



CLIENT: Shell Canada Energy	PROJECT: Camp Farewell 2015 Decommissioning and Soil Assessment Program	
LOCATION: Background	PROJECT NO.: A04012A07	DATE: August 14, 2015
CO-ORDINATES: Not Measured	GROUND ELEVATION: Not Measured	CASING ELEVATION: N/A
HOLE DIA.: 0.15 m	CASING DIA.: N/A	TOTAL DEPTH OF HOLE: 6 m
DRILLING METHOD: Solid Stem Auger	DRILLING CONTRACTOR: CP Drilling	
LOGGED BY: KS	CHECKED BY: NW	Page 1 of 1

DEPTH (m)	SYMBOL	MATERIAL DESCRIPTION	BOREHOLE COMPLETION	COMMENTS	SAMPLE TYPE	OVA (ppm)					EC MEASUREMENTS (dS/m)												
						1000	3000	5000	7000	9000	2	6	10	14	18								
0.00 - 0.15	[Symbol]	TOPSOIL Sandy, black, moist.	[Symbol]		Jar/Bag	0.15																	
0.15 - 0.26	[Symbol]	SAND (SW) Fine-grained, trace gravel (subangular; <10 mm), well graded, brown, moist.	[Symbol]		Jar/Bag	0.26																	
0.26 - 0.10	[Symbol]				0.10																		
0.10 - 0.20	[Symbol]				0.20																		
0.20 - 0.30	[Symbol]				0.30			Jar/Bag	0.30														
0.30 - 0.10	[Symbol]	At 1.3 m: Wet. At 1.5 m: Permafrost.	[Symbol]	Backfilled with bentonite.	[Symbol]	0.10																	
0.10 - 0.18	[Symbol]	0.18					Jar/Bag	0.18															
0.18 - 0.41	[Symbol]	0.41					Jar/Bag	0.41															
0.41 - 0.53	[Symbol]	0.53					Jar/Bag	0.53															
0.53 - 0.40	[Symbol]		[Symbol]		[Symbol]	0.40																	
0.40 - 0.25	[Symbol]	0.25					[Symbol]	0.25															
0.25 - 0.25	[Symbol]	0.25					Bag	0.25															
0.25 - 0.29	[Symbol]	0.29					Jar/Bag	0.29															
0.29 - 6.00	[Symbol]	End of Hole at: 6.00 m	[Symbol]																				

KCBL ENVIRONMENTAL (4) 160109 BOREHOLE LOGS 001 TO 073.GPJ_KCBL CALGARY.GDT 11-4-16



CLIENT: Shell Canada Energy	PROJECT: Camp Farewell 2015 Decommissioning and Soil Assessment Program	
LOCATION: Runway	PROJECT NO.: A04012A07	DATE: August 14, 2015
CO-ORDINATES: Not Measured	GROUND ELEVATION: Not Measured	CASING ELEVATION: N/A
HOLE DIA.: 0.15 m	CASING DIA.: N/A	TOTAL DEPTH OF HOLE: 3 m
DRILLING METHOD: Solid Stem Auger	DRILLING CONTRACTOR: CP Drilling	
LOGGED BY: KS	CHECKED BY: NW	Page 1 of 1

DEPTH (m)	SYMBOL	MATERIAL DESCRIPTION	BOREHOLE COMPLETION	COMMENTS	SAMPLE TYPE	OVA (ppm)					EC MEASUREMENTS (dS/m)									
						1000	3000	5000	7000	9000	2	6	10	14	18					
0.00 - 0.20	[Symbol]	Gravel (Fill) Coarse-grained, (subangular; <25 mm), loose, brown, wet, trace organics.	[Symbol]	Backfilled with bentonite.	[Symbol]	20 0.04														
0.20 - 0.60	[Symbol]	SAND (SP) Fine-grained, poorly-graded, loose, brown, moist.	[Symbol]		Bag/Jar	170 0.11														
0.60 - 1.00	[Symbol]		[Symbol]		Jar	150 0.10														
1.00 - 1.30	[Symbol]	At 1.3 m: Wet.	[Symbol]	Backfilled with drill cuttings.	Bag/Jar	115 0.13														
1.30 - 1.50	[Symbol]	At 1.5 m: Permafrost.	[Symbol]																	
1.50 - 1.90	[Symbol]		[Symbol]			90 0.10														
1.90 - 2.30	[Symbol]		[Symbol]			90 0.13														
2.30 - 2.70	[Symbol]		[Symbol]		Bag/Jar	70 0.30														
2.70 - 3.00	[Symbol]	End of Hole at: 3.00 m	[Symbol]																	
3.00 - 3.40	[Symbol]		[Symbol]																	
3.40 - 3.80	[Symbol]		[Symbol]																	
3.80 - 4.20	[Symbol]		[Symbol]																	
4.20 - 4.60	[Symbol]		[Symbol]																	
4.60 - 5.00	[Symbol]		[Symbol]																	
5.00 - 5.40	[Symbol]		[Symbol]																	
5.40 - 5.80	[Symbol]		[Symbol]																	
5.80 - 6.20	[Symbol]		[Symbol]																	



CLIENT: Shell Canada Energy	PROJECT: Camp Farewell 2015 Decommissioning and Soil Assessment Program	
LOCATION: Runway	PROJECT NO.: A04012A07	DATE: August 14, 2015
CO-ORDINATES: Not Measured	GROUND ELEVATION: Not Measured	CASING ELEVATION: N/A
HOLE DIA.: 0.15 m	CASING DIA.: N/A	TOTAL DEPTH OF HOLE: 1.5 m
DRILLING METHOD: Solid Stem Auger	DRILLING CONTRACTOR: CP Drilling	
LOGGED BY: KS	CHECKED BY: NW	Page 1 of 1

DEPTH (m)	SYMBOL	MATERIAL DESCRIPTION	BOREHOLE COMPLETION	COMMENTS	SAMPLE TYPE	OVA (ppm)					EC MEASUREMENTS (dS/m)									
						1000	3000	5000	7000	9000	2	6	10	14	18					
0.0 - 0.2		Gravel (Fill) Coarse-grained, (subangular; <25 mm), loose, brown, wet, trace organics.		Backfilled with bentonite.		X 500 0.37														
0.2 - 1.0		SAND (SW) Fine-grained, trace gravel (subangular; <75 mm), well-graded, loose, brown, moist.		Backfilled with drill cuttings.	Bag/Jar	X 590 0.21														
1.0 - 1.5					Bag/Jar	X 250 0.13														
1.5 - 2.0		End of Hole at: 1.50 m			Bag/Jar	X 60 0.20														
2.0 - 3.0																				
3.0 - 4.0																				
4.0 - 5.0																				
5.0 - 6.0																				
6.0 - 6.5																				



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HOLE DIA.: 0.15 m	CASING DIA.: N/A	TOTAL DEPTH OF HOLE: 3 m
DRILLING METHOD: Solid Stem Auger	DRILLING CONTRACTOR: CP Drilling	
LOGGED BY: KS	CHECKED BY: NW	Page 1 of 1

DEPTH (m)	SYMBOL	MATERIAL DESCRIPTION	BOREHOLE COMPLETION	COMMENTS	SAMPLE TYPE	OVA (ppm)		EC MEASUREMENTS (dS/m)												
						1000	3000	5000	7000	9000	2	6	10	14	18					
0.0 - 1.0	[Symbol]	Gravel (Fill) Coarse-grained, some topsoil, (Subangular; <25 mm), loose, brown, wet.	[Symbol]			5														
1.0 - 1.5	[Symbol]	TOPSOIL Clay, soft, dark brown, moist, rootlets.	[Symbol]	Backfilled with bentonite.	Bag/Jar	870														
1.5 - 2.0	[Symbol]	SAND (SW) Fine-grained, trace gravel, well-graded, loose, brown, moist.	[Symbol]			60														
2.0 - 2.5	[Symbol]		[Symbol]		Bag/Jar	155														
2.5 - 3.0	[Symbol]		[Symbol]	Backfilled with drill cuttings.	Bag/Jar	25														
3.0 - 3.0		End of Hole at: 3.00 m																		
4.0 - 4.0																				
5.0 - 5.0																				
6.0 - 6.0																				

KCBL ENVIRONMENTAL (4) 160109 BOREHOLE LOGS 001 TO 073.GPJ KCBL CALGARY.GDT 11.4-16



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CO-ORDINATES: Not Measured	GROUND ELEVATION: Not Measured	CASING ELEVATION: N/A
HOLE DIA.: 0.15 m	CASING DIA.: N/A	TOTAL DEPTH OF HOLE: 3 m
DRILLING METHOD: Solid Stem Auger	DRILLING CONTRACTOR: CP Drilling	
LOGGED BY: KS	CHECKED BY: NW	Page 1 of 1

DEPTH (m)	SYMBOL	MATERIAL DESCRIPTION	BOREHOLE COMPLETION	COMMENTS	SAMPLE TYPE	OVA (ppm)		EC MEASUREMENTS (dS/m)											
						1000	3000	5000	7000	9000	2	6	10	14	18				
0.00		Gravel (Fill) Coarse-grained, sandy, (Subangular; <25 mm), loose, brown, moist, trace organics.				X													
0.390						X													
0.210		TOPSOIL Clay, soft, black, moist, rootlets.				X													
0.35				Backfilled with bentonite.	Bag/Ja	X	1850												
0.24					Bag/Ja	X	400												
0.24						X													
0.5		SAND (SW) Fine-grained, trace gravel (subangular; <15 mm), well-graded, loose, brown, wet.					5												
0.0							0												
0.70					Bag/Ja		70												
3.00		End of Hole at: 3.00 m																	

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LOCATION: Runway	PROJECT NO.: A04012A07	DATE: August 14, 2015
CO-ORDINATES: Not Measured	GROUND ELEVATION: Not Measured	CASING ELEVATION: N/A
HOLE DIA.: 0.15 m	CASING DIA.: N/A	TOTAL DEPTH OF HOLE: 2.5 m
DRILLING METHOD: Solid Stem Auger	DRILLING CONTRACTOR: CP Drilling	
LOGGED BY: KS	CHECKED BY: NW	Page 1 of 1

DEPTH (m)	SYMBOL	MATERIAL DESCRIPTION	BOREHOLE COMPLETION	COMMENTS	SAMPLE TYPE	OVA (ppm)		EC MEASUREMENTS (dS/m)											
						1000	3000	5000	7000	9000	2	6	10	14	18				
0.0 - 1.0	[Symbol]	Gravel (Fill) Coarse-grained, sandy, (Subangular; <25 mm), loose, brown, moist, trace organics.	[Symbol]		10 30 360														
1.0 - 1.5	[Symbol]	TOPSOIL Clay, soft, black, moist, rootlets.	[Symbol]	Backfilled with bentonite.	Bag/Jar 0.22	2050													
1.5 - 2.5	[Symbol]	SAND (SW) Fine-grained, trace gravel (subangular; <15 mm), well-graded, loose, brown, wet.	[Symbol]		Bag/Jar 0.21	630													
2.0 - 2.5	[Symbol]		[Symbol]		20														
2.5 - 3.0	[Symbol]	End of Hole at: 2.50 m	[Symbol]		Bag/Jar 30														
3.0 - 4.0	[Symbol]		[Symbol]																
4.0 - 5.0	[Symbol]		[Symbol]																
5.0 - 6.0	[Symbol]		[Symbol]																



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HOLE DIA.: 0.15 m	CASING DIA.: N/A	TOTAL DEPTH OF HOLE: 2.5 m
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DEPTH (m)	SYMBOL	MATERIAL DESCRIPTION	BOREHOLE COMPLETION	COMMENTS	SAMPLE TYPE	OVA (ppm)		EC MEASUREMENTS (dS/m)												
						1000	3000	5000	7000	9000	2	6	10	14	18					
0 - 1.5	Gravel symbol	Gravel (Fill) Coarse-grained, sandy, (Subangular; <25 mm), well-graded, loose, brown, wet, trace organics.	Gravel symbol		Bag/Jar	10														
1.5 - 2.5	Topsoil and Sand symbols	TOPSOIL Peat, clay, soft, black, moist. SAND (SW) Fine-grained, well-graded, loose, brown, wet. At 1.5 m: Permafrost. At 1.6 m: Ice and Sand.	Gravel symbol	Backfilled with drill cuttings.	Bag/Jar	320														
2.5		End of Hole at: 2.5 m																		

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HOLE DIA.: 0.15 m	CASING DIA.: N/A	TOTAL DEPTH OF HOLE: 1.5 m
DRILLING METHOD: Solid Stem Auger	DRILLING CONTRACTOR: CP Drilling	
LOGGED BY: KS	CHECKED BY: NW	Page 1 of 1

DEPTH (m)	SYMBOL	MATERIAL DESCRIPTION	BOREHOLE COMPLETION	COMMENTS	SAMPLE TYPE	OVA (ppm)						>>*
						EC MEASUREMENTS (dS/m)						
						1000	3000	5000	7000	9000		
0		Gravel (Fill) Coarse-grained, sandy, (Subangular; <25 mm), well-graded, loose, brown, moist, trace organics.			Bag/Jar							>>*
0		TOPSOIL Peat, soft, black, moist.			Bag/Jar	0.26						>>*
1		At 1.1 m: Permafrost.		Backfilled with drill cuttings.	Bag/Jar	0.16						>>*
1.1		End of Hole at: 1.50 m			Bag/Jar	0.22						>>*
2												
3												
4												
5												
6												



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HOLE DIA.: 0.15 m	CASING DIA.: N/A	TOTAL DEPTH OF HOLE: 1.5 m
DRILLING METHOD: Solid Stem Auger	DRILLING CONTRACTOR: CP Drilling	
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DEPTH (m)	SYMBOL	MATERIAL DESCRIPTION	BOREHOLE COMPLETION	COMMENTS	SAMPLE TYPE	OVA (ppm)					EC MEASUREMENTS (dS/m)									
						1000	3000	5000	7000	9000	2	6	10	14	18					
0.0 - 0.5		Gravel (Fill) Coarse-grained, sandy, coarse-grained, (Subangular; <25 mm), well-graded, loose, brown, wet, trace organics.				35														
0.5 - 1.0		TOPSOIL Peat, trace gravel, soft, black, wet.				220														
1.0 - 1.2				Backfilled with drill cuttings.	Bag/Jar	300														
1.2 - 1.5		At 1.2 m: Permafrost.			Bag/Jar	240														
1.5 - 1.5		End of Hole at: 1.50 m			Bag	150														
2.0																				
3.0																				
4.0																				
5.0																				
6.0																				

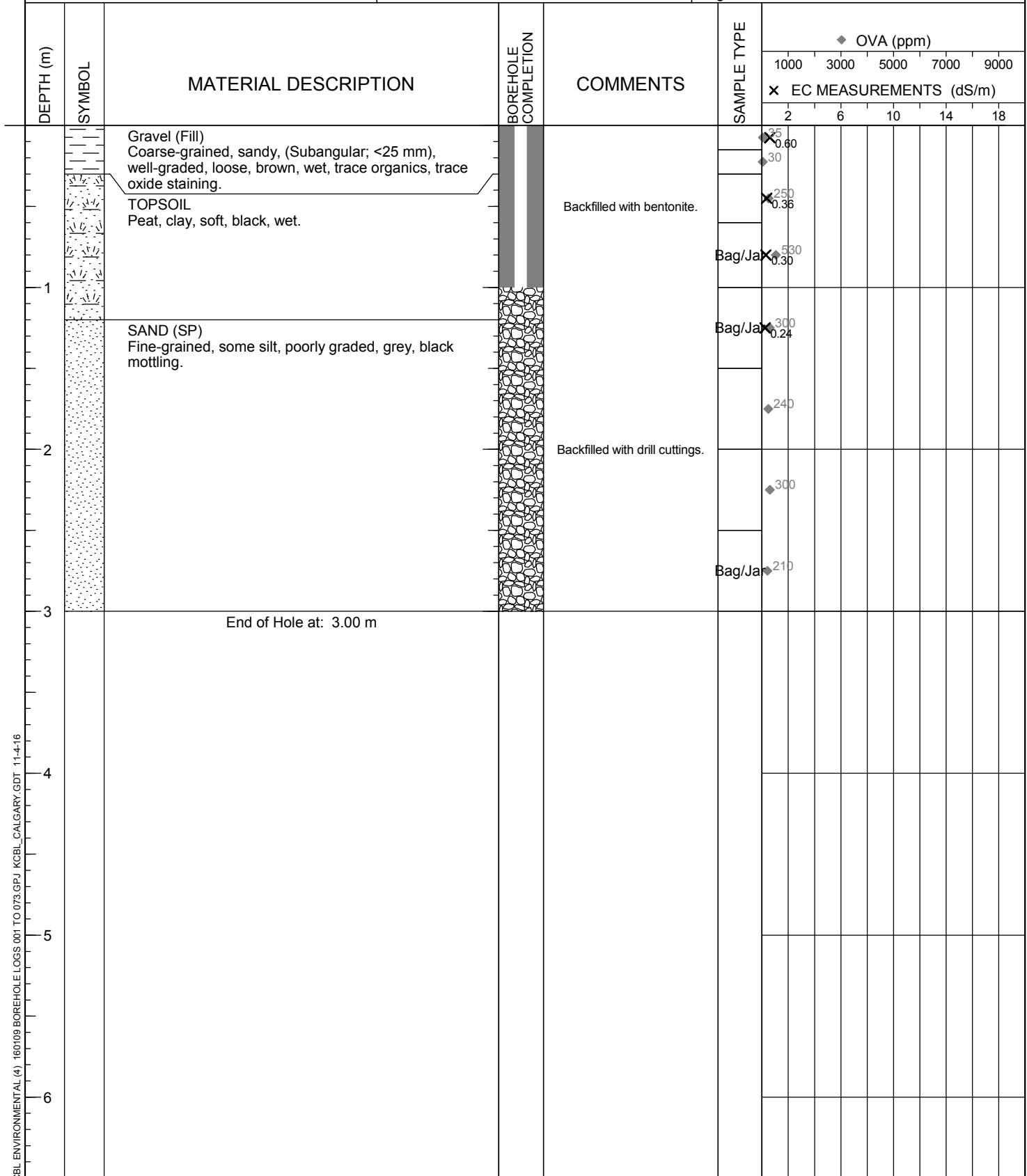


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CO-ORDINATES: Not Measured	GROUND ELEVATION: Not Measured	CASING ELEVATION: N/A
HOLE DIA.: 0.15 m	CASING DIA.: N/A	TOTAL DEPTH OF HOLE: 3 m
DRILLING METHOD: Solid Stem Auger	DRILLING CONTRACTOR: CP Drilling	
LOGGED BY: KS	CHECKED BY: NW	Page 1 of 1

DEPTH (m)	SYMBOL	MATERIAL DESCRIPTION	BOREHOLE COMPLETION	COMMENTS	SAMPLE TYPE	OVA (ppm)		EC MEASUREMENTS (dS/m)											
						1000	3000	5000	7000	9000	2	6	10	14	18				
0.0 - 1.0		Gravel (Fill) Sandy, coarse-grained, (Subangular; <25 mm), well-graded, loose, brown, wet, trace organics.			Bag/Jar	20													
1.0 - 1.5		TOPSOIL Peat, trace gravel, soft, black, wet.																	
1.5 - 2.2		SAND (SW) Fine-grained, some silt, well graded, grey, frozen.																	
2.2 - 3.0		At 2.2 m: Trace coal.		Backfilled with drill cuttings.															
3.0 - 3.0		At 3.0 m: Ice. End of Hole at: 3.00 m			Bag/Jar	110													



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HOLE DIA.: 0.15 m	CASING DIA.: N/A	TOTAL DEPTH OF HOLE: 3 m
DRILLING METHOD: Solid Stem Auger	DRILLING CONTRACTOR: CP Drilling	
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LOCATION: Background	PROJECT NO.: A04012A07	DATE: August 14, 2015
CO-ORDINATES: Not Measured	GROUND ELEVATION: Not Measured	CASING ELEVATION: N/A
HOLE DIA.: 0.15 m	CASING DIA.: N/A	TOTAL DEPTH OF HOLE: 3 m
DRILLING METHOD: Solid Stem Auger	DRILLING CONTRACTOR: CP Drilling	
LOGGED BY: KS	CHECKED BY: NW	Page 1 of 1

DEPTH (m)	SYMBOL	MATERIAL DESCRIPTION	BOREHOLE COMPLETION	COMMENTS	SAMPLE TYPE	OVA (ppm)					EC MEASUREMENTS (dS/m)									
						1000	3000	5000	7000	9000	2	6	10	14	18					
0.0 - 0.3		TOPSOIL Peat, black, wet.		Backfilled with bentonite.	Bag															
0.3 - 1.0		SAND (SP) Fine-grained, (subangular, <10 mm), some silt, poorly graded, grey, trace coal. At 0.3 m: Permafrost.			Bag															
1.0 - 1.5					Bag/Jar															
1.5 - 2.0					Bag/Jar															
2.0 - 2.5					Bag/Jar															
2.5 - 3.0					Bag															
3.0 - 3.5			Bag																	
3.0 - 3.5		End of Hole at: 3.00 m			Bag/Jar															
3.5 - 4.0																				
4.0 - 4.5																				
4.5 - 5.0																				
5.0 - 5.5																				
5.5 - 6.0																				



