notes**

All units in ug/L unless otherwise indicated

"-" indicates that there is no applicable regulation or analyses were not performed.

Red cells indicates parameter exceeds CSR – B.C. Reg. 343/2008.

"NC" indicates that the relative percent difference (%) was not calculated for this parameter

Table 1-13: APEC 1 Groundwater Analysis for Metals  
Cambridge Bay Airport, Cambridge Bay, Nunavut

Area ID	BC CSR (Marine)	APEC 1	APEC 1	APEC 1	APEC 1	APEC 1	APEC 1	APEC 1	Duplicate Evaluation	
Station ID		1-09-1M	1-09-2M	1-09-3M	1-09-4M	1-09-5M	1-09-6M	1-09-6M	Reportable Detection Level (RDL)	Relative Percent Difference (%)
Field label		1-09-1M	1-09-2M	1-09-3M	1-09-4M	1-09-5M	1-09-6M	FR-3		
Duplicate ID								FR-3		
Date		1/Sep/09	1/Sep/09	1/Sep/09	1/Sep/09	1/Sep/09	1/Sep/09	1/Sep/09		
Lab report ID		A948731	A948731	A948731	A948731	A948731	A948731	A948731		
Hardness (mg/L)	-	520	750	2200	970	2400	1200	820	-	NC
Aluminum	-	900	240	70	330	270	<10	240	10	NC
Antimony	200	<2	<2	<2	<2	<2	<2	<2	2	NC
Arsenic	125	<2	<2	<2	<2	<2	<2	<2	2	NC
Barium	5000	40	50	20	30	110	50	50	10	0
Beryllium	1000	<10	<10	<10	<10	<10	<10	<10	10	NC
Boron	50000	150	90	860	280	210	70	110	20	NC
Cadmium	1	<0.05	<0.05	<0.05	<0.05	0.11	0.20	<0.05	0.05	NC
Calcium	-	89000	130000	330000	180000	410000	180000	140000	300	25
Chromium	150	<10	<10	<10	<10	<10	10	<10	10	NC
Cobalt	40	<3	<3	<3	<3	<3	<3	<3	3	NC
Copper	20	9	8	3	5	7	12	18	2	40
Iron	-	1400	460	500	510	450	310	450	60	36.84
Lead	20	<2	<2	<2	<2	<2	<2	<2	2	NC
Magnesium	-	72000	110000	320000	120000	330000	180000	120000	200	40
Manganese	-	56	25	20	100	35	21	28	4	28.57
Mercury	1	0.003	0.005	0.004	0.003	0.003	0.004	0.006	0.001	NC
Molybdenum	10000	3	2	<2	3	<2	9	2	2	NC
Nickel	83	<5	5	7	<5	6	<5	<5	5	NC
Potassium	-	17000	21000	78000	24000	38000	34000	22000	300	42.86
Selenium	540	<2	<2	<2	<2	<2	<2	<2	2	NC
Silver	15	<1	<1	<1	<1	<1	<1	<1	1	NC
Sodium	-	190000	180000	670000	160000	700000	390000	220000	500	55.74
Strontium	-	160	140	1100	320	530	220	150	20	37.84
Thallium	3	<2	<2	<2	<2	<2	<2	<2	2	NC
Tin	-	<10	<10	<10	<10	<10	<10	<10	10	NC
Titanium	1000	50	20	<10	30	<10	<10	<10	10	NC
Uranium	1000	7	12	33	14	29	26	12	1	73.68
Vanadium	-	<10	10	<10	<10	<10	<10	<10	10	NC
Zinc	100	<30	<30	<30	<30	<30	<30	<30	30	NC

**Notes**

All units in ug/L unless otherwise indicated

"-" indicates that there is no applicable regulation or analyses were not performed.

Red cells indicates parameter exceeds CSR – B.C. Reg. 343/2008.

"NC" indicates that the relative percent difference (%) was not calculated for this parameter

Table 1-14: APEC 1 Metals Analysis in Vegetation  
Cambridge Bay Airport, Cambridge Bay, Nunavut

Area ID	MOE Vegetation Guidelines (ppm)	APEC 1	APEC 1	Background
Station ID		1-09-VG1	1-09-VG2	BG-VG-1
Field label		1-09-VG1	1-09-VG2	BG-VG-1
Duplicate ID				
Date		2/Sep/09	2/Sep/09	2/Sep/09
Lab report ID		A948579	A948579	A948579
Antimony	0.3	<1	<1	<1
Arsenic	0.5	<1	<1	<1
Barium	-	<10	<10	<10
Beryllium	-	<0.4	<0.4	<0.4
Cadmium	1	<0.1	<0.1	0.2
Chromium	8	<1	2	1
Chromium (VI)	-	<0.15	<0.15	
Cobalt	2	<1	<1	1
Copper	20	<5	<5	7
Lead	30	<1	<1	<1
Mercury	-	<0.05	<0.05	<0.05
Molybdenum	1.5	<0.4	2.6	0.8
Nickel	5	1	1	1
Selenium	0.5	<0.5	<0.5	<0.5
Silver	50	<1	<1	<1
Thallium	-	<0.3	<0.3	<0.3
Tin	-	<1	<1	<1
Uranium	-	<1	<1	<1
Vanadium	5	<1	1	2
Zinc	250	<10	24	51

**Notes**

All units in ug/g.

"-" indicates that analyses were not performed.

Red cells indicate parameter exceeds the Ontario Ministry of the Environment  
Vegetation guidelines (2008).

Table 2-1: APEC 2 Soil Analysis for Polycyclic Aromatic Hydrocarbons (PAHs)  
Cambridge Bay Airport, Cambridge Bay, Nunavut

Area ID	CCME Soil (Residential)	CCME Soil (Commercial)	APEC 2	APEC 2	APEC 2
Station ID			2-09-TP2	2-09-TP3	2-09-TP9
Field label			2-09-TP2-2	2-09-TP3-1	2-09-TP9-1
Duplicate ID					
Date			29/Aug/09	29/Aug/09	29/Aug/09
Lab report ID			A947822	A947822	A947822
Depth (m)			0.3 – 0.5	0.1 – 0.7	0.2 – 0.4
Acenaphthene	-	-	<0.01	<0.01	<0.01
Acenaphthylene	-	-	<0.01	<0.01	<0.01
Anthracene	-	-	<0.01	<0.01	<0.01
Benzo(a)anthracene	1	10	<0.01	<0.01	<0.01
Benzo(a)pyrene	0.7	0.7	<0.01	<0.01	<0.01
Benzo(b+j)fluoranthene	-	-	<0.01	<0.01	<0.01
Benzo(g,h,i)perylene	-	-	<0.02	<0.02	<0.02
Benzo(k)fluoranthene	1	10	<0.01	<0.01	<0.01
Chrysene	-	-	<0.01	<0.01	<0.01
Dibenz(a,h)anthracene	1	10	<0.02	<0.02	<0.02
Fluoranthene	-	-	<0.01	<0.01	<0.01
Fluorene	-	-	<0.01	<0.01	<0.01
High molecular weight PAHs	-	-	<0.02	<0.02	<0.02
Indeno(1,2,3-cd)pyrene	1	10	<0.02	<0.02	<0.02
Low molecular weight PAHs	-	-	<0.01	<0.01	0.02
2-Methylnaphthalene	-	-	<0.01	<0.01	0.02
Naphthalene	0.6	22	<0.01	<0.01	<0.01
Phenanthrene	5	50	<0.01	<0.01	<0.01
Pyrene	10	100	<0.01	<0.01	<0.01
Total PAHs	-	-	<0.02	<0.02	<0.02

#### Notes

All units in ug/g.

"-" indicates that there is no applicable regulation or analyses were not performed.

Red cells indicates parameter exceeds CCME Canadian Environmental Quality Guidelines for commercial land use in coarse soils.

Residential land use guidelines for coarse soil are shown for comparison purposes only.



Table 2-2: APEC 2 Soil Analysis for Petroleum Hydrocarbons (PHCs)  
Cambridge Bay Airport, Cambridge Bay, Nunavut

Area ID	CCME Soil (Residential)	CCME Soil (Commercial)	APEC 2	APEC 2	APEC 2	APEC 2	APEC 2	APEC 2	Relative Percent Difference (%)	APEC 2	APEC 2	APEC 2	APEC 2	APEC 2
Station ID			2-09-TP1	2-09-TP2	2-09-TP3	2-09-TP4	2-09-TP5	2-09-TP5		2-09-TP6	2-09-TP7	2-09-TP8	2-09-TP9	2-09-TP10
Field label			2-09-TP1-2	2-09-TP2-2	2-09-TP3-1	2-09-TP4	2-09-TP5-1	GR2		2-09-TP6-1	2-09-TP7-1	2-09-TP8-1	2-09-TP9-1	2-09-TP10-1
Duplicate ID							GR2	2-09-TP5-1						
Date			29/Aug/09	29/Aug/09	29/Aug/09	29/Aug/09	29/Aug/09	29/Aug/09		29/Aug/09	29/Aug/09	29/Aug/09	29/Aug/09	29/Aug/09
Lab report ID			A947822	A947822	A947822	A947822	A947822	A947822		A947822	A947822	A947822	A947822	A947822
Depth (m)			0.4 – 0.5	0.3 – 0.5	0.1 – 0.7		0.4 – 0.6	0.4 – 0.6		0.2 – 0.6	0.2 – 0.4	0.3 – 0.5	0.2 – 0.4	0.2 – 0.4
Moisture content	-	-	15.0	24.0	16.0	22.0	8.9	2.4	28.8	17.0	11.0	9.3	32.0	27.0
Benzene	0.03	0.03	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	NC	<0.005	<0.005	<0.005	<0.005	<0.005
Ethylbenzene	0.082	0.082	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	NC	<0.01	<0.01	<0.01	<0.01	<0.01
Toluene	0.37	0.37	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	NC	<0.03	<0.03	<0.05	<0.05	<0.03
m+p-Xylene	-	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	NC	<0.1	<0.1	<0.1	<0.1	<0.1
o-Xylene	-	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	NC	<0.1	<0.1	<0.1	<0.1	<0.1
Xylenes (total)	11	11	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	NC	<0.1	<0.1	<0.1	<0.1	<0.1
F1 (C6-C10)	30*	320	<10	<10	<10	<10	<10	<10	NC	<10	<10	-	-	<10
F1 (C6-C10) minus BTEX	30*	320	<10	<10	<10	<10	<10	<10	NC	<10	<10	<10	<10	<10
F2 (C10-C16)	150*	260	<10	<10	<10	<10	<10	<10	NC	<10	<10	13	31	13
F3 (C16-C34)	300*	1700	50	19	<10	<10	66	74	2.9	65	23	120	52	39
F4 (C34-C50)	2800*	3300	<10	<10	<10	<10	<10	<10	NC	<10	<10	18	<10	<10
Reached Baseline at C50	-	-	Yes	Yes	Yes	Yes	Yes	Yes	NC	Yes	Yes	Yes	Yes	Yes

#### Notes

All units in ug/g, unless otherwise noted.

"-" indicates that there is no applicable regulation or analyses were not performed.

Red cells indicates parameter exceeds CCME Canadian Environmental Quality Guidelines for commercial land use in coarse soils.

"\*" indicates that the guideline is CCME Canada-Wide Standards for Petroleum Hydrocarbons (CWS for PHC)

Residential land use guidelines for coarse soil are shown for comparison purposes only.

NC indicates that the relative percent difference (%) was not calculated for this parameter

Table 2-3: APEC 2 Soil Analysis for Volatile Organic Compounds (VOCs)  
Cambridge Bay Airport, Cambridge Bay, Nunavut

Area ID	CCME Soil (Residential)	CCME Soil (Commercial)	APEC 2	APEC 2	APEC 2	APEC 2	APEC 2	APEC 2	Relative Percent Difference (%)	APEC 2	APEC 2	APEC 2	APEC 2	APEC 2
Station ID			2-09-TP1	2-09-TP2	2-09-TP3	2-09-TP4	2-09-TP5	2-09-TP5		2-09-TP6	2-09-TP7	2-09-TP8	2-09-TP9	2-09-TP10
Field label			2-09-TP1-2	2-09-TP2-2	2-09-TP3-1	2-09-TP4	2-09-TP5-1	GR2		2-09-TP6-1	2-09-TP7-1	2-09-TP8-1	2-09-TP9-1	2-09-TP10-1
Duplicate ID							GR2	2-09-TP5-1						
Date			29/Aug/09	29/Aug/09	29/Aug/09	29/Aug/09	29/Aug/09	29/Aug/09		29/Aug/09	29/Aug/09	29/Aug/09	29/Aug/09	29/Aug/09
Lab report ID			A947822	A947822	A947822	A947822	A947822	A947822		A947822	A947822	A947822	A947822	A947822
Depth (m)			0.4 – 0.5	0.3 – 0.5	0.1 – 0.7			0.4 – 0.6		0.2 – 0.6	0.2 – 0.4	0.3 – 0.5	0.2 – 0.4	0.2 – 0.4
Benzene	0.03	0.03	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	NC	<0.005	<0.005	<0.005	<0.005	<0.005
Bromodichloromethane	-	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	NC	<0.05	<0.05	-	-	<0.05
Bromoform	-	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	NC	<0.05	<0.05	-	-	<0.05
Bromomethane	-	-	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	NC	<0.3	<0.3	-	-	<0.3
Carbon tetrachloride	5	50	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	NC	<0.03	<0.03	-	-	<0.03
Chlorobenzene	1	10	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	NC	<0.03	<0.03	-	-	<0.03
Chlorodibromomethane	-	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	NC	<0.05	<0.05	-	-	<0.05
Chloroethane	-	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	NC	<0.1	<0.1	-	-	<0.1
Chloroform	5	50	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	NC	<0.05	<0.05	-	-	<0.05
Chloromethane	-	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	NC	<0.1	<0.1	-	-	<0.1
1,2-Dichlorobenzene	1	10	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	NC	<0.03	<0.03	-	-	<0.03
1,3-Dichlorobenzene	1	10	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	NC	<0.03	<0.03	-	-	<0.03
1,4-Dichlorobenzene	1	10	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	NC	<0.03	<0.03	-	-	<0.03
1,1-Dichloroethane	5	50	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	NC	<0.03	<0.03	-	-	<0.03
1,2-Dichloroethane	5	50	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	NC	<0.03	<0.03	-	-	<0.03
1,1-Dichloroethene	5	50	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	NC	<0.03	<0.03	-	-	<0.03
cis-1,2-Dichloroethene	-	-	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	NC	<0.03	<0.03	-	-	<0.03
trans-1,2-Dichloroethene	-	-	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	NC	<0.03	<0.03	-	-	<0.03
Dichloromethane	5	50	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	NC	<0.1	<0.1	-	-	<0.1
1,2-Dichloropropane	5	50	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	NC	<0.03	<0.03	-	-	<0.03
cis-1,3-Dichloropropene	-	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	NC	<0.05	<0.05	-	-	<0.05
trans-1,3-Dichloropropene	-	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	NC	<0.05	<0.05	-	-	<0.05
Ethylbenzene	0.082	0.082	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	NC	<0.01	<0.01	<0.01	<0.01	<0.01
Ethylene dibromide	-	-	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	NC	<0.03	<0.03	-	-	<0.03
Methyl-tert-butylether	-	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	NC	<0.1	<0.1	<0.1	<0.1	<0.1
Styrene	5	50	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	NC	<0.1	<0.1	<0.1	<0.1	<0.1
1,1,1,2-Tetrachloroethane	-	-	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	NC	<0.03	<0.03	-	-	<0.03
1,1,2,2-Tetrachloroethane	5	50	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	NC	<0.03	<0.03	-	-	<0.03
Tetrachloroethene	5	50	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	NC	<0.03	<0.03	-	-	<0.03
Toluene	0.37	0.37	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	NC	<0.03	<0.03	<0.05	<0.05	<0.03
1,1,1-Trichloroethane	5	50	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	NC	<0.03	<0.03	-	-	<0.03
1,1,2-Trichloroethane	5	50	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	NC	<0.03	<0.03	-	-	<0.03
Trichloroethene	5	50	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	NC	<0.01	<0.01	-	-	<0.01
Trichlorofluoromethane	-	-	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	NC	<0.2	<0.2	-	-	<0.2
Vinyl chloride	-	-	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08	NC	<0.08	<0.08	-	-	<0.08
m+p-Xylene	-	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	NC	<0.1	<0.1	<0.1	<0.1	<0.1
o-Xylene	-	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	NC	<0.1	<0.1	<0.1	<0.1	<0.1
Xylenes (total)	11	11	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	NC	<0.1	<0.1	<0.1	<0.1	<0.1

#### Notes

All units in ug/g.

"-" indicates that there is no applicable regulation or analyses were not performed.

Red cells indicates parameter exceeds CCME Canadian Environmental Quality Guidelines for commercial land use in coarse soils.

Residential land use guidelines for coarse soil are shown for comparison purposes only.

Table 2-4: APEC 2 Soil Analysis for Polychlorinated Biphenyls (PCBs)  
Cambridge Bay Airport, Cambridge Bay, Nunavut

Area ID	CCME Soil Commercial Guidelines	APEC 2	APEC 2	APEC 2	APEC 2
Station ID		2-09-TP1	2-09-TP2	2-09-TP3	2-09-TP9
Field Label		2-09-TP1-1	2-09-TP2-2	2-09-TP3-1	2-09-TP9-1
Duplicate ID					
Sampling Date		29/08/2009	29/08/2009	29/08/2009	29/08/2009
Lab Report ID		DP3380	DP3381	DP3382	DP3384
Depth (m)		0.05 - 0.4	0.3 - 0.5	0.1 - 0.7	0.2 - 0.4
<b>Inorganics</b>					
Moisture (%)	-	11	22	5.9	14
<b>PCBs</b>					
Aroclor 1262	-	<0.01	<0.01	<0.01	<0.01
Aroclor 1016	-	<0.01	<0.01	<0.01	<0.01
Aroclor 1221	-	<0.01	<0.01	<0.01	<0.01
Aroclor 1232	-	<0.01	<0.01	<0.01	<0.01
Aroclor 1242	-	<0.01	<0.01	<0.01	<0.01
Aroclor 1248	-	<0.01	<0.01	<0.01	<0.01
Aroclor 1254	-	<0.01	<0.01	<0.01	<0.01
Aroclor 1260	-	<0.01	<0.01	<0.01	<0.01
Aroclor 1268	-	<0.01	<0.01	<0.01	<0.01
Total PCB	-	<0.01	<0.01	<0.01	<0.01
<b>Surrogate Recovery (%)</b>					
2,4,5,6-Tetrachloro-m-xylene (%)	-	77	89	70	68
Decachlorobiphenyl (%)	-	74	75	75	69

**Notes**

All units in ug/g.

"-" indicates that there is no applicable regulation or analyses were not performed.

Red cells indicates parameter exceeds CCME Canadian Environmental Quality Guidelines for commercial land use in coarse-grained soils

Table 2-5: APEC 2 Soil Analysis for Metals  
Cambridge Bay Airport, Cambridge Bay, Nunavut

Area ID	CCME Soil (Residential)	CCME Soil (Commercial)	APEC 2	APEC 2	APEC 2	APEC 2	APEC 2	APEC 2	Relative Percent Difference (%)	APEC 2	APEC 2	APEC 2	APEC 2	APEC 2
Station ID			2-09-TP1	2-09-TP2	2-09-TP3	2-09-TP4	2-09-TP5	2-09-TP5		2-09-TP6	2-09-TP7	2-09-TP8	2-09-TP9	2-09-TP10
Field label			2-09-TP1-2	2-09-TP2-2	2-09-TP3-1	2-09-TP4	2-09-TP5-1	GR2		2-09-TP6-1	2-09-TP7-1	2-09-TP8-1	2-09-TP9-1	2-09-TP10-1
Duplicate ID							GR2	2-09-TP5-1						
Date			29/Aug/09	29/Aug/09	29/Aug/09	29/Aug/09	29/Aug/09	29/Aug/09		29/Aug/09	29/Aug/09	29/Aug/09	29/Aug/09	29/Aug/09
Lab report ID			A947822	A947822	A947822	A947822	A947822	A947822		A947822	A947822	A947822	A947822	A947822
Depth (m)			0.4 – 0.5	0.3 – 0.5	0.1 – 0.7		0.4 – 0.6	0.4 – 0.6		0.2 – 0.6	0.2 – 0.4	0.3 – 0.5	0.2 – 0.4	0.2 – 0.4
pH	6 to 8	6 to 8	7.30	7.75	7.90	8.49	8.02	7.90	0.8	8.09	8.12	8.14	8.32	8.10
Aluminum	-	-	3560	8920	4800	2950	4050	4980	10.3	3860	3850	2860	3180	3900
Antimony	20	20	0.2	0.2	<0.1	<0.1	0.1	0.1	0.0	0.6	0.2	0.2	0.1	0.2
Arsenic	12	12	1.8	8.5	1.8	1.6	3.3	2.0	24.5	40.6	6.5	5.2	8.7	9.1
Barium	500	500	41.4	60.3	27.1	24.0	20.2	24.5	9.6	32.3	19.9	41.5	17.1	25.7
Beryllium	4	4	0.3	0.6	0.3	0.3	0.5	0.3	25.0	0.7	0.6	0.4	0.7	0.7
Bismuth	-	-	<0.1	<0.1	<0.1	<0.1	0.2	0.1	33.3	0.1	0.1	<0.1	0.1	0.1
Cadmium	10	10	0.07	0.11	<0.05	<0.05	1.45	1.71	8.2	0.06	<0.05	<0.05	<0.05	<0.05
Calcium	-	-	67900	54200	54700	85900	81100	72800	5.4	40800	31600	53800	111000	72900
Chromium	64	64	11	27	12	8	20	22	4.8	16	15	13	13	17
Cobalt	50	50	3.3	5.1	4.3	3.6	6.1	5.0	9.9	10.1	13.7	12.1	6.0	16.0
Copper	63	91	28.7	12.5	12.0	8.5	94.5	102.0	3.8	24.5	20.0	18.2	11.3	22.4
Iron	-	-	9650	16300	11100	8520	16200	11900	15.3	51000	18200	22200	22200	24300
Lead	140	140	4.9	6.2	3.6	3.6	21.4	20.8	1.4	24.5	21.2	22.9	15.2	25.6
Magnesium	-	-	35400	33400	32500	53300	48000	40800	8.1	22600	17000	29600	63200	40800
Manganese	-	-	265.0	224.0	292.0	259.0	561.0	495.0	6.3	433.0	333.0	490.0	807.0	639.0
Mercury	6.6	6.6	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	NC	<0.05	<0.05	<0.05	<0.05	<0.05
Molybdenum	10	10	0.8	3.4	0.4	0.3	1.3	0.9	18.2	7.4	4.9	3.7	2.7	4.7
Nickel	50	50	14.4	15.5	10.4	8.5	32.1	29.7	3.9	25.5	20.9	23.4	13.0	24.0
Potassium	-	-	1500	3590	1400	1890	1680	1660	0.6	2570	2590	2080	2000	2480
Selenium	1	1	0.9	<0.5	<0.5	<0.5	<0.5	<0.5	NC	<0.5	<0.5	<0.5	<0.5	<0.5
Silver	20	20	0.05	0.08	<0.05	<0.05	0.09	0.07	12.5	<0.05	0.09	0.11	0.05	0.07
Sodium	-	-	329	585	215	333	231	216	3.4	1220	712	476	1300	1730
Strontium	-	-	27.2	35.6	25.1	29.8	75.7	79.4	2.4	58.0	35.1	31.1	57.2	54.6
Thallium	1	1	0.13	0.14	0.07	0.08	0.09	0.10	5.3	0.09	0.09	0.21	0.05	0.10
Tin	50	50	0.2	0.4	0.2	0.1	0.4	0.5	11.1	0.4	0.5	0.4	0.3	0.5
Titanium	-	-	156	604	285	135	110	147	14.4	75	84	61	80	110
Vanadium	130	130	18	43	25	12	22	20	4.8	69	22	23	30	34
Zinc	200	200	15	32	16	10	110	97	6.3	24	16	12	10	18
Zirconium	-	-	4.4	6.3	2.5	2.0	4.5	3.1	18.4	4.3	6.1	5.7	6.2	4.9

#### Notes

All units in ug/g, unless otherwise noted.

"-" indicates that there is no applicable regulation or analyses were not performed.

Red cells indicates parameter exceeds CCME Canadian Environmental Quality Guidelines for commercial land use in coarse soils.

Residential land use guidelines for coarse soil are shown for comparison purposes only.

"NC" indicates that the relative percent difference (%) was not calculated for this parameter

Table 2-6: APEC 2 Groundwater Analysis for Polycyclic Aromatic Hydrocarbons (PAHs)  
Cambridge Bay Airport, Cambridge Bay, Nunavut

Area ID	BC CSR (Marine)	APEC 2
Station ID		2-09-MW4
Field label		2-09-MW4
Duplicate ID		
Date		2/Sep/09
Lab report ID		A948731
Acenaphthene	60	<0.10
Acenaphthylene	-	<0.10
Acridine	0.5	<0.20
Anthracene	1	<0.010
Benzo(a)anthracene	1	<0.0085
Benzo(a)pyrene	0.1	<0.0075
Benzo(b+j)fluoranthene	-	<0.0085
Benzo(e)pyrene	-	<0.050
Benzo(g,h,i)perylene	-	<0.0085
Benzo(k)fluoranthene	-	<0.0085
Chrysene	1	<0.0085
Dibenz(a,h)anthracene	-	<0.0075
Fluoranthene	2	<0.040
Fluorene	120	<0.050
Indeno(1,2,3-cd)pyrene	-	<0.0085
2-Methylnaphthalene	-	<0.10
Naphthalene	10	<0.10
Perylene	-	<0.050
Phenanthrene	3	<0.050
Pyrene	0.2	<0.020
Quinoline	34	<0.20

**Notes**

All units in ug/L unless otherwise indicated

"-" indicates that there is no applicable regulation or analyses were not performed.

Red cells indicates parameter exceeds CSR – B.C. Reg. 343/2008.

Table 2-7: APEC 2 Groundwater Analysis for Petroleum Hydrocarbons (PHCs)  
Cambridge Bay Airport, Cambridge Bay, Nunavut

Area ID	BC CSR (Marine)	APEC 2
Station ID		2-09-MW4
Field label		2-09-MW4
Duplicate ID		
Date		2/Sep/09
Lab report ID		A948731
Benzene	1000	<0.4
Ethylbenzene	2500	<0.4
Toluene	3300	<0.4
m+p-Xylene	-	<0.8
o-Xylene	-	<0.4
Xylenes (total)	-	<0.8
F1 (C6-C10) minus BTEX	-	<100
F2 (C10-C16)	-	<100
F3 (C16-C34)	-	<100
F4 (C34-C50)	-	<100
Reached Baseline at C50	-	Yes

**Notes**

All units in ug/L unless otherwise indicated

"-" indicates that there is no applicable regulation or analyses were not performed.

Red cells indicates parameter exceeds CSR – B.C. Reg. 343/2008.

Table 2-8: APEC 2 Groundwater Analysis for Volatile Organic Compounds (VOCs)  
Cambridge Bay Airport, Cambridge Bay, Nunavut

Area ID	BC CSR (Marine)	APEC 2
Station ID		2-09-MW4
Field label		2-09-MW4
Duplicate ID		
Date		2/Sep/09
Lab report ID		A948731
Benzene	1000	<0.4
Bromodichloromethane	-	<0.5
Bromoform	-	<0.5
Bromomethane	-	<2
Carbon tetrachloride	130	<0.5
Chlorobenzene	120	<0.5
Chlorodibromomethane	-	<1
Chloroethane	-	<1
Chloroform	20	<0.5
Chloromethane	-	<2
1,2-Dichlorobenzene	420	<0.5
1,3-Dichlorobenzene	1500	<0.5
1,4-Dichlorobenzene	260	<0.5
1,1-Dichloroethane	-	<0.5
1,2-Dichloroethane	1000	<0.5
1,1-Dichloroethene	-	<0.5
cis-1,2-Dichloroethene	-	<0.5
trans-1,2-Dichloroethene	-	<0.5
Dichloromethane	980	<2
1,2-Dichloropropane	-	<0.5
cis-1,3-Dichloropropene	-	<0.5
trans-1,3-Dichloropropene	-	<0.5
Ethylbenzene	2500	<0.4
Ethylene dibromide	-	<0.5
Methyl-tert-butylether	4400	<0.5
Styrene	720	<0.5
1,1,1,2-Tetrachloroethane	-	<2
1,1,2,2-Tetrachloroethane	-	<2
Trichlorofluoromethane	-	<0.5
Vinyl chloride	-	<0.5
m+p-Xylene	-	<0.8
o-Xylene	-	<0.4
Xylenes (total)	-	<0.8

**Notes**

All units in ug/L unless otherwise indicated

"-" indicates that there is no applicable regulation or analyses were not performed.