CLIENT: Shell Canada Energy	PROJECT: Camp Farewell 2015 Decommissioning and Soil Assessment Program	
LOCATION: Burn Pit	PROJECT NO.: A04012A07	DATE: August 15, 2015
CO-ORDINATES: Not Measured	GROUND ELEVATION: Not Measured	CASING ELEVATION: N/A
HOLE DIA.: 0.15 m	CASING DIA.: N/A	TOTAL DEPTH OF HOLE: 4.5 m
DRILLING METHOD: Solid Stem Auger	DRILLING CONTRACTOR: CP Drilling	
LOGGED BY: KS	CHECKED BY: NW	Page 1 of 1

DEPTH (m)	SYMBOL	MATERIAL DESCRIPTION	BOREHOLE COMPLETION	COMMENTS	SAMPLE TYPE	OVA (ppm)					EC MEASUREMENTS (dS/m)						
						1000	3000	5000	7000	9000	2	6	10	14	18		
0.0 - 0.5	[Symbol]	GRAVEL (Fill) Coarse-grained, sandy, well graded (subangular, <25 mm), loose, brown, moist.	[Symbol]		Bag/Jar	65					0.12						
0.5 - 1.0	[Symbol]	TOPSOIL Clay, soft, black, odor.	[Symbol]		Bag/Jar	210					0.86						
1.0 - 2.0	[Symbol]	SAND (SP) Fine-grained, trace gravel (subangular, <10 mm), poorly graded, grey, moist.	[Symbol]			830											
2.0 - 3.0	[Symbol]	At 2.0 m: Permafrost.	[Symbol]	Backfilled with bentonite.		295					0.70						
3.0 - 4.0	[Symbol]		[Symbol]			125											
4.0 - 4.5	[Symbol]		[Symbol]		Bag/Jar	35					10						
						160					0.27						
						130					0.07						
					Bag/Jar	20					0.29						
4.5		End of Hole at: 4.50 m															

KCBL ENVIRONMENTAL (4) 160109 BOREHOLE LOGS 001 TO 073.GPJ KCBL CALGARY.GDT 11.4-16



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LOCATION: Burn Pit	PROJECT NO.: A04012A07	DATE: August 15, 2015
CO-ORDINATES: Not Measured	GROUND ELEVATION: Not Measured	CASING ELEVATION: N/A
HOLE DIA.: 0.15 m	CASING DIA.: N/A	TOTAL DEPTH OF HOLE: 3 m
DRILLING METHOD: Solid Stem Auger	DRILLING CONTRACTOR: CP Drilling	
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						1000	3000	5000	7000	9000	2	6	10	14	18					
0.0 - 0.5		GRAVEL (Fill) Coarse-grained, sandy, well graded (subangular, <25 mm), brown, odor, moist.			Jar	880														
0.5 - 1.0		TOPSOIL Clay, soft, black, odor.			Jar	630														
1.0 - 2.0		SAND (SP) Fine-grained, poorly graded, grey, odor, moist.		Backfilled with drill cuttings.	Jar	990														
2.0 - 3.0		At 2.0 m: Permafrost.				125														
3.0 - 3.0		End of Hole at: 3.00 m				0.18														
3.0 - 4.0						40														
4.0 - 5.0						15														
5.0 - 6.0					Jar	5														

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HOLE DIA.: 0.15 m	CASING DIA.: N/A	TOTAL DEPTH OF HOLE: 1.5 m
DRILLING METHOD: Solid Stem Auger	DRILLING CONTRACTOR: CP Drilling	
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DEPTH (m)	SYMBOL	MATERIAL DESCRIPTION	BOREHOLE COMPLETION	COMMENTS	SAMPLE TYPE	OVA (ppm)					EC MEASUREMENTS (dS/m)									
						1000	3000	5000	7000	9000	2	6	10	14	18					
0.0 - 0.1		GRAVEL (Fill) Coarse-grained, sandy, well graded (subangular, <25 mm), brown, odor, moist, trace organics.			Bag/Jar	15														
0.1 - 0.2		TOPSOIL Clay, peat, soft, black, moist.				110														
0.2 - 1.0		SAND (SW) Fine-grained, well graded, brown, compact, moist.		Backfilled with drill cuttings.	Bag/Jar	45														
1.0 - 1.5		End of Hole at: 1.50 m			Bag/Jar	15														
1.5 - 2.0																				
2.0 - 3.0																				
3.0 - 4.0																				
4.0 - 5.0																				
5.0 - 6.0																				



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						1000	3000	5000	7000	9000	2	6	10	14	18					
0.0 - 0.5		GRAVEL (Fill) Coarse-grained, sandy, well graded (subangular, <25 mm), brown, moist, trace organics.	█	Backfilled with bentonite.	10															
0.5 - 1.0		TOPSOIL Clay, peat, soft, black, moist.			5	10	0.18													
1.0 - 1.5		SAND (SP) Fine-grained, poorly graded, grey, moist. At 1.2 m: Permafrost.			55	0.24														
1.5 - 1.5		End of Hole at: 1.50 m			15	0.60														
2.0 - 2.0																				
3.0 - 3.0																				
4.0 - 4.0																				
5.0 - 5.0																				
6.0 - 6.0																				



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HOLE DIA.: 0.15 m	CASING DIA.: N/A	TOTAL DEPTH OF HOLE: 1.5 m
DRILLING METHOD: Solid Stem Auger	DRILLING CONTRACTOR: CP Drilling	
LOGGED BY: KS	CHECKED BY: NW	Page 1 of 1

DEPTH (m)	SYMBOL	MATERIAL DESCRIPTION	BOREHOLE COMPLETION	COMMENTS	SAMPLE TYPE	OVA (ppm)					EC MEASUREMENTS (dS/m)									
						1000	3000	5000	7000	9000	2	6	10	14	18					
0.0 - 0.5		GRAVEL (Fill) Coarse-grained, sandy, well graded (subangular, <25 mm), loose, brown, moist, trace organics.			Bag/Jar	5														
0.5 - 1.0		TOPSOIL Clay, peat, soft, black, moist.			Bag/Jar	65														
1.0 - 1.5		SAND (SP) Fine-grained, poorly graded, loose, grey, moist.		Backfilled with drill cuttings.	Bag/Jar	185														
1.5 - 1.5		At 1.5 m: Permafrost. End of Hole at: 1.50 m																		
2.0 - 2.0																				
3.0 - 3.0																				
4.0 - 4.0																				
5.0 - 5.0																				
6.0 - 6.0																				

KCBL ENVIRONMENTAL (4) 160109 BOREHOLE LOGS 001 TO 073.GPJ KCBL CALGARY.GDT 11.4-16



CLIENT: Shell Canada Energy	PROJECT: Camp Farewell 2015 Decommissioning and Soil Assessment Program	
LOCATION: Burn Pit	PROJECT NO.: A04012A07	DATE: August 15, 2015
CO-ORDINATES: Not Measured	GROUND ELEVATION: Not Measured	CASING ELEVATION: N/A
HOLE DIA.: 0.15 m	CASING DIA.: N/A	TOTAL DEPTH OF HOLE: 3 m
DRILLING METHOD: Solid Stem Auger	DRILLING CONTRACTOR: CP Drilling	
LOGGED BY: KS	CHECKED BY: NW	Page 1 of 1

DEPTH (m)	SYMBOL	MATERIAL DESCRIPTION	BOREHOLE COMPLETION	COMMENTS	SAMPLE TYPE	OVA (ppm)					EC MEASUREMENTS (dS/m)									
						1000	3000	5000	7000	9000	2	6	10	14	18					
0.0 - 0.5	[Symbol]	GRAVEL (Fill) Coarse-grained, sandy, well graded (subangular, <25 mm), loose, brown, moist.	[Symbol]			15														
0.5 - 1.0	[Symbol]	TOPSOIL Clay, peat, soft, black, moist.	[Symbol]			55														
1.0 - 2.0	[Symbol]	SAND (SP) Fine-grained, poorly graded, compact, grey, moist.	[Symbol]	Backfilled with bentonite.	Bag/Jar	150														
2.0 - 3.0	[Symbol]	At 2.0 m: Permafrost.	[Symbol]			300														
3.0 - 3.0	[Symbol]	End of Hole at: 3.00 m	[Symbol]			45														
3.0 - 4.0	[Symbol]		[Symbol]			80														
4.0 - 5.0	[Symbol]		[Symbol]			10														
5.0 - 6.0	[Symbol]		[Symbol]																	



CLIENT: Shell Canada Energy	PROJECT: Camp Farewell 2015 Decommissioning and Soil Assessment Program	
LOCATION: Burn Pit	PROJECT NO.: A04012A07	DATE: August 15, 2015
CO-ORDINATES: Not Measured	GROUND ELEVATION: Not Measured	CASING ELEVATION: N/A
HOLE DIA.: 0.15 m	CASING DIA.: N/A	TOTAL DEPTH OF HOLE: 3 m
DRILLING METHOD: Solid Stem Auger	DRILLING CONTRACTOR: CP Drilling	
LOGGED BY: KS	CHECKED BY: NW	Page 1 of 1

DEPTH (m)	SYMBOL	MATERIAL DESCRIPTION	BOREHOLE COMPLETION	COMMENTS	SAMPLE TYPE	OVA (ppm)					EC MEASUREMENTS (dS/m)									
						1000	3000	5000	7000	9000	2	6	10	14	18					
0.0 - 0.5		GRAVEL (Fill) Coarse-grained, sandy, well graded (subangular, <25 mm), loose, brown, moist.																		
0.5 - 0.8		TOPSOIL Clay, peat, soft, black, moist.			Bag/Jar	230														
0.8 - 1.0		SAND (SP) Fine-grained, poorly graded, grey, moist.			Bag/Jar	690														
1.0 - 2.0				Backfilled with drill cuttings.																
2.0 - 3.0		At 2.0 m: Permafrost.																		
3.0 - 3.0		End of Hole at: 3.00 m			Bag/Jar	40														
3.0 - 4.0																				
4.0 - 5.0																				
5.0 - 6.0																				

KCBL ENVIRONMENTAL (4) 160109 BOREHOLE LOGS 001 TO 073.GPJ_KCBL CALGARY.GDT 11.4-16

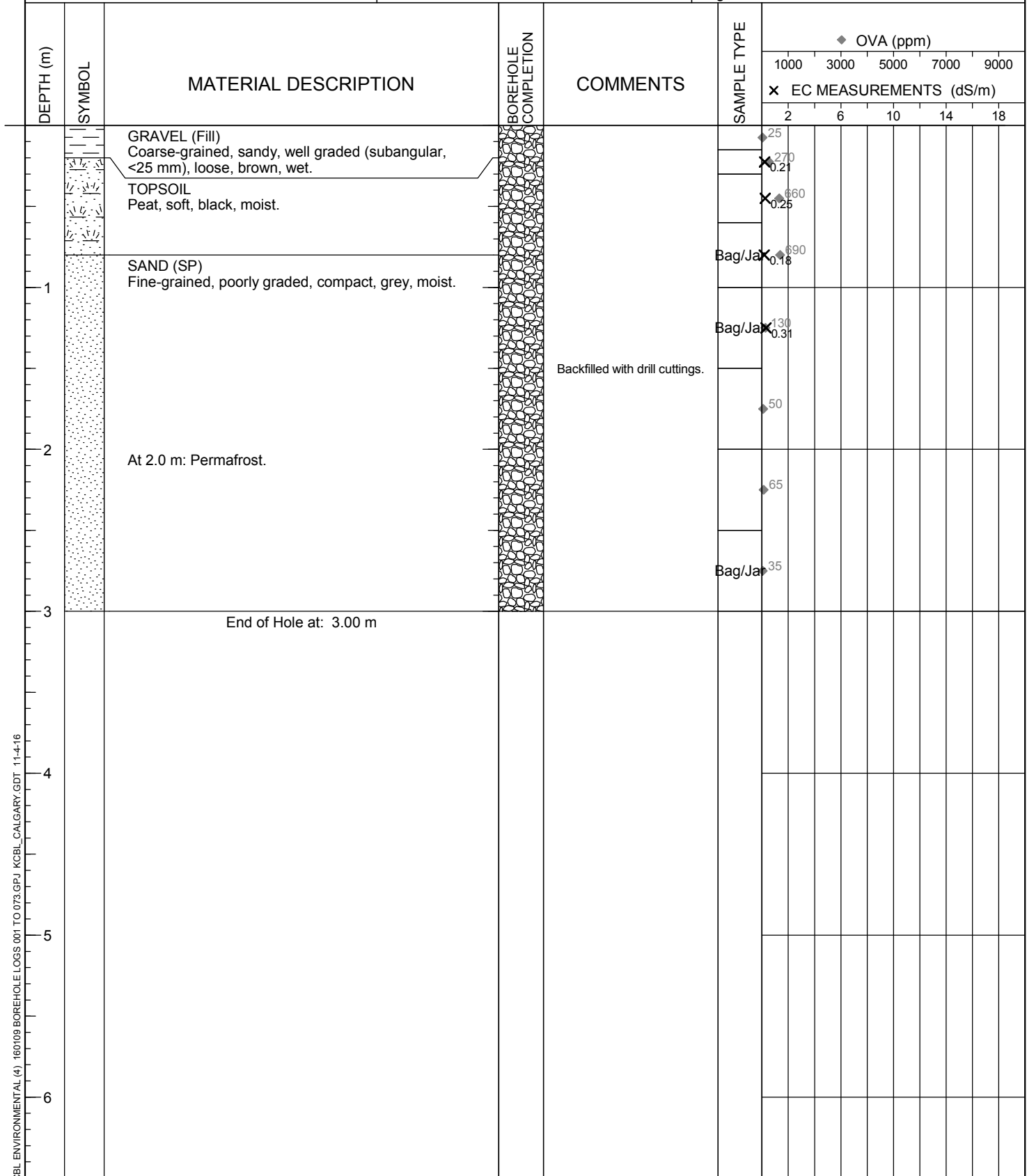


CLIENT: Shell Canada Energy	PROJECT: Camp Farewell 2015 Decommissioning and Soil Assessment Program	
LOCATION: Laydown	PROJECT NO.: A04012A07	DATE: August 15, 2015
CO-ORDINATES: Not Measured	GROUND ELEVATION: Not Measured	CASING ELEVATION: N/A
HOLE DIA.: 0.15 m	CASING DIA.: N/A	TOTAL DEPTH OF HOLE: 1.5 m
DRILLING METHOD: Solid Stem Auger	DRILLING CONTRACTOR: CP Drilling	
LOGGED BY: KS	CHECKED BY: NW	Page 1 of 1

DEPTH (m)	SYMBOL	MATERIAL DESCRIPTION	BOREHOLE COMPLETION	COMMENTS	SAMPLE TYPE	OVA (ppm)					EC MEASUREMENTS (dS/m)									
						1000	3000	5000	7000	9000	2	6	10	14	18					
0.0 - 1.0		GRAVEL (Fill) Coarse-grained, sandy, well graded (subangular, <25 mm), loose, brown, wet.			Bag/Jar	15														
1.0 - 1.2		TOPSOIL Clay, peat, soft, black, moist.		Backfilled with drill cuttings.	Bag/Jar	140														
1.2 - 1.5		SAND (SP) Fine-grained, poorly graded, compact, grey, moist.			Bag/Jar	240														
1.5 - 1.5		End of Hole at: 1.50 m				60														
2.0 - 2.0																				
3.0 - 3.0																				
4.0 - 4.0																				
5.0 - 5.0																				
6.0 - 6.0																				

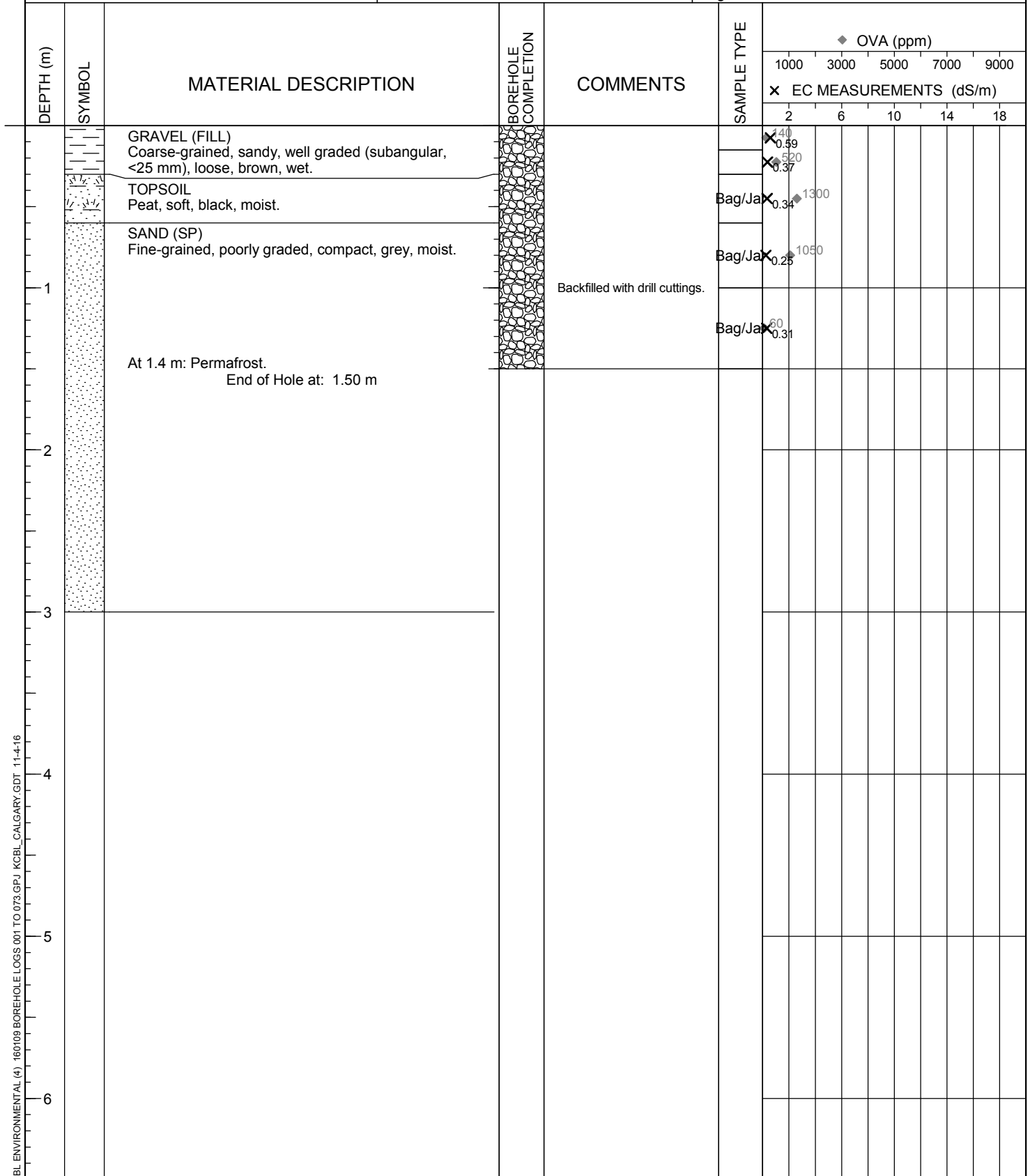


CLIENT: Shell Canada Energy	PROJECT: Camp Farewell 2015 Decommissioning and Soil Assessment Program	
LOCATION: Laydown	PROJECT NO.: A04012A07	DATE: August 15, 2015
CO-ORDINATES: Not Measured	GROUND ELEVATION: Not Measured	CASING ELEVATION: N/A
HOLE DIA.: 0.15 m	CASING DIA.: N/A	TOTAL DEPTH OF HOLE: 3 m
DRILLING METHOD: Solid Stem Auger	DRILLING CONTRACTOR: CP Drilling	
LOGGED BY: KS	CHECKED BY: NW	Page 1 of 1



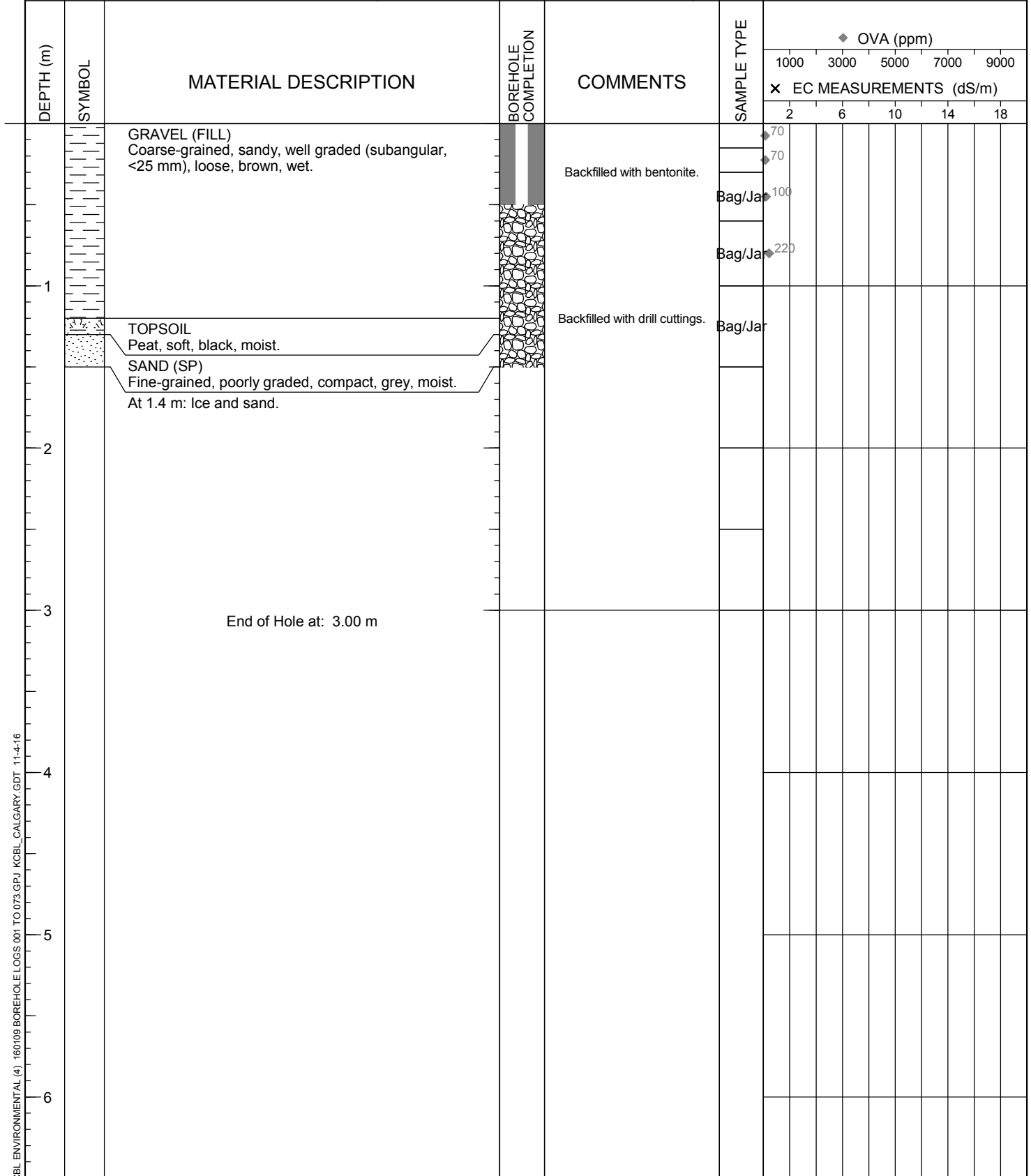


CLIENT: Shell Canada Energy	PROJECT: Camp Farewell 2015 Decommissioning and Soil Assessment Program	
LOCATION: Laydown	PROJECT NO.: A04012A07	DATE: August 15, 2015
CO-ORDINATES: Not Measured	GROUND ELEVATION: Not Measured	CASING ELEVATION: N/A
HOLE DIA.: 0.15 m	CASING DIA.: N/A	TOTAL DEPTH OF HOLE: 1.5 m
DRILLING METHOD: Solid Stem Auger	DRILLING CONTRACTOR: CP Drilling	
LOGGED BY: KS	CHECKED BY: NW	Page 1 of 1





CLIENT: Shell Canada Energy	PROJECT: Camp Farewell 2015 Decommissioning and Soil Assessment Program	
LOCATION: Laydown	PROJECT NO.: A04012A07	DATE: August 15, 2015
CO-ORDINATES: Not Measured	GROUND ELEVATION: Not Measured	CASING ELEVATION: N/A
HOLE DIA.: 0.15 m	CASING DIA.: N/A	TOTAL DEPTH OF HOLE: 3 m
DRILLING METHOD: Solid Stem Auger	DRILLING CONTRACTOR: CP Drilling	
LOGGED BY: KS	CHECKED BY: NW	Page 1 of 1





CLIENT: Shell Canada Energy	PROJECT: Camp Farewell 2015 Decommissioning and Soil Assessment Program	
LOCATION: Laydown	PROJECT NO.: A04012A07	DATE: August 15, 2015
CO-ORDINATES: Not Measured	GROUND ELEVATION: Not Measured	CASING ELEVATION: N/A
HOLE DIA.: 0.15 m	CASING DIA.: N/A	TOTAL DEPTH OF HOLE: 1.5 m
DRILLING METHOD: Solid Stem Auger	DRILLING CONTRACTOR: CP Drilling	
LOGGED BY: KS	CHECKED BY: NW	Page 1 of 1

DEPTH (m)	SYMBOL	MATERIAL DESCRIPTION	BOREHOLE COMPLETION	COMMENTS	SAMPLE TYPE	OVA (ppm)					EC MEASUREMENTS (dS/m)									
						1000	3000	5000	7000	9000	2	6	10	14	18					
0.0 - 0.5	[Symbol]	GRAVEL (FILL) Coarse-grained, sandy, well graded (subangular, <25 mm), loose, brown, wet.	[Symbol]		Bag/Jar	40														
0.5 - 0.8	[Symbol]	TOPSOIL Peat, soft, black, moist.	[Symbol]	Backfilled with drill cuttings.	Bag/Jar	45														
0.8 - 1.5	[Symbol]	SAND (SP) Fine-grained, poorly graded, compact, grey, moist.	[Symbol]		Bag/Jar	360														
1.5 - 1.5		End of Hole at: 1.50 m				250														
1.5 - 2.0						0.29														
2.0 - 2.5						40														
2.5 - 3.0						0.20														
3.0 - 3.5																				
3.5 - 4.0																				
4.0 - 4.5																				
4.5 - 5.0																				
5.0 - 5.5																				
5.5 - 6.0																				



CLIENT: Shell Canada Energy	PROJECT: Camp Farewell 2015 Decommissioning and Soil Assessment Program	
LOCATION: Laydown	PROJECT NO.: A04012A07	DATE: August 15, 2015
CO-ORDINATES: Not Measured	GROUND ELEVATION: Not Measured	CASING ELEVATION: N/A
HOLE DIA.: 0.15 m	CASING DIA.: N/A	TOTAL DEPTH OF HOLE: 3 m
DRILLING METHOD: Solid Stem Auger	DRILLING CONTRACTOR: CP Drilling	
LOGGED BY: KS	CHECKED BY: NW	Page 1 of 1

DEPTH (m)	SYMBOL	MATERIAL DESCRIPTION	BOREHOLE COMPLETION	COMMENTS	SAMPLE TYPE	OVA (ppm)					EC MEASUREMENTS (dS/m)									
						1000	3000	5000	7000	9000	2	6	10	14	18					
0.0 - 0.1		GRAVEL (FILL) Coarse-grained, sandy, well graded (subangular, <25 mm), loose, brown, wet.				45														
0.1 - 0.2		TOPSOIL Peat, soft, black, moist.				50														
0.2 - 0.3		SAND (SP) Fine-grained, poorly graded, compact, brown, moist.				170														
0.3 - 0.4					Bag/Ja	560														
0.4 - 0.5						22														
0.5 - 0.6																				
0.6 - 0.7																				
0.7 - 0.8																				
0.8 - 0.9																				
0.9 - 1.0																				
1.0 - 1.1																				
1.1 - 1.2																				
1.2 - 1.3																				
1.3 - 1.4																				
1.4 - 1.5																				
1.5 - 1.6																				
1.6 - 1.7		At 1.6 m: Permafrost, wet.		Backfilled with drill cuttings.																
1.7 - 1.8																				
1.8 - 1.9																				
1.9 - 2.0																				
2.0 - 2.1																				
2.1 - 2.2																				
2.2 - 2.3																				
2.3 - 2.4																				
2.4 - 2.5																				
2.5 - 2.6																				
2.6 - 2.7																				
2.7 - 2.8																				
2.8 - 2.9																				
2.9 - 3.0																				
3.0 - 3.1		End of Hole at: 3.00 m																		
3.1 - 3.2																				
3.2 - 3.3																				
3.3 - 3.4																				
3.4 - 3.5																				
3.5 - 3.6																				
3.6 - 3.7																				
3.7 - 3.8																				
3.8 - 3.9																				
3.9 - 4.0																				
4.0 - 4.1																				
4.1 - 4.2																				
4.2 - 4.3																				
4.3 - 4.4																				
4.4 - 4.5																				
4.5 - 4.6																				
4.6 - 4.7																				
4.7 - 4.8																				
4.8 - 4.9																				
4.9 - 5.0																				
5.0 - 5.1																				
5.1 - 5.2																				
5.2 - 5.3																				
5.3 - 5.4																				
5.4 - 5.5																				
5.5 - 5.6																				
5.6 - 5.7																				
5.7 - 5.8																				
5.8 - 5.9																				
5.9 - 6.0																				



CLIENT: Shell Canada Energy	PROJECT: Camp Farewell 2015 Decommissioning and Soil Assessment Program	
LOCATION: Laydown	PROJECT NO.: A04012A07	DATE: August 15, 2015
CO-ORDINATES: Not Measured	GROUND ELEVATION: Not Measured	CASING ELEVATION: N/A
HOLE DIA.: 0.15 m	CASING DIA.: N/A	TOTAL DEPTH OF HOLE: 1.5 m
DRILLING METHOD: Solid Stem Auger	DRILLING CONTRACTOR: CP Drilling	
LOGGED BY: KS	CHECKED BY: NW	Page 1 of 1

DEPTH (m)	SYMBOL	MATERIAL DESCRIPTION	BOREHOLE COMPLETION	COMMENTS	SAMPLE TYPE	OVA (ppm)					EC MEASUREMENTS (dS/m)									
						1000	3000	5000	7000	9000	2	6	10	14	18					
0.0 - 0.1	[Symbol]	GRAVEL (FILL) Coarse-grained, sandy, well graded (subangular, <25 mm), loose, brown, wet.	[Symbol]	Backfilled with bentonite.		5														
0.1 - 0.2	[Symbol]	TOPSOIL Peat, soft, black, moist.	[Symbol]		Bag/Jar	15														
0.2 - 1.5	[Symbol]	SAND (SP) Fine-grained, poorly graded, compact, grey, moist.	[Symbol]	Backfilled with drill cuttings.	Bag/Jar	180														
1.5 - 1.5		End of Hole at: 1.50 m			Bag/Jar	280														
1.5 - 2.0						30														
2.0 - 3.0						0.31														
3.0 - 4.0						0.29														
4.0 - 5.0						0.38														
5.0 - 6.0						0.17														



CLIENT: Shell Canada Energy	PROJECT: Camp Farewell 2015 Decommissioning and Soil Assessment Program	
LOCATION: Laydown	PROJECT NO.: A04012A07	DATE: August 15, 2015
CO-ORDINATES: Not Measured	GROUND ELEVATION: Not Measured	CASING ELEVATION: N/A
HOLE DIA.: 0.15 m	CASING DIA.: N/A	TOTAL DEPTH OF HOLE: 1.5 m
DRILLING METHOD: Solid Stem Auger	DRILLING CONTRACTOR: CP Drilling	
LOGGED BY: KS	CHECKED BY: NW	Page 1 of 1

DEPTH (m)	SYMBOL	MATERIAL DESCRIPTION	BOREHOLE COMPLETION	COMMENTS	SAMPLE TYPE	OVA (ppm)					EC MEASUREMENTS (dS/m)									
						1000	3000	5000	7000	9000	2	6	10	14	18					
0.0 - 0.1		GRAVEL (FILL) Coarse-grained, sandy, well graded (subangular, <25 mm), loose, brown, wet.			Bag/Jar	25														
0.1 - 0.2		TOPSOIL Peat, soft, black, moist.			Bag/Jar	120														
0.2 - 0.3					Bag/Jar	510														
0.3 - 1.5		SAND (SP) Fine-grained, poorly graded, compact, grey, moist.		Backfilled with bentonite.																
1.5		End of Hole at: 1.50 m																		
1.5 - 2.0																				
2.0 - 3.0																				
3.0 - 4.0																				
4.0 - 5.0																				
5.0 - 6.0																				



CLIENT: Shell Canada Energy	PROJECT: Camp Farewell 2015 Decommissioning and Soil Assessment Program	
LOCATION: Laydown	PROJECT NO.: A04012A07	DATE: August 15, 2015
CO-ORDINATES: Not Measured	GROUND ELEVATION: Not Measured	CASING ELEVATION: N/A
HOLE DIA.: 0.15 m	CASING DIA.: N/A	TOTAL DEPTH OF HOLE: 1.5 m
DRILLING METHOD: Solid Stem Auger	DRILLING CONTRACTOR: CP Drilling	
LOGGED BY: KS	CHECKED BY: NW	Page 1 of 1

DEPTH (m)	SYMBOL	MATERIAL DESCRIPTION	BOREHOLE COMPLETION	COMMENTS	SAMPLE TYPE	OVA (ppm)					EC MEASUREMENTS (dS/m)									
						1000	3000	5000	7000	9000	2	6	10	14	18					
0.0 - 0.5		GRAVEL (FILL) Coarse-grained, sandy, well graded (subangular, <25 mm), loose, brown, wet.			Bag/Jar	20														
0.5 - 0.8		TOPSOIL Peat, soft, black, moist.		Backfilled with bentonite.	Bag/Jar	103														
0.8 - 1.0		SAND (SP) Fine-grained, poorly graded, compact, grey, moist.			Bag/Jar	0.23														
1.0 - 1.5		End of Hole at: 1.50 m																		



CLIENT: Shell Canada Energy	PROJECT: Camp Farewell 2015 Decommissioning and Soil Assessment Program	
LOCATION: Laydown	PROJECT NO.: A04012A07	DATE: August 15, 2015
CO-ORDINATES: Not Measured	GROUND ELEVATION: Not Measured	CASING ELEVATION: N/A
HOLE DIA.: 0.15 m	CASING DIA.: N/A	TOTAL DEPTH OF HOLE: 1.5 m
DRILLING METHOD: Solid Stem Auger	DRILLING CONTRACTOR: CP Drilling	
LOGGED BY: KS	CHECKED BY: NW	Page 1 of 1

DEPTH (m)	SYMBOL	MATERIAL DESCRIPTION	BOREHOLE COMPLETION	COMMENTS	SAMPLE TYPE	OVA (ppm)					EC MEASUREMENTS (dS/m)									
						1000	3000	5000	7000	9000	2	6	10	14	18					
0.0 - 0.1	[Symbol]	GRAVEL (FILL) Coarse-grained, sandy, well graded (subangular, <25 mm), loose, brown, moist.	[Symbol]		Bag/Jar	420														
0.1 - 0.2	[Symbol]	TOPSOIL Peat, soft, black, moist.	[Symbol]		Bag/Jar	310														
0.2 - 1.4	[Symbol]	SAND (SP) Fine-grained, poorly graded, compact, grey, moist.	[Symbol]	Backfilled with drill cuttings.		210														
1.4 - 1.5	[Symbol]	At 1.4 m: Permafrost. End of Hole at: 1.50 m	[Symbol]		Bag/Jar	55														
1.5 - 2.0						0.27														
2.0 - 3.0						0.09														
3.0 - 4.0						0.07														
4.0 - 5.0						0.39														
5.0 - 6.0																				

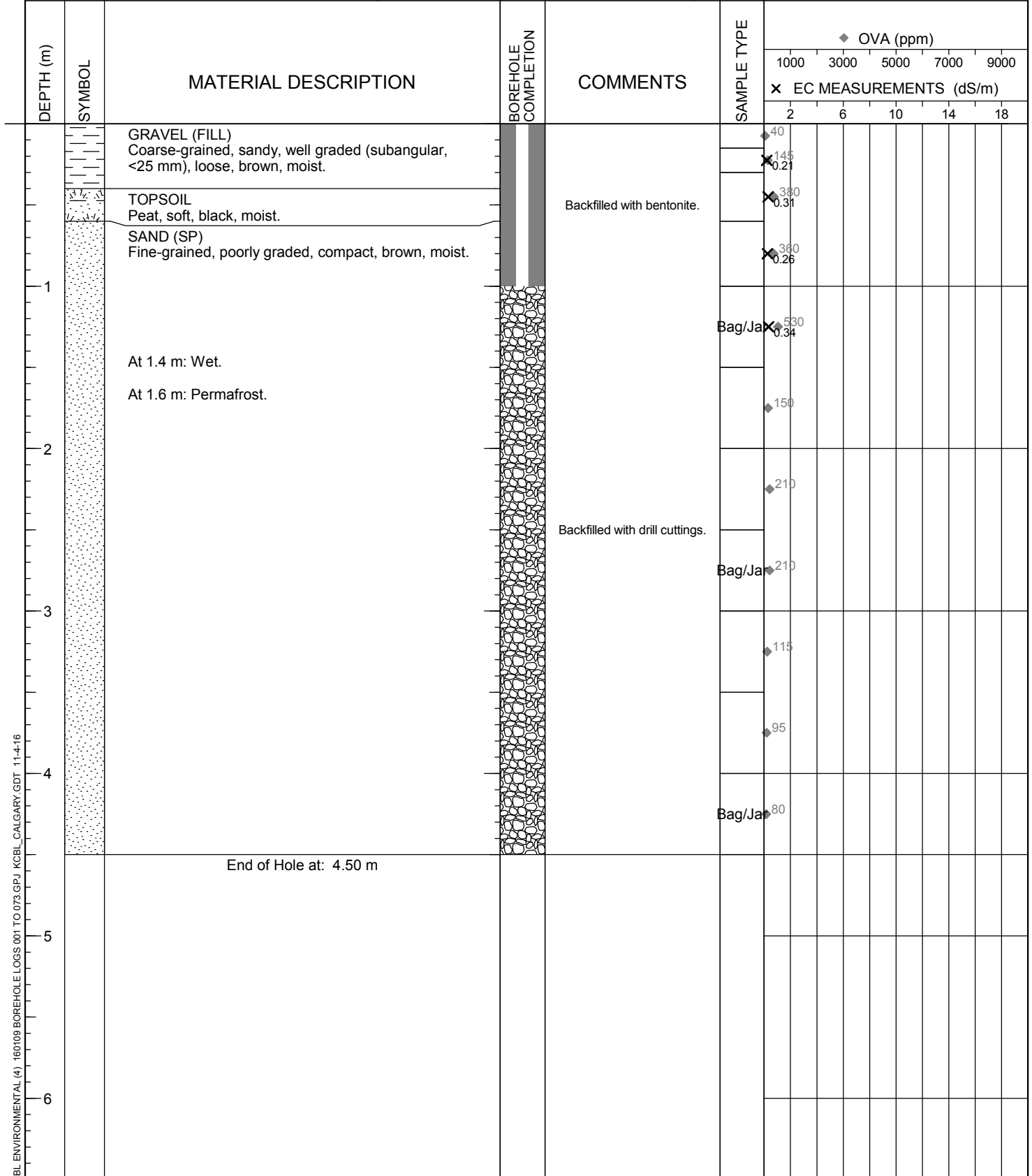


CLIENT: Shell Canada Energy	PROJECT: Camp Farewell 2015 Decommissioning and Soil Assessment Program	
LOCATION: Laydown	PROJECT NO.: A04012A07	DATE: August 15, 2015
CO-ORDINATES: Not Measured	GROUND ELEVATION: Not Measured	CASING ELEVATION: N/A
HOLE DIA.: 0.15 m	CASING DIA.: N/A	TOTAL DEPTH OF HOLE: 1.5 m
DRILLING METHOD: Solid Stem Auger	DRILLING CONTRACTOR: CP Drilling	
LOGGED BY: KS	CHECKED BY: NW	Page 1 of 1

DEPTH (m)	SYMBOL	MATERIAL DESCRIPTION	BOREHOLE COMPLETION	COMMENTS	SAMPLE TYPE	OVA (ppm)					EC MEASUREMENTS (dS/m)										
						1000	3000	5000	7000	9000	2	6	10	14	18						
0.0 - 0.1		GRAVEL (FILL) Coarse-grained, sandy, well graded (subangular, <25 mm), loose, brown, moist.		Backfilled with bentonite.	Bag/Jar	60															
0.1 - 0.2		TOPSOIL Peat, soft, black, moist.			Bag/Jar	145															
0.2 - 1.0		SAND (SP) Fine-grained, poorly graded, compact, brown, moist.						60													
1.0 - 1.5		At 1.3 m: Wet.					Bag/Jar	70													
1.5 - 2.0		End of Hole at: 1.50 m																			
2.0 - 3.0																					
3.0 - 4.0																					
4.0 - 5.0																					
5.0 - 6.0																					



CLIENT: Shell Canada Energy	PROJECT: Camp Farewell 2015 Decommissioning and Soil Assessment Program	
LOCATION: Laydown	PROJECT NO.: A04012A07	DATE: August 15, 2015
CO-ORDINATES: Not Measured	GROUND ELEVATION: Not Measured	CASING ELEVATION: N/A
HOLE DIA.: 0.15 m	CASING DIA.: N/A	TOTAL DEPTH OF HOLE: 4.5 m
DRILLING METHOD: Solid Stem Auger	DRILLING CONTRACTOR: CP Drilling	
LOGGED BY: KS	CHECKED BY: NW	Page 1 of 1





CLIENT: Shell Canada Energy	PROJECT: Camp Farewell 2015 Decommissioning and Soil Assessment Program	
LOCATION: Laydown	PROJECT NO.: A04012A07	DATE: August 16, 2015
CO-ORDINATES: Not Measured	GROUND ELEVATION: Not Measured	CASING ELEVATION: N/A
HOLE DIA.: 0.15 m	CASING DIA.: N/A	TOTAL DEPTH OF HOLE: 3 m
DRILLING METHOD: Solid Stem Auger	DRILLING CONTRACTOR: CP Drilling	
LOGGED BY: KS	CHECKED BY: NW	Page 1 of 1