Red cells indicates parameter exceeds CSR – B.C. Reg. 343/2008.

Table 2-9: APEC 2 Groundwater Analysis for Polychlorinated Biphenyls (PCBs)  
Cambridge Bay Airport, Cambridge Bay, Nunavut

Area ID	BC CSR (Marine)	APEC 2
Station ID		2-09-MW4
Field label		2-09-MW4
Duplicate ID		
Date		2/Sep/09
Lab report ID		A948731
Aroclor 1016	-	<0.050
Aroclor 1221	-	<0.050
Aroclor 1232	-	<0.050
Aroclor 1242	-	<0.050
Aroclor 1248	-	<0.050
Aroclor 1254	-	<0.050
Aroclor 1260	-	<0.050
Aroclor 1262	-	<0.050
Aroclor 1268	-	<0.050

**Notes**

All units in ug/L unless otherwise indicated

"-" indicates that there is no applicable regulation or analyses were not performed.

Red cells indicates parameter exceeds CSR – B.C. Reg. 343/2008.



Table 2-10: APEC 2 Groundwater Analysis for Glycols  
Cambridge Bay Airport, Cambridge Bay, Nunavut

<b>Area ID</b>	<b>BC CSR (Marine)</b>	<b>APEC 2</b>
<b>Station ID</b>		<b>2-09-MW4</b>
<b>Field label</b>		2-09-MW4
<b>Duplicate ID</b>		
<b>Date</b>		2/Sep/09
<b>Lab report ID</b>		A948579
Diethylene glycol	-	<10000
Ethylene glycol	1920000	<10000
Propylene glycol	5000000	<10000
Tetraethylene glycol	-	<10000
Triethylene glycol	-	<10000

**Notes**

All units in ug/L unless otherwise indicated

"-" indicates that there is no applicable regulation or analyses were not performed.

Red cells indicates parameter exceeds CSR – B.C. Reg. 343/2008.

Table 2-11: APEC 2 Groundwater Analysis for Metals  
Cambridge Bay Airport, Cambridge Bay, Nunavut

Area ID	BC CSR (Marine)	APEC 2
Station ID		2-09-MW4
Field label		2-09-MW4
Duplicate ID		
Date		2/Sep/09
Lab report ID		A948731
Hardness (mg/L)	-	1900
Aluminum	-	<10
Antimony	200	<2
Arsenic	125	<2
Barium	5000	30
Beryllium	1000	<10
Boron	50000	1200
Cadmium	1	<0.05
Calcium	-	240000
Chromium	150	<10
Cobalt	40	11
Copper	20	4
Iron	-	420
Lead	20	<2
Magnesium	-	320000
Manganese	-	160
Mercury	1	0.002
Molybdenum	10000	4
Nickel	83	33
Potassium	-	83000
Selenium	540	<2
Silver	15	<1
Sodium	-	1000000
Strontium	-	1200
Thallium	3	<2
Tin	-	<10
Titanium	1000	<10
Uranium	1000	8

**Notes**

All units in ug/L unless otherwise indicated

"-" indicates that there is no applicable regulation or analyses were not performed.

Red cells indicates parameter exceeds CSR – B.C. Reg. 343/2008.

Table 2-12: APEC 2 Vegetation Analysis for Metals  
Cambridge Bay Airport, Cambridge Bay, Nunavut

Area ID	MOE Vegetation Guidelines (ppm)	APEC 2	APEC 2	APEC 2	Relative Percent Difference (%)	Background
Station ID		2-09-VG1	2-09-VG2	2-09-VG2		BG-VG-1
Field label		2-09-VG1	2-09-VG2	2-09-VG3		BG-VG-1
Duplicate ID			2-09-VG3	2-09-VG2		
Date		2/Sep/09	2/Sep/09	2/Sep/09		2/Sep/09
Lab report ID		A948579	A948579	A948579		A948579
Antimony	0.3	<1	<1	<1	NC	<1
Arsenic	0.5	<1	<1	<1	NC	<1
Barium	-	<10	<10	10	NC	<10
Beryllium	-	<0.4	<0.4	<0.4	NC	<0.4
Cadmium	1	0.9	0.3	0.4	7.1	0.2
Chromium	8	<1	1	2	16.7	1
Chromium (VI)	-	<0.15	<0.15	<0.15	NC	<0.15
Cobalt	2	<1	<1	<1	NC	1
Copper	20	6	<5	<5	NC	7
Lead	30	<1	<1	<1	NC	<1
Mercury	-	<0.05	<0.05	<0.05	NC	<0.05
Molybdenum	1.5	0.5	1.6	0.9	14.0	0.8
Nickel	5	4	1	2	16.7	1
Selenium	0.5	<0.5	<0.5	<0.5	NC	<0.5
Silver	50	<1	<1	<1	NC	<1
Thallium	-	<0.3	<0.3	<0.3	NC	<0.3
Tin	-	<1	<1	<1	NC	<1
Uranium	-	<1	<1	<1	NC	<1
Vanadium	5	<1	2	3	10.0	2
Zinc	250	150	19	39	17.2	51

**Notes**

All units in ug/g.

"-" indicates that there is no applicable regulation or analyses were not performed.

Red cells indicates parameter exceeds Ontario Ministry of the Environment Vegetation Guidelines

"NC" indicates that the relative percent difference (%) was not calculated for this parameter

Table 3-1: APEC 3 Soil Analysis for Polycyclic Aromatic Hydrocarbons (PAHs)  
Cambridge Bay Airport, Cambridge Bay, Nunavut

Area ID	CCME Soil (Residential)	CCME Soil (Commercial)	APEC 3	APEC 3	Relative Percent Difference (%)	APEC 3
Station ID			3-09-1	3-09-1		3-09-4M
Field label			3-09-1-1	3-09-DUP-1		3-09-4M-3
Duplicate ID			3-09-DUP-1	3-09-1-1		
Date			29/Aug/09	29/Aug/09		29/Aug/09
Lab report ID			A947822	A947822		A947822
Depth (m)			0 – 0.45	0 – 0.45		2 – 2.1
Acenaphthene	-	-	<0.01	<0.01	NC	<0.01
Acenaphthylene	-	-	<0.01	<0.01	NC	<0.01
Anthracene	-	-	<0.01	<0.01	NC	<0.01
Benzo(a)anthracene	1	10	<0.01	<0.01	NC	<0.01
Benzo(a)pyrene	0.7	0.7	<0.01	<0.01	NC	<0.01
Benzo(b+j)fluoranthene	-	-	<0.01	<0.01	NC	<0.01
Benzo(g,h,i)perylene	-	-	<0.02	<0.02	NC	<0.02
Benzo(k)fluoranthene	1	10	<0.01	<0.01	NC	<0.01
Chrysene	-	-	<0.01	<0.01	NC	<0.01
Dibenz(a,h)anthracene	1	10	<0.02	<0.02	NC	<0.02
Fluoranthene	-	-	<0.01	<0.01	NC	<0.01
Fluorene	-	-	<0.01	<0.01	NC	<0.01
High molecular weight PAHs	-	-	<0.02	<0.02	NC	<0.02
Indeno(1,2,3-cd)pyrene	1	10	<0.02	<0.02	NC	<0.02
Low molecular weight PAHs	-	-	<0.01	<0.01	NC	0.40
2-Methylnaphthalene	-	-	<0.01	<0.01	NC	0.20
Naphthalene	0.6	22	<0.01	<0.01	NC	0.20
Phenanthrene	5	50	<0.01	<0.01	NC	<0.01
Pyrene	10	100	<0.01	<0.01	NC	<0.01
Total PAHs	-	-	<0.02	<0.02	NC	0.40

#### Notes

All units in ug/g.

"-" indicates that there is no applicable regulation or analyses were not performed.

Red cells indicates parameter exceeds CCME Canadian Environmental Quality Guidelines for commercial land use in coarse-grained soils

Residential guidelines for coarse soil are shown for comparison purposes only.

"NC" indicates that the relative percent difference (%) was not calculated for this parameter

Table 3-2: APEC 3 Soil Analysis for Petroleum Hydrocarbons (PHCs)  
Cambridge Bay Airport, Cambridge Bay, Nunavut

Area ID	CCME Soil (Residential)	CCME Soil (Commercial)	APEC 3	APEC 3	Relative Percent Difference (%)	APEC 3	APEC 3	APEC 3	APEC 3	APEC 3	APEC 3	APEC 3	Relative Percent Difference (%)
Station ID			3-09-1	3-09-1		3-09-2	3-09-3	3-09-4M	3-09-4M	3-09-5M	3-09-6M	3-09-6M	
Field label			3-09-1-1	3-09-DUP-1		3-09-2-2	3-09-3-2	3-09-4M-2	3-09-4M-3	3-09-5M-2	3-09-6M-3	3-09-DUP-2	
Duplicate ID			3-09-DUP-1	3-09-1-1							3-09-DUP-2	3-09-6M-3	
Date			29/Aug/09	29/Aug/09		29/Aug/09	29/Aug/09	29/Aug/09	29/Aug/09	29/Aug/09	29/Aug/09	29/Aug/09	
Lab report ID			A947822	A947822		A947822	A947822	A947822	A947822	A947822	A947822	A947822	
Depth (m)			0 – 0.45	0 – 0.45		0.5 – 1.5	0.5 – 1.5	0.5 – 2	2 – 2.1	0.5 – 1	1 – 2	1 – 2	
Moisture content	-	-	5.6	5.8	0.9	7.3	6.5	8.4	8.9	5.3	10.0	9.5	1.3
Lead	-	-	5.9	-	NC	4.6	-	5.5	5.6	2.8	3.9	-	NC
Benzene	0.03	0.03	<0.005	0.006	0.004	0.015	<0.005	0.86	-	<0.005	0.005	<0.005	0.0025
Ethylbenzene	0.082	0.082	<0.01	<0.01	NC	<0.01	<0.01	0.05	0.08	<0.01	0.08	0.10	5.6
Toluene	0.37	0.37	<0.03	<0.03	NC	0.07	<0.05	0.16	0.28	<0.05	<0.05	<0.05	NC
m+p-Xylene	-	-	<0.1	<0.1	NC	<0.1	<0.1	0.3	0.6	<0.1	2.1	1.6	6.8
o-Xylene	-	-	<0.1	<0.1	NC	<0.1	<0.1	0.1	0.2	<0.1	0.9	0.6	10.0
Xylenes (total)	11	11	<0.1	<0.1	NC	<0.1	<0.1	0.5	0.8	<0.1	2.9	2.3	5.8
F1 (C6-C10)	30*	320*	<10	<10	NC	-	-	-	47	-	-	-	NC
F1 (C6-C10) minus BTEX	30*	320*	<10	<10	NC	<10	<10	28	44	110	120	88	7.7
F2 (C10-C16)	150*	260*	<10	<10	NC	<10	<10	16	27	1700	850	860	0.3
F3 (C16-C34)	300*	1700*	220	430	16.2	<10	<10	13	17	30	160	180	2.9
F4 (C34-C50)	2800*	3300*	190	190	0.0	<10	<10	<10	<10	<10	<10	<10	NC
F4 Gravimetric	-	-	3300	-	NC	-	-	-	-	-	-	-	NC
Reached Baseline at C50	-	-	No	Yes	NC	Yes	Yes	Yes	Yes	Yes	Yes	Yes	NC

#### Notes

All units in ug/g, unless otherwise noted.

"-" indicates that there is no applicable regulation or analyses were not performed.

\*\*\* indicates Canada-Wide Standards for Petroleum Hydrocarbons

Red cells indicates parameter exceeds CCME Canadian Environmental Quality Guidelines for commercial land use in coarse-grained soils

Residential guidelines for coarse soil are shown for comparison purposes only.

"NC" indicates that the relative percent difference (%) was not calculated for this parameter

Table 3-3 APEC 3 Soil Analysis for Volatile Organic Compounds (VOCs)  
Cambridge Bay Airport, Cambridge Bay, Nunavut

Area ID	CCME Soil (Residential)	CCME Soil (Commercial)	APEC 3	APEC 3	Relative Percent Difference (%)	APEC 3	APEC 3	APEC 3	APEC 3	APEC 3	APEC 3	APEC 3	Relative Percent Difference (%)
Station ID			3-09-1	3-09-1		3-09-2	3-09-3	3-09-4M	3-09-4M	3-09-5M	3-09-6M	3-09-6M	
Field label			3-09-1-1	3-09-DUP-1		3-09-2-2	3-09-3-2	3-09-4M-2	3-09-4M-3	3-09-5M-2	3-09-6M-3	3-09-DUP-2	
Duplicate ID			3-09-DUP-1	3-09-1-1									
Date			29/Aug/09	29/Aug/09		29/Aug/09	29/Aug/09	29/Aug/09	29/Aug/09	29/Aug/09	29/Aug/09	29/Aug/09	
Lab report ID			A947822	A947822		A947822	A947822	A947822	A947822	A947822	A947822	A947822	
Depth (m)			0 – 0.45	0 – 0.45		0.5 – 1.5	0.5 – 1.5	0.5 – 2	2 – 2.1	0.5 – 1	1 – 2	1 – 2	
Benzene	0.03	0.03	<0.005	0.006	NC	0.015	<0.005	0.86	1.2	<0.005	0.005	<0.005	NC
Bromodichloromethane	-	-	<0.05	<0.05	NC	-	-	-	<0.05	-	-	-	NC
Bromoform	-	-	<0.05	<0.05	NC	-	-	-	<0.05	-	-	-	NC
Bromomethane	-	-	<0.3	<0.3	NC	-	-	-	<0.3	-	-	-	NC
Carbon tetrachloride	5	50	<0.03	<0.03	NC	-	-	-	<0.03	-	-	-	NC
Chlorobenzene	1	10	<0.03	<0.03	NC	-	-	-	<0.03	-	-	-	NC
Chlorodibromomethane	-	-	<0.05	<0.05	NC	-	-	-	<0.05	-	-	-	NC
Chloroethane	-	-	<0.1	<0.1	NC	-	-	-	<0.1	-	-	-	NC
Chloroform	5	50	<0.05	<0.05	NC	-	-	-	<0.05	-	-	-	NC
Chloromethane	-	-	<0.1	<0.1	NC	-	-	-	<0.1	-	-	-	NC
1,2-Dichlorobenzene	1	10	<0.03	<0.03	NC	-	-	-	<0.03	-	-	-	NC
1,3-Dichlorobenzene	1	10	<0.03	<0.03	NC	-	-	-	<0.03	-	-	-	NC
1,4-Dichlorobenzene	1	10	<0.03	<0.03	NC	-	-	-	<0.03	-	-	-	NC
1,1-Dichloroethane	5	50	<0.03	<0.03	NC	-	-	-	<0.03	-	-	-	NC
1,2-Dichloroethane	5	50	<0.03	<0.03	NC	-	-	-	<0.03	-	-	-	NC
1,1-Dichloroethene	5	50	<0.03	<0.03	NC	-	-	-	<0.03	-	-	-	NC
cis-1,2-Dichloroethene	-	-	<0.03	<0.03	NC	-	-	-	<0.03	-	-	-	NC
trans-1,2-Dichloroethene	-	-	<0.03	<0.03	NC	-	-	-	<0.03	-	-	-	NC
Dichloromethane	5	50	<0.1	<0.1	NC	-	-	-	<0.1	-	-	-	NC
1,2-Dichloropropane	5	50	<0.03	<0.03	NC	-	-	-	<0.03	-	-	-	NC
cis-1,3-Dichloropropene	-	-	<0.05	<0.05	NC	-	-	-	<0.05	-	-	-	NC
trans-1,3-Dichloropropene	-	-	<0.05	<0.05	NC	-	-	-	<0.05	-	-	-	NC
Ethylbenzene	0.082	0.082	<0.01	<0.01	NC	<0.01	<0.01	0.05	0.08	<0.01	0.08	0.10	5.56
Ethylene dibromide	-	-	<0.03	<0.03	NC	-	-	-	<0.03	-	-	-	NC
Methyl-tert-butylether	-	-	<0.1	<0.1	NC	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	NC
Styrene	5	50	<0.1	<0.1	NC	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	NC
1,1,1,2-Tetrachloroethane	-	-	<0.03	<0.03	NC	-	-	-	<0.03	-	-	-	NC
1,1,2,2-Tetrachloroethane	5	50	<0.03	<0.03	NC	-	-	-	<0.03	-	-	-	NC
Tetrachloroethene	5	50	<0.03	<0.03	NC	-	-	-	<0.03	-	-	-	NC
Toluene	0.37	0.37	<0.03	<0.03	NC	0.07	<0.05	0.16	0.28	<0.05	<0.05	<0.05	NC
1,1,1-Trichloroethane	5	50	<0.03	<0.03	NC	-	-	-	<0.03	-	-	-	NC
1,1,2-Trichloroethane	5	50	<0.03	<0.03	NC	-	-	-	<0.03	-	-	-	NC
Trichloroethene	5	50	<0.01	<0.01	NC	-	-	-	<0.01	-	-	-	NC
Trichlorofluoromethane	-	-	<0.2	<0.2	NC	-	-	-	<0.2	-	-	-	NC
Vinyl chloride	-	-	<0.08	<0.08	NC	-	-	-	<0.08	-	-	-	NC
m+p-Xylene	-	-	<0.1	<0.1	NC	<0.1	<0.1	0.3	0.6	<0.1	2.1	1.6	6.76
o-Xylene	-	-	<0.1	<0.1	NC	<0.1	<0.1	0.1	0.2	<0.1	0.9	0.6	10.00
Xylenes (total)	11	11	<0.1	<0.1	NC	<0.1	<0.1	0.5	0.8	<0.1	2.9	2.3	5.77

#### Notes

All units in ug/g.

"-" indicates that there is no applicable regulation or analyses were not performed.

Red cells indicates parameter exceeds CCME Canadian Environmental Quality Guidelines for commercial land use in coarse-grained soils

Residential guidelines for coarse soil are shown for comparison purposes only.

"NC" indicates that the relative percent difference (%) was not calculated for this parameter

Table 3-4: APEC 3 Soil Analysis for PFOS PFOA  
Cambridge Bay Airport, Cambridge Bay, Nunavut

Area ID	MPCA Soil CL Guidelines	APEC 3	APEC 3	APEC 3	APEC 3	Relative Percent Difference (%)	APEC 3
Station ID		3-09-1	3-09-3	3-09-4M	3-09-4M		3-09-6M
Field Label		3-09-1-1	3-09-3-2	3-09-4M-3	3-09-DUP-1		3-09-6M-3
Duplicate ID				3-09-DUP-1	3-09-4M-3		
Sampling Date		29/08/2009	29/08/2009	29/08/2009	29/08/2009		29/08/2009
Lab Report ID		DQ3180	DQ3181	DQ3182	DQ3183		DQ3184
Depth (m)		0 - 0.45	0.5 - 1.5	2.0 - 2.1	2.0 - 2.1		1.0 - 2.0
Miscellaneous Parameters							
Perfluoro-1-Octanesulfonate (PFOS)	2100	830	<25	620	820	27.7	53
Perfluoro-n-Octanoic Acid (PFOA)	2100	<2.5	5.8	9.6	3.2	NC	5.5

**Notes**

All units in ug/g.

"-" indicates that there is no applicable regulation or analyses were not performed.

Red cells indicates parameter exceeds Minnesota Pollution Control Agency (MPCA) Soil guidelines for PFOS and related compounds

NC indicates that the relative percent difference (%) was not calculated for this parameter



Table 3-5: APEC 3 Soil Analysis for Polychlorinated Biphenyls (PCBs)  
Cambridge Bay Airport, Cambridge Bay, Nunavut

Area ID	CCME Soil Commercial Guidelines	APEC 3	APEC 3	APEC 3	Relative Percent Difference (%)
Station ID		3-09-4M	3-09-4M	3-09-4M-3	
Field Label		3-09-4M-1	3-09-4M-3	3-09-DUP-1	
Duplicate ID			3-09-DUP-1	3-09-4M-3	
Sampling Date		29/08/2009	29/08/2009	29/08/2009	
Lab Report ID		DP3385	DP7276	DW4928	
Depth (m)		0 - 0.5	2.0 - 2.1	2.0 - 2.1	
<b>Inorganics</b>					
Moisture (%)	-	18	5.2	-	NC
<b>PCBs</b>					
Aroclor 1262	-	<0.01	<0.01	<0.01	NC
Aroclor 1016	-	<0.01	<0.01	<0.01	NC
Aroclor 1221	-	<0.01	<0.01	<0.01	NC
Aroclor 1232	-	<0.01	<0.01	<0.01	NC
Aroclor 1242	-	<0.01	<0.01	<0.01	NC
Aroclor 1248	-	<0.01	<0.01	<0.01	NC
Aroclor 1254	-	<0.01	<0.01	<0.01	NC
Aroclor 1260	-	<0.01	<0.01	<0.01	NC
Aroclor 1268	-	<0.01	<0.01	<0.01	NC
Total PCB	-	<0.01	<0.01	<0.01	NC
<b>Surrogate Recovery (%)</b>					
2,4,5,6-Tetrachloro-m-xylene (%)	-	91	65	71	85.7
Decachlorobiphenyl (%)	-	81	70	83	17

**Notes**

All units in ug/g.

"-" indicates that there is no applicable regulation or analyses were not performed.

Red cells indicates parameter exceeds CCME Canadian Environmental Quality  
Guidelines for commercial land use in coarse-grained soils

NC indicates that the relative percent difference (%) was not calculated for this parameter

Table 3-6: APEC 3 Soil Analysis for Total Lead (Pb) Cambridge Bay Airport, Cambridge Bay, Nunavut

Area ID	CCME Soil (Residential)	CCME Soil (Commercial)	APEC 3	APEC 3	Relative Percent Difference (%)	APEC 3	APEC 3	APEC 3	APEC 3	APEC 3
Station ID			3-09-1	3-09-1		3-09-2	3-09-4M	3-09-4M	3-09-5M	3-09-6M
Field label			3-09-1-1	3-09-1-1		3-09-2-2	3-09-4M-2	3-09-4M-3	3-09-5M-2	3-09-6M-3
Duplicate ID				Lab Dup						
Date			2009/08/29	2009/08/29		2009/08/29	2009/08/29	2009/08/29	2009/08/29	2009/08/29
Lab report ID			Q56933	Q56933		Q56935	Q56939	Q56940	Q56943	Q56947
Depth (m)			0.0 - 0.5	0.0 - 0.5		0.5 - 1.0	0.5 - 1.0	1.0 - 2.0	0.5 - 1.0	1.0 - 2.0
Lead	140	140	5.9	6.0	1.7	4.6	5.5	5.6	2.8	3.9

**Notes**

All units in ug/g, unless otherwise noted.

"-" indicates that there is no applicable regulation or analyses were not performed.

Red cells indicates parameter exceeds CCME Canadian Environmental Quality Guidelines for commercial land use in coarse soils.

Residential land use guidelines for coarse soil are shown for comparison purposes only.

Table 3-7: APEC 3 Soil Analysis for Grain Size  
Cambridge Bay Airport, Cambridge Bay, Nunavut

Area ID	CCME Soil Commercial	APEC 3	APEC 3
Station ID		3-09-2	3-09-4M
Field label		3-09-2-1	3-09-4M-2
Duplicate ID			
Date		29/Aug/09	29/Aug/09
Lab report ID		A947822	A947822
Depth (m)		0 – 0.5	0.5 – 2
<200 mesh (>.075 mm)	-	43.7	59.3
>200 mesh (<.075 mm)	-	56.3	40.8

**Notes**

All units in ug/g.

"-" indicates that there is no applicable regulation or analyses were not performed.

Red cells indicates parameter exceeds CCME Canadian Environmental Quality Guidelines for commercial land use in coarse-grained soils

Table 3-8: APEC 3 Groundwater Analysis for Polyaromatic Hydrocarbons (PAHs)  
Cambridge Bay Airport, Cambridge Bay, Nunavut

Area ID	BC CSR (Marine)	APEC 3	APEC 3	APEC 3
Station ID		3-09-4M	3-09-5M	3-09-6M
Field label		3-09-4M	3-09-5M	3-09-6M
Duplicate ID				
Date		2/Sep/09	2/Sep/09	2/Sep/09
Lab report ID		A948731	A948731	A948731
Acenaphthene	60	0.11	0.20	<0.10
Acenaphthylene	-	<0.10	<0.10	<0.10
Acridine	0.5	<0.20	<0.20	<0.20
Anthracene	1	<0.010	<0.010	<0.010
Benzo(a)anthracene	1	<0.0085	<0.0085	<0.0085
Benzo(a)pyrene	0.1	<0.0075	<0.0075	<0.0075
Benzo(b+j)fluoranthene	-	<0.0085	<0.0085	<0.0085
Benzo(e)pyrene	-	<0.050	<0.050	<0.050
Benzo(g,h,i)perylene	-	<0.0085	<0.0085	<0.0085
Benzo(k)fluoranthene	-	<0.0085	<0.0085	<0.0085
Chrysene	1	<0.0085	<0.0085	<0.0085
Dibenz(a,h)anthracene	-	<0.0075	<0.0075	<0.0075
Fluoranthene	2	<0.040	<0.040	<0.040
Fluorene	120	0.37	0.55	0.066
Indeno(1,2,3-cd)pyrene	-	<0.0085	<0.0085	<0.0085
2-Methylnaphthalene	-	77	82	1.0
Naphthalene	10	330	84	2.1
Perylene	-	<0.050	<0.050	<0.050
Phenanthrene	3	0.30	0.10	<0.050
Pyrene	0.2	0.045	0.025	<0.020
Quinoline	34	<0.20	<0.20	<0.20

**Notes**

All units in ug/L unless otherwise indicated.

"-" indicates that there is no applicable regulation or analyses were not performed.

Red cells indicates parameter exceeds CSR – B.C. Reg. 343/2008.

Table 3-9: APEC 3 Groundwater Analysis for Petroleum Hydrocarbons (PHCs)  
Cambridge Bay Airport, Cambridge Bay, Nunavut

Area ID	BC CSR (Marine)	APEC 3	APEC 3	APEC 3
Station ID		3-09-4M	3-09-5M	3-09-6M
Field label		3-09-4M	3-09-5M	3-09-6M
Duplicate ID				
Date		2/Sep/09	2/Sep/09	2/Sep/09
Lab report ID		A948731	A948731	A948731
Benzene	1000	1700	670.0	2.5
Ethylbenzene	2500	180	38.0	1.1
Toluene	3300	2800	110.0	2.1
m+p-Xylene	-	1500	120.0	13.0
o-Xylene	-	770	150.0	6.2
Xylenes (total)	-	2300	280.0	19.0
F1 (C6-C10) minus BTEX	-	3500	1700	410
F2 (C10-C16)	-	3800	3500	2500
F3 (C16-C34)	-	200	<100	500
F4 (C34-C50)	-	<100	<100	<100
Reached Baseline at C50	-	Yes	Yes	Yes

**Notes**

All units in ug/L unless otherwise indicated.

"-" indicates that there is no applicable regulation or analyses were not performed.

Red cells indicates parameter exceeds CSR – B.C. Reg. 343/2008.