DEPTH (m)	SYMBOL	MATERIAL DESCRIPTION	BOREHOLE COMPLETION	COMMENTS	SAMPLE TYPE	OVA (ppm)		EC MEASUREMENTS (dS/m)											
						1000	3000	5000	7000	9000	2	6	10	14	18				
0.0 - 0.2	[Symbol]	GRAVEL (FILL) Coarse-grained, sandy, well graded (subangular, <25 mm), loose, brown, moist.	[Symbol]			0													
0.2 - 0.8	[Symbol]	TOPSOIL Peat, soft, black, moist.	[Symbol]		Bag/Jar	60													
0.8 - 1.3	[Symbol]		[Symbol]			660													
1.3 - 1.5	[Symbol]		[Symbol]			410													
1.5 - 3.0	[Symbol]	SAND (SP) Fine-grained, poorly graded, compact, grey, moist. At 1.3 m: Permafrost. At 1.5 m: Wet.	[Symbol]	Backfilled with bentonite.	Bag/Jar	420													
3.0 - 3.0		End of Hole at: 3.00 m	[Symbol]		Bag/Jar	40													



CLIENT: Shell Canada Energy	PROJECT: Camp Farewell 2015 Decommissioning and Soil Assessment Program	
LOCATION: Laydown	PROJECT NO.: A04012A07	DATE: August 16, 2015
CO-ORDINATES: Not Measured	GROUND ELEVATION: Not Measured	CASING ELEVATION: N/A
HOLE DIA.: 0.15 m	CASING DIA.: N/A	TOTAL DEPTH OF HOLE: 1.5 m
DRILLING METHOD: Solid Stem Auger	DRILLING CONTRACTOR: CP Drilling	
LOGGED BY: KS	CHECKED BY: NW	Page 1 of 1

DEPTH (m)	SYMBOL	MATERIAL DESCRIPTION	BOREHOLE COMPLETION	COMMENTS	SAMPLE TYPE	OVA (ppm)					EC MEASUREMENTS (dS/m)									
						1000	3000	5000	7000	9000	2	6	10	14	18					
0.0 - 0.2		GRAVEL (FILL) Coarse-grained, sandy, well graded (subangular, <25 mm), loose, brown, wet.			Bag/Jar	25														
0.2 - 0.5		TOPSOIL Peat, soft, black, moist.			Bag/Jar	455														
0.5 - 0.8					Bag/Jar	450														
0.8 - 1.0				Backfilled with drill cuttings.		20														
1.0 - 1.4		SAND (SP) Fine-grained, poorly graded, compact, grey, moist.			Bag/Jar	70														
1.4 - 1.5		At 1.4 m: Permafrost, wet.																		
1.5 - 1.5		End of Hole at: 1.50 m																		
2.0																				
3.0																				
4.0																				
5.0																				
6.0																				



CLIENT: Shell Canada Energy	PROJECT: Camp Farewell 2015 Decommissioning and Soil Assessment Program	
LOCATION: Laydown	PROJECT NO.: A04012A07	DATE: August 16, 2015
CO-ORDINATES: Not Measured	GROUND ELEVATION: Not Measured	CASING ELEVATION: N/A
HOLE DIA.: 0.15 m	CASING DIA.: N/A	TOTAL DEPTH OF HOLE: 3 m
DRILLING METHOD: Solid Stem Auger	DRILLING CONTRACTOR: CP Drilling	
LOGGED BY: KS	CHECKED BY: NW	Page 1 of 1

DEPTH (m)	SYMBOL	MATERIAL DESCRIPTION	BOREHOLE COMPLETION	COMMENTS	SAMPLE TYPE	OVA (ppm)					EC MEASUREMENTS (dS/m)									
						1000	3000	5000	7000	9000	2	6	10	14	18					
0.0 - 0.5	[Symbol]	GRAVEL (FILL) Coarse-grained, sandy, well graded (subangular, <25 mm), loose, brown, wet.	[Symbol]	Backfilled with bentonite.	[Symbol]	5														
0.5 - 1.0	[Symbol]	TOPSOIL Peat, soft, black, moist.	[Symbol]		Bag/Jar	70														
1.0 - 1.3	[Symbol]	SAND (SP) Fine-grained, poorly graded, compact, grey, moist.	[Symbol]		Bag/Jar	155														
1.3 - 2.0	[Symbol]	At 1.3 m: Permafrost.	[Symbol]	Backfilled with drill cuttings.	[Symbol]	20														
2.0 - 3.0	[Symbol]		[Symbol]		Bag/Jar	25														
3.0 - 3.0	[Symbol]	End of Hole at: 3.00 m	[Symbol]																	



CLIENT: Shell Canada Energy	PROJECT: Camp Farewell 2015 Decommissioning and Soil Assessment Program	
LOCATION: Laydown	PROJECT NO.: A04012A07	DATE: August 16, 2015
CO-ORDINATES: Not Measured	GROUND ELEVATION: Not Measured	CASING ELEVATION: N/A
HOLE DIA.: 0.15 m	CASING DIA.: N/A	TOTAL DEPTH OF HOLE: 1.5 m
DRILLING METHOD: Solid Stem Auger	DRILLING CONTRACTOR: CP Drilling	
LOGGED BY: KS	CHECKED BY: NW	Page 1 of 1

DEPTH (m)	SYMBOL	MATERIAL DESCRIPTION	BOREHOLE COMPLETION	COMMENTS	SAMPLE TYPE	OVA (ppm)					EC MEASUREMENTS (dS/m)									
						1000	3000	5000	7000	9000	2	6	10	14	18					
0.0 - 0.1		GRAVEL (FILL) Coarse-grained, sandy, well graded (subangular, <25 mm), loose, brown, wet.			Bag/Jar	15	0.00													
0.1 - 0.2		TOPSOIL Peat, soft, black, moist.			Bag/Jar	15	0.00													
0.2 - 1.5		SAND (SP) Fine-grained, poorly graded, compact, grey, moist.		Backfilled with drill cuttings.	Bag/Jar	20	0.39													
1.5 - 1.5		End of Hole at: 1.50 m			Bag/Jar	15	0.22													
2.0																				
3.0																				
4.0																				
5.0																				
6.0																				



CLIENT: Shell Canada Energy	PROJECT: Camp Farewell 2015 Decommissioning and Soil Assessment Program	
LOCATION: Laydown	PROJECT NO.: A04012A07	DATE: August 16, 2015
CO-ORDINATES: Not Measured	GROUND ELEVATION: Not Measured	CASING ELEVATION: N/A
HOLE DIA.: 0.15 m	CASING DIA.: N/A	TOTAL DEPTH OF HOLE: 1.5 m
DRILLING METHOD: Solid Stem Auger	DRILLING CONTRACTOR: CP Drilling	
LOGGED BY: KS	CHECKED BY: NW	Page 1 of 1

DEPTH (m)	SYMBOL	MATERIAL DESCRIPTION	BOREHOLE COMPLETION	COMMENTS	SAMPLE TYPE	OVA (ppm)					EC MEASUREMENTS (dS/m)									
						1000	3000	5000	7000	9000	2	6	10	14	18					
0.0 - 0.1	[Symbol]	GRAVEL (FILL) Coarse-grained, sandy, well graded (subangular, <25 mm), loose, brown, wet.	[Symbol]			15														
0.1 - 0.2	[Symbol]	TOPSOIL Peat, soft, black, moist.	[Symbol]	Backfilled with bentonite.	Bag/Jar	65														
0.2 - 0.3	[Symbol]	SAND (SP) Fine-grained, poorly graded, compact, grey, moist.	[Symbol]	Backfilled with drill cuttings.	Bag/Jar	60														
0.3 - 1.5	[Symbol]	End of Hole at: 1.50 m	[Symbol]		Bag/Jar	45														
1.5 - 2.0																				
2.0 - 3.0																				
3.0 - 4.0																				
4.0 - 5.0																				
5.0 - 6.0																				



CLIENT: Shell Canada Energy	PROJECT: Camp Farewell 2015 Decommissioning and Soil Assessment Program	
LOCATION: Laydown	PROJECT NO.: A04012A07	DATE: August 16, 2015
CO-ORDINATES: Not Measured	GROUND ELEVATION: Not Measured	CASING ELEVATION: N/A
HOLE DIA.: 0.15 m	CASING DIA.: N/A	TOTAL DEPTH OF HOLE: 1.5 m
DRILLING METHOD: Solid Stem Auger	DRILLING CONTRACTOR: CP Drilling	
LOGGED BY: KS	CHECKED BY: NW	Page 1 of 1

DEPTH (m)	SYMBOL	MATERIAL DESCRIPTION	BOREHOLE COMPLETION	COMMENTS	SAMPLE TYPE	OVA (ppm)					EC MEASUREMENTS (dS/m)									
						1000	3000	5000	7000	9000	2	6	10	14	18					
0.00 - 0.20	[Symbol]	GRAVEL (FILL) Coarse-grained, sandy, well graded (subangular, <25 mm), loose, brown, wet.	[Symbol]	Backfilled with bentonite.	Bag/Jar	5														
0.20 - 0.80	[Symbol]	TOPSOIL Peat, soft, black, moist.	[Symbol]		Bag/Jar	80														
0.80 - 1.50	[Symbol]	SAND (SP) Fine-grained, poorly graded, compact, grey, moist.	[Symbol]	Backfilled with drill cuttings.	Bag/Jar	20														
1.50 - 1.50		End of Hole at: 1.50 m				70														
2.00																				
3.00																				
4.00																				
5.00																				
6.00																				



CLIENT: Shell Canada Energy	PROJECT: Camp Farewell 2015 Decommissioning and Soil Assessment Program	
LOCATION: Laydown	PROJECT NO.: A04012A07	DATE: August 16, 2015
CO-ORDINATES: Not Measured	GROUND ELEVATION: Not Measured	CASING ELEVATION: N/A
HOLE DIA.: 0.15 m	CASING DIA.: N/A	TOTAL DEPTH OF HOLE: 1.5 m
DRILLING METHOD: Solid Stem Auger	DRILLING CONTRACTOR: CP Drilling	
LOGGED BY: KS	CHECKED BY: NW	Page 1 of 1

DEPTH (m)	SYMBOL	MATERIAL DESCRIPTION	BOREHOLE COMPLETION	COMMENTS	SAMPLE TYPE	OVA (ppm)					EC MEASUREMENTS (dS/m)										
						1000	3000	5000	7000	9000	2	6	10	14	18						
0.00 - 0.30		GRAVEL (FILL) Coarse-grained, sandy, well graded (subangular, <25 mm), loose, brown, wet.	█	Backfilled with bentonite.	Bag/Jar	0															
0.30 - 0.35		TOPSOIL Peat, soft, black, moist.			Bag/Jar	0.14															
0.35 - 0.45		SAND (SP) Fine-grained, poorly graded, compact, grey, moist.			Bag/Jar	0															
0.45 - 1.50		End of Hole at: 1.50 m																			
1.50 - 2.00																					
2.00 - 3.00																					
3.00 - 4.00																					
4.00 - 5.00																					
5.00 - 6.00																					



CLIENT: Shell Canada Energy	PROJECT: Camp Farewell 2015 Decommissioning and Soil Assessment Program	
LOCATION: Laydown	PROJECT NO.: A04012A07	DATE: August 16, 2015
CO-ORDINATES: Not Measured	GROUND ELEVATION: Not Measured	CASING ELEVATION: N/A
HOLE DIA.: 0.15 m	CASING DIA.: N/A	TOTAL DEPTH OF HOLE: 1.5 m
DRILLING METHOD: Solid Stem Auger	DRILLING CONTRACTOR: CP Drilling	
LOGGED BY: KS	CHECKED BY: NW	Page 1 of 1

DEPTH (m)	SYMBOL	MATERIAL DESCRIPTION	BOREHOLE COMPLETION	COMMENTS	SAMPLE TYPE	OVA (ppm)					EC MEASUREMENTS (dS/m)											
						1000	3000	5000	7000	9000	2	6	10	14	18							
0.0		GRAVEL (FILL) Coarse-grained, sandy, well graded (subangular, <25 mm), loose, brown, wet.		Backfilled with bentonite.	Bag/Jar	80																
0.0		TOPSOIL Peat, soft, black, moist.						70														
0.0		SAND (SP) Fine-grained, poorly graded, compact, brown, moist. At 0.7 m: Grey.						5														
0.7					Bag/Jar	15																
0.7					Bag/Jar	35																
1.5		End of Hole at: 1.50 m																				
2.0																						
3.0																						
4.0																						
5.0																						
6.0																						



CLIENT: Shell Canada Energy	PROJECT: Camp Farewell 2015 Decommissioning and Soil Assessment Program	
LOCATION: Laydown	PROJECT NO.: A04012A07	DATE: August 16, 2015
CO-ORDINATES: Not Measured	GROUND ELEVATION: Not Measured	CASING ELEVATION: N/A
HOLE DIA.: 0.15 m	CASING DIA.: N/A	TOTAL DEPTH OF HOLE: 1.5 m
DRILLING METHOD: Solid Stem Auger	DRILLING CONTRACTOR: CP Drilling	
LOGGED BY: KS	CHECKED BY: NW	Page 1 of 1

DEPTH (m)	SYMBOL	MATERIAL DESCRIPTION	BOREHOLE COMPLETION	COMMENTS	SAMPLE TYPE	OVA (ppm)					EC MEASUREMENTS (dS/m)									
						1000	3000	5000	7000	9000	2	6	10	14	18					
0.0 - 0.3	[Symbol]	GRAVEL (FILL) Coarse-grained, sandy, well graded (subangular, <25 mm), loose, brown, wet. At 0.3 m: Sawdust to 0.4 m.	[Shaded]			0														
0.3 - 0.4	[Symbol]	TOPSOIL Peat, soft, black, moist.	[Shaded]		Bag/Jar	55														
0.4 - 1.5	[Symbol]	SAND (SP) Fine-grained, poorly graded, compact, grey, moist.	[Shaded]	Backfilled with bentonite.	Bag/Jar	390														
1.5 - 1.5		End of Hole at: 1.50 m			Bag/Jar	300														
1.5 - 2.0						20														
2.0 - 3.0																				
3.0 - 4.0																				
4.0 - 5.0																				
5.0 - 6.0																				



CLIENT: Shell Canada Energy	PROJECT: Camp Farewell 2015 Decommissioning and Soil Assessment Program	
LOCATION: Laydown	PROJECT NO.: A04012A07	DATE: August 16, 2015
CO-ORDINATES: Not Measured	GROUND ELEVATION: Not Measured	CASING ELEVATION: N/A
HOLE DIA.: 0.15 m	CASING DIA.: N/A	TOTAL DEPTH OF HOLE: 1.5 m
DRILLING METHOD: Solid Stem Auger	DRILLING CONTRACTOR: CP Drilling	
LOGGED BY: KS	CHECKED BY: NW	Page 1 of 1

DEPTH (m)	SYMBOL	MATERIAL DESCRIPTION	BOREHOLE COMPLETION	COMMENTS	SAMPLE TYPE	OVA (ppm)					EC MEASUREMENTS (dS/m)										
						1000	3000	5000	7000	9000	2	6	10	14	18						
0.0 - 0.1		GRAVEL (FILL) Coarse-grained, sandy, well graded (subangular, <25 mm), loose, brown, wet.		Backfilled with bentonite.	Bag/Jar	15															
0.1 - 0.2		TOPSOIL Peat, soft, black, moist.					Bag/Jar	65	0.65												
0.2 - 1.4		SAND (SP) Fine-grained, poorly graded, compact, grey, moist.					Bag/Jar	45	0.35												
1.4 - 1.5		At 1.4 m: Wet.			Bag/Jar	15	0.27														
1.5 - 1.5		End of Hole at: 1.50 m																			
2.0																					
3.0																					
4.0																					
5.0																					
6.0																					



CLIENT: Shell Canada Energy	PROJECT: Camp Farewell 2015 Decommissioning and Soil Assessment Program	
LOCATION: Laydown	PROJECT NO.: A04012A07	DATE: August 16, 2015
CO-ORDINATES: Not Measured	GROUND ELEVATION: Not Measured	CASING ELEVATION: N/A
HOLE DIA.: 0.15 m	CASING DIA.: N/A	TOTAL DEPTH OF HOLE: 3 m
DRILLING METHOD: Solid Stem Auger	DRILLING CONTRACTOR: CP Drilling	
LOGGED BY: KS	CHECKED BY: NW	Page 1 of 1

DEPTH (m)	SYMBOL	MATERIAL DESCRIPTION	BOREHOLE COMPLETION	COMMENTS	SAMPLE TYPE	OVA (ppm)					EC MEASUREMENTS (dS/m)									
						1000	3000	5000	7000	9000	2	6	10	14	18					
0.0 - 0.5	[Symbol]	GRAVEL (FILL) Coarse-grained, sandy, well graded (subangular, <25 mm), loose, brown, wet.	[Symbol]			25														
0.5 - 1.0	[Symbol]	TOPSOIL Peat, soft, black, moist.	[Symbol]			80														
1.0 - 3.0	[Symbol]	SAND (SP) Fine-grained, poorly graded, compact, grey, moist. At 1.4 m: Permafrost, wet. At 1.5 m: Ice and sand to 3.0 m.	[Symbol]	Backfilled with drill cuttings.		95														
3.0 - 3.0		End of Hole at: 3.00 m				135														
3.0 - 4.0						20														
4.0 - 5.0						115														
5.0 - 6.0						70														

KCBL ENVIRONMENTAL (4) 160109 BOREHOLE LOGS 001 TO 073.GPJ KCBL CALGARY.GDT 11.4-16



CLIENT: Shell Canada Energy	PROJECT: Camp Farewell 2015 Decommissioning and Soil Assessment Program	
LOCATION: Laydown	PROJECT NO.: A04012A07	DATE: August 16, 2015
CO-ORDINATES: Not Measured	GROUND ELEVATION: Not Measured	CASING ELEVATION: N/A
HOLE DIA.: 0.15 m	CASING DIA.: N/A	TOTAL DEPTH OF HOLE: 1.5 m
DRILLING METHOD: Solid Stem Auger	DRILLING CONTRACTOR: CP Drilling	
LOGGED BY: KS	CHECKED BY: NW	Page 1 of 1

DEPTH (m)	SYMBOL	MATERIAL DESCRIPTION	BOREHOLE COMPLETION	COMMENTS	SAMPLE TYPE	OVA (ppm)					EC MEASUREMENTS (dS/m)									
						1000	3000	5000	7000	9000	2	6	10	14	18					
0.0 - 0.5		GRAVEL (FILL) Coarse-grained, sandy, well graded (subangular, <25 mm), loose, brown, wet.			Bag/Jar	15														
0.5 - 0.8		TOPSOIL Peat, soft, black, moist.		Backfilled with drill cuttings.	Bag/Jar	45														
0.8 - 1.4		SAND (SP) Fine-grained, poorly graded, compact, grey, moist. At 1.4 m: Wet.			Bag/Jar	10														
1.4 - 1.5		End of Hole at: 1.50 m																		
1.5 - 2.0																				
2.0 - 3.0																				
3.0 - 4.0																				
4.0 - 5.0																				
5.0 - 6.0																				



CLIENT: Shell Canada Energy	PROJECT: Camp Farewell 2015 Decommissioning and Soil Assessment Program	
LOCATION: Laydown	PROJECT NO.: A04012A07	DATE: August 16, 2015
CO-ORDINATES: Not Measured	GROUND ELEVATION: Not Measured	CASING ELEVATION: N/A
HOLE DIA.: 0.15 m	CASING DIA.: N/A	TOTAL DEPTH OF HOLE: 1.5 m
DRILLING METHOD: Solid Stem Auger	DRILLING CONTRACTOR: CP Drilling	
LOGGED BY: KS	CHECKED BY: NW	Page 1 of 1

DEPTH (m)	SYMBOL	MATERIAL DESCRIPTION	BOREHOLE COMPLETION	COMMENTS	SAMPLE TYPE	OVA (ppm)					EC MEASUREMENTS (dS/m)									
						1000	3000	5000	7000	9000	2	6	10	14	18					
0.0 - 0.2		GRAVEL (FILL) Coarse-grained, sandy, well graded (subangular, <25 mm), loose, brown, wet.		Backfilled with bentonite.	Bag/Jar	70														
0.2 - 0.3		TOPSOIL Peat, soft, black, moist.				25														
0.3 - 1.0		SAND (SP) Fine-grained, poorly graded, compact, brown, moist.		Backfilled with drill cuttings.	Bag/Jar	25														
1.0 - 1.5		End of Hole at: 1.50 m			Bag/Jar	25														
1.5 - 2.0																				
2.0 - 3.0																				
3.0 - 4.0																				
4.0 - 5.0																				
5.0 - 6.0																				