Table 3-10: APEC 3 Groundwater Analysis for Volatile Organic Compounds (VOCs)  
Cambridge Bay Airport, Cambridge Bay, Nunavut

Area ID	BC CSR (Marine)	APEC 3	APEC 3	APEC 3
Station ID		3-09-4M	3-09-5M	3-09-6M
Field label		3-09-4M	3-09-5M	3-09-6M
Duplicate ID				
Date		2/Sep/09	2/Sep/09	2/Sep/09
Lab report ID		A948731	A948731	A948731
Benzene	1000	1700	670.0	2.5
Bromodichloromethane	-	<0.5	<0.5	<0.5
Bromoform	-	<0.5	<0.5	<0.5
Bromomethane	-	<2	<2	<2
Carbon tetrachloride	130	<0.5	<0.5	<0.5
Chlorobenzene	120	<0.5	<0.5	<0.5
Chlorodibromomethane	-	<1	<1	<1
Chloroethane	-	<1	<1	<1
Chloroform	20	<0.5	<0.5	<0.5
Chloromethane	-	<2	<2	<2
1,2-Dichlorobenzene	420	<0.5	<0.5	<0.5
1,3-Dichlorobenzene	1500	<0.5	<0.5	<0.5
1,4-Dichlorobenzene	260	<0.5	<0.5	<0.5
1,1-Dichloroethane	-	<0.5	<0.5	<0.5
1,2-Dichloroethane	1000	14.0	18.0	1.8
1,1-Dichloroethene	-	<0.5	<0.5	<0.5
cis-1,2-Dichloroethene	-	<0.5	<0.5	<0.5
trans-1,2-Dichloroethene	-	<0.5	<0.5	<0.5
Dichloromethane	980	<2	<2	<2
1,2-Dichloropropane	-	<0.5	<0.5	<0.5
cis-1,3-Dichloropropene	-	<0.5	<0.5	<0.5
trans-1,3-Dichloropropene	-	<0.5	<0.5	<0.5
Ethylbenzene	2500	180	38.0	1.1
Ethylene dibromide	-	150	7.8	<0.5
Methyl-tert-butylether	4400	<0.5	<0.5	<0.5
Styrene	720	1.5	<0.5	<0.5
1,1,1,2-Tetrachloroethane	-	<2	<2	<2
1,1,2,2-Tetrachloroethane	-	<2	<2	<2
Tetrachloroethene	1100	<0.5	<0.5	<0.5
Toluene	3300	2800	110.0	2.1
Total Trihalomethanes	-	<2	<2	<2
1,2,3-Trichlorobenzene	80	<1	<1	<1
1,2,4-Trichlorobenzene	54	<1	<1	<1
1,3,5-Trichlorobenzene	-	<0.5	<0.5	<0.5
1,1,1-Trichloroethane	-	<0.5	<0.5	<0.5
1,1,2-Trichloroethane	-	<0.5	<0.5	<0.5
Trichloroethene	200	<0.5	<0.5	<0.5
Trichlorofluoromethane	-	<0.5	<0.5	<0.5
Vinyl chloride	-	<0.5	<0.5	<0.5
m+p-Xylene	-	1500	120.0	13.0
o-Xylene	-	770	150.0	6.2
Xylenes (total)	-	2300	280.0	19.0

**Notes**

All units in ug/L unless otherwise indicated.

"-" indicates that there is no applicable regulation or analyses were not performed.

Red cells indicates parameter exceeds CSR – B.C. Reg. 343/2008.

Table 3-11: APEC 3 Groundwater Analysis for Metals  
Cambridge Bay Airport, Cambridge Bay, Nunavut

Area ID	BC CSR (Marine)	APEC 3	APEC 3	APEC 3
Station ID		3-09-4M	3-09-5M	3-09-6M
Field label		3-09-4M	3-09-5M	3-09-6M
Duplicate ID				
Date		2/Sep/09	2/Sep/09	2/Sep/09
Lab report ID		A948731	A948731	A948731
Hardness (mg/L)	-	550	360	1000
Aluminum	-	1000	40	130
Antimony	200	<2	<2	<2
Arsenic	125	3	<2	6
Barium	5000	70	30	120
Beryllium	1000	<10	<10	<10
Boron	50000	680	290	850
Cadmium	1	<0.05	0.13	0.06
Calcium	-	86000	70000	200000
Chromium	150	<10	<10	<10
Cobalt	40	8	<3	14
Copper	20	12	4	18
Iron	-	1700	190	1600
Lead	20	100	<2	4
Magnesium	-	82000	45000	120000
Manganese	-	330	94	460
Mercury	1	0.005	0.002	0.009
Molybdenum	10000	11	22	7
Nickel	83	42	10	52
Potassium	-	110000	46000	94000
Selenium	540	<2	<2	<2
Silver	15	<1	<1	<1
Sodium	-	260000	130000	300000
Strontium	-	210	150	460
Thallium	3	<2	<2	<2
Tin	-	<10	<10	<10
Titanium	1000	40	<10	<10
Uranium	1000	13	7	14
Vanadium	-	20	10	10
Zinc	100	<30	<30	<30

#### Notes

All units in ug/L unless otherwise indicated.

"-" indicates that there is no applicable regulation or analyses were not performed.

Red cells indicates parameter exceeds CSR – B.C. Reg. 343/2008.



Table 3-12: APEC 3 Vegetation Analysis for Metals Cambridge Bay Airport, Cambridge Bay, Nunavut

Area ID	MOE Vegetation Guidelines (ppm)	APEC 3	APEC 3
Station ID		3-09-VG1	3-09-VG2
Field label		3-09-VG1	3-09-VG2
Duplicate ID			
Date		2/Sep/09	2/Sep/09
Lab report ID		A948579	A948579
Antimony	0.3	<1	<1
Arsenic	0.5	<1	<1
Barium	-	16	<10
Beryllium	-	<0.4	<0.4
Cadmium	1	<0.1	0.2
Chromium	8	4	<1
Chromium (VI)	-	<0.15	<0.15
Cobalt	2	<1	<1
Copper	20	<5	8
Lead	30	5	<1
Mercury	-	<0.05	<0.05
Molybdenum	1.5	<0.4	<0.4
Nickel	5	2	2
Selenium	0.5	<0.5	<0.5
Silver	50	<1	<1
Thallium	-	<0.3	<0.3
Tin	-	<1	<1
Uranium	-	<1	<1
Vanadium	5	3	1
Zinc	250	14	160

**Notes**

All units in ug/g.

"-" indicates that there is no applicable regulation or analyses were not performed.

Red cells indicates parameter exceeds Ontario Ministry of the Environment Vegetation Guidelines

Table 4-1: APEC 4 Soil Analysis for Polycyclic Aromatic Hydrocarbons (PAHs)  
Cambridge Bay Airport, Cambridge Bay, Nunavut

Area ID	CCME Soil (Residential)	CCME Soil (Commercial)	APEC 4	APEC 4	APEC 4
Station ID			4A-09-3M	4A-09-4	4A-09-5
Field label			4A-09-3M-1	4A-09-4-1	4A-09-5-1
Duplicate ID					
Date			30/Aug/09	30/Aug/09	30/Aug/09
Lab report ID			A947822	A947822	A947822
Depth (m)			0.5 – 1	1.9 – 2	1.3 – 1.5
Acenaphthene	-	-	<0.03	0.2	0.8
Acenaphthylene	-	-	<0.1	<0.1	<0.4
Anthracene	-	-	<0.01	<0.1	<0.3
Benzo(a)anthracene	1	10	<0.01	<0.1	<0.1
Benzo(a)pyrene	0.7	0.7	<0.01	<0.1	<0.1
Benzo(b+j)fluoranthene	-	-	<0.01	<0.1	<0.1
Benzo(g,h,i)perylene	-	-	<0.02	<0.2	<0.2
Benzo(k)fluoranthene	1	10	<0.01	<0.1	<0.1
Chrysene	-	-	<0.01	<0.1	<0.1
Dibenz(a,h)anthracene	1	10	<0.02	<0.2	<0.2
Fluoranthene	-	-	0.02	<0.1	<0.1
Fluorene	-	-	0.14	0.5	2.6
High molecular weight PAHs	-	-	0.03	<0.2	<0.2
Indeno(1,2,3-cd)pyrene	1	10	<0.02	<0.2	<0.2
Low molecular weight PAHs	-	-	5.6	16.0	58.0
2-Methylnaphthalene	-	-	4.0	11.0	39.0
Naphthalene	0.6	22	1.3	4.3	13.0
Phenanthrene	5	50	0.13	0.3	2.6
Pyrene	10	100	0.01	<0.1	0.1
Total PAHs	-	-	5.6	16.0	58.0

#### Notes

All units in ug/g.

"-" indicates that there is no applicable regulation or analyses were not performed.

Red cells indicates parameter exceeds CCME Canadian Environmental Quality Guidelines for commercial land use in coarse-grained soils.

Residential land use guidelines are shown for comparison purposes only.

Table 4-2: APEC 4 Soil Analysis for Petroleum Hydrocarbons (PHCs)  
Cambridge Bay Airport, Cambridge Bay, Nunavut

Area ID	CCME Soil (Residential)	CCME Soil (Commercial)	APEC 4	APEC 4	APEC 4	Relative Percent Difference (%)	APEC 4	APEC 4	APEC 4	APEC 4	APEC 4	APEC 4	APEC 4
Station ID			4A-09-1M	4A-09-2M	4A-09-2M		4A-09-3M	4A-09-4	4A-09-5	4A-09-6	4A-09-6	4A-09-7	4A-09-8
Field label			4A-09-1M-1	4A-09-2M-1	4A-09-DUP-1		4A-09-3M-1	4A-09-4-1	4A-09-5-1	4A-09-6-1	4A-09-6-2	4A-09-7-1	4A-09-8-1
Duplicate ID			4A-09-DUP-1		4A-09-2M-1		30/Aug/09		30/Aug/09	30/Aug/09	30/Aug/09	30/Aug/09	30/Aug/09
Date			30/Aug/09	30/Aug/09	30/Aug/09		30/Aug/09	30/Aug/09	30/Aug/09	30/Aug/09	30/Aug/09	30/Aug/09	30/Aug/09
Lab report ID			A947822	A947822	A947822		A947822	A947822	A947822	A947822	A947822	A947822	A947822
Depth (m)			0.5 – 1	0.6 – 1	0.6 – 1		0.5 – 1	1.9 – 2	1.3 – 1.5	0.5 – 1	1 – 1.5	1.3 – 1.5	1 – 1.7
Moisture content	-	-	11.0	8.7	11.0	5.8	12.0	9.9	9.7	5.6	11.0	8.8	12.0
Benzene	0.03	0.03	<0.005	<0.005	0.009	0.007	1.0	2.9	4.6	<0.005	<0.005	<0.005	0.046
Ethylbenzene	0.082	0.082	<0.01	<0.01	<0.01	NC	5.6	6.8	6.5	<0.01	<0.01	0.02	0.07
Toluene	0.37	0.37	<0.05	<0.05	<0.05	NC	15.00	37.0	1.5	<0.05	<0.05	<0.05	0.06
m+p-Xylene	-	-	<0.1	<0.1	<0.1	NC	22.0	100.0	65.0	<0.1	<0.1	<0.1	0.4
o-Xylene	-	-	<0.1	<0.1	<0.1	NC	7.0	34.0	11.0	<0.1	<0.1	<0.1	2.0
Xylenes (total)	11	11	<0.1	<0.1	<0.1	NC	29.0	140.0	76.0	<0.1	<0.1	<0.1	2.5
F1 (C6-C10)	30*	320*	-	-	-	NC	4800	4600	4400	-	-	-	-
F1 (C6-C10) minus BTEX	30*	320*	<10	<10	<10	NC	4700	4400	4300	<10	<10	32	180
F2 (C10-C16)	150*	260*	<10	<10	<10	NC	740	3700	12000	<10	<10	<10	150
F3 (C16-C34)	300*	1700*	22	<10	<10	NC	140	520	6400	110	27	<10	120
F4 (C34-C50)	2800*	3300*	<10	<10	<10	NC	<10	11	3900	94	15	<10	<10
F4 Gravimetric	-	-	-	-	-	NC	-	-	-	5500	2300	-	-
Reached Baseline at C50	-	-	Yes	Yes	Yes	NC	Yes	Yes	Yes	No	No	Yes	Yes

#### Notes

All units in ug/g, unless otherwise noted.

"-" indicates that there is no applicable regulation or analyses were not performed.

Red cells indicates parameter exceeds CCME Canadian Environmental Quality Guidelines for commercial land use in coarse-grained soils.

Residential land use guidelines are shown for comparison purposes only.

"NC" indicates that the relative percent difference (%) was not calculated for this parameter

Table 4-3: APEC 4 Soil Analysis for Volatile Organic Compounds (VOCs)  
Cambridge Bay Airport, Cambridge Bay, Nunavut

Area ID	CCME Soil (Residential)	CCME Soil (Commercial)	APEC 4	APEC 4	APEC 4	Relative Percent Difference (%)	APEC 4	APEC 4	APEC 4	APEC 4	APEC 4	APEC 4	APEC 4
Station ID			4A-09-1M	4A-09-2M	4A-09-2M		4A-09-3M	4A-09-4	4A-09-5	4A-09-6	4A-09-6	4A-09-7	4A-09-8
Field label			4A-09-1M-1	4A-09-2M-1	4A-09-DUP-1		4A-09-3M-1	4A-09-4-1	4A-09-5-1	4A-09-6-1	4A-09-6-2	4A-09-7-1	4A-09-8-1
Duplicate ID			30/Aug/09	4A-09-DUP-1	4A-09-2M-1		30/Aug/09	30/Aug/09	30/Aug/09	30/Aug/09	30/Aug/09	30/Aug/09	30/Aug/09
Date			A947822	A947822	A947822		A947822	A947822	A947822	A947822	A947822	A947822	A947822
Lab report ID			0.5 – 1	0.6 – 1	0.6 – 1		0.5 – 1	1.9 – 2	1.3 – 1.5	0.5 – 1	1 – 1.5	1.3 – 1.5	1 – 1.7
Depth (m)			0.03	0.03	<0.005		<0.005	0.009	NC	1.0	2.9	4.6	<0.005
Benzene	-	-	-	-	-	NC	<0.05	<0.05	<0.05	-	-	-	-
Bromodichloromethane	-	-	-	-	-	NC	<0.05	<0.05	<0.05	-	-	-	-
Bromoform	-	-	-	-	-	NC	<0.3	<0.3	<0.3	-	-	-	-
Bromomethane	5	50	-	-	-	NC	<0.03	<0.03	<0.03	-	-	-	-
Carbon tetrachloride	1	10	-	-	-	NC	<0.03	<0.03	<0.03	-	-	-	-
Chlorobenzene	-	-	-	-	-	NC	<0.05	<0.05	<0.05	-	-	-	-
Chlorodibromomethane	-	-	-	-	-	NC	<0.1	<0.1	<0.1	-	-	-	-
Chloroethane	5	50	-	-	-	NC	<0.05	<0.05	<0.05	-	-	-	-
Chloroform	-	-	-	-	-	NC	<0.1	<0.1	<0.1	-	-	-	-
Chloromethane	1	10	-	-	-	NC	<0.03	<0.03	<0.03	-	-	-	-
1,2-Dichlorobenzene	1	10	-	-	-	NC	<0.03	<0.03	<0.03	-	-	-	-
1,3-Dichlorobenzene	1	10	-	-	-	NC	<0.03	<0.03	<0.03	-	-	-	-
1,4-Dichlorobenzene	5	50	-	-	-	NC	<0.03	<0.03	<0.03	-	-	-	-
1,1-Dichloroethane	5	50	-	-	-	NC	<0.03	<0.03	<0.03	-	-	-	-
1,2-Dichloroethane	5	50	-	-	-	NC	<0.03	<0.03	<0.03	-	-	-	-
1,1-Dichloroethene	5	50	-	-	-	NC	<0.03	<0.03	<0.03	-	-	-	-
cis-1,2-Dichloroethene	-	-	-	-	-	NC	<0.03	<0.03	<0.03	-	-	-	-
trans-1,2-Dichloroethene	-	-	-	-	-	NC	<0.03	<0.03	<0.03	-	-	-	-
Dichloromethane	5	50	-	-	-	NC	<0.1	<0.1	<0.1	-	-	-	-
1,2-Dichloropropane	5	50	-	-	-	NC	<0.03	<0.03	<0.03	-	-	-	-
cis-1,3-Dichloropropene	-	-	-	-	-	NC	<0.05	<0.05	<0.05	-	-	-	-
trans-1,3-Dichloropropene	-	-	-	-	-	NC	<0.05	<0.05	<0.05	-	-	-	-
Ethylbenzene	0.082	0.082	<0.01	<0.01	<0.01	NC	5.6	6.8	6.5	<0.01	<0.01	0.02	0.07
Ethylene dibromide	-	-	-	-	-	NC	<0.03	<0.03	<0.03	-	-	-	-
Methyl-tert-butylether	-	-	<0.1	<0.1	<0.1	NC	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Styrene	5	50	<0.1	<0.1	<0.1	NC	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
1,1,1,2-Tetrachloroethane	-	-	-	-	-	NC	<0.03	<0.03	<0.03	-	-	-	-
1,1,2,2-Tetrachloroethane	5	50	-	-	-	NC	<0.03	<0.03	<0.03	-	-	-	-
Tetrachloroethene	5	50	-	-	-	NC	<0.03	<0.03	<0.03	-	-	-	-
Toluene	0.37	0.37	<0.05	<0.05	<0.05	NC	15.00	37.0	1.5	<0.05	<0.05	<0.05	0.06
1,1,1-Trichloroethane	5	50	-	-	-	NC	<0.03	<0.03	<0.03	-	-	-	-
1,1,2-Trichloroethane	5	50	-	-	-	NC	<2	<9	<6	-	-	-	-
Trichloroethene	5	50	-	-	-	NC	<0.01	<0.01	<0.01	-	-	-	-
Trichlorofluoromethane	-	-	-	-	-	NC	<0.2	<0.2	<0.2	-	-	-	-
Vinyl chloride	-	-	-	-	-	NC	<0.08	<0.08	<0.08	-	-	-	-
m+p-Xylene	-	-	<0.1	<0.1	<0.1	NC	22.0	100.0	65.0	<0.1	<0.1	<0.1	0.4
o-Xylene	-	-	<0.1	<0.1	<0.1	NC	7.0	34.0	11.0	<0.1	<0.1	<0.1	2.0
Xylenes (total)	11	11	<0.1	<0.1	<0.1	NC	29.0	140.0	76.0	<0.1	<0.1	<0.1	2.5

#### Notes

All units in ug/g.

"-" indicates that there is no applicable regulation or analyses were not performed.

Red cells indicates parameter exceeds CCME Canadian Environmental Quality Guidelines for commercial land use in coarse-grained soils.

Residential land use guidelines are shown for comparison purposes only.

"NC" indicates that the relative percent difference (%) was not calculated for this parameter

Table 4-4: APEC 4 Soil Analysis for Metals  
Cambridge Bay Airport, Cambridge Bay, Nunavut

Area ID	CCME Soil (Residential)	CCME Soil (Commercial)	APEC 4	APEC 4	APEC 4
Station ID			4A-09-3M	4A-09-4	4A-09-5
Field label			4A-09-3M-1	4A-09-4-1	4A-09-5-1
Duplicate ID					
Date			30/Aug/09	30/Aug/09	30/Aug/09
Lab report ID			A947822	A947822	A947822
Depth (m)			0.5 – 1	1.9 – 2	1.3 – 1.5
pH	6 to 8	6 to 8	7.98	8.03	8.55
Aluminum	-	-	4310	4280	3940
Antimony	20	20	0.2	0.2	0.2
Arsenic	12	12	2.7	1.9	1.5
Barium	500	500	27.2	28.3	25.3
Beryllium	4	4	0.3	0.2	0.4
Bismuth	-	-	<0.1	<0.1	<0.1
Cadmium	10	10	0.07	0.08	0.39
Calcium	-	-	75700	75900	92900
Chromium	64	64	11	10	9
Cobalt	50	50	3.9	3.4	3.7
Copper	63	63	9.0	8.2	10.8
Iron	-	-	10600	9540	10100
Lead	140	140	13.5	14.4	294.0
Magnesium	-	-	40300	43100	53500
Manganese	-	-	328.0	275.0	350.0
Mercury	6.6	6.6	<0.05	<0.05	<0.05
Molybdenum	10	10	0.6	0.5	0.7
Nickel	50	50	10.0	9.0	9.5
Potassium	-	-	1900	1890	2250
Selenium	1	1	<0.5	<0.5	<0.5
Silver	20	20	<0.05	<0.05	<0.05
Sodium	-	-	184	180	195
Strontium	-	-	43.5	38.7	35.6
Thallium	1	1	0.10	0.09	0.08
Tin	50	50	0.2	0.2	0.3
Titanium	-	-	184	192	122
Vanadium	130	130	22	19	17
Zinc	200	200	13	11	13
Zirconium	-	-	2.9	2.8	3.1

#### Notes

All units in ug/g, unless otherwise noted.

"-" indicates that there is no applicable regulation or analyses were not performed.

Red cells indicates parameter exceeds CCME Canadian Environmental Quality Guidelines for commercial land use in coarse-grained soils.

Residential land use guidelines are shown for comparison purposes only.

Table 4-5: APEC 4 Groundwater Analysis for Polyaromatic Hydrocarbons (PAHs)  
Cambridge Bay Airport, Cambridge Bay, Nunavut

Area ID	BC CSR (Freshwater)	BC CSR (Marine)	APEC 4	APEC 4	APEC 4
Station ID			4A-09-1M	4A-09-2M	4A-09-3M
Field label			4-09-1M	4-09-2M	4-09-3M
Duplicate ID					
Date			2/Sep/09	2/Sep/09	2/Sep/09
Lab report ID			A948579	A948579	A948579
Acenaphthene	60	60	<0.10	<0.10	0.17
Acenaphthylene	-	-	<0.10	<0.10	<0.10
Acridine	0.5	0.5	<0.20	<0.20	<0.20
Anthracene	1	1	<0.010	<0.010	<0.010
Benzo(a)anthracene	1	1	<0.0085	<0.0085	<0.0085
Benzo(a)pyrene	0.1	0.1	<0.0075	<0.0075	<0.0075
Benzo(b+j)fluoranthene	-	-	<0.0085	<0.0085	<0.0085
Benzo(e)pyrene	-	-	<0.050	<0.050	<0.050
Benzo(g,h,i)perylene	-	-	<0.0085	<0.0085	<0.0085
Benzo(k)fluoranthene	-	-	<0.0085	<0.0085	<0.0085
Chrysene	1	1	<0.0085	<0.0085	<0.0085
Dibenz(a,h)anthracene	-	-	<0.0075	<0.0075	<0.0075
Fluoranthene	2	2	<0.040	<0.040	0.052
Fluorene	120	120	<0.050	<0.050	0.53
Indeno(1,2,3-cd)pyrene	-	-	<0.0085	<0.0085	<0.0085
2-Methylnaphthalene	-	-	0.59	<0.10	20.0
Naphthalene	10	10	0.78	<0.10	14.0
Perylene	-	-	<0.050	<0.050	<0.050
Phenanthrene	3	3	<0.050	<0.050	0.47
Pyrene	0.2	0.2	<0.020	<0.020	0.038
Quinoline	34	34	<0.20	<0.20	<0.20

#### Notes

All units in ug/L unless otherwise indicated.

"-" indicates that there is no applicable regulation or analyses were not performed.

Red cells indicates parameter exceeds CSR – B.C. Reg. 343/2008.

Table 4-6: APEC 4 Groundwater Analysis for Petroleum Hydrocarbons (PHCs)  
Cambridge Bay Airport, Cambridge Bay, Nunavut

Area ID	BC CSR (Freshwater)	BC CSR (Marine)	APEC 4	APEC 4	APEC 4
Station ID			4A-09-1M	4A-09-2M	4A-09-3M
Field label			4-09-1M	4-09-2M	4-09-3M
Duplicate ID					
Date			2/Sep/09	2/Sep/09	2/Sep/09
Lab report ID			A948579	A948579	A948579
Benzene	4000	1000	210.0	<0.4	790
Ethylbenzene	2000	2500	2.0	<0.4	130
Toluene	390	3300	4.6	<0.4	1000
m+p-Xylene	-	-	19.0	<0.8	460
o-Xylene	-	-	18.0	<0.4	180
Xylenes (total)	-	-	37.0	<0.8	640
F1 (C6-C10) minus BTEX	-	-	870	<100	1600
F2 (C10-C16)	-	-	1400	<100	500
F3 (C16-C34)	-	-	<100	<100	<100
F4 (C34-C50)	-	-	<100	<100	<100
Reached Baseline at C50	-	-	Yes	Yes	Yes

**Notes**

All units in ug/L unless otherwise indicated.

"-" indicates that there is no applicable regulation or analyses were not performed.

Red cells indicates parameter exceeds CSR – B.C. Reg. 343/2008.



Table 4-7: APEC 4 Groundwater Analysis for VOCs  
Cambridge Bay Airport, Cambridge Bay, Nunavut

Area ID	BC CSR (Freshwater)	BC CSR (Marine)	APEC 4	APEC 4	APEC 4
Station ID			4A-09-1M	4A-09-2M	4A-09-3M
Field label			4-09-1M	4-09-2M	4-09-3M
Duplicate ID					
Date			2/Sep/09	2/Sep/09	2/Sep/09
Lab report ID			A948579	A948579	A948579
Benzene	4000	1000	210.0	<0.4	790
Bromodichloromethane	-	-	<0.5	<0.5	<0.5
Bromoform	-	-	<0.5	<0.5	<0.5
Bromomethane	-	-	<2	<2	<2
Carbon tetrachloride	130	130	<0.5	<0.5	<0.5
Chlorobenzene	13	120	<0.5	<0.5	<0.5
Chlorodibromomethane	-	-	<1	<1	<1
Chloroethane	-	-	<1	<1	<1
Chloroform	20	20	<0.5	<0.5	<0.5
Chloromethane	-	-	<2	<2	<2
1,2-Dichlorobenzene	7	420	<0.5	<0.5	<0.5
1,3-Dichlorobenzene	1500	1500	<0.5	<0.5	<0.5
1,4-Dichlorobenzene	260	260	<0.5	<0.5	<0.5
1,1-Dichloroethane	-	-	<0.5	<0.5	<0.5
1,2-Dichloroethane	1000	1000	1.7	<0.5	6.4
1,1-Dichloroethene	-	-	<0.5	<0.5	<0.5
cis-1,2-Dichloroethene	-	-	<0.5	<0.5	<0.5
trans-1,2-Dichloroethene	-	-	<0.5	<0.5	<0.5
Dichloromethane	980	980	<2	<2	<2
1,2-Dichloropropane	-	-	<0.5	<0.5	<0.5
cis-1,3-Dichloropropene	-	-	<0.5	<0.5	<0.5
trans-1,3-Dichloropropene	-	-	<0.5	<0.5	<0.5
Ethylbenzene	2000	2500	2.0	<0.4	130
Ethylene dibromide	-	-	<0.5	<0.5	<0.5
Methyl-tert-butylether	34000	10000	<0.5	<0.5	<0.5
Styrene	720	72	<0.5	<0.5	<0.5
1,1,1,2-Tetrachloroethane	-	-	<2	<2	<2
1,1,2,2-Tetrachloroethane	-	-	<2	<2	<2
Tetrachloroethene	1100	111	<0.5	<0.5	<0.5
Toluene	390	3300	4.6	<0.4	1000
Total Trihalomethanes	-	-	<2	<2	<2
1,2,3-Trichlorobenzene	80	80	<1	<1	<1
1,2,4-Trichlorobenzene	240	54	<1	<1	<1
1,3,5-Trichlorobenzene	-	-	<0.5	<0.5	<0.5
1,1,1-Trichloroethane	-	-	<0.5	<0.5	<0.5
1,1,2-Trichloroethane	-	-	<0.5	<0.5	<0.5
Trichloroethene	200	200	<0.5	<0.5	<0.5
Trichlorofluoromethane	-	-	<0.5	<0.5	<0.5
Vinyl chloride	-	-	<0.5	<0.5	<0.5
m+p-Xylene	-	-	19.0	<0.8	460
o-Xylene	-	-	18.0	<0.4	180
Xylenes (total)	-	-	37.0	<0.8	640

**Notes**

All units in ug/L unless otherwise indicated.