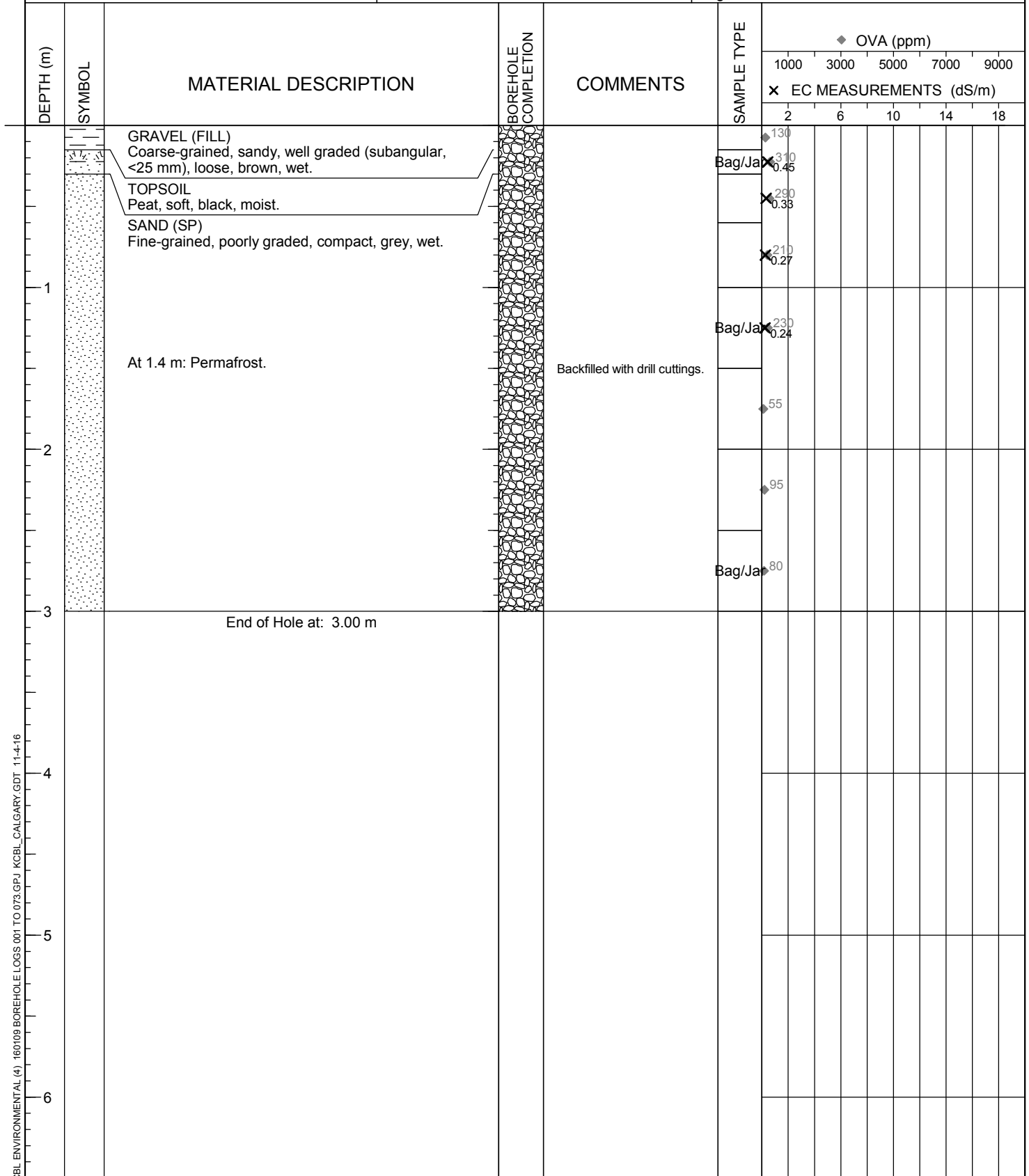


CLIENT: Shell Canada Energy	PROJECT: Camp Farewell 2015 Decommissioning and Soil Assessment Program	
LOCATION: Laydown	PROJECT NO.: A04012A07	DATE: August 16, 2015
CO-ORDINATES: Not Measured	GROUND ELEVATION: Not Measured	CASING ELEVATION: N/A
HOLE DIA.: 0.15 m	CASING DIA.: N/A	TOTAL DEPTH OF HOLE: 1.5 m
DRILLING METHOD: Solid Stem Auger	DRILLING CONTRACTOR: CP Drilling	
LOGGED BY: KS	CHECKED BY: NW	Page 1 of 1

DEPTH (m)	SYMBOL	MATERIAL DESCRIPTION	BOREHOLE COMPLETION	COMMENTS	SAMPLE TYPE	OVA (ppm)					EC MEASUREMENTS (dS/m)									
						1000	3000	5000	7000	9000	2	6	10	14	18					
0.0 - 0.1	[Symbol]	GRAVEL (FILL) Coarse-grained, sandy, well graded (subangular, <25 mm), loose, brown, wet.	[Symbol]		Bag/Jar	60														
0.1 - 0.2	[Symbol]	TOPSOIL Peat, soft, black, moist.	[Symbol]		Bag/Jar	300	0.56													
0.2 - 1.5	[Symbol]	SAND (SP) Fine-grained, poorly graded, compact, grey, wet.	[Symbol]	Backfilled with drill cuttings.	Bag/Jar	65														
1.5 - 1.5		End of Hole at: 1.50 m																		
2.0																				
3.0																				
4.0																				
5.0																				
6.0																				



CLIENT: Shell Canada Energy	PROJECT: Camp Farewell 2015 Decommissioning and Soil Assessment Program	
LOCATION: Laydown	PROJECT NO.: A04012A07	DATE: August 16, 2015
CO-ORDINATES: Not Measured	GROUND ELEVATION: Not Measured	CASING ELEVATION: N/A
HOLE DIA.: 0.15 m	CASING DIA.: N/A	TOTAL DEPTH OF HOLE: 3 m
DRILLING METHOD: Solid Stem Auger	DRILLING CONTRACTOR: CP Drilling	
LOGGED BY: KS	CHECKED BY: NW	Page 1 of 1





CLIENT: Shell Canada Energy	PROJECT: Camp Farewell 2015 Decommissioning and Soil Assessment Program	
LOCATION: Laydown	PROJECT NO.: A04012A07	DATE: August 16, 2015
CO-ORDINATES: Not Measured	GROUND ELEVATION: Not Measured	CASING ELEVATION: N/A
HOLE DIA.: 0.15 m	CASING DIA.: N/A	TOTAL DEPTH OF HOLE: 1.5 m
DRILLING METHOD: Solid Stem Auger	DRILLING CONTRACTOR: CP Drilling	
LOGGED BY: KS	CHECKED BY: NW	Page 1 of 1

DEPTH (m)	SYMBOL	MATERIAL DESCRIPTION	BOREHOLE COMPLETION	COMMENTS	SAMPLE TYPE	OVA (ppm)					EC MEASUREMENTS (dS/m)									
						1000	3000	5000	7000	9000	2	6	10	14	18					
0.00 - 0.05	[Symbol]	GRAVEL (FILL) Coarse-grained, sandy, well graded (subangular, <25 mm), loose, brown, wet.	[Symbol]	Backfilled with bentonite.	Bag/Jar	25														
0.05 - 0.10	[Symbol]	TOPSOIL Peat, soft, black, moist.	[Symbol]			70														
0.10 - 0.15	[Symbol]	SAND (SP) Fine-grained, poorly graded, compact, grey, wet.	[Symbol]	Backfilled with drill cuttings.	Bag/Jar	70														
0.15 - 1.50	[Symbol]	End of Hole at: 1.50 m	[Symbol]		Bag/Jar	80														
1.50 - 2.00						50														
2.00 - 3.00						0.40														
3.00 - 4.00						0.20														
4.00 - 5.00						0.24														
5.00 - 6.00																				

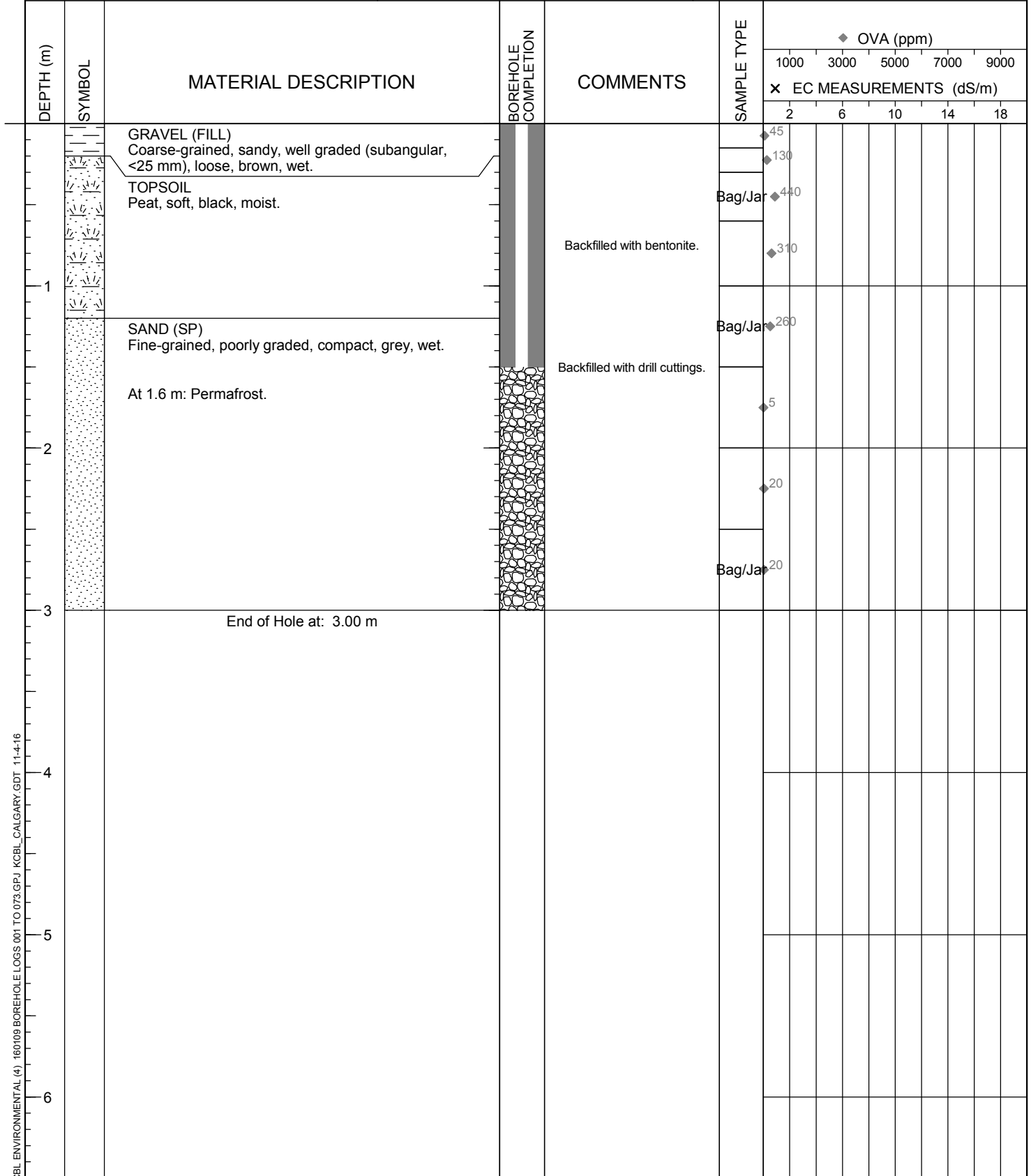


CLIENT: Shell Canada Energy	PROJECT: Camp Farewell 2015 Decommissioning and Soil Assessment Program	
LOCATION: Laydown	PROJECT NO.: A04012A07	DATE: August 16, 2015
CO-ORDINATES: Not Measured	GROUND ELEVATION: Not Measured	CASING ELEVATION: N/A
HOLE DIA.: 0.15 m	CASING DIA.: N/A	TOTAL DEPTH OF HOLE: 1.5 m
DRILLING METHOD: Solid Stem Auger	DRILLING CONTRACTOR: CP Drilling	
LOGGED BY: KS	CHECKED BY: NW	Page 1 of 1

DEPTH (m)	SYMBOL	MATERIAL DESCRIPTION	BOREHOLE COMPLETION	COMMENTS	SAMPLE TYPE	OVA (ppm)					EC MEASUREMENTS (dS/m)										
						1000	3000	5000	7000	9000	2	6	10	14	18						
											2	6	10	14	18						
0.0 - 0.2	[Symbol]	GRAVEL (FILL) Coarse-grained, sandy, well graded (subangular, <25 mm), loose, brown, wet.	[Symbol]		Bag/Jar																
0.2 - 0.3	[Symbol]	TOPSOIL Peat, soft, black, moist, trace wood chips.	[Symbol]		Bag/Jar																
0.3 - 1.3	[Symbol]	SAND (SP) Fine-grained, poorly graded, compact, grey, wet.	[Symbol]	Backfilled with drill cuttings.																	
1.3 - 1.5	[Symbol]	At 1.3 m: Permafrost.	[Symbol]		Bag/Jar																
1.5 - 1.5	[Symbol]	End of Hole at: 1.50 m	[Symbol]																		
2.0																					
3.0																					
4.0																					
5.0																					
6.0																					



CLIENT: Shell Canada Energy	PROJECT: Camp Farewell 2015 Decommissioning and Soil Assessment Program	
LOCATION: Laydown	PROJECT NO.: A04012A07	DATE: August 16, 2015
CO-ORDINATES: Not Measured	GROUND ELEVATION: Not Measured	CASING ELEVATION: N/A
HOLE DIA.: 0.15 m	CASING DIA.: N/A	TOTAL DEPTH OF HOLE: 3 m
DRILLING METHOD: Solid Stem Auger	DRILLING CONTRACTOR: CP Drilling	
LOGGED BY: KS	CHECKED BY: NW	Page 1 of 1





CLIENT: Shell Canada Energy	PROJECT: Camp Farewell 2015 Decommissioning and Soil Assessment Program	
LOCATION: Laydown	PROJECT NO.: A04012A07	DATE: August 16, 2015
CO-ORDINATES: Not Measured	GROUND ELEVATION: Not Measured	CASING ELEVATION: N/A
HOLE DIA.: 0.15 m	CASING DIA.: N/A	TOTAL DEPTH OF HOLE: 1.5 m
DRILLING METHOD: Solid Stem Auger	DRILLING CONTRACTOR: CP Drilling	
LOGGED BY: KS	CHECKED BY: NW	Page 1 of 1

DEPTH (m)	SYMBOL	MATERIAL DESCRIPTION	BOREHOLE COMPLETION	COMMENTS	SAMPLE TYPE	OVA (ppm)					EC MEASUREMENTS (dS/m)									
						1000	3000	5000	7000	9000	2	6	10	14	18					
0.0 - 0.35		GRAVEL (FILL) Coarse-grained, sandy, well graded (subangular, <25 mm), loose, brown, wet.																		
0.35 - 0.50		TOPSOIL Peat, soft, black, moist.				Bag/Jar	155													
0.50 - 0.61				Backfilled with drill cuttings.		Bag/Jar	205													
0.61 - 0.79		SAND (SP) Fine-grained, poorly graded, compact, grey, wet.				Bag/Jar	110													
0.79 - 1.50		End of Hole at: 1.50 m																		
1.50 - 2.00																				
2.00 - 3.00																				
3.00 - 4.00																				
4.00 - 5.00																				
5.00 - 6.00																				



CLIENT: Shell Canada Energy	PROJECT: Camp Farewell 2015 Decommissioning and Soil Assessment Program	
LOCATION: Laydown	PROJECT NO.: A04012A07	DATE: August 16, 2015
CO-ORDINATES: Not Measured	GROUND ELEVATION: Not Measured	CASING ELEVATION: N/A
HOLE DIA.: 0.15 m	CASING DIA.: N/A	TOTAL DEPTH OF HOLE: 1.5 m
DRILLING METHOD: Solid Stem Auger	DRILLING CONTRACTOR: CP Drilling	
LOGGED BY: KS	CHECKED BY: NW	Page 1 of 1

DEPTH (m)	SYMBOL	MATERIAL DESCRIPTION	BOREHOLE COMPLETION	COMMENTS	SAMPLE TYPE	OVA (ppm)					EC MEASUREMENTS (dS/m)									
						1000	3000	5000	7000	9000	2	6	10	14	18					
0.0 - 0.2	[Symbol]	GRAVEL (FILL) Coarse-grained, sandy, well graded (subangular, <25 mm), loose, brown, wet.	[Symbol]			0														
0.2 - 0.5	[Symbol]	TOPSOIL Peat, soft, black, moist.	[Symbol]	Backfilled with bentonite.	Bag/Jar	0.65														
0.5 - 1.0	[Symbol]	SAND (SP) Fine-grained, poorly graded, compact, grey, wet.	[Symbol]	Backfilled with drill cuttings.	Bag/Jar	0.38														
1.0 - 1.5		End of Hole at: 1.50 m																		

KCBL ENVIRONMENTAL (4) 160109 BOREHOLE LOGS 001 TO 073.GPJ KCBL CALGARY.GDT 11-4-16



CLIENT: Shell Canada Energy	PROJECT: Camp Farewell 2015 Decommissioning and Soil Assessment Program	
LOCATION: Laydown	PROJECT NO.: A04012A07	DATE: August 16, 2015
CO-ORDINATES: Not Measured	GROUND ELEVATION: Not Measured	CASING ELEVATION: N/A
HOLE DIA.: 0.15 m	CASING DIA.: N/A	TOTAL DEPTH OF HOLE: 1.5 m
DRILLING METHOD: Solid Stem Auger	DRILLING CONTRACTOR: CP Drilling	
LOGGED BY: KS	CHECKED BY: NW	Page 1 of 1

DEPTH (m)	SYMBOL	MATERIAL DESCRIPTION	BOREHOLE COMPLETION	COMMENTS	SAMPLE TYPE	OVA (ppm)					EC MEASUREMENTS (dS/m)										
						1000	3000	5000	7000	9000	2	6	10	14	18						
0.0 - 0.5		GRAVEL (FILL) Coarse-grained, sandy, well graded (subangular, <25 mm), loose, brown, wet.		Backfilled with bentonite.	Bag/Jar	70															
0.5 - 1.0		TOPSOIL Peat, soft, black, moist.			Bag/Jar	50															
1.0 - 1.5		SAND (SP) Fine-grained, poorly graded, compact, grey, wet.			Bag/Jar	55															
1.5 - 1.5		End of Hole at: 1.50 m																			
2.0 - 2.0																					
3.0 - 3.0																					
4.0 - 4.0																					
5.0 - 5.0																					
6.0 - 6.0																					



CLIENT: Shell Canada Energy	PROJECT: Camp Farewell 2015 Decommissioning and Soil Assessment Program	
LOCATION: Laydown	PROJECT NO.: A04012A07	DATE: August 17, 2015
CO-ORDINATES: Not Measured	GROUND ELEVATION: Not Measured	CASING ELEVATION: N/A
HOLE DIA.: 0.15 m	CASING DIA.: N/A	TOTAL DEPTH OF HOLE: 1.5 m
DRILLING METHOD: Solid Stem Auger	DRILLING CONTRACTOR: CP Drilling	
LOGGED BY: KS	CHECKED BY: NW	Page 1 of 1

DEPTH (m)	SYMBOL	MATERIAL DESCRIPTION	BOREHOLE COMPLETION	COMMENTS	SAMPLE TYPE	OVA (ppm)					EC MEASUREMENTS (dS/m)									
						1000	3000	5000	7000	9000	2	6	10	14	18					
0.0 - 0.1	[Symbol]	GRAVEL (FILL) Coarse-grained, sandy, well graded (subangular, <25 mm), loose, brown, wet.	[Symbol]		Bag/Jar	0														
0.1 - 0.2	[Symbol]	TOPSOIL Peat, soft, black, moist.	[Symbol]	Backfilled with bentonite.	Bag/Jar	15														
0.2 - 1.0	[Symbol]	SAND (SP) Fine-grained, poorly graded, compact, grey, moist.	[Symbol]			0														
1.0 - 1.5	[Symbol]	End of Hole at: 1.50 m	[Symbol]	Backfilled with drill cuttings.	Bag/Jar	0														
1.5 - 2.0																				
2.0 - 3.0																				
3.0 - 4.0																				
4.0 - 5.0																				
5.0 - 6.0																				



CLIENT: Shell Canada Energy	PROJECT: Camp Farewell 2015 Decommissioning and Soil Assessment Program	
LOCATION: Laydown	PROJECT NO.: A04012A07	DATE: August 17, 2015
CO-ORDINATES: Not Measured	GROUND ELEVATION: Not Measured	CASING ELEVATION: N/A
HOLE DIA.: 0.15 m	CASING DIA.: N/A	TOTAL DEPTH OF HOLE: 1.5 m
DRILLING METHOD: Solid Stem Auger	DRILLING CONTRACTOR: CP Drilling	
LOGGED BY: KS	CHECKED BY: NW	Page 1 of 1

DEPTH (m)	SYMBOL	MATERIAL DESCRIPTION	BOREHOLE COMPLETION	COMMENTS	SAMPLE TYPE	OVA (ppm)					EC MEASUREMENTS (dS/m)									
						1000	3000	5000	7000	9000	2	6	10	14	18					
0.0 - 0.5	[Symbol]	GRAVEL (FILL) Coarse-grained, sandy, trace topsoil, well graded (subangular, <25 mm), loose, brown, wet.	[Symbol]		Bag/Jar															
0.5 - 1.0	[Symbol]	SAND (SP) Fine-grained, poorly graded, compact, brown, moist.	[Symbol]		Bag/Jar															
1.0 - 1.5	[Symbol]		[Symbol]	Backfilled with bentonite.	Bag/Jar															
1.5 - 2.0		End of Hole at: 1.50 m																		
2.0 - 3.0																				
3.0 - 4.0																				
4.0 - 5.0																				
5.0 - 6.0																				