"-" indicates that there is no applicable regulation or analyses were not performed.

Red cells indicates parameter exceeds CSR – B.C. Reg. 343/2008.

Table 4-8: APEC 4 Groundwater Analysis for Metals  
Cambridge Bay Airport, Cambridge Bay, Nunavut

Area ID	BC CSR (Freshwater)	BC CSR (Marine)	APEC 4	APEC 4	APEC 4
Station ID			4A-09-1M	4A-09-2M	4A-09-3M
Field label			4-09-1M	4-09-2M	4-09-3M
Duplicate ID					
Date			2/Sep/09	2/Sep/09	2/Sep/09
Lab report ID			A948579	A948579	A948579
Hardness (mg/L)	-	-	1200	1200	490
Aluminum	-	-	<10	60	<10
Antimony	200	200	<2	<2	<2
Arsenic	50	120	5	<2	6
Barium	10000	5000	90	40	40
Beryllium	53	1000	<10	<10	<10
Boron	50000	50000	550	370	390
Cadmium	0.6 <sup>(1)</sup>	1	0.32	0.12	0.11
Calcium	-	-	140000	210000	84000
Chromium	10	150	<10	<10	<10
Cobalt	40	40	6	<3	4
Copper	90 <sup>(1)</sup>	20	<2	3	3
Iron	-	-	970	360	260
Lead	160 <sup>(1)</sup>	20	<2	<2	18
Magnesium		-	200000	150000	67000
Manganese		-	260	69	170
Mercury	1	1	0.008	0.008	0.006
Molybdenum	10000	10000	40	5	25
Nickel	1500 <sup>(1)</sup>	83	10	6	11
Potassium		-	27000	20000	15000
Selenium	10	540	<2	<2	<2
Silver	15 <sup>(1)</sup>	15	<1	<1	<1
Sodium		-	250000	200000	24000
Strontium		-	310	500	150
Thallium	3	3	<2	<2	<2
Tin		-	<10	<10	<10
Titanium	1000	1000	<10	<10	<10
Uranium	3000	1000	32	16	11
Vanadium		-	<10	<10	<10
Zinc	2400 <sup>(1)</sup>	100	<30	280	<30

#### Notes

All units in ug/L unless otherwise indicated.

"-" indicates that there is no applicable regulation or analyses were not performed.

Red cells indicates parameter exceeds CSR – B.C. Reg. 343/2008.

(1): Hardness Dependant Standard

Table 4-9: APEC 4 Surface Water Analysis for Polycyclic Aromatic Hydrocarbons (PAHs)  
Cambridge Bay Airport, Cambridge Bay, Nunavut

Area ID	CCME AW (Freshwater)	APEC 4
Station ID		4-09-SW1
Field label		4-09-SW1
Duplicate ID		
Date		2/Sep/09
Lab report ID		A948579
Screen depth (m)		
Acenaphthene	5.8	<0.10
Acenaphthylene	-	<0.10
Acridine	4.4	<0.20
Anthracene	0.012	<0.010
Benzo(a)anthracene	0.018	<0.0085
Benzo(a)pyrene	0.015	<0.0075
Benzo(b+j)fluoranthene	-	<0.0085
Benzo(e)pyrene	-	<0.050
Benzo(g,h,i)perylene	-	<0.0085
Benzo(k)fluoranthene	-	<0.0085
Chrysene	-	<0.0085
Dibenz(a,h)anthracene	-	<0.0075
Fluoranthene	0.04	<0.040
Fluorene	3	<0.050
Indeno(1,2,3-cd)pyrene	-	<0.0085
2-Methylnaphthalene	-	<0.10
Naphthalene	1.1	<0.10
Perylene	-	<0.050
Phenanthrene	0.4	<0.050
Pyrene	0.025	<0.020
Quinoline	3.4	<0.20

**Notes**

All units in ug/L.

"-" indicates that there is no applicable regulation or analyses were not performed.

Red cells indicates parameter exceeds CCME Canadian Environmental Quality Guidelines for freshwater.

Table 4-10: APEC 4 Surface Water Analysis for Petroleum Hydrocarbons (PHCs)  
Cambridge Bay Airport, Cambridge Bay, Nunavut

Area ID	CCME AW (Freshwater)	APEC 4
Station ID		4-09-SW1
Field label		4-09-SW1
Duplicate ID		
Date		2/Sep/09
Lab report ID		A948579
Screen depth (m)		
Benzene	370	<0.4
Ethylbenzene	90	<0.4
Toluene	2	<0.4
m+p-Xylene	-	<0.8
o-Xylene	-	<0.4
Xylenes (total)	-	<0.8
F1 (C6-C10) minus BTEX	-	<100
F2 (C10-C16)	-	<100
F3 (C16-C34)	-	<100
F4 (C34-C50)	-	<100
Reached Baseline at C50	-	Yes

**Notes**

All units in ug/L.

"-" indicates that there is no applicable regulation or analyses were not performed.

Red cells indicates parameter exceeds CCME Canadian Environmental Quality Guidelines for freshwater.

Table 4-11: APEC 4 Surface Water Analysis for Volatile Organic Compounds (VOCs)  
Cambridge Bay Airport, Cambridge Bay, Nunavut

Area ID	CCME AW (Freshwater)	APEC 4
Station ID		4-09-SW1
Field label		4-09-SW1
Duplicate ID		
Date		2/Sep/09
Lab report ID		A948579
Screen depth (m)		
Benzene	370	<0.4
Bromodichloromethane	-	<0.5
Bromoform	-	<0.5
Bromomethane	-	<2
Carbon tetrachloride	13.3	<0.5
Chlorobenzene	1.3	<0.5
Chlorodibromomethane	-	<1
Chloroethane	-	<1
Chloroform	1.8	<0.5
Chloromethane	-	<2
1,2-Dichlorobenzene	0.7	<0.5
1,3-Dichlorobenzene	150	<0.5
1,4-Dichlorobenzene	26	<0.5
1,1-Dichloroethane	-	<0.5
1,2-Dichloroethane	100	<0.5
1,1-Dichloroethene	-	<0.5
cis-1,2-Dichloroethene	-	<0.5
trans-1,2-Dichloroethene	-	<0.5
Dichloromethane	98.1	<2
1,2-Dichloropropane	-	<0.5
cis-1,3-Dichloropropene	-	<0.5
trans-1,3-Dichloropropene	-	<0.5
Ethylbenzene	90	<0.4
Ethylene dibromide	-	<0.5
Methyl-tert-butylether	10000	<0.5
Styrene	72	<0.5
1,1,1,2-Tetrachloroethane	-	<2
1,1,2,2-Tetrachloroethane	-	<2
Tetrachloroethene	111	<0.5
Toluene	2	<0.4
Total Trihalomethanes	-	<2
1,2,3-Trichlorobenzene	8	<1
1,2,4-Trichlorobenzene	24	<1
1,3,5-Trichlorobenzene	-	<0.5
1,1,1-Trichloroethane	-	<0.5
1,1,2-Trichloroethane	-	<0.5
Trichloroethene	21	<0.5
Trichlorofluoromethane	-	<0.5
Vinyl chloride	-	<0.5
m+p-Xylene	-	<0.8
o-Xylene	-	<0.4
Xylenes (total)	-	<0.8

**Notes**

All units in ug/L.

"-" indicates that there is no applicable regulation or analyses were not performed.

Red cells indicates parameter exceeds CCME Canadian Environmental Quality Guidelines for freshwater.

Table 4-12: APEC 4 Surface Water Analysis for Metals  
Cambridge Bay Airport, Cambridge Bay, Nunavut

Area ID	CCME AW (Freshwater)	APEC 4
Station ID		4-09-SW1
Field label		4-09-SW1
Duplicate ID		
Date		2/Sep/09
Lab report ID		A948579
Screen depth (m)		
Hardness	-	880
Aluminum	5	20
Antimony	-	<2
Arsenic	5	<2
Barium	-	40
Beryllium	-	<10
Boron	-	310
Cadmium	0.017	<0.05
Calcium	-	140000
Chromium	-	<10
Cobalt	-	<3
Copper	2	<2
Iron	300	240
Lead	1	<2
Magnesium	-	130000
Manganese	-	51
Mercury	0.026	0.008
Molybdenum	73	3
Nickel	25	<5
Potassium	-	20000
Selenium	1	<2
Silver	0.1	<1
Sodium	-	310000
Strontium	-	320
Thallium	0.8	<2
Tin	-	<10
Titanium	-	<10
Uranium	-	6
Vanadium	-	<10
Zinc	30	<30

**Notes**

All units in ug/L.

"-" indicates that there is no applicable regulation or analyses were not performed.

Red cells indicates parameter exceeds CCME Canadian Environmental Quality Guidelines for freshwater.

Table 5-1: APEC 5 Soil Analysis for Polycyclic Aromatic Hydrocarbons (PAHs)  
Cambridge Bay Airport, Cambridge Bay, Nunavut

Area ID	CCME Soil (Residential)	CCME Soil (Commercial)	APEC 5	APEC 5	APEC 5	APEC 5
Station ID			5-09-TP1	5-09-TP2	5-09-TP3	5-09-TP4
Field label			5-09-TP1-1	5-09-TP2-1	5-09-TP3-1	5-09TP4-3
Duplicate ID						
Date			30/Aug/09	30/Aug/09	30/Aug/09	30/Aug/09
Lab report ID			A947822	A947822	A947822	A947822
Depth (m)			0.2 – 0.5	0.2 – 0.5	0.2 – 0.5	0.6 - 1.5
Acenaphthene	-	-	<0.01	<0.01	0.04	<0.01
Acenaphthylene	-	-	<0.01	<0.01	<0.01	<0.01
Anthracene	-	-	<0.01	<0.01	0.09	<0.01
Benzo(a)anthracene	1	10	<0.01	<0.01	0.18	<0.01
Benzo(a)pyrene	0.7	0.7	<0.01	<0.01	0.19	<0.01
Benzo(b+j)fluoranthene	-	-	<0.01	<0.01	0.27	<0.01
Benzo(g,h,i)perylene	-	-	<0.02	<0.02	0.10	<0.02
Benzo(k)fluoranthene	1	10	<0.01	<0.01	0.09	<0.01
Chrysene	-	-	<0.01	<0.01	0.19	<0.01
Dibenz(a,h)anthracene	1	10	<0.02	<0.02	<0.02	<0.02
Fluoranthene	-	-	<0.01	<0.01	0.60	<0.01
Fluorene	-	-	<0.01	<0.01	0.04	<0.01
High molecular weight PAHs	-	-	<0.02	<0.02	2.1	<0.02
Indeno(1,2,3-cd)pyrene	1	10	<0.02	<0.02	0.10	<0.02
Low molecular weight PAHs	-	-	0.01	<0.01	0.61	<0.01
2-Methylnaphthalene	-	-	<0.01	<0.01	<0.01	<0.01
Naphthalene	0.6	22	0.01	<0.01	0.03	<0.01
Phenanthrene	5	50	<0.01	<0.01	0.40	<0.01
Pyrene	10	100	<0.01	<0.01	0.40	<0.01
Total PAHs	-	-	<0.02	<0.02	2.7	<0.02

#### Notes

All units in ug/g.

"-" indicates that there is no applicable regulation or analyses were not performed.

Red cells indicates parameter exceeds CCME – Canadian Environmental Quality Guidelines for commercial land use in coarse-grained soils.

Residential land use guidelines are shown for comparison purposes only.

Table 5-2: APEC 5 Soil Analysis for Petroleum Hydrocarbons (PHCs)  
Cambridge Bay Airport, Cambridge Bay, Nunavut

Area ID	CCME Soil (Residential)	CCME Soil (Commercial)	APEC 5	APEC 5	APEC 5	APEC 5
Station ID			5-09-TP1	5-09-TP2	5-09-TP3	5-09-TP4
Field label			5-09-TP1-1	5-09-TP2-1	5-09-TP3-1	5-09TP4-3
Duplicate ID						
Date			30/Aug/09	30/Aug/09	30/Aug/09	30/Aug/09
Lab report ID			A947822	A947822	A947822	A947822
Depth (m)			0.2 – 0.5	0.2 – 0.5	0.2 – 0.5	0.6 - 1.5
Moisture content	-	-	19.0	21.0	13.0	6.2
Benzene	0.03	0.03	0.005	<0.005	<0.005	<0.005
Ethylbenzene	0.082	0.082	0.01	<0.01	<0.01	<0.01
Toluene	0.37	0.37	<0.03	<0.03	<0.03	<0.03
m+p-Xylene	-	-	<0.1	<0.1	<0.1	<0.1
o-Xylene	-	-	<0.1	<0.1	<0.1	<0.1
Xylenes (total)	11	11	<0.1	<0.1	<0.1	<0.1
F1 (C6-C10)	30*	320*	<10	<10	<10	<10
F1 (C6-C10) minus BTEX	30*	320*	<10	<10	<10	<10
F2 (C10-C16)	150*	260*	<10	<10	<10	<10
F3 (C16-C34)	300*	1700*	<10	47	350	<10
F4 (C34-C50)	2800*	3300*	<10	<10	23	<10
Reached Baseline at C50	-	-	Yes	Yes	Yes	Yes

#### Notes

All units in ug/g, unless otherwise noted.

"-" indicates that there is no applicable regulation or analyses were not performed.

Red cells indicates parameter exceeds CCME – Canadian Environmental Quality Guidelines for commercial land use in coarse-grained soils.

Residential land use guidelines are shown for comparison purposes only.



Table 5-3: APEC 5 Soil Analysis for Volatile Organic Compounds (VOCs)  
Cambridge Bay Airport, Cambridge Bay, Nunavut

Area ID	CCME Soil (Residential)	CCME Soil (Commercial)	APEC 5	APEC 5	APEC 5	APEC 5
Station ID			5-09-TP1	5-09-TP2	5-09-TP3	5-09-TP4
Field label			5-09-TP1-1	5-09-TP2-1	5-09-TP3-1	5-09TP4-3
Duplicate ID						
Date			30/Aug/09	30/Aug/09	30/Aug/09	30/Aug/09
Lab report ID			A947822	A947822	A947822	A947822
Depth (m)			0.2 – 0.5	0.2 – 0.5	0.2 – 0.5	0.6 - 1.5
Benzene	0.03	0.03	0.005	<0.005	<0.005	<0.005
Bromodichloromethane	-	-	<0.05	<0.05	<0.05	<0.05
Bromoform	-	-	<0.05	<0.05	<0.05	<0.05
Bromomethane	-	-	<0.3	<0.3	<0.3	<0.3
Carbon tetrachloride	5	50	<0.03	<0.03	<0.03	<0.03
Chlorobenzene	1	10	<0.03	<0.03	<0.03	<0.03
Chlorodibromomethane	-	-	<0.05	<0.05	<0.05	<0.05
Chloroethane	-	-	<0.1	<0.1	<0.1	<0.1
Chloroform	5	50	<0.05	<0.05	<0.05	<0.05
Chloromethane	-	-	<0.1	<0.1	<0.1	<0.1
1,2-Dichlorobenzene	1	10	<0.03	<0.03	<0.03	<0.03
1,3-Dichlorobenzene	1	10	<0.03	<0.03	<0.03	<0.03
1,4-Dichlorobenzene	1	10	<0.03	<0.03	<0.03	<0.03
1,1-Dichloroethane	5	50	<0.03	<0.03	<0.03	<0.03
1,2-Dichloroethane	5	50	<0.03	<0.03	<0.03	<0.03
1,1-Dichloroethene	5	50	<0.03	<0.03	<0.03	<0.03
cis-1,2-Dichloroethene	-	-	<0.03	<0.03	<0.03	<0.03
trans-1,2-Dichloroethene	-	-	<0.03	<0.03	<0.03	<0.03
Dichloromethane	5	50	<0.1	<0.1	<0.1	<0.1
1,2-Dichloropropane	5	50	<0.03	<0.03	<0.03	<0.03
cis-1,3-Dichloropropene	-	-	<0.05	<0.05	<0.05	<0.05
trans-1,3-Dichloropropene	-	-	<0.05	<0.05	<0.05	<0.05
Ethylbenzene	0.082	0.082	0.01	<0.01	<0.01	<0.01
Ethylene dibromide	-	-	<0.03	<0.03	<0.03	<0.03
Methyl-tert-butylether	-	-	<0.1	<0.1	<0.1	<0.1
Styrene	5	50	<0.1	<0.1	<0.1	<0.1
1,1,1,2-Tetrachloroethane	-	-	<0.03	<0.03	<0.03	<0.03
1,1,2,2-Tetrachloroethane	5	50	<0.03	<0.03	<0.03	<0.03
Tetrachloroethene	5	50	<0.03	<0.03	<0.03	<0.03
Toluene	0.37	0.37	<0.03	<0.03	<0.03	<0.03
1,1,1-Trichloroethane	5	50	<0.03	<0.03	<0.03	<0.03
1,1,2-Trichloroethane	5	50	<0.03	<0.03	<0.03	<0.03
Trichloroethene	5	50	<0.01	<0.01	<0.01	<0.01
Trichlorofluoromethane	-	-	<0.2	<0.2	<0.2	<0.2
Vinyl chloride	-	-	<0.08	<0.08	<0.08	<0.08
m+p-Xylene	-	-	<0.1	<0.1	<0.1	<0.1
o-Xylene	-	-	<0.1	<0.1	<0.1	<0.1
Xylenes (total)	11	11	<0.1	<0.1	<0.1	<0.1

**Notes**

All units in ug/g.

"-" indicates that there is no applicable regulation or analyses were not performed.

Red cells indicates parameter exceeds CCME – Canadian Environmental Quality Guidelines for commercial land use in coarse-grained soils.

Residential land use guidelines are shown for comparison purposes only.

Table 5-4: APEC 5 Soil Analysis for Metals  
Cambridge Bay Airport, Cambridge Bay, Nunavut

Area ID	CCME Soil (Residential)	CCME Soil (Commercial)	APEC 5	APEC 5	APEC 5	APEC 5
Station ID			5-09-TP1	5-09-TP2	5-09-TP3	5-09-TP4
Field label			5-09-TP1-1	5-09-TP2-1	5-09-TP3-1	5-09TP4-3
Duplicate ID						
Date			30/Aug/09	30/Aug/09	30/Aug/09	30/Aug/09
Lab report ID			A947822	A947822	A947822	A947822
Depth (m)			0.2 – 0.5	0.2 – 0.5	0.2 – 0.5	0.6 - 1.5
pH	6 to 8	6 to 8	8.28	8.29	8.60	8.49
Aluminum	-	-	6630	2640	3300	4420
Antimony	20	20	<0.1	<0.1	0.3	<0.1
Arsenic	12	12	2.1	2.4	1.6	0.7
Barium	500	500	35.5	28.2	35.6	33.3
Beryllium	4	4	0.3	0.4	0.3	0.3
Bismuth	-	-	<0.1	<0.1	<0.1	<0.1
Cadmium	10	10	0.14	<0.05	0.05	<0.05
Calcium	-	-	53900	95400	91400	57400
Chromium	64	64	15	12	9	9
Cobalt	50	50	6.7	7.1	3.6	4.7
Copper	63	63	11.8	13.7	8.0	9.3
Iron	-	-	13100	15200	9350	9010
Lead	140	140	6.5	10.6	16.9	7.5
Magnesium	-	-	32300	54000	51600	30400
Manganese	-	-	340.0	535.0	322.0	247.0
Mercury	6.6	6.6	<0.05	<0.05	<0.05	<0.05
Molybdenum	10	10	0.5	0.7	0.6	0.3
Nickel	50	50	14.8	18.2	8.7	10.7
Potassium	-	-	2530	1750	1790	2250
Selenium	1	1	<0.5	<0.5	<0.5	<0.5
Silver	20	20	0.06	0.07	<0.05	0.06
Sodium	-	-	179	180	163	229
Strontium	-	-	26.9	47.4	34.5	21.6
Thallium	1	1	0.13	0.08	0.09	0.11
Tin	50	50	0.3	0.2	0.2	0.2
Titanium	-	-	299	69	134	188
Vanadium	130	130	22	21	14	14
Zinc	200	200	34	8	12	13
Zirconium	-	-	4.8	5.2	2.4	3.9

#### Notes

All units in ug/g, unless otherwise noted.

"-" indicates that there is no applicable regulation or analyses were not performed.

Red cells indicates parameter exceeds CCME – Canadian Environmental Quality Guidelines for commercial land use in coarse-grained soils.

Residential land use guidelines are shown for comparison purposes only.

Table 5-5: APEC 5 Groundwater Analysis for Polycyclic Aromatic Hydrocarbons (PAHs)  
Cambridge Bay Airport, Cambridge Bay, Nunavut

Area ID	BC CSR (Freshwater)	BC CSR (Marine)	APEC 5
Station ID			5-09-MW3
Field label			5-09-MW3
Duplicate ID			
Date			1/Sep/09
Lab report ID			A948731
Acenaphthene	60	60	<0.10
Acenaphthylene	-	-	<0.10
Acridine	0.5	0.5	<0.20
Anthracene	1	1	<0.010
Benzo(a)anthracene	1	1	<0.0085
Benzo(a)pyrene	0.1	0.1	<0.0075
Benzo(b+j)fluoranthene	-	-	<0.0085
Benzo(e)pyrene	-	-	<0.050
Benzo(g,h,i)perylene	-	-	<0.0085
Benzo(k)fluoranthene	-	-	<0.0085
Chrysene	1	1	<0.0085
Dibenz(a,h)anthracene	-	-	<0.0075
Fluoranthene	2	2	<0.040
Fluorene	120	120	<0.050
Indeno(1,2,3-cd)pyrene	-	-	<0.0085
2-Methylnaphthalene	-	-	<0.10
Naphthalene	10	10	<0.10
Perylene	-	-	<0.050
Phenanthrene	3	3	<0.050
Pyrene	0.2	0.2	<0.020
Quinoline	34	34	<0.20

#### Notes

All units in ug/L unless otherwise indicated.

"-" indicates that there is no applicable regulation or analyses were not performed.

Red cells indicates parameter exceeds CSR – B.C. Reg. 343/2008.

CCME Canadian Environmental Quality Guidelines are shown for comparison purposes only

Table 5-6: APEC 5 Groundwater Analysis for Petroleum Hydrocarbons (PHCs)  
Cambridge Bay Airport, Cambridge Bay, Nunavut

Area ID	BC CSR (Freshwater)	BC CSR (Marine)	APEC 5
Station ID			5-09-MW3
Field label			5-09-MW3
Duplicate ID			
Date			1/Sep/09
Lab report ID			A948731
Benzene	4000	1000	<0.4
Ethylbenzene	2000	2500	<0.4
Toluene	390	3300	1.1
m+p-Xylene	-	-	<0.8
o-Xylene	-	-	1.1
Xylenes (total)	-	-	1.1
F1 (C6-C10) minus BTEX	-	-	<100
F2 (C10-C16)	-	-	<100
F3 (C16-C34)	-	-	<100
F4 (C34-C50)	-	-	<100
Reached Baseline at C50	-	-	Yes

**Notes**

All units in ug/L unless otherwise indicated.

"-" indicates that there is no applicable regulation or analyses were not performed.

Red cells indicates parameter exceeds CSR – B.C. Reg. 343/2008.

CCME Canadian Environmental Quality Guidelines are shown for comparison purposes only

Table 5-7: APEC 5 Groundwater Analysis for Volatile Organic Compounds (VOCs)  
Cambridge Bay Airport, Cambridge Bay, Nunavut

Area ID	BC CSR (Freshwater)	BC CSR (Marine)	APEC 5
Station ID			5-09-MW3
Field label			5-09-MW3
Duplicate ID			
Date			1/Sep/09
Lab report ID			A948731
Benzene	4000	1000	<0.4
Bromodichloromethane	-	-	<0.5
Bromoform	-	-	<0.5
Bromomethane	-	-	<2
Carbon tetrachloride	130	130	<0.5
Chlorobenzene	13	120	<0.5
Chlorodibromomethane	-	-	<1
Chloroethane	-	-	<1
Chloroform	20	20	<0.5
Chloromethane	-	-	<2
1,2-Dichlorobenzene	7	420	<0.5
1,3-Dichlorobenzene	1500	1500	<0.5
1,4-Dichlorobenzene	260	260	<0.5
1,1-Dichloroethane	-	-	<0.5
1,2-Dichloroethane	1000	1000	<0.5
1,1-Dichloroethene	-	-	<0.5
cis-1,2-Dichloroethene	-	-	<0.5
trans-1,2-Dichloroethene	-	-	<0.5
Dichloromethane	980	980	<2
1,2-Dichloropropane	-	-	<0.5
cis-1,3-Dichloropropene	-	-	<0.5
trans-1,3-Dichloropropene	-	-	<0.5
Ethylbenzene	2000	2500	<0.4
Ethylene dibromide	-	-	<0.5
Methyl-tert-butylether	34000	4400	<0.5
Styrene	720	720	<0.5
1,1,2,2-Tetrachloroethane	-	-	<2
Tetrachloroethene	1100	1100	<0.5
Toluene	390	3300	1.1
Total Trihalomethanes	-	-	<2
1,2,3-Trichlorobenzene	80	80	<1
1,2,4-Trichlorobenzene	240	54	<1
1,3,5-Trichlorobenzene	-	-	<0.5
1,1,1-Trichloroethane	-	-	<0.5
1,1,2-Trichloroethane	-	-	<0.5
Trichloroethene	200	200	<0.5
Trichlorofluoromethane	-	-	<0.5
Vinyl chloride	-	-	<0.5
m+p-Xylene	-	-	<0.8
o-Xylene	-	-	1.1
Xylenes (total)	-	-	1.1

**Notes**

All units in ug/L unless otherwise indicated.

"-" indicates that there is no applicable regulation or analyses were not performed.

Red cells indicates parameter exceeds CSR – B.C. Reg. 343/2008.

CCME – Canadian Environmental Quality Guidelines are shown for comparison purposes only

Table 5-8: APEC 5 Groundwater Analysis for Metals  
Cambridge Bay Airport, Cambridge Bay, Nunavut

Area ID	BC CSR (Freshwater)	BC CSR (Marine)	APEC 5
Station ID			5-09-MW3
Field label			5-09-MW3
Duplicate ID			
Date			1/Sep/09
Lab report ID			A948731
Hardness (mg/L)	-	-	930
Aluminum	-	-	50
Antimony	200	200	<2
Arsenic	50	120	<2
Barium	10000	5000	50
Beryllium	53	1000	<10
Boron	50000	50000	500
Cadmium	0.6 <sup>(1)</sup>	1	0.07
Calcium	-	-	120000
Chromium	10	150	<10
Cobalt	40	40	<3
Copper	90 <sup>(1)</sup>	20	4
Iron	-	-	270
Lead	160 <sup>(1)</sup>	20	<2
Magnesium	-	-	150000
Manganese	-	-	120
Mercury	1	1	0.004
Molybdenum	10000	10000	10
Nickel	1500 <sup>(1)</sup>	83	5
Potassium	-	-	40000
Selenium	10	540	<2
Silver	15	15	<1
Sodium	-	-	680000
Strontium	-	-	330
Thallium	3	3	<2
Tin	-	-	<10
Uranium	3000	1000	13
Vanadium	-	-	<10
Zinc	2400 <sup>(1)</sup>	100	<30

**Notes**

All units in ug/L unless otherwise indicated.

"-" indicates that there is no applicable regulation or analyses were not performed.

Red cells indicates parameter exceeds CSR – B.C. Reg. 343/2008.

(1) : Standard is hardness dependent.

**APPENDIX H**  
**Field Measurements**

Field Measurements  
Cambridge Bay, Nunavut

Site	pH	Conductivity	Turbidity	Dissolved Oxygen	Temperature
1-09-1M	6.80	2.60	698.0	10.38	4.63
	6.79	2.95	>1000	10.90	3.68
	6.85	0.09	>1000	11.29	4.32
	6.90	3.48	>1000	11.55	4.28
	6.93	3.34	>1000	11.62	3.17
	6.96	3.21	>1000	11.62	3.14
	7.10	0.04	>1000	11.47	3.59
Average	6.90	2.24	N/A	11.26	3.83
1-09-2M	7.66	4.06	159.0	9.12	5.23
	7.66	0.02	>1000	9.66	3.53
	7.74	4.77	>1000	9.87	3.10
	7.78	4.35	>1000	9.78	3.32
	7.75	4.30	>1000	9.84	3.14
	7.76	3.97	>1000	9.84	3.25
Average	7.73	3.58	N/A	9.69	3.60
1-09-3M	7.30	6.41	197.0	10.69	4.71
	7.23	6.53	>1000	11.21	3.68
	7.28	0.08	>1000	11.40	3.62
	7.30	0.03	>1000	11.29	3.71
Average	7.28	3.26	N/A	11.15	3.93
1-09-4M	7.40	0.009	>1000	9.13	4.90
	7.44	0.007	321.0	9.66	3.64
	7.33	2.90	>1000	9.79	3.34
	7.26	2.84	920.0	9.19	4.80
	7.30	2.72	>1000	9.61	3.93
	7.32	0.017	>1000	10.06	2.90
Average	7.34	1.42	N/A	9.57	3.92
1-09-5M	7.17	7.24	361.0	10.63	5.32
	7.21	6.90	>1000	10.70	4.98
	7.12	7.08	>1000	10.85	4.94
	7.20	6.99	>1000	10.97	4.61
	7.27	0.05*	>1000	11.00	4.58
	7.30	7.09	>1000	10.85	4.68
	7.30	7.05	844.0	10.95	4.45
Average	7.22	7.06	N/A	10.85	4.79
2-09-MW4	7.37	7.08	400.0	8.90	6.69
	7.83	1.60	>1000	9.01	6.49
	7.92	1.40	>1000	8.98	6.49
	7.85	1.45	>1000	8.98	6.50
	7.92	1.40	>1000	9.01	6.47
Average	7.78	2.59	N/A	8.98	6.53

Site	pH	Conductivity	Turbidity	Dissolved Oxygen	Temperature
3-09-4M	7.43	3.57	480.0	8.81	6.99
	7.63	1.61	>1000	8.94	6.63
	7.57	1.64	>1000	8.92	6.71
	7.31	0.143	>1000	8.89	6.77
	7.23	3.20	>1000	9.34	5.60
	7.26	2.97	>1000	9.29	5.74
Average	7.41	2.19	N/A	9.03	6.41
3-09-5M	7.02	0.09	810.0	9.32	4.51
	7.03	0.018	>1000	9.72	3.70
	7.01	6.82	>1000	10.16	2.90
Average	7.02	2.31	N/A	9.73	3.70
3-09-6M	7.09	2.80	316.0	10.04	3.04
	6.99	2.88	>1000	10.59	1.83
	6.98	2.87	>1000	10.42	2.27
	6.99	2.87	>1000	10.64	1.75
	6.98	2.96	>1000	10.70	1.65
	6.98	2.96	>1000	10.64	1.77
Average	7.00	2.89	N/A	10.51	2.05
4A-09-1M	7.01	3.53	260.0	8.80	5.97
	7.01	3.54	262.0	8.76	5.98
	7.04	3.32	>1000	9.71	3.77
	7.05	3.32	>1000	9.66	3.86
	7.04	3.30	>1000	9.57	4.10
Average	7.03	3.38	N/A	9.34	4.64
4A-09-2M	7.19	2.28	380.0	8.76	5.72
	7.16	2.77	>1000	9.40	4.41
	7.12	2.77	>1000	8.86	5.56
	7.12	2.77	>1000	8.87	5.59
	7.12	2.77	>1000	8.86	5.58
Average	7.14	2.67	N/A	8.95	5.37
4A-09-3M	6.93	1.69	308.0	9.20	4.85
	6.90	1.68	305.0	9.21	4.91
	6.93	1.69	304.0	9.19	4.93
	7.00	1.34	>1000	9.25	4.76
Average	6.94	1.60	N/A	9.21	4.86



## **Appendix D    Aerial Photographs**

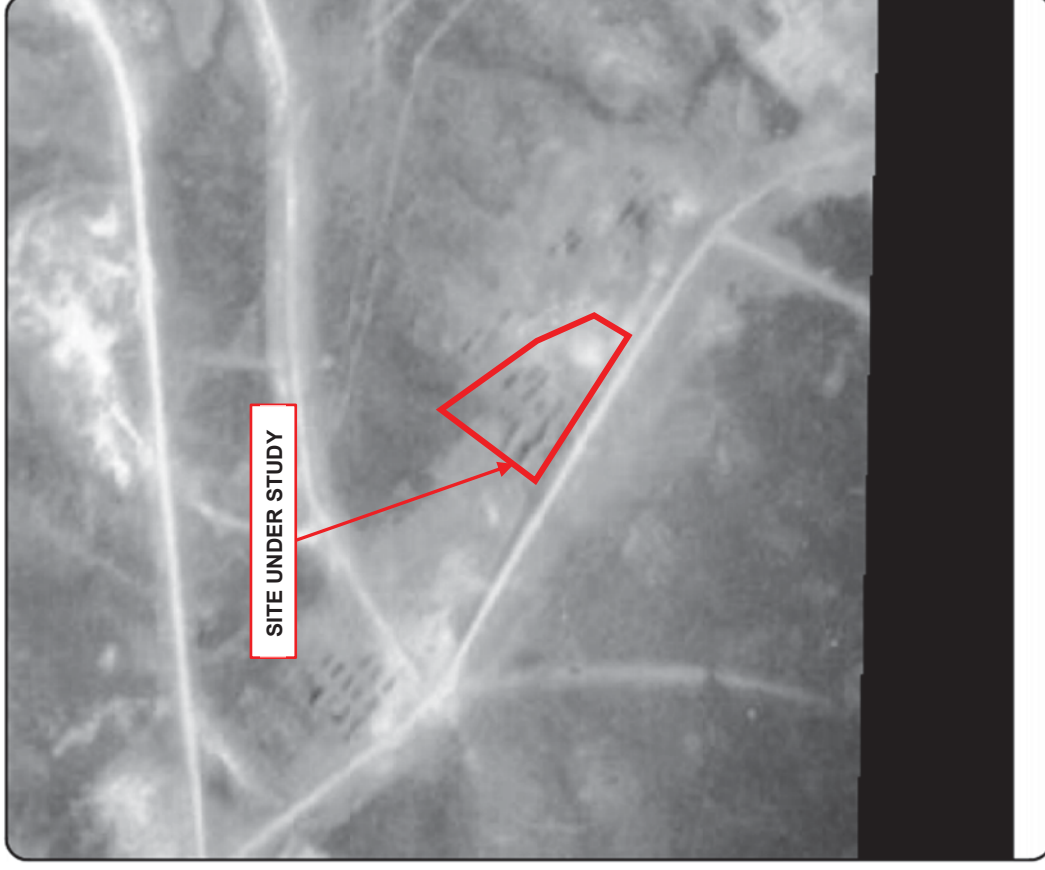


Photo 1: Aerial Photo of the area, image taken in 1969, scale 1 : 10,000 (Source: ERIS Stock Imagery, NRCAN National Air Photo Library)



Photo 2: Aerial Photo of the area, image taken in 1975, scale 1 : 10,000 (Source: NRCAN National Air Photo Library)

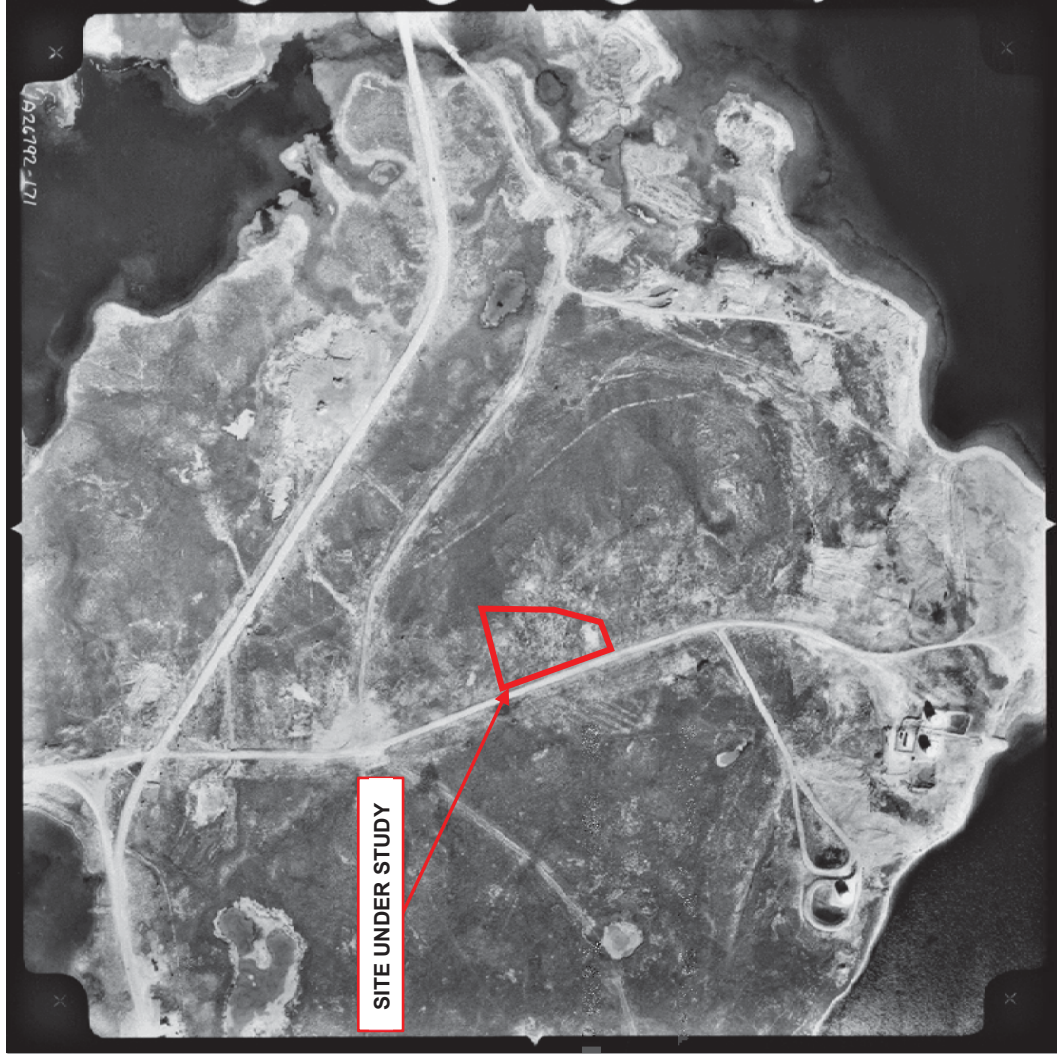


Photo 3: Aerial Photo of the area, image taken in 1985 (Source: NRCAN National Air Photo Library)





Photo 4: Aerial Photo of the area, image taken in 1990 (Source: NRCAN National Air Photo Library)



Photo 5: Aerial Photo of the area, image taken in 1991 (Source: NRCAN National Air Photo Library)



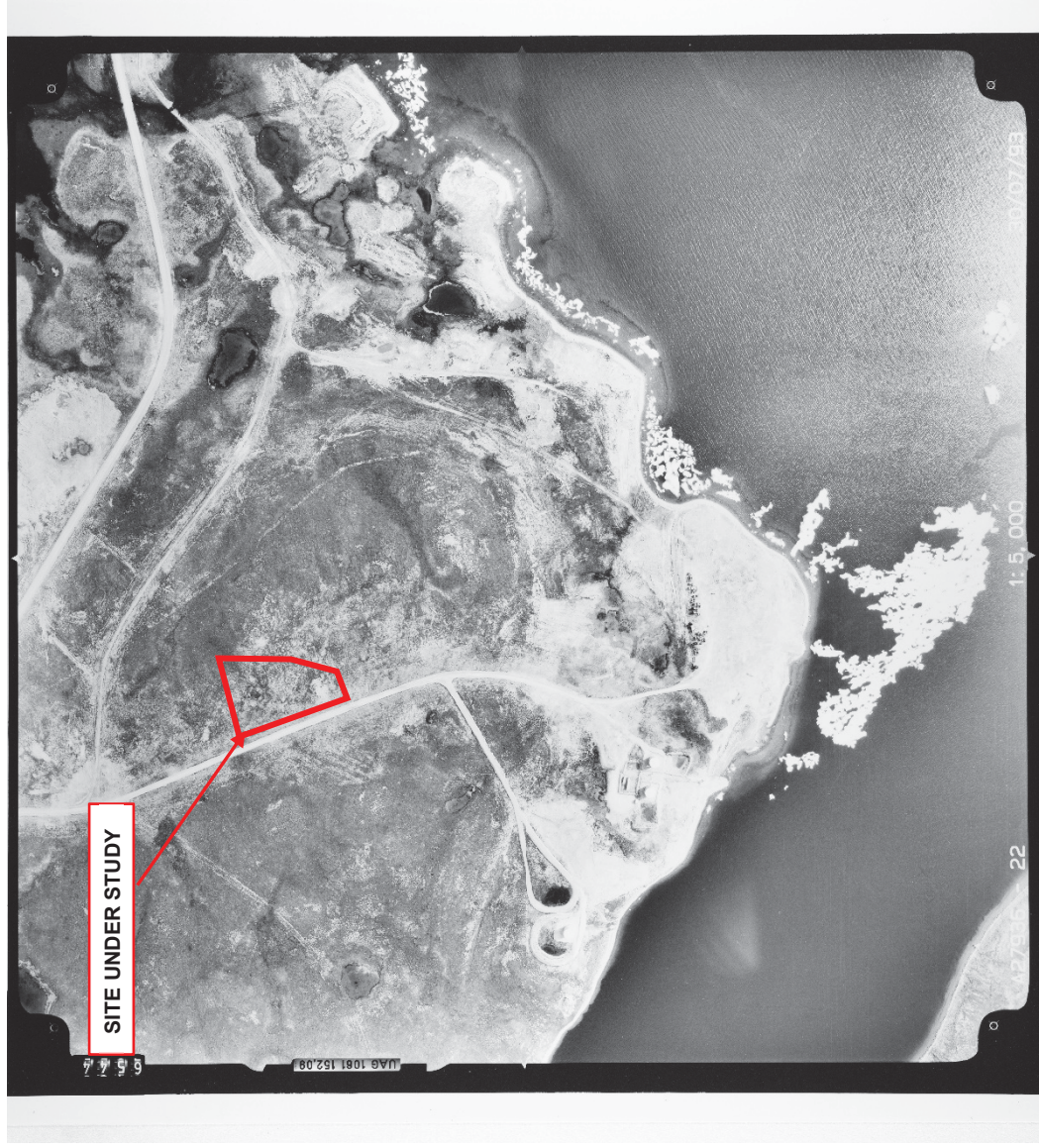


Photo 6: Aerial Photo of the area, image taken in 1993 (Source: NRCAN National Air Photo Library)



Photo 7: Satellite image of the area on July 31, 2006 (Source: Google Earth)





Photo 8: Satellite image of the area on July 2, 2010 (Source: Google Earth)



Photo 9: Satellite image of the area on July 8, 2011 (Source: Google Earth)



Photo 10: Satellite image of the area on June 21, 2017 (Source: Google Earth)



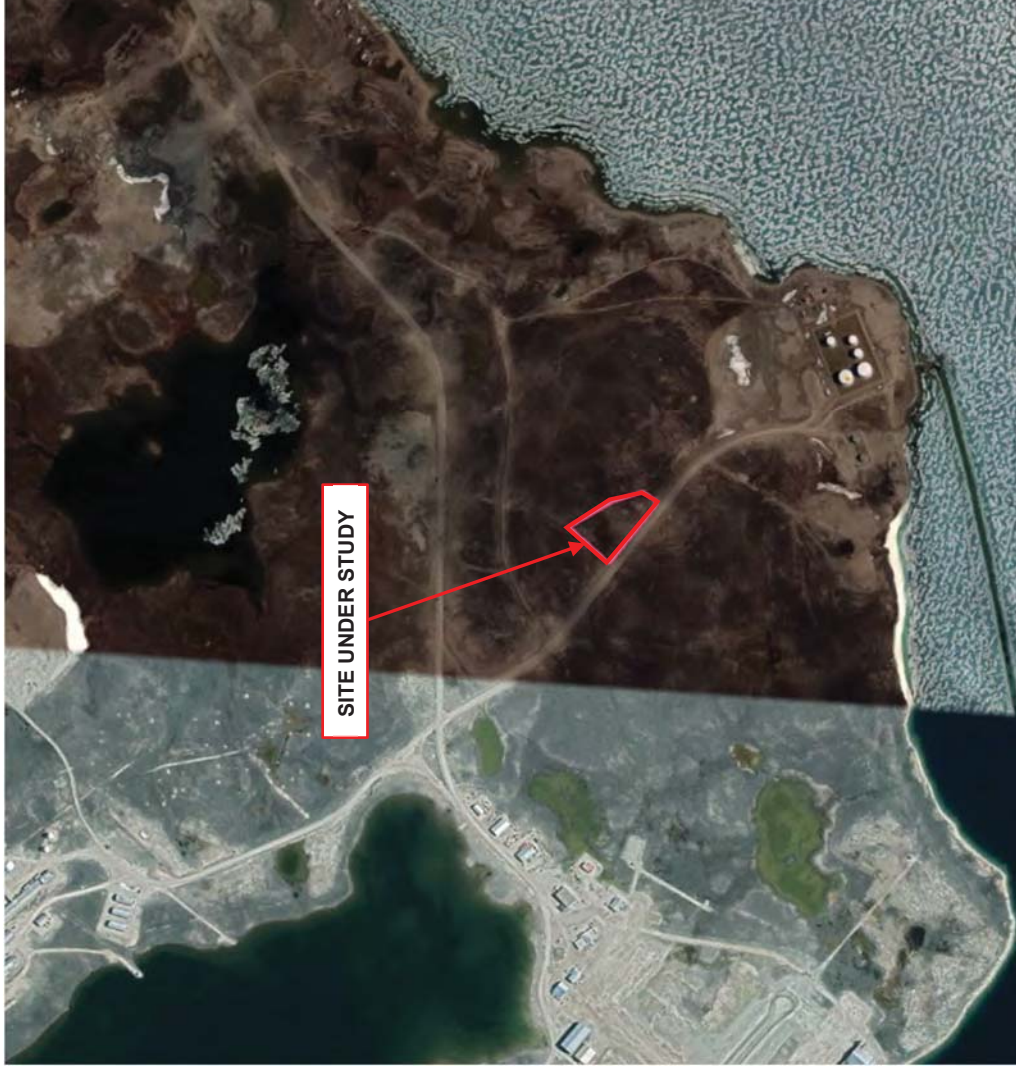


Photo 11: Satellite image of the area on July 26, 2019 (Source: Google Earth)



Photo 12: Satellite image of the area on July 31, 2020 (Source: Google Earth)

## **Appendix E    Records from Regulatory Agencies**

## Katheryne Budd

---

**From:** Kevin Taylor <ktaylor@cambridgebay.ca>  
**Sent:** Thursday, December 3, 2020 6:25 PM  
**To:** Katheryne Budd  
**Cc:** Ekikere Elijah  
**Subject:** RE: Land title request

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Plan number #3120  
QUAD 77D/2  
NWS site  
DnD Reserve (Department of National Defence)

Kevin Taylor  
Development Officer  
Hamlet of Cambridge Bay  
Ph: 867-983-4653  
Fx : 867-983-2193  
[ktaylor@cambridgebay.ca](mailto:ktaylor@cambridgebay.ca)

---

From: Katheryne Budd [mailto:Katheryne.Budd@englobecorp.com]  
Sent: December-03-20 4:10 PM  
To: Kevin Taylor  
Cc: Ekikere Elijah  
Subject: Land title request

Hello,

I am presently working on a Ph I environmental site assessment and would like to Obtain a copy of the land title for lot 1005 (airport land) however the corporate registries department has request I supply them with the plan number associate with the lot.

Can you advise me of what Plan # references the lot 1005?

Best,

Katheryne



**Katheryne Budd, B.A. Geog.**

Project Manager

Environmental engineering, Northern & Western Canada

1200, S-Martin Blvd West, Suite 400, Laval (quebec) H7S 2E4

514.281.5151 ext. 122704 Cell. 514.260.8208

[englobecorp.com](http://englobecorp.com)



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## Katheryne Budd

---

**From:** Ohokanoak, Sophia <SOhokanoak@GOV.NU.CA>  
**Sent:** Thursday, January 7, 2021 3:48 PM  
**To:** Ekikere Elijah  
**Subject:** RE: request for information for Phase I ESA re Cambridge Bay QEC Power Plant  
**Attachments:** 20180927\_Cambridge Bay Hamlet Office Meeting\_DraftROD.pdf; Attachment#1(DEW Line CAM-M As-builts).pdf; Attachment#2(Landfill Integrity Concerns Identified Regarding the DND DEW Line South Shore and Airstrip Landfills).pdf; Attachment#3(Excerpts From CAM-M 2015 Final Monitoring Report (Englobe, 2016)).pdf; Attachment#4(Figure Overlay of the South Shore Landfill and the Hamlet of Cambridge Bay Fuel Tank Farm).pdf; Attachment#5(Draft Land Transfer Document Request Government of Nunavut).pdf; 20-40-GN-LOTS 1 TO 4, BLOCK 67 AND ROADS R51 AND R52-SIGNED.pdf

**Caution** Do not click on links or open attachments you do not trust.

**Attention** Assurez-vous que le contenu soit de confiance avant d'ouvrir une pièce jointe ou un hyperlien.

Good Day Ekikere Elijah,

Please find attached all the information that my department has about this area.

I believe there is a mistake in your email as you referenced Lot 1005 and 1006, however it appears from the image that you are actually interested in Lot 1017 Plan 4573.

I will also note that I am currently working on registering a new survey plan for this area and so the lot numbers will change once I get that registered. I have attached a copy of the new survey for your information. With this survey plan, Lot 1017 Plan 4573 will become Lot 3 Block 67 Plan 4781.

Regardless, I have attached the information for you to review. If you are looking for anything else, you would have to contact Airports Division as they had control of this area for many years.

Please do not hesitate to contact me if there is anything else I can help you with.

Kind Regards,

Sophia Ohokanoak CPT  
Kitikmeot Land Administrator  
Community and Government Services  
Government of Nunavut  
Bag 200 | Cambridge Bay | NU | X0B 0C0

Phone: (867) 983-4020  
Email: [sohokanoak@gov.nu.ca](mailto:sohokanoak@gov.nu.ca)

PLEASE NOTE: I will be in the office until 4pm every work day as I have small children and the daycare is running on reduced hours. From 4pm-5pm I will be working from home.

---

**From:** Ekikere Elijah <[eelijah@dstgroup.com](mailto:eelijah@dstgroup.com)>  
**Sent:** December 23, 2020 8:50 AM

**To:** Ohokanoak, Sophia <SOhokanoak@GOV.NU.CA>

**Subject:** RE: request for information for Phase I ESA re Cambridge Bay QEC Power Plant

**CAUTION:** This email originated from outside of the organization. Do not click links or open attachments unless you recognize the sender and know the content is safe.

Hi Sophia,

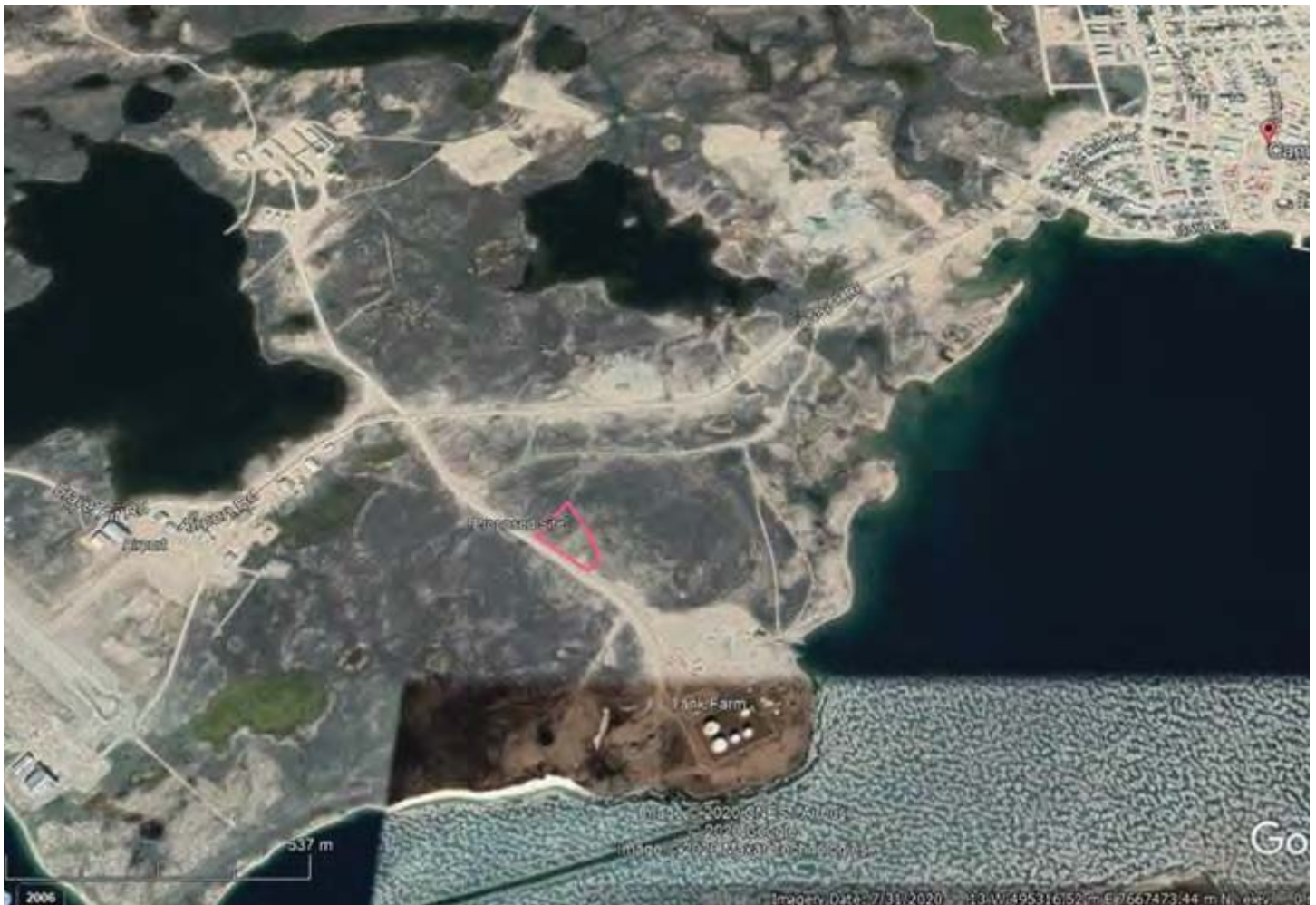
I am currently working on Phase I & Phase II Site assessment for a proposed lot for the construction of a new power plant in Cambridge Bay. I am following up on the chain of emails below, concerning contaminants and spill information as well as current and historical land use of the proposed power plant site in Cambridge Bay, that your office may have.

The Legal Registries Division (Land Titles Office), Department of Justice - Government of Nunavut gives the site description as LOT 1005 QUAD 77 D/02 PLAN 3120 and LOT 1006 QUAD 77 D/02 PLAN 3120. See google map capture below.

Any information you may have in the City Directory concerning this lot will be very much helpful in the completion of out Phase I & Phase II studies on the site.

I look forward to hearing from you.

Happy Holidays!!!