CLIENT: Shell Canada Energy	PROJECT: Camp Farewell 2015 Decommissioning and Soil Assessment Program	
LOCATION: Laydown	PROJECT NO.: A04012A07	DATE: August 17, 2015
CO-ORDINATES: Not Measured	GROUND ELEVATION: Not Measured	CASING ELEVATION: N/A
HOLE DIA.: 0.15 m	CASING DIA.: N/A	TOTAL DEPTH OF HOLE: 1.5 m
DRILLING METHOD: Solid Stem Auger	DRILLING CONTRACTOR: CP Drilling	
LOGGED BY: KS	CHECKED BY: NW	Page 1 of 1

DEPTH (m)	SYMBOL	MATERIAL DESCRIPTION	BOREHOLE COMPLETION	COMMENTS	SAMPLE TYPE	OVA (ppm)					EC MEASUREMENTS (dS/m)									
						1000	3000	5000	7000	9000	2	6	10	14	18					
0.0 - 0.1		GRAVEL (FILL) Coarse-grained, sandy, well graded (subangular, <25 mm), loose, brown, wet.		Backfilled with bentonite.	10															
0.1 - 0.3		TOPSOIL Peat, soft, black, moist.			Bag/Jar	55														
0.3 - 0.5		TOPSOIL Peat, soft, black, moist.			Bag/Jar	55														
0.5 - 1.5		SAND (SP) Fine-grained, poorly graded, compact, brown, moist.			15															
1.5 - 1.5		End of Hole at: 1.50 m																		
2.0																				
3.0																				
4.0																				
5.0																				
6.0																				



CLIENT: Shell Canada Energy	PROJECT: Camp Farewell 2015 Decommissioning and Soil Assessment Program	
LOCATION: Laydown	PROJECT NO.: A04012A07	DATE: August 17, 2015
CO-ORDINATES: Not Measured	GROUND ELEVATION: Not Measured	CASING ELEVATION: N/A
HOLE DIA.: 0.15 m	CASING DIA.: N/A	TOTAL DEPTH OF HOLE: 1.5 m
DRILLING METHOD: Solid Stem Auger	DRILLING CONTRACTOR: CP Drilling	
LOGGED BY: KS	CHECKED BY: NW	Page 1 of 1

DEPTH (m)	SYMBOL	MATERIAL DESCRIPTION	BOREHOLE COMPLETION	COMMENTS	SAMPLE TYPE	OVA (ppm)					EC MEASUREMENTS (dS/m)									
						1000	3000	5000	7000	9000	2	6	10	14	18					
0.0 - 1.0	[Symbol]	GRAVEL (FILL) Coarse-grained, sandy, well graded (subangular, <25 mm), loose, brown, wet.	[Shaded]		Bag/Jar	25														
1.0 - 1.5	[Symbol]	TOPSOIL Peat, soft, black, moist.	[Shaded]	Backfilled with bentonite.	Bag/Jar	25														
1.5 - 1.50	[Symbol]	SAND (SP) Fine-grained, poorly graded, compact, grey, moist.	[Shaded]		Bag/Jar	55														
1.50 - 1.50		End of Hole at: 1.50 m																		
2.0 - 3.0																				
4.0 - 5.0																				
6.0 - 6.0																				



CLIENT: Shell Canada Energy	PROJECT: Camp Farewell 2015 Decommissioning and Soil Assessment Program	
LOCATION: Laydown	PROJECT NO.: A04012A07	DATE: August 17, 2015
CO-ORDINATES: Not Measured	GROUND ELEVATION: Not Measured	CASING ELEVATION: N/A
HOLE DIA.: 0.15 m	CASING DIA.: N/A	TOTAL DEPTH OF HOLE: 1.5 m
DRILLING METHOD: Solid Stem Auger	DRILLING CONTRACTOR: CP Drilling	
LOGGED BY: KS	CHECKED BY: NW	Page 1 of 1

DEPTH (m)	SYMBOL	MATERIAL DESCRIPTION	BOREHOLE COMPLETION	COMMENTS	SAMPLE TYPE	OVA (ppm)					EC MEASUREMENTS (dS/m)									
						1000	3000	5000	7000	9000	2	6	10	14	18					
0.0 - 0.1		GRAVEL (FILL) Coarse-grained, sandy, well graded (subangular, <25 mm), loose, brown, wet.		Backfilled with bentonite.	10															
0.1 - 0.2		TOPSOIL Peat, soft, black, moist.			Bag/Jar	15														
0.2 - 0.3		SAND (SP) Fine-grained, poorly graded, compact, brown, moist.			Bag/Jar	50 0.32														
0.3 - 1.5		End of Hole at: 1.50 m			20															
1.5 - 2.0																				
2.0 - 3.0																				
3.0 - 4.0																				
4.0 - 5.0																				
5.0 - 6.0																				



CLIENT: Shell Canada Energy	PROJECT: Camp Farewell 2015 Decommissioning and Soil Assessment Program	
LOCATION: Laydown	PROJECT NO.: A04012A07	DATE: August 17, 2015
CO-ORDINATES: Not Measured	GROUND ELEVATION: Not Measured	CASING ELEVATION: N/A
HOLE DIA.: 0.15 m	CASING DIA.: N/A	TOTAL DEPTH OF HOLE: 1.5 m
DRILLING METHOD: Solid Stem Auger	DRILLING CONTRACTOR: CP Drilling	
LOGGED BY: KS	CHECKED BY: NW	Page 1 of 1

DEPTH (m)	SYMBOL	MATERIAL DESCRIPTION	BOREHOLE COMPLETION	COMMENTS	SAMPLE TYPE	OVA (ppm)					EC MEASUREMENTS (dS/m)									
						1000	3000	5000	7000	9000	2	6	10	14	18					
0.0 - 0.1	[Symbol]	GRAVEL (FILL) Coarse-grained, sandy, well graded (subangular, <25 mm), loose, brown, wet.	[Symbol]		Bag/Jar															
0.1 - 0.2	[Symbol]	TOPSOIL Peat, soft, black, moist.	[Symbol]		Bag/Jar															
0.2 - 1.5	[Symbol]	SAND (SP) Fine-grained, poorly graded, compact, brown, moist.	[Symbol]	Backfilled with bentonite.	Bag/Jar															
1.5 - 1.5		End of Hole at: 1.50 m																		
2.0																				
3.0																				
4.0																				
5.0																				
6.0																				



CLIENT: Shell Canada Energy	PROJECT: Camp Farewell 2015 Decommissioning and Soil Assessment Program	
LOCATION: Laydown	PROJECT NO.: A04012A07	DATE: August 17, 2015
CO-ORDINATES: Not Measured	GROUND ELEVATION: Not Measured	CASING ELEVATION: N/A
HOLE DIA.: 0.15 m	CASING DIA.: N/A	TOTAL DEPTH OF HOLE: 1.5 m
DRILLING METHOD: Solid Stem Auger	DRILLING CONTRACTOR: CP Drilling	
LOGGED BY: KS	CHECKED BY: NW	Page 1 of 1

DEPTH (m)	SYMBOL	MATERIAL DESCRIPTION	BOREHOLE COMPLETION	COMMENTS	SAMPLE TYPE	OVA (ppm)					EC MEASUREMENTS (dS/m)									
						1000	3000	5000	7000	9000	2	6	10	14	18					
0.0 - 0.3	[Symbol]	GRAVEL (FILL) Coarse-grained, sandy, well graded (subangular, <25 mm), loose, brown, wet. At 0.3 m: Styrofoam.	[Shaded]		Bag/Jar	25														
0.3 - 0.8	[Symbol]	TOPSOIL Peat, soft, black, moist.	[Shaded]		Bag/Jar	65														
0.8 - 1.5	[Symbol]	SAND (SP) Fine-grained, poorly graded, compact, brown, moist.	[Shaded]	Backfilled with bentonite.	Bag/Jar	40														
1.5 - 1.5		End of Hole at: 1.50 m																		



CLIENT: Shell Canada Energy	PROJECT: Camp Farewell 2015 Decommissioning and Soil Assessment Program	
LOCATION: Laydown	PROJECT NO.: A04012A07	DATE: August 17, 2015
CO-ORDINATES: Not Measured	GROUND ELEVATION: Not Measured	CASING ELEVATION: N/A
HOLE DIA.: 0.15 m	CASING DIA.: N/A	TOTAL DEPTH OF HOLE: 1.5 m
DRILLING METHOD: Solid Stem Auger	DRILLING CONTRACTOR: CP Drilling	
LOGGED BY: KS	CHECKED BY: NW	Page 1 of 1

DEPTH (m)	SYMBOL	MATERIAL DESCRIPTION	BOREHOLE COMPLETION	COMMENTS	SAMPLE TYPE	OVA (ppm)					EC MEASUREMENTS (dS/m)									
						1000	3000	5000	7000	9000	2	6	10	14	18					
0.0 - 0.1		GRAVEL (FILL) Coarse-grained, sandy, well graded (subangular, <25 mm), loose, brown, wet.		Backfilled with bentonite.	Bag/Jar															
0.1 - 0.2		TOPSOIL Peat, soft, black, moist.			Bag/Jar															
0.2 - 1.5		SAND (SP) Fine-grained, poorly graded, compact, brown, moist.			Bag/Jar															
1.5 - 1.5		End of Hole at: 1.50 m																		
2.0 - 2.0																				
3.0 - 3.0																				
4.0 - 4.0																				
5.0 - 5.0																				
6.0 - 6.0																				



CLIENT: Shell Canada Energy	PROJECT: Camp Farewell 2015 Decommissioning and Soil Assessment Program	
LOCATION: Shed	PROJECT NO.: A04012A07	DATE: August 17, 2015
CO-ORDINATES: Not Measured	GROUND ELEVATION: Not Measured	CASING ELEVATION: N/A
HOLE DIA.: 0.15 m	CASING DIA.: N/A	TOTAL DEPTH OF HOLE: 1.5 m
DRILLING METHOD: Solid Stem Auger	DRILLING CONTRACTOR: CP Drilling	
LOGGED BY: KS	CHECKED BY: NW	Page 1 of 1

DEPTH (m)	SYMBOL	MATERIAL DESCRIPTION	BOREHOLE COMPLETION	COMMENTS	SAMPLE TYPE	OVA (ppm)					EC MEASUREMENTS (dS/m)									
						1000	3000	5000	7000	9000	2	6	10	14	18					
0.0 - 0.5	[Symbol]	GRAVEL (FILL) Coarse-grained, sandy, well graded (subangular, <25 mm), loose, brown, wet.	[Shaded]		Bag/Jar	5														
0.5 - 0.8	[Symbol]	TOPSOIL Peat, soft, black, moist.	[Shaded]	Backfilled with bentonite.	Bag/Jar	15														
0.8 - 1.5	[Symbol]	SAND (SP) Fine-grained, poorly graded, compact, brown.	[Shaded]		Bag/Jar	15														
1.5 - 1.5		End of Hole at: 1.50 m																		
2.0																				
3.0																				
4.0																				
5.0																				
6.0																				



CLIENT: Shell Canada Energy	PROJECT: Camp Farewell 2015 Decommissioning and Soil Assessment Program	
LOCATION: Shed	PROJECT NO.: A04012A07	DATE: August 17, 2015
CO-ORDINATES: Not Measured	GROUND ELEVATION: Not Measured	CASING ELEVATION: N/A
HOLE DIA.: 0.15 m	CASING DIA.: N/A	TOTAL DEPTH OF HOLE: 1.5 m
DRILLING METHOD: Solid Stem Auger	DRILLING CONTRACTOR: CP Drilling	
LOGGED BY: KS	CHECKED BY: NW	Page 1 of 1

DEPTH (m)	SYMBOL	MATERIAL DESCRIPTION	BOREHOLE COMPLETION	COMMENTS	SAMPLE TYPE	OVA (ppm)					EC MEASUREMENTS (dS/m)										
						1000	3000	5000	7000	9000	2	6	10	14	18						
0.0 - 0.2		GRAVEL (FILL) Coarse-grained, sandy, well graded (subangular, <25 mm), loose, brown, wet.		Backfilled with bentonite.	Bag/Jar	50															
0.2 - 0.4		TOPSOIL Peat, soft, black, moist.			Bag/Jar	45															
0.4 - 1.5		SAND (SP) Fine-grained, poorly graded, compact, brown, moist.			35																
1.5		End of Hole at: 1.50 m			Bag/Jar	40															
2.0																					
3.0																					
4.0																					
5.0																					
6.0																					



CLIENT: Shell Canada Energy	PROJECT: Camp Farewell 2015 Decommissioning and Soil Assessment Program	
LOCATION: Shed	PROJECT NO.: A04012A07	DATE: August 17, 2015
CO-ORDINATES: Not Measured	GROUND ELEVATION: Not Measured	CASING ELEVATION: N/A
HOLE DIA.: 0.15 m	CASING DIA.: N/A	TOTAL DEPTH OF HOLE: 1.5 m
DRILLING METHOD: Solid Stem Auger	DRILLING CONTRACTOR: CP Drilling	
LOGGED BY: KS	CHECKED BY: NW	Page 1 of 1

DEPTH (m)	SYMBOL	MATERIAL DESCRIPTION	BOREHOLE COMPLETION	COMMENTS	SAMPLE TYPE	OVA (ppm)					EC MEASUREMENTS (dS/m)										
						1000	3000	5000	7000	9000	2	6	10	14	18						
0.00 - 0.10		GRAVEL (FILL) Coarse-grained, sandy, well graded (subangular, <25 mm), loose, brown, wet.		Backfilled with bentonite.	Bag/Jar	65															
0.10 - 0.20		TOPSOIL Peat, soft, black, moist.					75														
0.20 - 0.30		SAND (SP) Fine-grained, poorly graded, compact, grey, moist.					60														
0.30 - 1.50		End of Hole at: 1.50 m			Bag/Jar	60															
1.50 - 2.00																					
2.00 - 3.00																					
3.00 - 4.00																					
4.00 - 5.00																					
5.00 - 6.00																					



CLIENT: Shell Canada Energy	PROJECT: Camp Farewell 2015 Decommissioning and Soil Assessment Program	
LOCATION: Shed	PROJECT NO.: A04012A07	DATE: August 17, 2015
CO-ORDINATES: Not Measured	GROUND ELEVATION: Not Measured	CASING ELEVATION: N/A
HOLE DIA.: 0.15 m	CASING DIA.: N/A	TOTAL DEPTH OF HOLE: 1.5 m
DRILLING METHOD: Solid Stem Auger	DRILLING CONTRACTOR: CP Drilling	
LOGGED BY: KS	CHECKED BY: NW	Page 1 of 1

DEPTH (m)	SYMBOL	MATERIAL DESCRIPTION	BOREHOLE COMPLETION	COMMENTS	SAMPLE TYPE	OVA (ppm)					EC MEASUREMENTS (dS/m)									
						1000	3000	5000	7000	9000	2	6	10	14	18					
0.0 - 0.3	[Symbol]	GRAVEL (FILL) Coarse-grained, sandy, well graded (subangular, <25 mm), loose, brown, wet.	[Symbol]		Bag/Jar	40														
0.3 - 0.5	[Symbol]	TOPSOIL Peat, soft, black, moist. At 0.3 m: Styrofoam.	[Symbol]		Bag/Jar	55														
0.5 - 1.3	[Symbol]	SAND (SP) Fine-grained, poorly graded, compact, brown, moist. At 1.3 m: Grey.	[Symbol]	Backfilled with bentonite.	Bag/Jar	70														
1.3 - 1.5		End of Hole at: 1.50 m				50														
1.5 - 2.0																				
2.0 - 3.0																				
3.0 - 4.0																				
4.0 - 5.0																				
5.0 - 6.0																				



CLIENT: Shell Canada Energy	PROJECT: Camp Farewell 2015 Decommissioning and Soil Assessment Program	
LOCATION: Camp	PROJECT NO.: A04012A07	DATE: August 17, 2015
CO-ORDINATES: Not Measured	GROUND ELEVATION: Not Measured	CASING ELEVATION: N/A
HOLE DIA.: 0.15 m	CASING DIA.: N/A	TOTAL DEPTH OF HOLE: 1.5 m
DRILLING METHOD: Solid Stem Auger	DRILLING CONTRACTOR: CP Drilling	
LOGGED BY: KS	CHECKED BY: NW	Page 1 of 1

DEPTH (m)	SYMBOL	MATERIAL DESCRIPTION	BOREHOLE COMPLETION	COMMENTS	SAMPLE TYPE	OVA (ppm)					EC MEASUREMENTS (dS/m)									
						1000	3000	5000	7000	9000	2	6	10	14	18					
0.00 - 0.05	[Symbol]	GRAVEL (FILL) Coarse-grained, sandy, well graded (subangular, <25 mm), loose, brown, wet.	[Symbol]		Bag/Jar	25														
0.05 - 0.10	[Symbol]	TOPSOIL Peat, soft, black, moist. At 0.2 m: Styrofoam.	[Symbol]		Bag/Jar	30														
0.10 - 1.50	[Symbol]	SAND (SP) Fine-grained, poorly graded, compact, brown, moist.	[Symbol]	Backfilled with bentonite.	Bag/Jar	25														
1.50 - 1.50		End of Hole at: 1.50 m			Bag/Jar	40														
2.00																				
3.00																				
4.00																				
5.00																				
6.00																				



CLIENT: Shell Canada Energy	PROJECT: Camp Farewell 2015 Decommissioning and Soil Assessment Program	
LOCATION: Camp	PROJECT NO.: A04012A07	DATE: August 17, 2015
CO-ORDINATES: Not Measured	GROUND ELEVATION: Not Measured	CASING ELEVATION: N/A
HOLE DIA.: 0.15 m	CASING DIA.: N/A	TOTAL DEPTH OF HOLE: 1.5 m
DRILLING METHOD: Solid Stem Auger	DRILLING CONTRACTOR: CP Drilling	
LOGGED BY: KS	CHECKED BY: NW	Page 1 of 1

DEPTH (m)	SYMBOL	MATERIAL DESCRIPTION	BOREHOLE COMPLETION	COMMENTS	SAMPLE TYPE	OVA (ppm)					EC MEASUREMENTS (dS/m)									
						1000	3000	5000	7000	9000	2	6	10	14	18					
0.0 - 0.1		GRAVEL (FILL) Coarse-grained, sandy, well graded (subangular, <25 mm), loose, brown, wet.				0														
0.1 - 0.3		TOPSOIL Peat, soft, black, moist.				Bag/Jar	150													
0.3 - 0.5						Bag/Jar	115													
0.5 - 1.5		SAND (SP) Fine-grained, poorly graded, compact, brown, moist.		Backfilled with drill cuttings.		Bag/Jar	45													
1.5 - 1.5		End of Hole at: 1.50 m																		
2.0																				
3.0																				
4.0																				
5.0																				
6.0																				



CLIENT: Shell Canada Energy	PROJECT: Camp Farewell 2015 Decommissioning and Soil Assessment Program	
LOCATION: Camp	PROJECT NO.: A04012A07	DATE: August 17, 2015
CO-ORDINATES: Not Measured	GROUND ELEVATION: Not Measured	CASING ELEVATION: N/A
HOLE DIA.: 0.15 m	CASING DIA.: N/A	TOTAL DEPTH OF HOLE: 1.5 m
DRILLING METHOD: Solid Stem Auger	DRILLING CONTRACTOR: CP Drilling	
LOGGED BY: KS	CHECKED BY: NW	Page 1 of 1

DEPTH (m)	SYMBOL	MATERIAL DESCRIPTION	BOREHOLE COMPLETION	COMMENTS	SAMPLE TYPE	OVA (ppm)					EC MEASUREMENTS (dS/m)									
						1000	3000	5000	7000	9000	2	6	10	14	18					
0.0 - 0.3	[Symbol]	GRAVEL (FILL) Coarse-grained, sandy, well graded (subangular, <25 mm), loose, brown, wet.	[Symbol]		Bag/Jar	20														
0.3 - 0.5	[Symbol]	TOPSOIL Peat, soft, black, moist.	[Symbol]		Bag/Jar	103														
0.5 - 1.5	[Symbol]	SAND (SP) Fine-grained, poorly graded, compact, grey, moist. Ice and Sand	[Symbol]	Backfilled with bentonite.	Bag/Jar	25	0.33													
1.5 - 1.5		End of Hole at: 1.50 m																		



CLIENT: Shell Canada Energy	PROJECT: Camp Farewell 2015 Decommissioning and Soil Assessment Program	
LOCATION: Camp	PROJECT NO.: A04012A07	DATE: August 17, 2015
CO-ORDINATES: Not Measured	GROUND ELEVATION: Not Measured	CASING ELEVATION: N/A
HOLE DIA.: 0.15 m	CASING DIA.: N/A	TOTAL DEPTH OF HOLE: 1.5 m
DRILLING METHOD: Solid Stem Auger	DRILLING CONTRACTOR: CP Drilling	
LOGGED BY: KS	CHECKED BY: NW	Page 1 of 1