**Ekikere Elijah**

Intermediate Hydrogeologist, Project Manager

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**From:** corey dimitruk <[coreydimitruk@gmail.com](mailto:coreydimitruk@gmail.com)>

**Sent:** Friday, November 27, 2020 6:15 PM

**To:** Kevin Taylor <[ktaylor@cambridgebay.ca](mailto:ktaylor@cambridgebay.ca)>

**Cc:** Ekikere Elijah <[elijah@dstgroup.com](mailto:eelijah@dstgroup.com)>; Alix Rive <[alix.rive@englobecorp.com](mailto:alix.rive@englobecorp.com)>; Marla Limousin <[mlimousin@cambridgebay.ca](mailto:mlimousin@cambridgebay.ca)>; Corey Dimitruk <[cdimitruk@gov.nu.ca](mailto:cdimitruk@gov.nu.ca)>; Ohokanoak, Sophia <[SOhokanoak@gov.nu.ca](mailto:SOhokanoak@gov.nu.ca)>; [Katheryne.Budd@englobecorp.com](mailto:Katheryne.Budd@englobecorp.com)

**Subject:** Re: request for information for Phase I ESA re Cambridge Bay QEC Power Plant

**Caution** Do not click on links or open attachments you do not trust.

**Attention** Assurez-vous que le contenu soit de confiance avant d'ouvrir une pièce jointe ou un hyperlien.

Hi Kevin, I have only met Rick Hunt and Jamie Flaherty.

I see that you have sent this to my personal email and out of convenience I will respond in this reply all to provide direction.

When QECs Engineer Rick Hunt and VP Jamie Flaherty met with the Hamlet council they did have a look around town earlier in the day and Rick did indicate to me that Lee Brenton had given them some info about the area near the tank farm.

Aside from a very informal discussion that day with them, the discussions I had with you and Marla and Sophia at your office days before that visit were explicit that the Hamlet and QEC would work together to choose a site for a new powerplant.

Sophia has access to all lands files and the info that Alix (QECs environmental consultant) is seeking is for you, Department of Environment (they keep records of contamination), CGS Sophia Ohokanoak Regional Lands Administrator, keeps data by parcel and so may have something to offer, and possibly the Kitikmeot Regional Manager Airports division of Economic Development and Transportation if the land in question was at anytime their responsibility.

I have nothing beyond what Sophia would be able to provide you regarding history about spills.

I am due back Dec 22 and am happy to review any info you may have, provide opinion, or to assist the Municipality in some other way.

Thanks....Corey Dimitruk ([cdimitruk@gov.nu.ca](mailto:cdimitruk@gov.nu.ca))  
Kitikmeot Regional Land Use Planner.

On Fri., Nov. 27, 2020, 12:56 p.m. Kevin Taylor, <[ktaylor@cambridgebay.ca](mailto:ktaylor@cambridgebay.ca)> wrote:

Good day,

My apologies as I was out of the office for a bit and reviewing this email now. I noticed you mentioned a Development Officer was on site with you. I would assume his name is Corey Dimitruk. So that's great for Corey to take your needs on and accommodate you with your request. I've Cc'd corey in this email as I'm sure would still continue to help you out with the history, surroundings etc.... It was unfortunate Hamlet Lands department and or Hamlet administration were not on site the day this had occurred. We were not aware of your town visit.

Have a great day and be safe!!

Kevin Taylor

Development Officer

Hamlet of Cambridge Bay

Ph: 867-983-4653

Fx : 867-983-2193

[ktaylor@cambridgebay.ca](mailto:ktaylor@cambridgebay.ca)

---

From: Ekikere Elijah [mailto:[elijah@dstgroup.com](mailto:eelijah@dstgroup.com)]  
Sent: November-20-20 1:3 PM  
To: Iliive Kevin Taylor Marla Limousin  
Cc: Katheryne Budd  
Subject: E: request for information for Phase E

Hi Kevin,

I am following up on the initial request made back in September concerning information on a site located in Cambridge Bay that we are currently performing a Phase I ESA on – see map attached. The site is one of the options for consideration as a location for the proposed power plant, and we are looking for any land title (past and present) information, any historical events or environmental issues such as : infraction notices, complaints, corrective actions, spills, known sources of contamination, permits, certificates of authorization, aboveground storage tanks recorded for the subject property, etc.

While on site visit, Development Officer told our personnel that the site belonged to the Airport until recently when it was handed over to the Hamlet, do you know when the property was handed over to the Hamlet?

Also, has there been any activities there? Is the site being used right now to store anything?

Would it be possible to send a zoning and site plan identifying buildings and authorized uses of the area, that would be greatly appreciated.

Any past and present information on the property and surrounding lands will be very much appreciated.

Thank you.

**Ekikere Elijah**

Intermediate Hydrogeologist, Project Manager

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**From:** Alix Rive <[Alix.Rive@englobecorp.com](mailto:Alix.Rive@englobecorp.com)>

**Sent:** Tuesday, September 8, 2020 5:53 PM

**To:** [ktaylor@cambridgebay.ca](mailto:ktaylor@cambridgebay.ca); [mlimousin@cambridgebay.ca](mailto:mlimousin@cambridgebay.ca)

**Subject:** request for information for Phase I ESA

Hello Kevin and Marla,

We are working on a Phase I Environmental Site Assessment on a site located in Cambridge Bay and would like some information about the environmental history of the site. Any land title (past and present) information would be greatly appreciated as well.

The site is shown here attached, with UTM coordinates.

I am looking for any historical events or environmental issues such as : infraction notices, complaints, corrective actions, spills, known sources of contamination, permits, certificates of authorization, aboveground storage tanks recorded for the subject property, etc. Has there been any activities there ? Is the site being used right now to store anything?

Would it be possible to send a zoning and site plan identifying buildings and authorized uses of the area, that would be greatly appreciated.

Thank you very much for your assistance,

Alix

**ALIX RIVE, Biol., M.Sc**

Project Manager

Environmental engineering, Northern Canada

**Englobe**

16114 – 114 Avenue NW

Edmonton (Alberta) T5M 2Z5 Canada

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**Agenda – September 27, 2017****9:00 to 12:00****CAM-M / DEW Line South Shore & Airstrip Landfill Site Visit**

<b>Participants</b>	<b>Initials</b>	<b>Role and Organization</b>	<b>Email</b>
Marla Limousin	ML	Senior Administrative Officer, Hamlet of Cambridge Bay	mlimousin@cambridgebay.ca
Shane Slifka	SS	Acting Regional Director, Department of Community and Government Services (DCGS), Government of Nunavut	sslifka@gov.nu.ca
Shah Alam	SA	Municipal Planning Engineer, DCGS, Government of Nunavut	salam@gov.nu.ca
Lindsay Clements	LC	North Warning System Zone Manager	lindsay.clements-nr@raytheon.com
James Eetoolook*	JE	Vice President, Nunavut Tunngavik Incorporated (NTI)	jeetoolook@tunngavik.com
Stanley Anablak*	SA	President, Kitikmeot Inuit Association (KIA)	president@kia.ca
Bert Dean	BD	Assistant Director, Department of Wildlife & Environment, NTI	bdean@tunngavik.com
Jared Ottenhof	JO	Resource Management Advisor, Department of Wildlife & Environment, NTI,	jottenhof@tunngavik.com
Fred Weihs	FW	Senior Consultant, NVision/Aarluk Consulting Group	fweihs@fweihs.ca
Neida Gonzalez	NG	Senior Consultant, NVision/Aarluk Consulting Group	neida@gonzalezsp.com
Naomi Ratte	NR	Technical Researcher, NVision/Aarluk Consulting Group	nratte@nvisiongroup.ca
Ranjeet Gupta*	RG	Director of Contaminated Sites, Department of National Defence (DND)	Ranjeet.Gupta@forces.gc.ca
Laura D'Costa*	LDC	Senior Project Manager, DEW Line Clean-up and Long Term Monitoring (DLCU & LTM), DND	Laura.DCosta@forces.gc.ca
Alison Street	AS	Project Engineer, DLCU & LTM, DND	Alison.Street@forces.gc.ca



Regrets			
TBC		Qikiqtani Inuit Association (QIA)	
Notes: 1. * Steering Committee Member, DEW Line Clean-Up and Long Term Monitoring 2. Meeting co-chaired by Neida Gonzalez (NVision/Aarluk) and Laura D’Costa (DND)			

Location: Meet at Hamlet Office, Followed by Walking Tour of Tank Farm Near CAM-M			
Objective: Preliminary Investigation of Tank Farm Proximity to CAM-M Landfill & Location of Airstrip Landfill			
		Time/References	Lead
1.	Meet at Hamlet Office	9:00	All
2.	Introductions, Followed by South Shore & Airstrip Landfill Site Visits	9:30 – 10:00	LDC
3.	Walking Tour – South Shore & Airstrip Landfills	10:00 – 11:00	LDC

**Table 2: List of Attachments**

No	Attachment Title
#1	DEW Line As-Builts (Overall Site Plan, South Shore Landfill, and Airstrip Landfill )
#2	Landfill Integrity Concerns Identified Regarding the DND DEW Line South Shore and Airstrip Landfills
#3	Excerpts From CAM-M 2015 Final Monitoring Report (Englobe, 2016)
#4	Figure Overlay of the South Shore Landfill and the Hamlet of Cambridge Bay Fuel Tank Farm
#5	Draft Land Transfer Document Request Government of Nunavut

## 1.0 Introductions

The meeting began with a round table of introductions.

## 2.0 Background

Laura provided some background on the purpose of the meeting:

- i) To discuss two DEW Line regraded landfills, the South Shore Landfill and the Airstrip Landfill, which were created during historic operations at CAM-M and are located outside of the DND reserve boundary. The South Shore Landfill is located in close proximity to the Hamlet's new fuel tank farm, and the Airstrip Landfill is located to the southwest of the airstrip, between the access road and the shoreline. Figures were shared depicting the locations from the DEW Line as-builts (**See Attachment #1**);
- ii) To discuss any questions or concerns; and
- iii) To come up with a mutual path forward to work together to address any identified challenges.

## 3.0 Land Ownership and Infrastructure Co-location Discussion

In addition to the as-Builts (please see Attachment #1 previously referenced), Laura provided a copy of:

- i) The summary on the two issues of concern (**see Attachment #2**);
- ii) Excerpts from the 2015 CAM-M Monitoring Report describing these two concerns in more detail (**see Attachment #3**); and
- A figure depicting an overlay of the Hamlet's fuel tank farm and the South Shore Landfill (**see Attachment #4**).

The two issues of concern discussed by DND included:

- i) The Airstrip Landfill is comprised of multiple separate lobes of waste that were covered and regraded; these lobes are located south of the airstrip access road over a stretch of several hundred metres. In 2015, the consultant hired by DND to conduct long-term monitoring at CAM-M reported that two large drainage channels (identified in the CAM-M monitoring report as features U1 and U2) had been excavated by heavy equipment, presumably to improve drainage from the access road; these excavations narrowly missed damaging some of the regraded areas that comprise the Airstrip Landfill; and
- ii) A portion of the Hamlet's new fuel tank farm and its associated pump houses may have been built on part of the footprint of the South Shore Landfill.

### Airstrip Landfill and Access Road Drainage:

From the discussion, the Airstrip Landfill appears to be on Airport Authority land. Meeting participants advised DND to set up an additional meeting that day with Wiz Mohammed (Manager of Transportation Programs with the Government of Nunavut) if he was available. The Airstrip Landfill was not discussed in further detail at this meeting; the area was briefly inspected as part of the site visit by meeting participants, however snow cover prevented the group from making detailed observations.

### South Shore Landfill and Hamlet of Cambridge Bay Fuel Tank Farm:

From the discussion, the South Shore Landfill appears to be on lands transferred from the Airport Authority to the Hamlet for the construction of the tank farm. The Hamlet and Government of Nunavut participants were not previously aware of the close proximity of the tank farm and the South Shore Landfill.

Shah provided information on the due diligence steps taken in selecting the location of the tank farm. He provided documentation on the land transfer (**see Attachment #5**), and outlined how the Hamlet had built the tank farm following the completion of two important studies: i) a 2011 Enhanced Phase I Environmental Site Assessment done by FSC Architects and Engineers; and ii) a 2012 Site Visit Field Report by Worley Parsons. Neither study identified any concern with the proposed tank farm location, nor did they identify the DEW Line regraded landfills.

Laura outlined that DND had sent a Property Officer to Cambridge Bay on October 24, 25, 2012 to discuss the tank farm and any DND concerns, lands, and infrastructure, with the Hamlet and Government of Nunavut representatives.

It was acknowledged that the lack of awareness regarding the locations of these DEW Line landfills is an unfortunate gap that occurred despite all of these best efforts. However, moving forward, working together, we can hopefully mitigate any concerns.

#### Hamlet Questions/Concerns:

- i) Laura enquired as to whether the Hamlet or Government of Nunavut representatives had any geotechnical concerns with the co-location of the South Shore landfill and fuel tank farm infrastructure (e.g. potential settling and/or potential impacts on tank farm operations). Participants outlined that there were no concerns. This was further supported by the later site visit. Shah outlined that the tank farm pad was constructed by layering gravel, sand, 60 millimetre high density polyethylene (HDPE) liner, more sand, and more gravel constituting on the order of 2m+ of additional clean fill.
- ii) Shah requested clarification regarding the two landfills, their content, their monitoring program, their management and any environmental risk they posed. Laura outlined the following:
  - The South Shore Landfill and the Airstrip Landfill are regraded landfills that were classified as low risk at the time of the environmental investigation/assessment. In these cases, although the full contents of the landfill were not always investigated, an environmental assessment and risk assessment were conducted, the extent of the landfills were defined, and engineered solutions (cover and regrading) were applied. Subsequent to this, a long-term monitoring program was put in place. The remediation was completed between the years 1998-2000. The monitoring has been ongoing for the past 19 years, following a schedule that was established with Nunavut Tunngavik Incorporated (NTI). The most recent monitoring event took place in 2015, and the next monitoring event is scheduled for 2019. To date, no risk from any of the CAM-M landfills has been identified from the monitoring program. The geotechnical condition of the landfills is rated as acceptable, and the environmental sampling demonstrates that there is no indication of leachate migration. (**see Attachment #3, 2015 Monitoring Report Sections**); and
  - As part of the monitoring program, consultants with Inuit support staff complete the monitoring programs and report on their work, providing conclusions and recommendations. The reports are reviewed by an Environmental Working Group (EWG), consisting of four independent consultants with geotechnical and environmental expertise. The EWG then makes recommendations to the DEW Line Clean-Up Steering Committee (all four members are at this meeting, please see the list of participants for details), and the Steering Committee decides if any new action is required (e.g. increased monitoring, or maintenance program). A significant amount of effort goes into ensuring that the landfills are performing as anticipated and that any identified risks are mitigated.
- iii) Shah/Marla requested more communication on the monitoring program, including the upcoming schedule and sharing of results.
- iv) Marla asked if the South Shore Landfill could be utilized by the Hamlet as a lay down area for materials from the sea lift.
- v) Shah asked if DND would consider posting signs indicating the location of the South Shore and Airstrip Landfills. Fred clarified that this question has been raised historically and was discussed by the Steering Committee. The Steering Committee decided that signs would not be posted at any of the former DEW Line sites for the following reasons: i) they would interfere with the goal of having the landfills blend back into the natural terrain; ii) signs don't last well in northern conditions; and iii) signs could pose a potential hazard to overland vehicles.

- vi) Marla described the wreckage of an airplane in the waters of the bay near the airport. She asked if it was a DEW Line relic. Shane outlined that the plane has some benefits, as it is an underwater attraction for divers. Discussion followed; the local understanding is that it was a 'Globemaster' plane that crash landed in the early days of construction of the DEW Line (estimate ~1953). Marla outlined that it might be interesting to transport the remaining fuselage to Heritage Park. Fred confirmed that the DEW Line looked at the equipment in the water at former DEW Line sites on a case by case basis. This plane would have been assessed by the Steering Committee at the time of the CAM-M site investigation/remediation in the 1990s; the decision they made was to leave the plane in place.

#### **ACTION ITEMS:**

- 1) In order to evaluate any potential geotechnical/environmental concerns regarding the co-location of the South Shore Landfill and the fuel tank farm, information will be transferred between DND and the Hamlet for an independent review by geotechnical engineers. Information to be transferred includes:

From DND to the Hamlet and Government of Nunavut:

- Laura will redistribute the information shared at the meeting (please see all attachments to these draft minutes);
- Laura will provide the information to be transferred from Shane to a geotechnical engineer and will ask the geotechnical engineer to produce:
  - A GIS file indicating the locations of the DND DEW Line South Shore and Airstrip Landfills, the Hamlet fuel tank farm and the Airport Authority runway and access road.
  - GPS locations of the landfills, including the individual lobes of the Airstrip Landfill;
  - Recommendations on how/if the South Shore Landfill could be used as a lay down area for construction materials from the sea lift, and any restrictions/required protective measures prior to this use;
  - An analysis of potential geotechnical/environmental concerns from the tank farm construction/operations and recommendations on mitigative measures.

From the Hamlet/Government of Nunavut to DND:

Shane will upload all documents to a website (due to their size) and send Laura a link by email with the following:

- The legal survey of the tank farm and surroundings;
  - The as-built drawing of the tank farm in GIS or AutoCAD electronic format; and
  - All available tank farm construction details.
- 2) Laura will work with Neida/Naomi on a communication plan for sharing information on the ongoing monitoring activities of the DEW Line Landfills in Cambridge Bay.
- 3) Laura will review historical DEW Line documentation to see if she can identify the decision and basis for leaving the plane in place underwater.

#### **Site Visit**

As part of this meeting, participants drove to the fuel tank farm. The area was briefly inspected as part of the site visit by meeting participants.

## **4.0 Additional Topics**

### **Release of Reserve Lands**

- Marla showed the participants a map of Cambridge Bay, outlining the restrictions to future development. Within the given space currently available, the Hamlet is only able to plan the next 5-10 years of development.
- The Hamlet is very interested in the release of some of the lands adjacent to the current community boundaries. The adjacent lands are an important constraint for development in the community. The community is running out of options in the current location and their remaining option would be to build across the river; this would be an extremely costly and resource-intensive undertaking that is far from ideal.
- From everyone's understanding, the question of land ownership in Cambridge Bay is very complex. Laura mentioned that she had contacted INAC to discuss the complicated land tenure situation, but no significant clarifications were possible at that time. More information is required to better understand land ownership and transfers.
- The DND Directorate of Contaminated Sites DEW Line team (present at this meeting) does not have authority over DND land administration. However, we understand that DND was doing surveys of their lands in order to return lands to the Inuit, while retaining the land required to continue addressing operational activities and long-term obligations (such as DEW Line landfill monitoring).

### **ACTION ITEMS:**

- 4) Marla will provide all meeting participants with a copy of the map she showed at this meeting.
- 5) DND will follow up on the question of land ownership and release of lands in Cambridge Bay through their Real Property Group.

### **LORAN tower**

Marla asked participants if they had any knowledge or influence regarding the decommissioning of the LORAN tower on the east side of the river that had recently collapsed. The tower was cut up and placed by a building approximately three years ago. There is suspected lead paint on the tower. Shane believes the tower may have belonged to NAV Canada.

### **ACTION ITEMS:**

- 6) Marla will provide a series of letters/correspondence regarding the LORAN tower to Neida for review/follow-up.

### **END OF MEETING**

## 5.0 Airstrip Landfill

Following the site visit, the DND DCS team visited the Government of Nunavut offices with Shah, who introduced the group to Wiz Mohammed.

Participant*	Initials	Role and Organization	Email
Wiz Mohammed	WM	Manager of Transportation Programs, Government of Nunavut	wmohammed@gov.nu.ca

\*Participants at this meeting also included: Shah, Ranjeet, Laura, & Alison (please see participant details above).

### Summary of the Discussion with Wiz Mohammed (September 27, 2018)

- The Airstrip landfill was discussed in more detail;
- Wiz outlined that the Hamlet intends on building a more permanent access road (the road adjacent to the Airstrip Landfill) and this design would include the construction of up to five culverts. Discussions are also underway to extend the airstrip runway by up to 500 m. This meeting is timely; knowledge of the Airstrip Landfill lobe locations (such as a figure with a Google map overlay and GPS locations), will enable mitigation measures to protect the Airstrip landfill to be incorporated into the designs (including ensuring culverts are not built through the landfill lobes).
- Some activities such as snowmobiling currently take place in the vicinity of the Airstrip Landfill as community members are not aware of the landfill's existence. With awareness, these activities could be possibly be discouraged.

### ACTION ITEMS:

- 7) Regarding any potential geotechnical/environmental concerns with the Airstrip Landfill and the runway extension and access road, DND will ask for the following from a geotechnical engineer:
  - As part of Action Item 1 above, Laura will ask the geotechnical engineer to also:
    - Include a Google Earth image overlay on the GIS, indicating the locations of the DND DEW Line South Shore and Airstrip Landfills, the airport fuel tank farm and the Airport Authority runway and access road; and
    - Conduct an analysis of potential geotechnical/environmental concerns, and provide recommendations on mitigation measures that would be protective of the Airstrip Landfill during construction and maintenance activities associated with the access road and runway extension. This would be inclusive of recommended locations for culverts.

Note: The recommendations from the geotechnical engineer will be shared once finalized.



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# DEW LINE CLEAN UP PROJECT

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CONTRACT DRAWINGS INCLUDE THE  
ENGINEER'S STAMP.

DRAWING INDEX			
DRAWING No.	TITLE	DRAWING No.	TITLE
SITING			
H-C25/J-9101-101	REZONING, ZONING AND LOCATION PLAN	H-C25/J-9101-108	TIER II DISPOSAL FACILITY SITE PLAN
H-C25/J-9101-102	OVERALL SITE PLAN	H-C25/J-9101-109	WESTERN LANDFILL AREA SITE PLAN
H-C25/J-9101-103	PROJECT LAYOUT	H-C25/J-9101-110	MAIN LANDFILL - SOUTH CROSS SECTION
H-C25/J-9101-104	STATION AREA SITE PLAN	H-C25/J-9101-111	MAIN LANDFILL - NORTH CROSS SECTION
H-C25/J-9101-105	MAIN LANDFILL AREAS NORTH AND SOUTH SITE PLAN	H-C25/J-9101-112	TIER II DISPOSAL FACILITY CROSS SECTION
H-C25/J-9101-106	SOUTH SHORE LANDFILL AREA SITE PLAN	H-C25/J-9101-113	STATION AND DETAILS SHEET-1
H-C25/J-9101-107	WEST LANDFILL AREA SITE PLAN	H-C25/J-9101-113A	STATION AND DETAILS SHEET-2
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		H-C25/J-9101-202	MAIN AREA DEMOLITION SITE PLAN
MISCELLANEOUS DETAILS			
		H-C25/J-9101-114	MISCELLANEOUS DETAILS SHEET-1
		H-C25/J-9101-115	MISCELLANEOUS DETAILS SHEET-2
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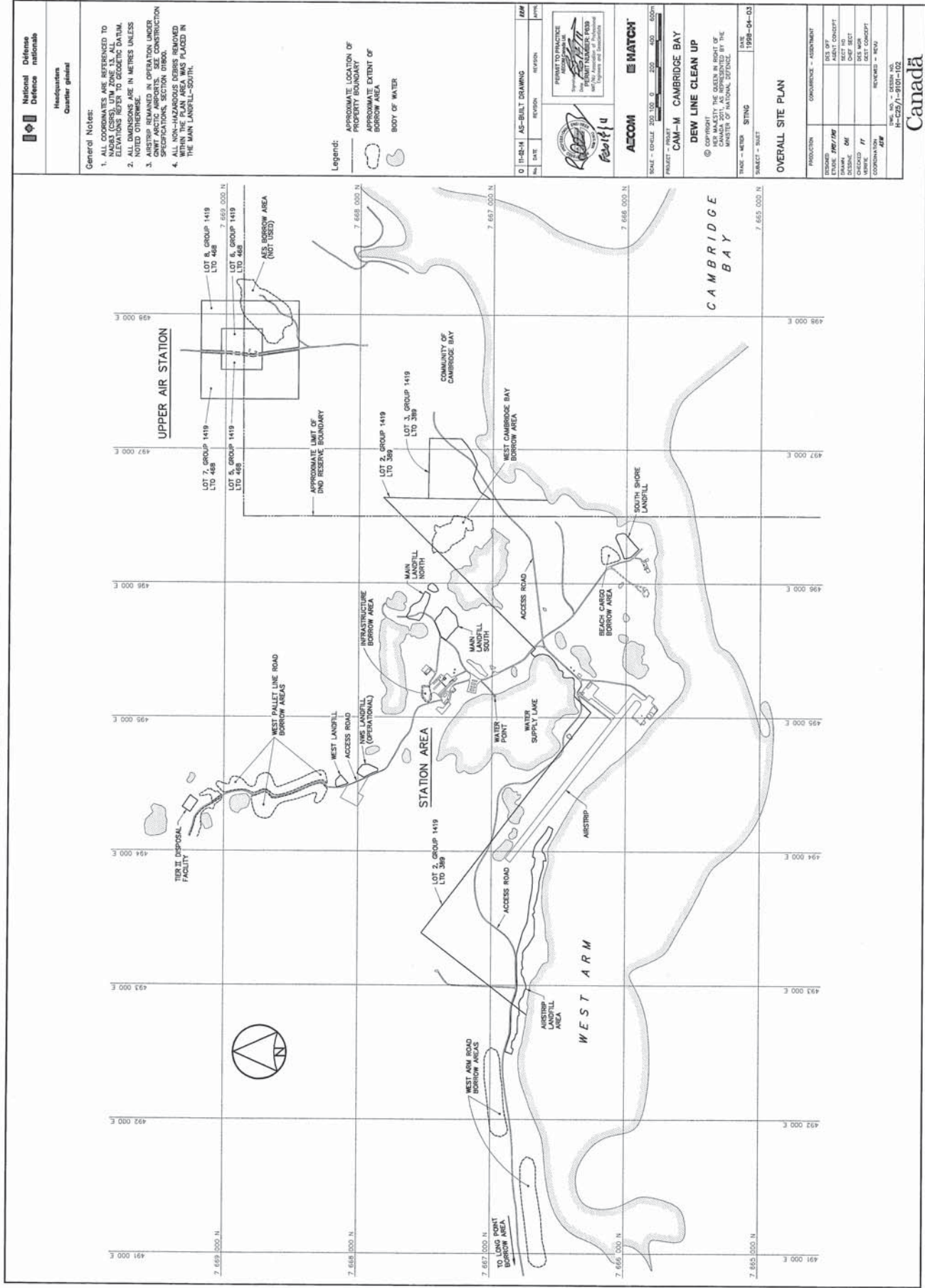
# CAM-M CAMBRIDGE BAY AS-BUILT DRAWINGS

AECOM

HATCH

FEBRUARY, 2011









NO.	UTM COORDINATES	
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NOTE: NO AS-BUILT SURVEY INFORMATION.



Legend:

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**PERMIT TO PRACTICE**  
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**PERMIT IN MINEFIELD**

NMT/NO association of Professional Engineers and Geoscientists

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CAM-M CAMBRIDGE BAY

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AIRSTRIIP LANDFILL AREA

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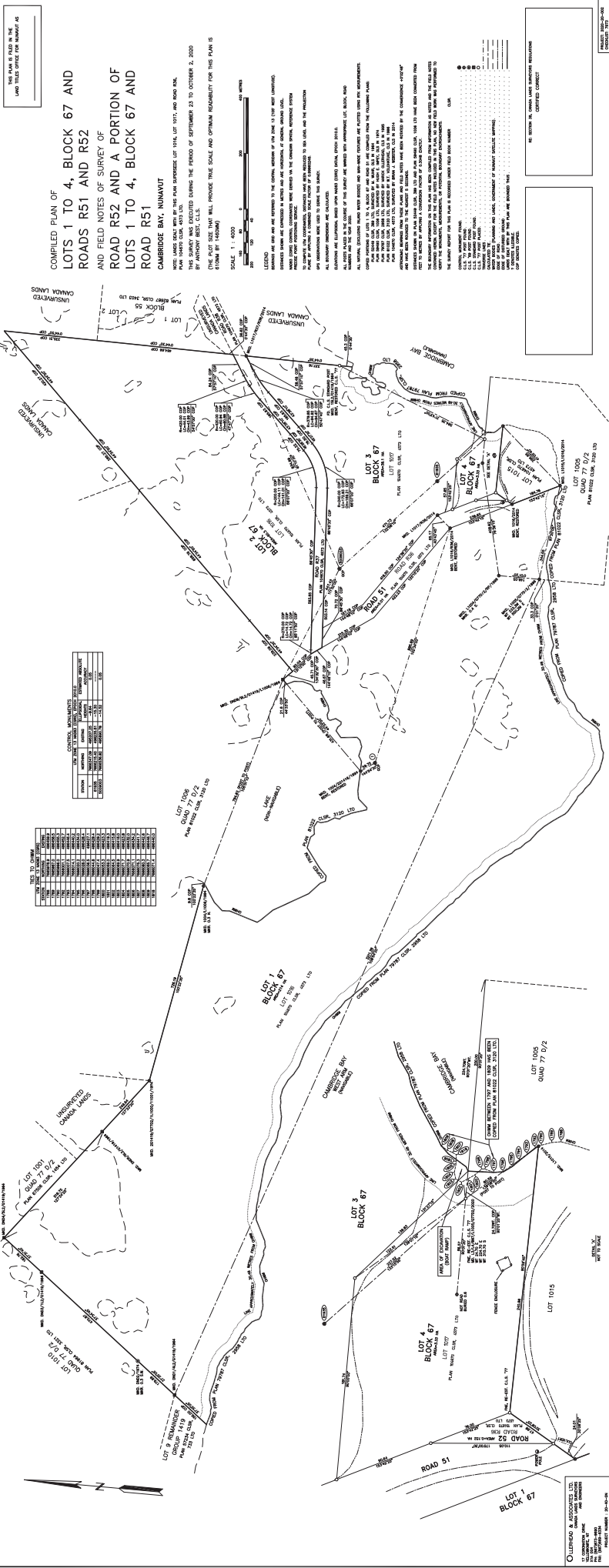
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THIS PLAN IS FILED IN THE  
LAND TITLE OFFICE OF NUNAVUT AS

COMPILED PLAN OF  
LOTS 1 TO 4, BLOCK 67 AND  
ROADS R51 AND R52  
AND FIELD NOTES OF SURVEY OF  
ROAD R52 AND A PORTION OF  
LOTS 1 TO 4, BLOCK 67 AND  
ROAD R51  
CAMBRIDGE BAY, NUNAVUT

NOTE: LANDS SHOWN ON THIS PLAN SURVEYED LOT 1016, LOT 1017, AND ROAD R51,  
PLAN 10065 CLAS, 4553 LTO, DURING THE PERIOD OF SEPTEMBER 23 TO OCTOBER 2, 2020  
BY ANTHONY BRET, C.L.S.  
(THIS PLAN SIZE THAT WILL PROVIDE TRUE SCALE AND OPTIMAL READABILITY FOR THIS PLAN IS  
610MM BY 1140MM)

SCALE 1:14000

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LOT NO.	AREA (SQ. METERS)	AREA (SQ. FEET)	PERCENTAGE OF TOTAL AREA
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LOT 2	1017.00	11000.00	1.00%
LOT 3	1018.00	11000.00	1.00%
LOT 4	1019.00	11000.00	1.00%
LOT 5	1020.00	11000.00	1.00%
LOT 6	1021.00	11000.00	1.00%
LOT 7	1022.00	11000.00	1.00%
LOT 8	1023.00	11000.00	1.00%
LOT 9	1024.00	11000.00	1.00%
LOT 10	1025.00	11000.00	1.00%
LOT 11	1026.00	11000.00	1.00%
LOT 12	1027.00	11000.00	1.00%
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LOT 78	1093.00	11000.00	1.00%
LOT 79	1094.00	11000.00	1.00%
LOT 80	1095.00	11000.00	1.00%
LOT 81	1096.00	11000.00	1.00%
LOT 82	1097.00	11000.00	1.00%
LOT 83	1098.00	11000.00	1.00%
LOT 84	1099.00	11000.00	1.00%
LOT 85	1100.00	11000.00	1.00%
LOT 86	1101.00	11000.00	1.00%
LOT 87	1102.00	11000.00	1.00%
LOT 88	1103.00	11000.00	1.00%
LOT 89	1104.00	11000.00	1.00%
LOT 90	1105.00	11000.00	1.00%
LOT 91	1106.00	11000.00	1.00%
LOT 92	1107.00	11000.00	1.00%
LOT 93	1108.00	11000.00	1.00%
LOT 94	1109.00	11000.00	1.00%
LOT 95	1110.00	11000.00	1.00%
LOT 96	1111.00	11000.00	1.00%
LOT 97	1112.00	11000.00	1.00%
LOT 98	1113.00	11000.00	1.00%
LOT 99	1114.00	11000.00	1.00%
LOT 100	1115.00	11000.00	1.00%

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## **Appendix F    Hazardous Materials and Spills Database**

Spill	Occurance Date	Location Description	Approximate Distance to Site	Contaminant	Volume (L)	Spill Cause	Lead Agency
spill-2020441	17-Nov-20	North Warning System CAM-M	Unknown	Hydraulic Fluid	Unknown	Other	CIRNAC
spill-2020088	27-Mar-20	North Warning System	Unknown	Hydraulic Fluid	9		ECCC
spill-2020051	15-Feb-20	North Warning System Radar Site CAM-M	Unknown	Mine Tailings	6000	Pipe Leaks	ECCC
spill-2019467	21-Nov-19	North Warning System CAM-M	Unknown	Heating Fuel	Unknown	Overflow Event	CIRNAC
spill-2018270	11-Jul-18	Millitary	Unknown	Heating Fuel	1	Breakage	CIRNAC
spill-2017196	5-Jun-17	Cambridge Bay, NWS LRR CAM-M, 69 06 16N 105 05 59W	215.8 m southeast of Site	Heating Fuel	1295	Pipe Leaks	GN
spill-2017238	4-Jul-17	Cambridge Bay, NWS site CAM-M, 69 06 59N 105 07 22W	Unknown	Hydraulic Fluid	6	Fitting Leak	CIRNAC
spill-2016129	20-Apr-16	Cambridge Bay, NWS Site CAM-M, 69 6 57N 105 7 9W	Unknown	Transformer Oils	96	Fitting Leak	CIRNAC
spill-2015054	17-Feb-15	Cambridge Bay, NWS LSS CAM-M	Unknown	Hydraulic Fluid	0.5	Fitting Leak	GN
spill-2010362	3-Sep-10	Cambridge Bay, CAM-M	Unknown	Heating Fuel	2	Fitting Leak	CIRNAC
spill-2010313	23-Jul-10	Cambridge Bay, CAM-M	Unknown	Heating Fuel	10	Fitting Leak	CIRNAC
spill-2010240	15-Jun-10	Cambridge Bay, CAM-M	Unknown	Hydraulic Fluid	1	Collision or Crash	CIRNAC
Spill-2009500	6-Nov-09	Cambridge Bay Airport Off Apron	Unplottable	Heating Fuel	40	Pipe Leaks	GN
spill-2009143	11-Apr-09	Cambridge Bay LSS	Unknown	Heating Fuel	20	Overflow Event	CIRNAC
spill-2008321	3-Jul-08	CAM-M	Unknown	Heating Fuel	20	Pipe Leaks	ECCC
spill-2006339	29-Aug-06	North Warning System 68:45:19N 114:56:16W	Unknown	Heating Fuel	1	Pipe Leaks	ECCC

<b>Spill</b>	<b>Occurance Date</b>	<b>Location Description</b>	<b>Approximate Distance to Site</b>	<b>Contaminant</b>	<b>Volume (L)</b>	<b>Spill Cause</b>	<b>Lead Agency</b>
spill-2001228	16-Jul-01	Cambridge Bay North Warning Radar Site	Unknown	Heating Fuel	150	Overflow Event	ECCC
spill-1998126	28-Jul-98	Power Plant	Unknown	Transformer Oils	205	Fitting Leak	ECCC
Spill-1996176	4-Sep-96	1 Mile Offshore of Cambridge Bay Airport	Unplottable	Mixed load: water/oil	6 Liters	Unknown	-

Notes:

IRNAC - Crown-Indigenous Relations and Northern Affairs Canada

ECCC - Environment and Climate Change Canada

GN - Government of Nunavut

## **Appendix G    ERIS Search Results**





# DATABASE REPORT

<b>Project Property:</b>	<i>Cambridge Bay Option 2 Cambridge Bay Option 2 Cambridge Bay NU</i>
<b>Project No:</b>	
<b>Report Type:</b>	<i>Quote - Custom-Build Your Own Report</i>
<b>Order No:</b>	<i>20291100221</i>
<b>Requested by:</b>	<i>Englobe Corp.</i>
<b>Date Completed:</b>	<i>September 21, 2020</i>

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# Executive Summary

## **Property Information:**

**Project Property:** *Cambridge Bay Option 2  
Cambridge Bay Option 2 Cambridge Bay NU*

**Project No:**

## **Order Information:**

**Order No:** *20291100221*  
**Date Requested:** *September 11, 2020*  
**Requested by:** *Englobe Corp.*  
**Report Type:** *Quote - Custom-Build Your Own Report*

## **Historical/Products:**

**Aerial Photographs** *Aerials - National Collection*  
**ERIS Xplorer** [\*ERIS Xplorer\*](#)

## Executive Summary: Report Summary

<i>Database</i>	<i>Name</i>	<i>Searched</i>	<i>Project Property</i>	<i>Boundary to 0.25km</i>	<i>Total</i>
AUWR	Automobile Wrecking & Supplies	Y	0	0	0
CDRY	Dry Cleaning Facilities	Y	0	0	0
CFST	Crown Land Fuel Storage Tanks	Y	0	0	0
CNG	Compressed Natural Gas Stations	Y	0	0	0
EHS	ERIS Historical Searches	Y	0	0	0
FCON	Federal Convictions	Y	0	0	0
FCS	Contaminated Sites on Federal Land	Y	0	0	0
FRST	Federal Identification Registry for Storage Tank Systems (FIRSTS)	Y	0	0	0
GHG	Greenhouse Gas Emissions from Large Facilities	Y	0	0	0
IAFT	Indian & Northern Affairs Fuel Tanks	Y	0	0	0
MINE	Canadian Mine Locations	Y	0	0	0
MNR	Mineral Occurrences	Y	0	0	0
NATE	National Analysis of Trends in Emergencies System (NATES)	Y	0	0	0
NDSP	National Defense & Canadian Forces Spills	Y	0	0	0
NDWD	National Defence & Canadian Forces Waste Disposal Sites	Y	0	0	0
NEBI	National Energy Board Pipeline Incidents	Y	0	0	0
NEBT	National Energy Board Wells	Y	0	0	0
NEES	National Environmental Emergencies System (NEES)	Y	0	0	0
NPCB	National PCB Inventory	Y	0	0	0
NPRI	National Pollutant Release Inventory	Y	0	0	0
OGWE	Oil and Gas Wells	Y	0	0	0
RST	Retail Fuel Storage Tanks	Y	0	0	0
SCT	Scott's Manufacturing Directory	Y	0	0	0
SPL	Spills	Y	0	1	1
<b>Total:</b>			0	1	1

# Executive Summary: Site Report Summary - Project Property

Map Key	DB	Company/Site Name	Address	Dir/Dist (m)	Elev diff (m)	Page Number
------------	----	-------------------	---------	--------------	------------------	----------------

No records found in the selected databases for the project property.


## Executive Summary: Site Report Summary - Surrounding Properties

<i>Map Key</i>	<i>DB</i>	<i>Company/Site Name</i>	<i>Address</i>	<i>Dir/Dist (m)</i>	<i>Elev Diff (m)</i>	<i>Page Number</i>
<a href="#">1</a>	SPL		Cambridge Bay, NWS LRR CAM-M, 69 06 16N 105 05 59W CAM M - Cambridge Bay (69 07N 105 08W) NU	SSE/215.8	0.68	<a href="#">11</a>

# Executive Summary: Summary By Data Source

## **SPL - Spills**

A search of the SPL database, dated Mar 31, 2020 has found that there are 1 SPL site(s) within approximately 0.25 kilometers of the project property.

<b><u>Site</u></b>	<b><u>Address</u></b>	<b><u>Distance (m)</u></b>	<b><u>Map Key</u></b>
	Cambridge Bay, NWS LRR CAM-M, 69 06 16N 105 05 59W CAM M - Cambridge Bay (69 07N 105 08W) NU	215.8	

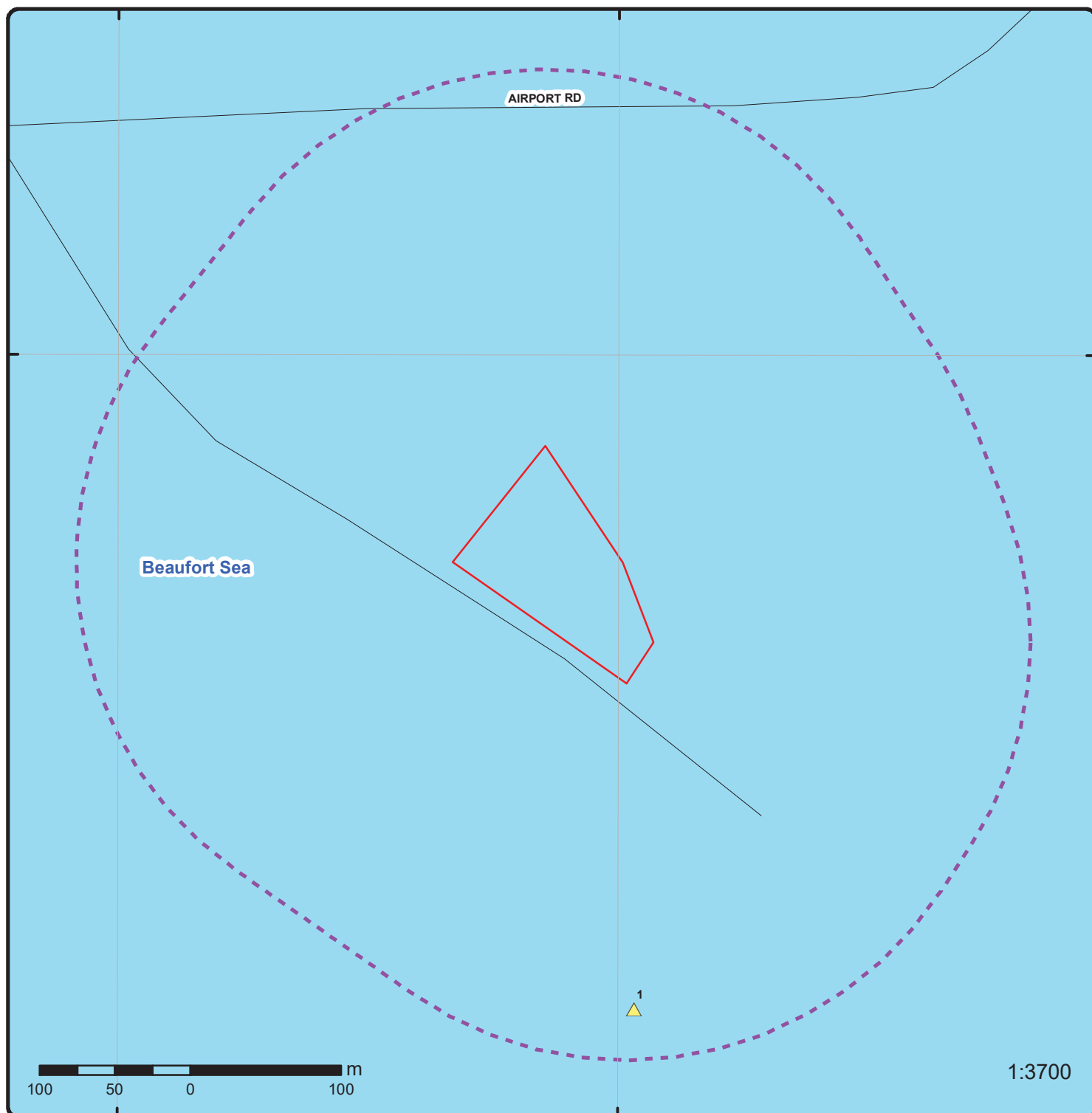


105°6'30"W

105°6'W

69°6'30"N

69°6'30"N



## Map : 0.25 Kilometer Radius

Order Number: 20291100221

Address: Cambridge Bay Option 2, Cambridge Bay, NU



Project Property	Expressway	Industrial and Resource - Regions	National Park
Buffer Outline	Principal Highway	Main Line	Provincial or Territorial Park
Eris Sites with Higher Elevation	Secondary Highway	Sidetrack	Other Park
Eris Sites with Same Elevation	Major Road	Transit Line	Golf Course or Driving Range
Eris Sites with Lower Elevation	Local road	Abandoned Line	Park or Sports Field
Eris Sites with Unknown Elevation	Trail		Other Recreation Area
	Proposed Road		
	Ferry Route/Ice Road		

105°7'30"W

105°6'W



N 9.69

N 9.69

**Aerial** Year: 2019

**Address:** Cambridge Bay Option 2, Cambridge Bay, NU

**Source:** ESRI World Imagery

Order Number: 20291100221



© Eris Information Limited Partnership

105°9'W

105°7'30"W

105°6'W

105°4'30"W

105°3'W

69°7'30"N

69°7'30"N

69°6'N

69°6'N

Cambridge Bay

West Arm

Cambridge Bay

Sources: Esri, HERE, Garmin, Intermap, increment P Corp., GEBCO, USGS, FAO, NPS, NRCAN, GeoBase, IGN, Kadaster NL, Ordnance Survey, Esri Japan, METI, Esri China (Hong Kong), (c) OpenStreetMap contributors, and the GIS User Community

1:24000

610 305 0 610 m

# Topographic Map

**Address: Cambridge Bay Option 2, NU**

**Source:** ESRI World Topographic Map

Order Number: 20291100221



© ERIS Information Limited Partnership

# Detail Report

Map Key	Number of Records	Direction/ Distance (m)	Elev/Diff (m)	Site	DB
<a href="#">1</a>	1 of 1	SSE/215.8	16.0 / 0.68	Cambridge Bay, NWS LRR CAM-M, 69 06 16N 105 05 59W CAM M - Cambridge Bay (69 07N 105 08W) NU	SPL
<div> <div> <b>Spill No:</b> spill-2017196         </div> <div> <b>Spill Date:</b> </div> <div> <b>Spill Quantity:</b> 1295.00         </div> <div> <b>Measurement:</b> Litres         </div> <div> <b>Spill Cause:</b> Pipe Leaks         </div> <div> <b>Spill Source:</b> Pipe or Line         </div> <div> <b>Product Spilled:</b> Petroleum - fuel oil (jet A, diesel, turbo A, heat)         </div> <div> <b>Product Spilled Description:</b> Jet A         </div> <div> <b>Area of Contamination:</b> </div> <div> <b>Spill Location Description:</b> Cambridge Bay, NWS LRR CAM-M, 69 06 16N 105 05 59W         </div> <div> <b>Known Hazards:</b> </div> <div> <b>Occurrence Date/Time:</b> June 5, 2017         </div> <div> <b>Reporting Date and Time:</b> Tuesday, June 6, 2017 - 18:00         </div> <div> <b>Support Info Un No:</b> </div> <div> <b>Supp Info Describe Any Assi:</b> </div> <div> <b>Support Info Water Use Permit:</b> </div> <div> <b>Support Info Land Use Permit N:</b> </div> <div> <b>Support Info Factors Affecting:</b> </div> <div> <b>Support Info Additional Inform:</b> </div> <div> <b>Supporting Agencies:</b> </div> <div> <b>Lead Agency:</b> GN - Government of Nunavut         </div> <div> <b>URL:</b> <a href="https://www.enr.gov.nt.ca/en/spill/spill-2017196">https://www.enr.gov.nt.ca/en/spill/spill-2017196</a> </div> <div> <b>Land Sea Indicator:</b> </div> <div> <b>Potential Spill:</b> No         </div> <div> <b>Received Method:</b> </div> <div> <b>Involved Parties Type:</b> Other         </div> <div> <b>Spill Region:</b> Kitikmeot         </div> </div>					

## Unplottable Summary

Total: 2 Unplottable sites

DB	Company Name/Site Name	Address	City	Postal
SPL		1 Mile Offshore of Cambridge Bay Airport	NU	
SPL		Airport Off Apron	Cambridge Bay NU	



# Unplottable Report

<b>Site:</b> 1 Mile Offshore of Cambridge Bay Airport NU		<b>Database:</b> SPL	
<b>Spill No:</b>	spill-1996176	<b>Land Sea Indicator:</b>	Salt Water
<b>Spill Date:</b>		<b>Potential Spill:</b>	No
<b>Spill Quantity:</b>	6.00	<b>Received Method:</b>	
<b>Measurement:</b>	Litres	<b>Involved Parties Type:</b>	Unknown
<b>Spill Cause:</b>	Unkown Cause	<b>Spill Region:</b>	Kitikmeot
<b>Spill Source:</b>	Truck		
<b>Product Spilled:</b>	Mixed load		
<b>Product Spilled Description:</b>	Water/Oil		
<b>Area of Contamination:</b>			
<b>Spill Location Description:</b>	1 Mile Offshore of Cambridge Bay Airport		
<b>Known Hazards:</b>			
<b>Occurrence Date/Time:</b>	September 4, 1996		
<b>Reporting Date and Time:</b>	Tuesday, September 3, 1996 - 18:00		
<b>Support Info Un No:</b>			
<b>Supp Info Describe Any Assi:</b>			
<b>Support Info Water Use Permit:</b>			
<b>Supp Info Land Use Permit N:</b>			
<b>Support Info Factors Affecting:</b>			
<b>Support Info Additional Inform:</b>			
<b>Supporting Agencies:</b>			
<b>Lead Agency:</b>			
<b>URL:</b>	<a href="https://www.enr.gov.nt.ca/en/spill/spill-1996176">https://www.enr.gov.nt.ca/en/spill/spill-1996176</a>		

<b>Site:</b> Airport Off Apron Cambridge Bay NU		<b>Database:</b> SPL	
<b>Spill No:</b>	spill-2009500	<b>Land Sea Indicator:</b>	Land
<b>Spill Date:</b>		<b>Potential Spill:</b>	No
<b>Spill Quantity:</b>	40.00	<b>Received Method:</b>	
<b>Measurement:</b>	Litres	<b>Involved Parties Type:</b>	Petroleum Companies
<b>Spill Cause:</b>	Pipe Leaks	<b>Spill Region:</b>	Kitikmeot
<b>Spill Source:</b>	Truck		
<b>Product Spilled:</b>	Petroleum - fuel oil (jet A, diesel, turbo A, heat)		
<b>Product Spilled Description:</b>	Jet A		
<b>Area of Contamination:</b>			
<b>Spill Location Description:</b>	Airport Off Apron		
<b>Known Hazards:</b>			
<b>Occurrence Date/Time:</b>	November 6, 2009		
<b>Reporting Date and Time:</b>	Thursday, November 5, 2009 - 17:00		
<b>Support Info Un No:</b>			
<b>Supp Info Describe Any Assi:</b>			
<b>Support Info Water Use Permit:</b>			
<b>Supp Info Land Use Permit N:</b>			
<b>Support Info Factors Affecting:</b>			
<b>Support Info Additional Inform:</b>			
<b>Supporting Agencies:</b>			
<b>Lead Agency:</b>	GN - Government of Nunavut		
<b>URL:</b>	<a href="https://www.enr.gov.nt.ca/en/spill/spill-2009500">https://www.enr.gov.nt.ca/en/spill/spill-2009500</a>		





## Appendix: Database Descriptions

*Environmental Risk Information Services (ERIS) can search the following databases. The extent of historical information varies with each database and current information is determined by what is publicly available to ERIS at the time of update. **Note:** Databases denoted with " \* " indicates that the database will no longer be updated. See the individual database description for more information.*

### **Automobile Wrecking & Supplies:**

Private

[AUWR](#)

This database provides an inventory of known locations that are involved in the scrap metal, automobile wrecking/recycling, and automobile parts & supplies industry. Information is provided on the company name, location and business type.

**Government Publication Date:** 1999-Jan 31, 2020

### **Dry Cleaning Facilities:**

Federal

[CDRY](#)

List of dry cleaning facilities made available by Environment and Climate Change Canada. Environment and Climate Change Canada's Tetrachloroethylene (Use in Dry Cleaning and Reporting Requirements) Regulations (SOR/2003-79) are intended to reduce releases of tetrachloroethylene to the environment from dry cleaning facilities.

Environment and Climate Change Canada cites the coronavirus pandemic as an explanation for delays in releasing data pursuant to requests.

**Government Publication Date:** Jan 2004-Dec 2017

### **Crown Land Fuel Storage Tanks:**

Territorial

[CFST](#)

The Department of Indian and Northern Affairs Canada mandates that all fuel storage tanks on Crown Land be recorded, when an individual applies for a land use permit or surface lease. Please note that there are numerous records in the database where the "Commencement Date" is previous to 1997. However, since INAC only began registering tank locations in 1997, any tanks installed previous to that may or may not be in the database, due to lack of regulations. Note the following descriptions: Commencement Date is the original file date, Fuel Application Date is the date an application was submitted for a tank, and the Fuel Confirmation Date is the date the department accepted the application and confirmed the information submitted. The Department of Indian and Northern Affairs cites the coronavirus pandemic as an explanation for delays in releasing data pursuant to requests.

**Government Publication Date:** Oct 1997-Feb 2019

### **Compressed Natural Gas Stations:**

Private

[CNG](#)

Canada has a network of public access compressed natural gas (CNG) refuelling stations. These stations dispense natural gas in compressed form at 3,000 pounds per square inch (psi), the pressure which is allowed within the current Canadian codes and standards. The majority of natural gas refuelling is located at existing retail gasoline that have a separate refuelling island for natural gas. This list of stations is made available by the Canadian Natural Gas Vehicle Alliance.

**Government Publication Date:** Dec 2012 - Jun 2020

### **ERIS Historical Searches:**

Private

[EHS](#)

ERIS has compiled a database of all environmental risk reports completed since March 1999. Available fields for this database include: site location, date of report, type of report, and search radius. As per all other databases, the ERIS database can be referenced on both the map and "Statistical Profile" page.

**Government Publication Date:** 1999-Jul 31, 2020

### **Federal Convictions:**

Federal

[FCON](#)

Environment Canada maintains a database referred to as the "Environmental Registry" that details prosecutions under the Canadian Environmental Protection Act (CEPA) and the Fisheries Act (FA). Information is provided on the company name, location, charge date, offence and penalty.

**Government Publication Date:** 1988-Jun 2007\*

### **Contaminated Sites on Federal Land:**

Federal

[FCS](#)

The Federal Contaminated Sites Inventory includes information on known federal contaminated sites under the custodianship of departments, agencies and consolidated Crown corporations as well as those that are being or have been investigated to determine whether they have contamination arising from past use that could pose a risk to human health or the environment. The inventory also includes non-federal contaminated sites for which the Government of Canada has accepted some or all financial responsibility. It does not include sites where contamination has been caused by, and which are under the control of, enterprise Crown corporations, private individuals, firms or other levels of government. Includes fire training sites and sites at which Per- and Polyfluoroalkyl Substances (PFAS) are a concern.

**Government Publication Date:** Jun 2000-Apr 2020

**Federal Identification Registry for Storage Tank Systems (FIRSTS):**

Federal

FRST

A list of federally regulated Storage tanks from the Federal Identification Registry for Storage Tank Systems (FIRSTS). FIRSTS is Environment and Climate Change Canada's database of storage tank systems subject to the Storage Tank for Petroleum Products and Allied Petroleum Products Regulations. The main objective of the Regulations is to prevent soil and groundwater contamination from storage tank systems located on federal and aboriginal lands. Storage tank systems that do not have a valid identification number displayed in a readily visible location on or near the storage tank system may be refused product delivery.