DEPTH (m)	SYMBOL	MATERIAL DESCRIPTION	BOREHOLE COMPLETION	COMMENTS	SAMPLE TYPE	OVA (ppm)					EC MEASUREMENTS (dS/m)									
						1000	3000	5000	7000	9000	2	6	10	14	18					
0.0 - 0.8		GRAVEL (FILL) Coarse-grained, sandy, well graded (subangular, <25 mm), loose, brown, wet.			Bag/Jar	65														
0.8 - 1.0		TOPSOIL Peat, soft, black, moist.			Bag/Jar	390														
1.0 - 1.3		SAND (SP) Fine-grained, poorly graded, compact, grey, wet. At 1.3 m: Permafrost.		Backfilled with drill cuttings.	Bag/Jar	450														
1.3 - 1.5		End of Hole at: 1.50 m			Bag/Jar	110														
1.5 - 2.0																				
2.0 - 3.0																				
3.0 - 4.0																				
4.0 - 5.0																				
5.0 - 6.0																				



CLIENT: Shell Canada Energy	PROJECT: Camp Farewell 2015 Decommissioning and Soil Assessment Program	
LOCATION: Tank Farm	PROJECT NO.: A04012A07	DATE: August 17, 2015
CO-ORDINATES: Not Measured	GROUND ELEVATION: Not Measured	CASING ELEVATION: N/A
HOLE DIA.: 0.15 m	CASING DIA.: N/A	TOTAL DEPTH OF HOLE: 1.5 m
DRILLING METHOD: Solid Stem Auger	DRILLING CONTRACTOR: CP Drilling	
LOGGED BY: KS	CHECKED BY: NW	Page 1 of 1

DEPTH (m)	SYMBOL	MATERIAL DESCRIPTION	BOREHOLE COMPLETION	COMMENTS	SAMPLE TYPE	OVA (ppm)					EC MEASUREMENTS (dS/m)									
						1000	3000	5000	7000	9000	2	6	10	14	18					
0.0 - 1.0		GRAVEL (FILL) Coarse-grained, sandy, well graded (subangular, <25 mm), loose, brown, wet.				20														
1.0 - 1.1				Backfilled with bentonite.																
1.1 - 1.2		TOPSOIL Peat, soft, black, moist.																		
1.2 - 1.5		SAND (SP) Fine-grained, poorly graded, compact, grey, wet.																		
1.5 - 1.5		End of Hole at: 1.50 m																		
2.0																				
3.0																				
4.0																				
5.0																				
6.0																				



CLIENT: Shell Canada Energy	PROJECT: Camp Farewell 2015 Decommissioning and Soil Assessment Program	
LOCATION: Tank Farm	PROJECT NO.: A04012A07	DATE: August 17, 2015
CO-ORDINATES: Not Measured	GROUND ELEVATION: Not Measured	CASING ELEVATION: N/A
HOLE DIA.: 0.15 m	CASING DIA.: N/A	TOTAL DEPTH OF HOLE: 1.5 m
DRILLING METHOD: Solid Stem Auger	DRILLING CONTRACTOR: CP Drilling	
LOGGED BY: KS	CHECKED BY: NW	Page 1 of 1

DEPTH (m)	SYMBOL	MATERIAL DESCRIPTION	BOREHOLE COMPLETION	COMMENTS	SAMPLE TYPE	OVA (ppm)					EC MEASUREMENTS (dS/m)									
						1000	3000	5000	7000	9000	2	6	10	14	18					
0.0 - 0.1	[Symbol]	GRAVEL (FILL) Coarse-grained, sandy, well graded (subangular, <25 mm), loose, brown, wet.	[Symbol]																	
0.1 - 0.2	[Symbol]	TOPSOIL Peat, soft, black, moist.	[Symbol]	Backfilled with bentonite.	Jar															
0.2 - 1.5	[Symbol]	SAND (SP) Fine-grained, poorly graded, compact, grey, wet.	[Symbol]	Backfilled with drill cuttings.	Jar															
1.5 - 1.5		End of Hole at: 1.50 m																		
2.0																				
3.0																				
4.0																				
5.0																				
6.0																				



CLIENT: Shell Canada Energy	PROJECT: Camp Farewell 2015 Decommissioning and Soil Assessment Program	
LOCATION: Tank Farm	PROJECT NO.: A04012A07	DATE: August 17, 2015
CO-ORDINATES: Not Measured	GROUND ELEVATION: Not Measured	CASING ELEVATION: N/A
HOLE DIA.: 0.15 m	CASING DIA.: N/A	TOTAL DEPTH OF HOLE: 3 m
DRILLING METHOD: Solid Stem Auger	DRILLING CONTRACTOR: CP Drilling	
LOGGED BY: KS	CHECKED BY: NW	Page 1 of 1

DEPTH (m)	SYMBOL	MATERIAL DESCRIPTION	BOREHOLE COMPLETION	COMMENTS	SAMPLE TYPE	OVA (ppm)					EC MEASUREMENTS (dS/m)									
						1000	3000	5000	7000	9000	2	6	10	14	18					
0.0 - 0.5	[Symbol]	GRAVEL (FILL) Coarse-grained, sandy, well graded (subangular, <25 mm), loose, brown, wet.	[Symbol]	Backfilled with bentonite.		55														
0.5 - 1.0	[Symbol]	TOPSOIL Peat, soft, black, moist.	[Symbol]			175														
1.0 - 1.5	[Symbol]	SAND (SP) Fine-grained, poorly graded, compact, grey, wet.	[Symbol]		Jar	300														
1.5 - 2.0		At 1.5 m: Permafrost.			Jar	360														
2.0 - 2.5				Backfilled with drill cuttings.		60														
2.5 - 3.0					Jar	90														
3.0 - 3.0		End of Hole at: 3.00 m			Jar	100														
3.0 - 4.0																				
4.0 - 5.0																				
5.0 - 6.0																				

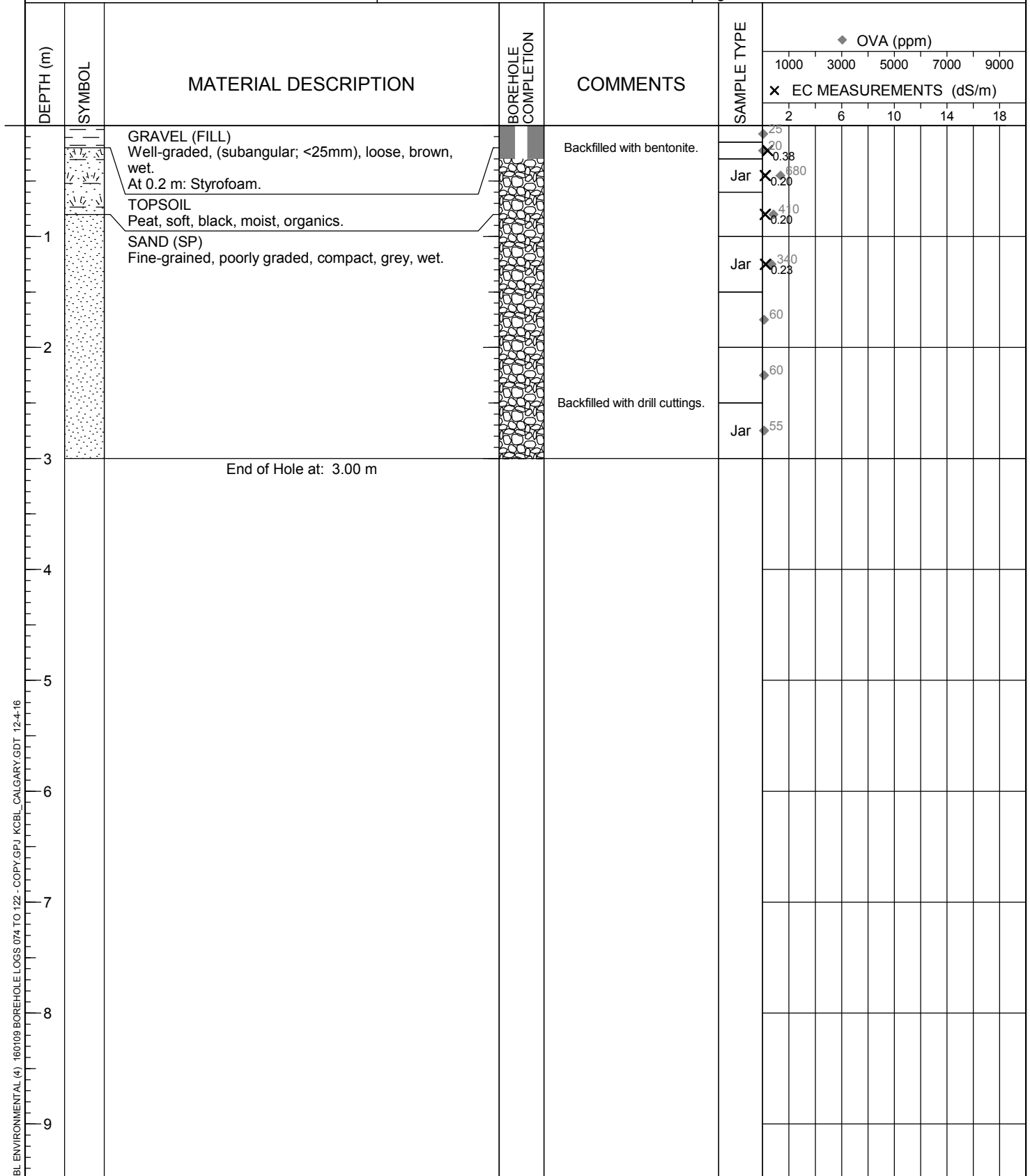


CLIENT: Shell Canada Energy	PROJECT: Camp Farewell 2015 Decommissioning and Soil Assessment Program	
LOCATION: Tank Farm	PROJECT NO.: A04012A07	DATE: August 17, 2015
CO-ORDINATES: Not Measured	GROUND ELEVATION: Not Measured	CASING ELEVATION: N/A
HOLE DIA.: 0.15 m	CASING DIA.: N/A	TOTAL DEPTH OF HOLE: 3 m
DRILLING METHOD: Solid Stem Auger	DRILLING CONTRACTOR: CP Drilling	
LOGGED BY: KS	CHECKED BY: NW	Page 1 of 1

DEPTH (m)	SYMBOL	MATERIAL DESCRIPTION	BOREHOLE COMPLETION	COMMENTS	SAMPLE TYPE	OVA (ppm)					EC MEASUREMENTS (dS/m)									
						1000	3000	5000	7000	9000	2	6	10	14	18					
						2	6	10	14	18	2	6	10	14	18					
0.0 - 0.1		GRAVEL (FILL) Coarse-grained, sandy, well graded (subangular, <25 mm), loose, brown, wet.																		
0.1 - 0.2		TOPSOIL Peat, soft, black, moist.																		
0.2 - 3.0		SAND (SP) Fine-grained, poorly graded, compact, grey, wet.																		
3.0 - 3.0		End of Hole at: 3.00 m																		
4.0 - 4.0																				
5.0 - 5.0																				
6.0 - 6.0																				



CLIENT: Shell Canada Energy	PROJECT: Camp Farewell 2015 Decommissioning and Soil Assessment Program	
LOCATION: Tank Farm	PROJECT NO.: A04012A07	DATE: August 17, 2015
CO-ORDINATES: Not Measured	GROUND ELEVATION: Not Measured	CASING ELEVATION: N/A
HOLE DIA.: 0.15 m	CASING DIA.: N/A	TOTAL DEPTH OF HOLE: 3 m
DRILLING METHOD: Solid Stem Auger	DRILLING CONTRACTOR: CP Drilling	
LOGGED BY: KS	CHECKED BY: NW	Page 1 of 1





CLIENT: Shell Canada Energy	PROJECT: Camp Farewell 2015 Decommissioning and Soil Assessment Program	
LOCATION: Tank Farm	PROJECT NO.: A04012A07	DATE: August 17, 2015
CO-ORDINATES: Not Measured	GROUND ELEVATION: Not Measured	CASING ELEVATION: N/A
HOLE DIA.: 0.15 m	CASING DIA.: N/A	TOTAL DEPTH OF HOLE: 3 m
DRILLING METHOD: Solid Stem Auger	DRILLING CONTRACTOR: CP Drilling	
LOGGED BY: KS	CHECKED BY: NW	Page 1 of 1

DEPTH (m)	SYMBOL	MATERIAL DESCRIPTION	BOREHOLE COMPLETION	COMMENTS	SAMPLE TYPE	OVA (ppm)					EC MEASUREMENTS (dS/m)									
						1000	3000	5000	7000	9000	2	6	10	14	18					
0.0 - 0.1	[Symbol]	GRAVEL (FILL) Well-graded, (subangular; <25mm), loose, brown, wet.	[Symbol]	Backfilled with bentonite.	Jar	10														
0.1 - 0.2	[Symbol]	TOPSOIL Peat, soft, black, moist, organics.	[Symbol]			210														
0.2 - 0.3	[Symbol]	SAND (SP) Fine-grained, poorly graded, compact, grey, wet.	[Symbol]		Jar	380														
0.3 - 0.4	[Symbol]		[Symbol]			0.70														
0.4 - 0.5	[Symbol]		[Symbol]			0.55														
0.5 - 0.6	[Symbol]		[Symbol]			470														
0.6 - 0.7	[Symbol]		[Symbol]			0.30														
0.7 - 0.8	[Symbol]		[Symbol]			115														
0.8 - 0.9	[Symbol]		[Symbol]			210														
0.9 - 1.0	[Symbol]		[Symbol]			360														
1.0 - 1.1	[Symbol]		[Symbol]			105														
1.1 - 1.2	[Symbol]		[Symbol]			270														
1.2 - 1.3	[Symbol]		[Symbol]		Jar	160														
1.3 - 1.4	[Symbol]		[Symbol]																	
1.4 - 1.5	[Symbol]		[Symbol]																	
1.5 - 1.6	[Symbol]		[Symbol]																	
1.6 - 1.7	[Symbol]		[Symbol]																	
1.7 - 1.8	[Symbol]		[Symbol]																	
1.8 - 1.9	[Symbol]		[Symbol]																	
1.9 - 2.0	[Symbol]		[Symbol]																	
2.0 - 2.1	[Symbol]		[Symbol]																	
2.1 - 2.2	[Symbol]		[Symbol]																	
2.2 - 2.3	[Symbol]		[Symbol]																	
2.3 - 2.4	[Symbol]		[Symbol]																	
2.4 - 2.5	[Symbol]		[Symbol]																	
2.5 - 2.6	[Symbol]		[Symbol]																	
2.6 - 2.7	[Symbol]		[Symbol]																	
2.7 - 2.8	[Symbol]		[Symbol]																	
2.8 - 2.9	[Symbol]		[Symbol]																	
2.9 - 3.0	[Symbol]		[Symbol]																	
3.0 - 3.1	[Symbol]		[Symbol]																	
3.1 - 3.2	[Symbol]		[Symbol]																	
3.2 - 3.3	[Symbol]		[Symbol]																	
3.3 - 3.4	[Symbol]		[Symbol]																	
3.4 - 3.5	[Symbol]		[Symbol]																	
3.5 - 3.6	[Symbol]		[Symbol]																	
3.6 - 3.7	[Symbol]		[Symbol]																	
3.7 - 3.8	[Symbol]		[Symbol]																	
3.8 - 3.9	[Symbol]		[Symbol]																	
3.9 - 4.0	[Symbol]		[Symbol]																	

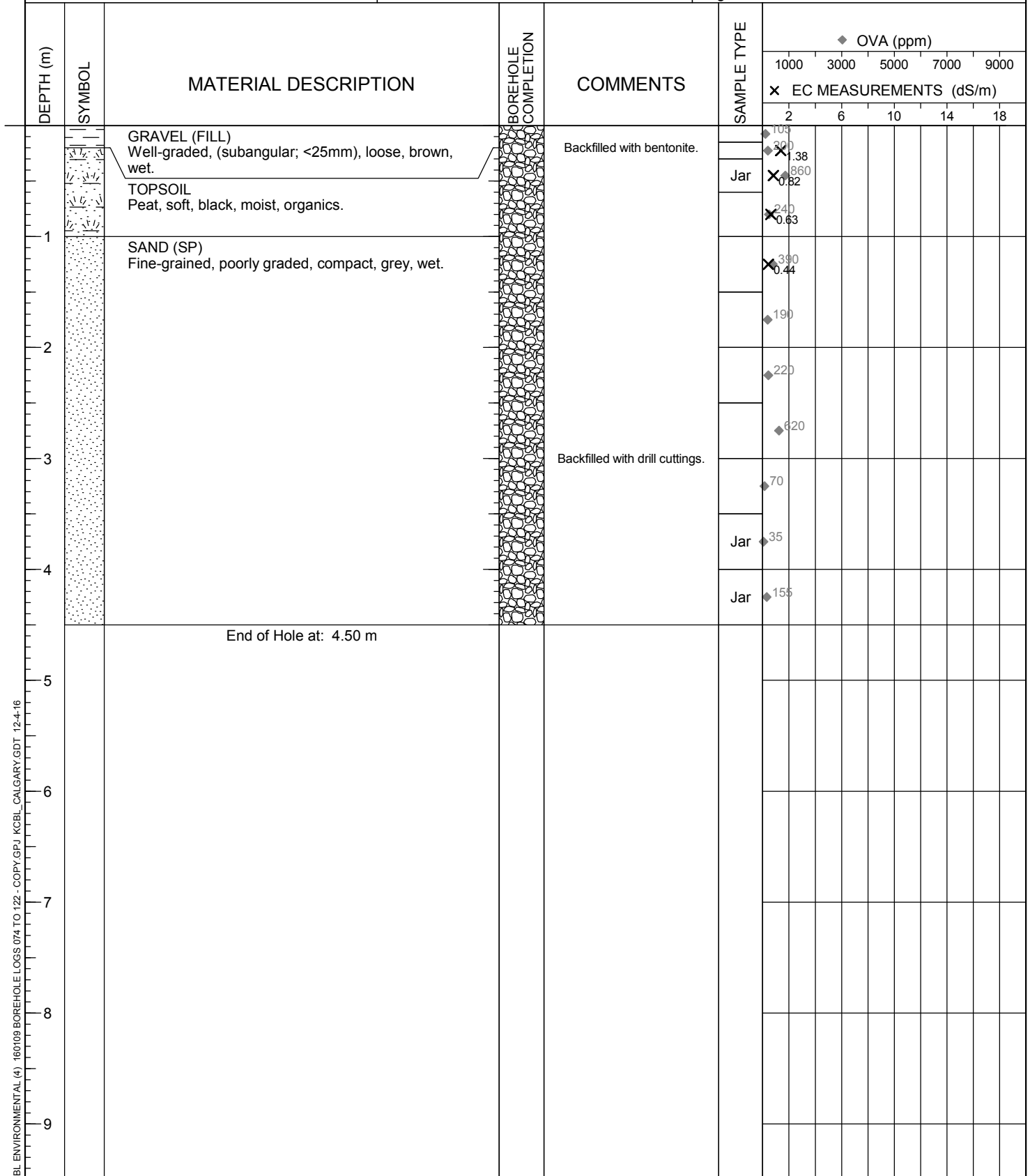


CLIENT: Shell Canada Energy	PROJECT: Camp Farewell 2015 Decommissioning and Soil Assessment Program	
LOCATION: Tank Farm	PROJECT NO.: A04012A07	DATE: August 18, 2015
CO-ORDINATES: Not Measured	GROUND ELEVATION: Not Measured	CASING ELEVATION: N/A
HOLE DIA.: 0.15 m	CASING DIA.: N/A	TOTAL DEPTH OF HOLE: 1.5 m
DRILLING METHOD: Solid Stem Auger	DRILLING CONTRACTOR: CP Drilling	
LOGGED BY: KS	CHECKED BY: NW	Page 1 of 1

DEPTH (m)	SYMBOL	MATERIAL DESCRIPTION	BOREHOLE COMPLETION	COMMENTS	SAMPLE TYPE	OVA (ppm)					EC MEASUREMENTS (dS/m)									
						2	6	10	14	18	2	6	10	14	18					
0.0 - 0.2		GRAVEL (FILL) Well-graded, (subangular; <25mm), loose, brown, wet.		Backfilled with drill cuttings.	Jar	25														
0.2 - 0.3		TOPSOIL Peat, soft, black, moist, organics.			Jar	420														
0.3 - 0.4		SAND (SP) Fine-grained, poorly graded, compact, grey, wet.			Jar	710														
0.4 - 1.5		End of Hole at: 1.50 m			Jar	920														
1.5 - 2.0																				
2.0 - 3.0																				
3.0 - 4.0																				
4.0 - 5.0																				
5.0 - 6.0																				
6.0 - 7.0																				
7.0 - 8.0																				
8.0 - 9.0																				
9.0 - 10.0																				



CLIENT: Shell Canada Energy	PROJECT: Camp Farewell 2015 Decommissioning and Soil Assessment Program	
LOCATION: Tank Farm	PROJECT NO.: A04012A07	DATE: August 18, 2015
CO-ORDINATES: Not Measured	GROUND ELEVATION: Not Measured	CASING ELEVATION: N/A
HOLE DIA.: 0.15 m	CASING DIA.: N/A	TOTAL DEPTH OF HOLE: 4.5 m
DRILLING METHOD: Solid Stem Auger	DRILLING CONTRACTOR: CP Drilling	
LOGGED BY: KS	CHECKED BY: NW	Page 1 of 1