**Government Publication Date: May 31, 2018**

**Greenhouse Gas Emissions from Large Facilities:**

Federal

GHG

List of greenhouse gas emissions from large facilities made available by Environment Canada. Greenhouse gas emissions in kilotonnes of carbon dioxide equivalents (kt CO<sub>2</sub> eq).

**Government Publication Date: 2013-Dec 2017**

**Indian & Northern Affairs Fuel Tanks:**

Federal

IAFT

The Department of Indian & Northern Affairs Canada (INAC) maintains an inventory of aboveground & underground fuel storage tanks located on both federal and crown land. Our inventory provides information on the reserve name, location, facility type, site/facility name, tank type, material & ID number, tank contents & capacity, and date of tank installation.

**Government Publication Date: 1950-Aug 2003\***

**Canadian Mine Locations:**

Private

MINE

This information is collected from the Canadian & American Mines Handbook. The Mines database is a national database that provides over 290 listings on mines (listed as public companies) dealing primarily with precious metals and hard rocks. Listed are mines that are currently in operation, closed, suspended, or are still being developed (advanced projects). Their locations are provided as geographic coordinates (x, y and/or longitude, latitude). As of 2002, data pertaining to Canadian smelters and refineries has been appended to this database.

**Government Publication Date: 1998-2009\***

**Mineral Occurrences:**

Territorial

MNR

The C.S. Lord Northern Geoscience Centre maintains a database of mineral showings (commodity occurrences) for both the Northwest Territories and Nunavut. The database provides Showing ID, latitude, longitude, Showing Name, commodity type, current development stage, and general comments on lithology, mineralization and geological settings.

**Government Publication Date: 1900-Sep 2018**

**National Analysis of Trends in Emergencies System (NATES):**

Federal

NATE

In 1974 Environment Canada established the National Analysis of Trends in Emergencies System (NATES) database, for the voluntary reporting of significant spill incidents. The data was to be used to assist in directing the work of the emergencies program. NATES ran from 1974 to 1994. Extensive information is available within this database including company names, place where the spill occurred, date of spill, cause, reason and source of spill, damage incurred, and amount, concentration, and volume of materials released.

**Government Publication Date: 1974-1994\***

**National Defense & Canadian Forces Spills:**

Federal

NDSP

The Department of National Defense and the Canadian Forces maintains an inventory of spills to land and water. All spill sites have been classified under the "Transportation of Dangerous Goods Act - 1992". Our inventory provides information on the facility name, location, spill ID #, spill date, type of spill, as well as the quantity of substance spilled & recovered.

**Government Publication Date: Mar 1999-Apr 2018**

**National Defence & Canadian Forces Waste Disposal Sites:**

Federal

NDWD

The Department of National Defence and the Canadian Forces maintains an inventory of waste disposal sites located on DND lands. Where available, our inventory provides information on the base name, location, type of waste received, area of site, depth of site, year site opened/closed and status.

**Government Publication Date: 2001-Apr 2007\***

**National Energy Board Pipeline Incidents:**

Federal

NEBI

Locations of pipeline incidents from 2008 to present, made available by the Canada Energy Regulator (CER) - previously the National Energy Board (NEB). Includes incidents reported under the Onshore Pipeline Regulations and the Processing Plant Regulations related to pipelines under federal jurisdiction, does not include incident data related to pipelines under provincial or territorial jurisdiction.

**Government Publication Date: 2008-Mar 31, 2020**

**National Energy Board Wells:**

Federal

NEBT

The NEBW database contains information on onshore & offshore oil and gas wells that are outside provincial jurisdiction(s) and are thereby regulated by the National Energy Board. Data is provided regarding the operator, well name, well ID No./UWI, status, classification, well depth, spud and release date.

**Government Publication Date: 1920-Feb 2003\***

**National Environmental Emergencies System (NEES):**

Federal

[NEES](#)

In 2000, the Emergencies program implemented NEES, a reporting system for spills of hazardous substances. For the most part, this system only captured data from the Atlantic Provinces, some from Quebec and Ontario and a portion from British Columbia. Data for Alberta, Saskatchewan, Manitoba and the Territories was not captured. However, NEES is also a repository for previous Environment Canada spill datasets. NEES is composed of the historic datasets ' or Trends ' which dates from approximately 1974 to present. NEES Trends is a compilation of historic databases, which were merged and includes data from NATES (National Analysis of Trends in Emergencies System), ARTS (Atlantic Regional Trends System), and NEES. In 2001, the Emergencies Program determined that variations in reporting regimes and requirements between federal and provincial agencies made national spill reporting and trend analysis difficult to achieve. As a consequence, the department has focused efforts on capturing data on spills of substances which fall under its legislative authority only (CEPA and FA). As such, the NEES database will be decommissioned in December 2004.

**Government Publication Date: 1974-2003\*****National PCB Inventory:**

Federal

[NPCB](#)

Environment Canada's National PCB inventory includes information on in-use PCB containing equipment in Canada including federal, provincial and private facilities. Federal out-of-service PCB containing equipment and PCB waste owned by the federal government or by federally regulated industries such as airlines, railway companies, broadcasting companies, telephone and telecommunications companies, pipeline companies, etc. are also listed. Although it is not Environment Canada's mandate to collect data on non-federal PCB waste, the National PCB inventory includes some information on provincial and private PCB waste and storage sites. Some addresses provided may be Head Office addresses and are not necessarily the location of where the waste is being used or stored.

**Government Publication Date: 1988-2008\*****National Pollutant Release Inventory:**

Federal

[NPRI](#)

Environment Canada has defined the National Pollutant Release Inventory ("NPRI") as a federal government initiative designed to collect comprehensive national data regarding releases to air, water, or land, and waste transfers for recycling for more than 300 listed substances.

**Government Publication Date: 1993-May 2017****Oil and Gas Wells:**

Private

[OGWE](#)

The Nickle's Energy Group (publisher of the Daily Oil Bulletin) collects information on drilling activity including operator and well statistics. The well information database includes name, location, class, status and depth. The main Nickle's database is updated on a daily basis, however, this database is updated on a monthly basis. More information is available at [www.nickles.com](http://www.nickles.com).

**Government Publication Date: 1988-May 31, 2020****Retail Fuel Storage Tanks:**

Private

[RST](#)

This database includes an inventory of retail fuel outlet locations (including marinas) that have on their property gasoline, oil, waste oil, natural gas and / or propane storage tanks.

**Government Publication Date: 1999-Jan 31, 2020****Scott's Manufacturing Directory:**

Private

[SCT](#)

Scott's Directories is a data bank containing information on over 200,000 manufacturers across Canada. Even though Scott's listings are voluntary, it is the most comprehensive database of Canadian manufacturers available. Information concerning a company's address, plant size, and main products are included in this database.

**Government Publication Date: 1992-Mar 2011\*****Spills:**

Territorial

[SPL](#)

The Department of Resources, Wildlife & Economic Development (RWED), in Yellowknife, maintains an inventory of spill locations through the "Hazardous Materials Spills Database". Information is provided on the spill number, date, location, spill description, quantity & commodity spilled and all applicable parties involved.

**Government Publication Date: Mar 31, 2020**

# Definitions

**Database Descriptions:** This section provides a detailed explanation for each database including: source, information available, time coverage, and acronyms used. They are listed in alphabetic order.

**Detail Report:** This is the section of the report which provides the most detail for each individual record. Records are summarized by location, starting with the project property followed by records in closest proximity.

**Distance:** The distance value is the distance between plotted points, not necessarily the distance between the sites' boundaries. All values are an approximation.

**Direction:** The direction value is the compass direction of the site in respect to the project property and/or center point of the report.

**Elevation:** The elevation value is taken from the location at which the records for the site address have been plotted. All values are an approximation. Source: Google Elevation API.

**Executive Summary:** This portion of the report is divided into 3 sections:

'Report Summary'- Displays a chart indicating how many records fall on the project property and, within the report search radii.

'Site Report Summary'-Project Property'- This section lists all the records which fall on the project property. For more details, see the 'Detail Report' section.

'Site Report Summary-Surrounding Properties'- This section summarizes all records on adjacent properties, listing them in order of proximity from the project property. For more details, see the 'Detail Report' section.

**Map Key:** The map key number is assigned according to closest proximity from the project property. Map Key numbers always start at #1. The project property will always have a map key of '1' if records are available. If there is a number in brackets beside the main number, this will indicate the number of records on that specific property. If there is no number in brackets, there is only one record for that property.

The symbol and colour used indicates 'elevation': the red inverted triangle will dictate 'ERIS Sites with Lower Elevation', the yellow triangle will dictate 'ERIS Sites with Higher Elevation' and the orange square will dictate 'ERIS Sites with Same Elevation.'

**Unplottables:** These are records that could not be mapped due to various reasons, including limited geographic information. These records may or may not be in your study area, and are included as reference.

## Appendix H Site Photographs





**Photo 1:** On southwest boundary of Site facing northeast.



**Photo 2:** On southeast corner of Site facing northwest.



**Photo 3:** On northeast boundary of Site facing southwest.



**Photo 4:** Away from NW





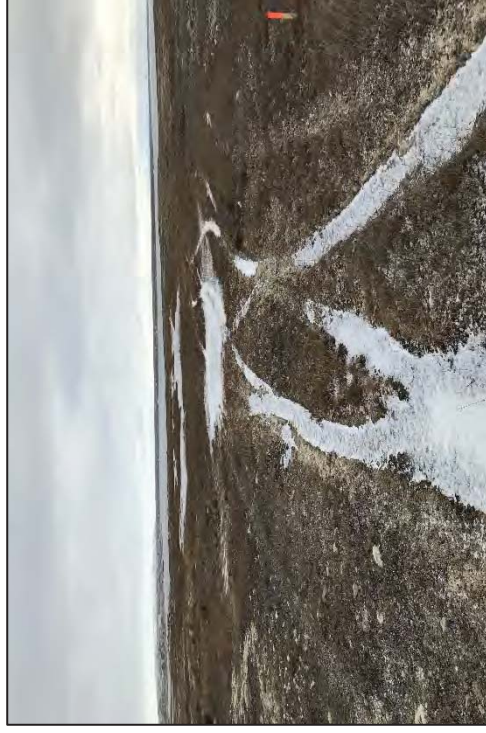
**Photo 5:** Away from southeast boundary of Site facing east. Tank farm visible in the background.



**Photo 6:** On southeast corner facing west. Airport visible in the background.



**Photo 7:** Southwest boundary of Site facing northwest. Hamlet visible in the background.



**Photo 8:** Southwest boundary of Site facing north. Hamlet visible in the background.



## **Appendix I    Site Notes/Interview**

## Environmental Site Assessment – Phase I

### Description of Site

- Inspect the site thoroughly, and describe what you see

Flat. Some boulders in the area. Stagnant surface water. Frozen. No tire marks. Golf Course. Some vegetation sparsely distributed along the area of the site.

- Any building(s) present on site? Vehicles? Mechanical Equipment? Snowmobiles? Sheds? Anything. If there is any equipment, describe the condition and inspect if there are any stains around the equipment.

No buildings, equipment or sheds in the area. There was a flag for the golf Course hole with some sandy soil around the hole.

- Anything else being stored on-site, if so, what? Describe. Take photographs.

No storage.

Any above storage tanks? If so, describe and indicate size of tank and contents. Any staining around ? If so, describe and take photographs.

No above storage tanks anywhere close to the site

- Any pipelines? Wells?

Closest pipeline goes from the storage tank from the south east direction towards the north east.

- Any strong odours ?

No odours noted. windy on all the days I drilled.

- Note site drainage, ditches, etc.

No drainage found. Frozen surface water around BH20-02

- Any storage, disposal and generation of hazardous materials? If so, what? Take photographs.

No hazardous materials in the area.

- Are there any discoloration or staining that could be from contamination anywhere? If so, take GPS coordinates to delineate and take photographs.

None.

- What buildings, objects, roads are immediately surrounding the site boundaries? Please describe what you see for each direction (N, NW, NE, SE, SW, E, W) and take photographs.

Road on the south side of the site.

- What are these neighboring buildings? What activities take place there? Any potential contamination from these surrounding sites?

Only gas station on south east side of Option 5.

### Topography and Physical Characteristics:

- Is the terrain gently sloping? If yes, in what direction? Is it flat?

Flat. Some boulders. Sloping on North East side and east side of BH20-08

- Is there surface water? Frozen? Take photographs.

Surface water around BH20-02. Frozen.

- Is there any vegetation? what kind? herbaceous? Shrubs? Is it stressed? Take photographs.

No stressed vegetation. Grassy vegetation.

### Interviews

- Note down any names of people you talk to regarding the site. Note the questions and answers.

- Ask interviewees what the history of the site.

1. Who is the current landowner, occupant?

Hamlet – As per Development Officer @ Hamlet. Previously belonged to Airport but was transferred to Hamlet.

2. Have there been any buildings here in the past?

No buildings – As per DO.

3. Has anything been stored here in the past?

No.

4. Has the site been used for anything in the past? If so, what?

Used only for golf course.

5. Knowledge of spills, any environmental incidents or concerns?

Closest spill is on the south east side of the site. Coordinates- 69.104269, -105.098890.

Caused and clean up by the Canadian Defence forces -69.116346, -105.119729

Spill done 2017 & 2018. Cones were still placed around the spill site.

Land Officer Cambridge Bay Contact – Kevin Taylor – ktaylor@cambridgebay.ca

QEC Supervisor – Anisre – 867 983 4880

QEC Assistant Operator – Jeff – 867 983 5492

## Katheryne Budd

---

**From:** Kevin Taylor <ktaylor@cambridgebay.ca>  
**Sent:** Thursday, December 3, 2020 6:25 PM  
**To:** Katheryne Budd  
**Cc:** Ekikere Elijah  
**Subject:** RE: Land title request

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Plan number #3120  
QUAD 77D/2  
NWS site  
DnD Reserve (Department of National Defence)

Kevin Taylor  
Development Officer  
Hamlet of Cambridge Bay  
Ph: 867-983-4653  
Fx : 867-983-2193  
[ktaylor@cambridgebay.ca](mailto:ktaylor@cambridgebay.ca)

---

From: Katheryne Budd [mailto:Katheryne.Budd@englobecorp.com]  
Sent: December-03-20 4:10 PM  
To: Kevin Taylor  
Cc: Ekikere Elijah  
Subject: Land title request

Hello,

I am presently working on a Ph I environmental site assessment and would like to Obtain a copy of the land title for lot 1005 (airport land) however the corporate registries department has request I supply them with the plan number associate with the lot.

Can you advise me of what Plan # references the lot 1005?

Best,

Katheryne



**Katheryne Budd, B.A. Geog.**

Project Manager

Environmental engineering, Northern & Western Canada

1200, S-Martin Blvd West, Suite 400, Laval (quebec) H7S 2E4

514.281.5151 ext. 122704 Cell. 514.260.8208

[englobecorp.com](http://englobecorp.com)



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## Katheryne Budd

---

**From:** Ohokanoak, Sophia <SOhokanoak@GOV.NU.CA>  
**Sent:** Thursday, January 7, 2021 3:48 PM  
**To:** Ekikere Elijah  
**Subject:** RE: request for information for Phase I ESA re Cambridge Bay QEC Power Plant  
**Attachments:** 20180927\_Cambridge Bay Hamlet Office Meeting\_DraftROD.pdf; Attachment#1(DEW Line CAM-M As-builts).pdf; Attachment#2(Landfill Integrity Concerns Identified Regarding the DND DEW Line South Shore and Airstrip Landfills).pdf; Attachment#3(Excerpts From CAM-M 2015 Final Monitoring Report (Englobe, 2016)).pdf; Attachment#4(Figure Overlay of the South Shore Landfill and the Hamlet of Cambridge Bay Fuel Tank Farm).pdf; Attachment#5(Draft Land Transfer Document Request Government of Nunavut).pdf; 20-40-GN-LOTS 1 TO 4, BLOCK 67 AND ROADS R51 AND R52-SIGNED.pdf

**Caution** Do not click on links or open attachments you do not trust.

**Attention** Assurez-vous que le contenu soit de confiance avant d'ouvrir une pièce jointe ou un hyperlien.

Good Day Ekikere Elijah,

Please find attached all the information that my department has about this area.

I believe there is a mistake in your email as you referenced Lot 1005 and 1006, however it appears from the image that you are actually interested in Lot 1017 Plan 4573.

I will also note that I am currently working on registering a new survey plan for this area and so the lot numbers will change once I get that registered. I have attached a copy of the new survey for your information. With this survey plan, Lot 1017 Plan 4573 will become Lot 3 Block 67 Plan 4781.

Regardless, I have attached the information for you to review. If you are looking for anything else, you would have to contact Airports Division as they had control of this area for many years.

Please do not hesitate to contact me if there is anything else I can help you with.

Kind Regards,

Sophia Ohokanoak CPT  
Kitikmeot Land Administrator  
Community and Government Services  
Government of Nunavut  
Bag 200 | Cambridge Bay | NU | X0B 0C0

Phone: (867) 983-4020  
Email: [sohokanoak@gov.nu.ca](mailto:sohokanoak@gov.nu.ca)

PLEASE NOTE: I will be in the office until 4pm every work day as I have small children and the daycare is running on reduced hours. From 4pm-5pm I will be working from home.

---

**From:** Ekikere Elijah <[elijah@dstgroup.com](mailto:eelijah@dstgroup.com)>  
**Sent:** December 23, 2020 8:50 AM

**To:** Ohokanoak, Sophia <SOhokanoak@GOV.NU.CA>

**Subject:** RE: request for information for Phase I ESA re Cambridge Bay QEC Power Plant

**CAUTION:** This email originated from outside of the organization. Do not click links or open attachments unless you recognize the sender and know the content is safe.

Hi Sophia,

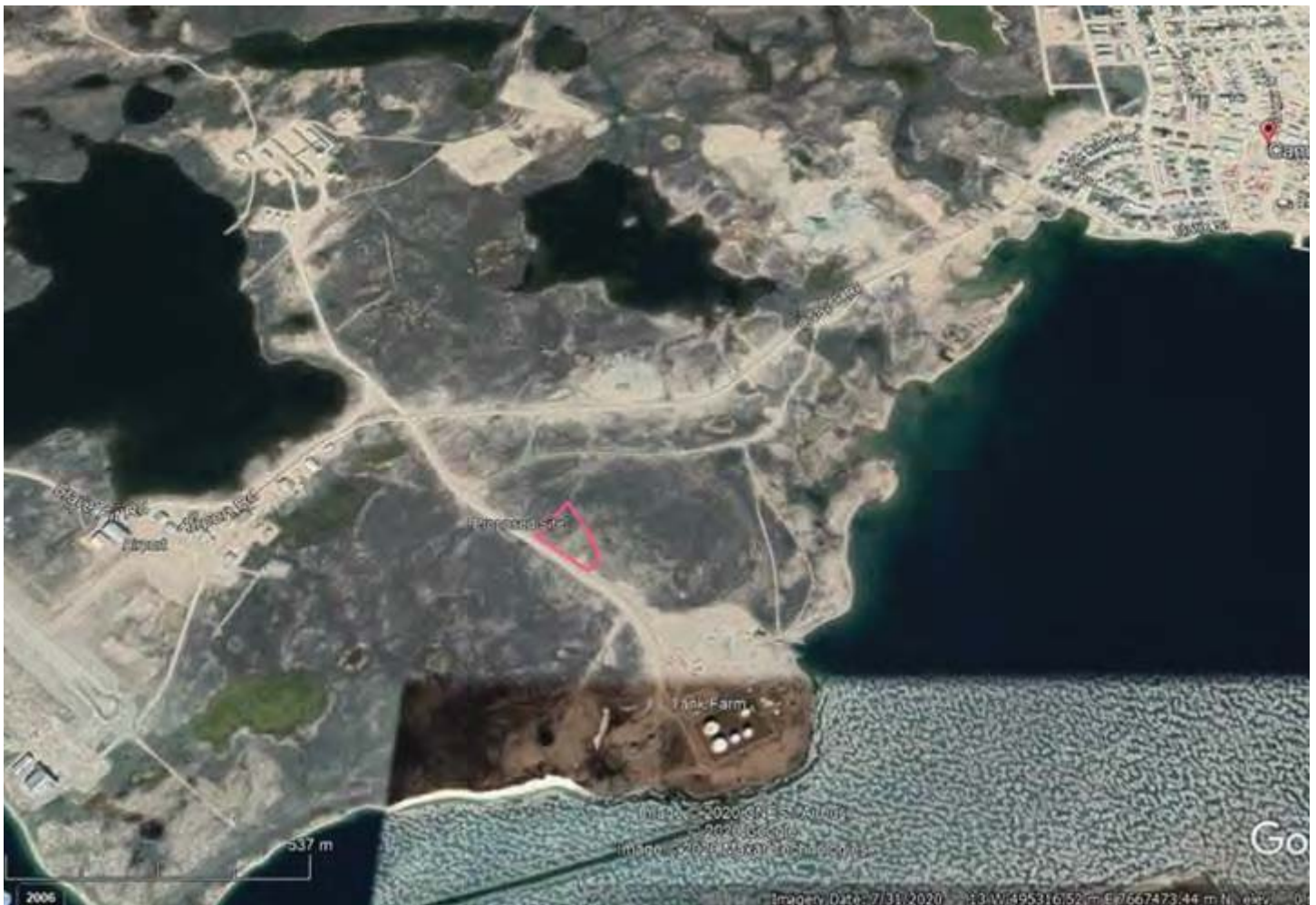
I am currently working on Phase I & Phase II Site assessment for a proposed lot for the construction of a new power plant in Cambridge Bay. I am following up on the chain of emails below, concerning contaminants and spill information as well as current and historical land use of the proposed power plant site in Cambridge Bay, that your office may have.

The Legal Registries Division (Land Titles Office), Department of Justice - Government of Nunavut gives the site description as LOT 1005 QUAD 77 D/02 PLAN 3120 and LOT 1006 QUAD 77 D/02 PLAN 3120. See google map capture below.

Any information you may have in the City Directory concerning this lot will be very much helpful in the completion of out Phase I & Phase II studies on the site.

I look forward to hearing from you.

Happy Holidays!!!



**Ekikere Elijah**

Intermediate Hydrogeologist, Project Manager



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**From:** corey dimitruk <[coreydimitruk@gmail.com](mailto:coreydimitruk@gmail.com)>

**Sent:** Friday, November 27, 2020 6:15 PM

**To:** Kevin Taylor <[ktaylor@cambridgebay.ca](mailto:ktaylor@cambridgebay.ca)>

**Cc:** Ekikere Elijah <[elijah@dstgroup.com](mailto:eelijah@dstgroup.com)>; Alix Rive <[alix.rive@englobecorp.com](mailto:alix.rive@englobecorp.com)>; Marla Limousin <[mlimousin@cambridgebay.ca](mailto:mlimousin@cambridgebay.ca)>; Corey Dimitruk <[cdimitruk@gov.nu.ca](mailto:cdimitruk@gov.nu.ca)>; Ohokanoak, Sophia <[SOhokanoak@gov.nu.ca](mailto:SOhokanoak@gov.nu.ca)>; [Katheryne.Budd@englobecorp.com](mailto:Katheryne.Budd@englobecorp.com)

**Subject:** Re: request for information for Phase I ESA re Cambridge Bay QEC Power Plant

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**Attention** Assurez-vous que le contenu soit de confiance avant d'ouvrir une pièce jointe ou un hyperlien.

Hi Kevin, I have only met Rick Hunt and Jamie Flaherty.

I see that you have sent this to my personal email and out of convenience I will respond in this reply all to provide direction.

When QECs Engineer Rick Hunt and VP Jamie Flaherty met with the Hamlet council they did have a look around town earlier in the day and Rick did indicate to me that Lee Brenton had given them some info about the area near the tank farm.

Aside from a very informal discussion that day with them, the discussions I had with you and Marla and Sophia at your office days before that visit were explicit that the Hamlet and QEC would work together to choose a site for a new powerplant.

Sophia has access to all lands files and the info that Alix (QECs environmental consultant) is seeking is for you, Department of Environment (they keep records of contamination), CGS Sophia Ohokanoak Regional Lands Administrator, keeps data by parcel and so may have something to offer, and possibly the Kitikmeot Regional Manager Airports division of Economic Development and Transportation if the land in question was at anytime their responsibility.

I have nothing beyond what Sophia would be able to provide you regarding history about spills.

I am due back Dec 22 and am happy to review any info you may have, provide opinion, or to assist the Municipality in some other way.

Thanks....Corey Dimitruk ([cdimitruk@gov.nu.ca](mailto:cdimitruk@gov.nu.ca))  
Kitikmeot Regional Land Use Planner.

On Fri., Nov. 27, 2020, 12:56 p.m. Kevin Taylor, <[ktaylor@cambridgebay.ca](mailto:ktaylor@cambridgebay.ca)> wrote:

Good day,

My apologies as I was out of the office for a bit and reviewing this email now. I noticed you mentioned a Development Officer was on site with you. I would assume his name is Corey Dimitruk. So that's great for Corey to take your needs on and accommodate you with your request. I've Cc'd corey in this email as I'm sure would still continue to help you out with the history, surroundings etc.... It was unfortunate Hamlet Lands department and or Hamlet administration were not on site the day this had occurred. We were not aware of your town visit.

Have a great day and be safe!!

Kevin Taylor

Development Officer

Hamlet of Cambridge Bay

Ph: 867-983-4653

Fx : 867-983-2193

[ktaylor@cambridgebay.ca](mailto:ktaylor@cambridgebay.ca)

---

From: Ekikere Elijah [mailto:[elijah@dstgroup.com](mailto:eelijah@dstgroup.com)]  
Sent: November-20-20 1:3 PM  
To: Iliive Kevin Taylor Marla Limousin  
Cc: Katheryne Budd  
Subject: E: request for information for Phase E

Hi Kevin,

I am following up on the initial request made back in September concerning information on a site located in Cambridge Bay that we are currently performing a Phase I ESA on – see map attached. The site is one of the options for consideration as a location for the proposed power plant, and we are looking for any land title (past and present) information, any historical events or environmental issues such as : infraction notices, complaints, corrective actions, spills, known sources of contamination, permits, certificates of authorization, aboveground storage tanks recorded for the subject property, etc.

While on site visit, Development Officer told our personnel that the site belonged to the Airport until recently when it was handed over to the Hamlet, do you know when the property was handed over to the Hamlet?

Also, has there been any activities there? Is the site being used right now to store anything?

Would it be possible to send a zoning and site plan identifying buildings and authorized uses of the area, that would be greatly appreciated.

Any past and present information on the property and surrounding lands will be very much appreciated.

Thank you.

**Ekikere Elijah**

Intermediate Hydrogeologist, Project Manager

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---

**From:** Alix Rive <[Alix.Rive@englobecorp.com](mailto:Alix.Rive@englobecorp.com)>

**Sent:** Tuesday, September 8, 2020 5:53 PM

**To:** [ktaylor@cambridgebay.ca](mailto:ktaylor@cambridgebay.ca); [mlimousin@cambridgebay.ca](mailto:mlimousin@cambridgebay.ca)

**Subject:** request for information for Phase I ESA

Hello Kevin and Marla,

We are working on a Phase I Environmental Site Assessment on a site located in Cambridge Bay and would like some information about the environmental history of the site. Any land title (past and present) information would be greatly appreciated as well.

The site is shown here attached, with UTM coordinates.

I am looking for any historical events or environmental issues such as : infraction notices, complaints, corrective actions, spills, known sources of contamination, permits, certificates of authorization, aboveground storage tanks recorded for the subject property, etc. Has there been any activities there ? Is the site being used right now to store anything?

Would it be possible to send a zoning and site plan identifying buildings and authorized uses of the area, that would be greatly appreciated.

Thank you very much for your assistance,

Alix

**ALIX RIVE, Biol., M.Sc**

Project Manager

Environmental engineering, Northern Canada

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