CLIENT: Shell Canada Energy	PROJECT: Camp Farewell 2015 Decommissioning and Soil Assessment Program	
LOCATION: Tank Farm	PROJECT NO.: A04012A07	DATE: August 18, 2015
CO-ORDINATES: Not Measured	GROUND ELEVATION: Not Measured	CASING ELEVATION: N/A
HOLE DIA.: 0.15 m	CASING DIA.: N/A	TOTAL DEPTH OF HOLE: 3 m
DRILLING METHOD: Solid Stem Auger	DRILLING CONTRACTOR: CP Drilling	
LOGGED BY: KS	CHECKED BY: NW	Page 1 of 1

DEPTH (m)	SYMBOL	MATERIAL DESCRIPTION	BOREHOLE COMPLETION	COMMENTS	SAMPLE TYPE	OVA (ppm)		EC MEASUREMENTS (dS/m)											
						1000	3000	5000	7000	9000	2	6	10	14	18				
0.0 - 0.1	[Symbol]	GRAVEL (FILL) Well-graded, (subangular; <25mm), loose, brown, wet.	[Symbol]		Jar	310													
0.1 - 0.2	[Symbol]	TOPSOIL Peat, soft, black, moist, organics.	[Symbol]		Jar	0.21													
0.2 - 0.3	[Symbol]	SAND (SP) Fine-grained, poorly graded, compact, grey, wet.	[Symbol]		Jar	0.28	1550												
0.3 - 0.4	[Symbol]		[Symbol]	Backfilled with drill cuttings.	Jar	120													
0.4 - 0.5	[Symbol]		[Symbol]		Jar	180													
0.5 - 0.6	[Symbol]		[Symbol]		Jar	25													
0.6 - 0.7	[Symbol]		[Symbol]		Jar	20													
0.7 - 0.8	[Symbol]		[Symbol]		Jar	85													
0.8 - 0.9	[Symbol]		[Symbol]																
0.9 - 1.0	[Symbol]		[Symbol]																
1.0 - 1.1	[Symbol]		[Symbol]																
1.1 - 1.2	[Symbol]		[Symbol]																
1.2 - 1.3	[Symbol]		[Symbol]																
1.3 - 1.4	[Symbol]		[Symbol]																
1.4 - 1.5	[Symbol]		[Symbol]																
1.5 - 1.6	[Symbol]		[Symbol]																
1.6 - 1.7	[Symbol]		[Symbol]																
1.7 - 1.8	[Symbol]		[Symbol]																
1.8 - 1.9	[Symbol]		[Symbol]																
1.9 - 2.0	[Symbol]		[Symbol]																
2.0 - 2.1	[Symbol]		[Symbol]																
2.1 - 2.2	[Symbol]		[Symbol]																
2.2 - 2.3	[Symbol]		[Symbol]																
2.3 - 2.4	[Symbol]		[Symbol]																
2.4 - 2.5	[Symbol]		[Symbol]																
2.5 - 2.6	[Symbol]		[Symbol]																
2.6 - 2.7	[Symbol]		[Symbol]																
2.7 - 2.8	[Symbol]		[Symbol]																
2.8 - 2.9	[Symbol]		[Symbol]																
2.9 - 3.0	[Symbol]		[Symbol]																
3.0 - 3.1	[Symbol]	End of Hole at: 3.00 m	[Symbol]																
3.1 - 3.2	[Symbol]		[Symbol]																
3.2 - 3.3	[Symbol]		[Symbol]																
3.3 - 3.4	[Symbol]		[Symbol]																
3.4 - 3.5	[Symbol]		[Symbol]																
3.5 - 3.6	[Symbol]		[Symbol]																
3.6 - 3.7	[Symbol]		[Symbol]																
3.7 - 3.8	[Symbol]		[Symbol]																
3.8 - 3.9	[Symbol]		[Symbol]																
3.9 - 4.0	[Symbol]		[Symbol]																



CLIENT: Shell Canada Energy	PROJECT: Camp Farewell 2015 Decommissioning and Soil Assessment Program	
LOCATION: Tank Farm	PROJECT NO.: A04012A07	DATE: August 18, 2015
CO-ORDINATES: Not Measured	GROUND ELEVATION: Not Measured	CASING ELEVATION: N/A
HOLE DIA.: 0.15 m	CASING DIA.: N/A	TOTAL DEPTH OF HOLE: 3 m
DRILLING METHOD: Solid Stem Auger	DRILLING CONTRACTOR: CP Drilling	
LOGGED BY: KS	CHECKED BY: NW	Page 1 of 1

DEPTH (m)	SYMBOL	MATERIAL DESCRIPTION	BOREHOLE COMPLETION	COMMENTS	SAMPLE TYPE	OVA (ppm)					EC MEASUREMENTS (dS/m)									
						1000	3000	5000	7000	9000	2	6	10	14	18					
0.0 - 0.2	[Symbol]	GRAVEL Well-graded, (subangular; <25mm), loose, brown, wet.	[Symbol]	Backfilled with bentonite.	Jar	0														
0.2 - 0.8	[Symbol]	TOPSOIL Peat, soft, black, moist, organics.	[Symbol]		Jar	200														
0.8 - 1.0	[Symbol]		[Symbol]		Jar	460														
1.0 - 2.0	[Symbol]	SAND (SP) Fine-grained, poorly graded, compact, grey, wet.	[Symbol]			135														
2.0 - 2.5	[Symbol]		[Symbol]			90														
2.5 - 3.0	[Symbol]		[Symbol]	Backfilled with drill cuttings.	Jar	15														
3.0 - 3.0		End of Hole at: 3.00 m				45														
3.0 - 4.0																				
4.0 - 5.0																				
5.0 - 6.0																				
6.0 - 7.0																				
7.0 - 8.0																				
8.0 - 9.0																				



CLIENT: Shell Canada Energy	PROJECT: Camp Farewell 2015 Decommissioning and Soil Assessment Program	
LOCATION: Tank Farm	PROJECT NO.: A04012A07	DATE: August 18, 2015
CO-ORDINATES: Not Measured	GROUND ELEVATION: Not Measured	CASING ELEVATION: N/A
HOLE DIA.: 0.15 m	CASING DIA.: N/A	TOTAL DEPTH OF HOLE: 1.5 m
DRILLING METHOD: Solid Stem Auger	DRILLING CONTRACTOR: CP Drilling	
LOGGED BY: KS	CHECKED BY: NW	Page 1 of 1

DEPTH (m)	SYMBOL	MATERIAL DESCRIPTION	BOREHOLE COMPLETION	COMMENTS	SAMPLE TYPE	OVA (ppm)					EC MEASUREMENTS (dS/m)								
						1000	3000	5000	7000	9000	2	6	10	14	18				
0.0 - 0.2		GRAVEL Well-graded, trace organics, (subangular; <25mm), loose, brown, wet.		Backfilled with bentonite.	Jar	15					0.85								
0.2 - 0.4		TOPSOIL Peat, soft, black, moist, organics.			Jar						0.44								
0.4 - 1.5		SAND (SP) Fine-grained, poorly graded, compact, grey, wet.		Backfilled with drill cuttings.	Jar						0.23								
1.5 - 1.5		End of Hole at: 1.50 m																	
2.0																			
3.0																			
4.0																			
5.0																			
6.0																			
7.0																			
8.0																			
9.0																			



CLIENT: Shell Canada Energy	PROJECT: Camp Farewell 2015 Decommissioning and Soil Assessment Program	
LOCATION: Tank Farm	PROJECT NO.: A04012A07	DATE: August 18, 2015
CO-ORDINATES: Not Measured	GROUND ELEVATION: Not Measured	CASING ELEVATION: N/A
HOLE DIA.: 0.15 m	CASING DIA.: N/A	TOTAL DEPTH OF HOLE: 3 m
DRILLING METHOD: Solid Stem Auger	DRILLING CONTRACTOR: CP Drilling	
LOGGED BY: KS	CHECKED BY: NW	Page 1 of 1

DEPTH (m)	SYMBOL	MATERIAL DESCRIPTION	BOREHOLE COMPLETION	COMMENTS	SAMPLE TYPE	OVA (ppm)		EC MEASUREMENTS (dS/m)											
						1000	3000	5000	7000	9000	2	6	10	14	18				
0.0 - 0.1		GRAVEL Coarse-grained, well graded, (subangular; <25mm), loose, brown, wet.		Backfilled with bentonite.															
0.1 - 0.2		TOPSOIL Peat, soft, black, moist, organics.			Jar	300													
0.2 - 0.3		SAND (SP) Fine-grained, poorly graded, compact, grey, wet.		Backfilled with drill cuttings.	Jar	1150													
0.3 - 0.4					Jar	710													
0.4 - 0.5					Jar	380													
0.5 - 0.6						65													
0.6 - 0.7						60													
0.7 - 0.8					Jar	45													
0.8 - 0.9																			
0.9 - 1.0																			
1.0 - 1.1																			
1.1 - 1.2																			
1.2 - 1.3																			
1.3 - 1.4																			
1.4 - 1.5																			
1.5 - 1.6																			
1.6 - 1.7																			
1.7 - 1.8																			
1.8 - 1.9																			
1.9 - 2.0																			
2.0 - 2.1																			
2.1 - 2.2																			
2.2 - 2.3																			
2.3 - 2.4																			
2.4 - 2.5																			
2.5 - 2.6																			
2.6 - 2.7																			
2.7 - 2.8																			
2.8 - 2.9																			
2.9 - 3.0																			
3.0 - 3.1		End of Hole at: 3.00 m																	
3.1 - 3.2																			
3.2 - 3.3																			
3.3 - 3.4																			
3.4 - 3.5																			
3.5 - 3.6																			
3.6 - 3.7																			
3.7 - 3.8																			
3.8 - 3.9																			
3.9 - 4.0																			



CLIENT: Shell Canada Energy	PROJECT: Camp Farewell 2015 Decommissioning and Soil Assessment Program	
LOCATION: Tank Farm	PROJECT NO.: A04012A07	DATE: August 18, 2015
CO-ORDINATES: Not Measured	GROUND ELEVATION: Not Measured	CASING ELEVATION: N/A
HOLE DIA.: 0.15 m	CASING DIA.: N/A	TOTAL DEPTH OF HOLE: 3 m
DRILLING METHOD: Solid Stem Auger	DRILLING CONTRACTOR: CP Drilling	
LOGGED BY: KS	CHECKED BY: NW	Page 1 of 1

DEPTH (m)	SYMBOL	MATERIAL DESCRIPTION	BOREHOLE COMPLETION	COMMENTS	SAMPLE TYPE	OVA (ppm)		EC MEASUREMENTS (dS/m)											
						1000	3000	5000	7000	9000	2	6	10	14	18				
0.0 - 0.5	[Symbol]	GRAVEL (FILL) Coarse-grained, well graded, (subangular; <25mm), loose, brown, wet, odour, staining.	[Symbol]	Backfilled with bentonite.	Jar	15													
0.5 - 1.0	[Symbol]	TOPSOIL Peat, soft, black, moist, organics, odour, staining.	[Symbol]		Jar	500													
1.0 - 3.0	[Symbol]	SAND (SP) Fine-grained, poorly graded, compact, grey, wet, odour.	[Symbol]	Backfilled with drill cuttings.		280													
3.0		End of Hole at: 3.00 m			Jar	1300													
3.0 - 4.0						600													
4.0 - 5.0						5													
5.0 - 6.0						5													
6.0 - 7.0					Jar	5													
7.0 - 8.0																			
8.0 - 9.0																			



CLIENT: Shell Canada Energy	PROJECT: Camp Farewell 2015 Decommissioning and Soil Assessment Program	
LOCATION: Tank Farm	PROJECT NO.: A04012A07	DATE: August 19, 2015
CO-ORDINATES: Not Measured	GROUND ELEVATION: Not Measured	CASING ELEVATION: N/A
HOLE DIA.: 0.15 m	CASING DIA.: N/A	TOTAL DEPTH OF HOLE: 1.5 m
DRILLING METHOD: Solid Stem Auger	DRILLING CONTRACTOR: CP Drilling	
LOGGED BY: KS	CHECKED BY: NW	Page 1 of 1

DEPTH (m)	SYMBOL	MATERIAL DESCRIPTION	BOREHOLE COMPLETION	COMMENTS	SAMPLE TYPE	OVA (ppm)		EC MEASUREMENTS (dS/m)											
						1000	3000	5000	7000	9000	2	6	10	14	18				
0.0 - 0.1		GRAVEL Coarse-grained, well graded, (subangular; <25mm), loose, brown, wet.			Jar	X	1000												
0.1 - 0.2		TOPSOIL Peat, soft, black, wet.			Jar	X	1200												
0.2 - 1.5		SAND (SP) Fine-grained, poorly graded, compact, grey, wet.		Backfilled with drill cuttings.	Jar	X	500												
1.5 - 1.5		End of Hole at: 1.50 m			Jar	X	120												
1.5 - 2.0																			
2.0 - 3.0																			
3.0 - 4.0																			
4.0 - 5.0																			
5.0 - 6.0																			
6.0 - 7.0																			
7.0 - 8.0																			
8.0 - 9.0																			
9.0 - 10.0																			

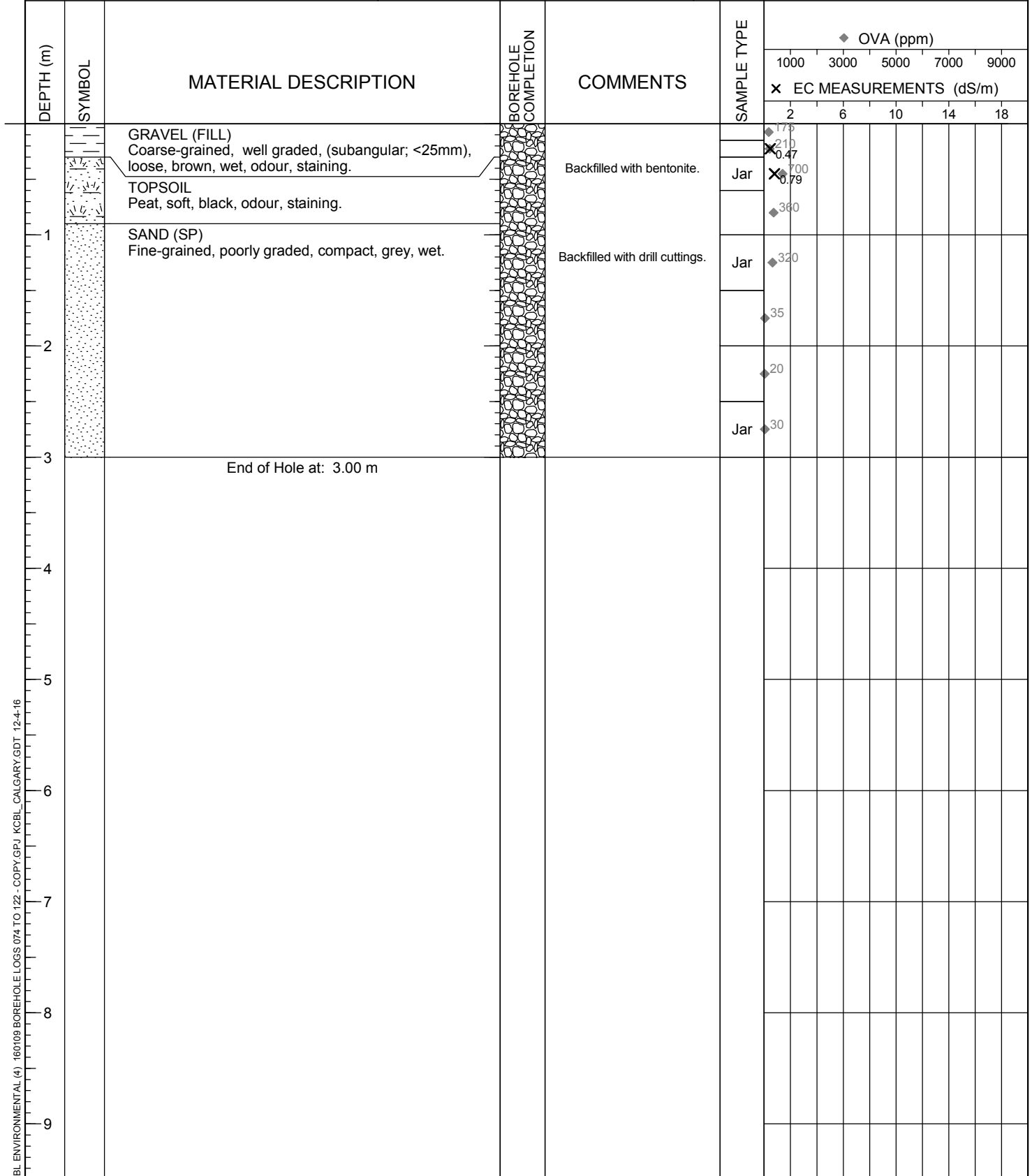


CLIENT: Shell Canada Energy	PROJECT: Camp Farewell 2015 Decommissioning and Soil Assessment Program	
LOCATION: Tank Farm	PROJECT NO.: A04012A07	DATE: August 18, 2015
CO-ORDINATES: Not Measured	GROUND ELEVATION: Not Measured	CASING ELEVATION: N/A
HOLE DIA.: 0.15 m	CASING DIA.: N/A	TOTAL DEPTH OF HOLE: 3 m
DRILLING METHOD: Solid Stem Auger	DRILLING CONTRACTOR: CP Drilling	
LOGGED BY: KS	CHECKED BY: NW	Page 1 of 1

DEPTH (m)	SYMBOL	MATERIAL DESCRIPTION	BOREHOLE COMPLETION	COMMENTS	SAMPLE TYPE	OVA (ppm)		EC MEASUREMENTS (dS/m)											
						1000	3000	5000	7000	9000	2	6	10	14	18				
0.0 - 0.2	[Symbol]	GRAVEL (FILL) Coarse-grained, well graded, (subangular; <25mm), loose, brown, wet, staining.	[Symbol]		Jar	45													
0.2 - 0.5	[Symbol]	TOPSOIL Peat, soft, black, staining.	[Symbol]		Jar	510													
0.5 - 1.0	[Symbol]	SAND (SP) Fine-grained, poorly graded, compact, grey, wet.	[Symbol]	Backfilled with drill cuttings.	Jar	2000													
1.0 - 1.5	[Symbol]		[Symbol]		Jar	1550													
1.5 - 2.0	[Symbol]		[Symbol]		Jar	980													
2.0 - 2.5	[Symbol]		[Symbol]		Jar	40													
2.5 - 3.0	[Symbol]		[Symbol]		Jar	80													
3.0 - 3.0	[Symbol]	End of Hole at: 3.00 m	[Symbol]		Jar	185													
3.0 - 4.0	[Symbol]		[Symbol]																
4.0 - 5.0	[Symbol]		[Symbol]																
5.0 - 6.0	[Symbol]		[Symbol]																
6.0 - 7.0	[Symbol]		[Symbol]																
7.0 - 8.0	[Symbol]		[Symbol]																
8.0 - 9.0	[Symbol]		[Symbol]																



CLIENT: Shell Canada Energy	PROJECT: Camp Farewell 2015 Decommissioning and Soil Assessment Program	
LOCATION: Tank Farm	PROJECT NO.: A04012A07	DATE: August 18, 2015
CO-ORDINATES: Not Measured	GROUND ELEVATION: Not Measured	CASING ELEVATION: N/A
HOLE DIA.: 0.15 m	CASING DIA.: N/A	TOTAL DEPTH OF HOLE: 3 m
DRILLING METHOD: Solid Stem Auger	DRILLING CONTRACTOR: CP Drilling	
LOGGED BY: KS	CHECKED BY: NW	Page 1 of 1





CLIENT: Shell Canada Energy	PROJECT: Camp Farewell 2015 Decommissioning and Soil Assessment Program	
LOCATION: Tank Farm	PROJECT NO.: A04012A07	DATE: August 18, 2015
CO-ORDINATES: Not Measured	GROUND ELEVATION: Not Measured	CASING ELEVATION: N/A
HOLE DIA.: 0.15 m	CASING DIA.: N/A	TOTAL DEPTH OF HOLE: 3 m
DRILLING METHOD: Solid Stem Auger	DRILLING CONTRACTOR: CP Drilling	
LOGGED BY: KS	CHECKED BY: NW	Page 1 of 1

DEPTH (m)	SYMBOL	MATERIAL DESCRIPTION	BOREHOLE COMPLETION	COMMENTS	SAMPLE TYPE	OVA (ppm)					EC MEASUREMENTS (dS/m)									
						1000	3000	5000	7000	9000	2	6	10	14	18					
0.0 - 0.2		GRAVEL Coarse-grained, well graded, (subangular; <25mm), loose, brown, wet.		Backfilled with bentonite.		0														
0.2 - 0.5		TOPSOIL Peat, soft, black, moist.			Jar	230														
0.5 - 3.0		SAND (SP) Fine-grained, poorly graded, compact, grey, wet.		Backfilled with drill cuttings.		300														
0.5 - 1.0					Jar	510														
1.0 - 1.5						200														
1.5 - 2.0					Jar	660														
2.0 - 2.5						160														
2.5 - 3.0						690														
3.0 - 3.5		End of Hole at: 3.00 m				150														
3.5 - 4.0						185														
4.0 - 4.5					Jar	125														
4.5 - 5.0																				
5.0 - 5.5																				
5.5 - 6.0																				
6.0 - 6.5																				
6.5 - 7.0																				
7.0 - 7.5																				
7.5 - 8.0																				
8.0 - 8.5																				
8.5 - 9.0																				

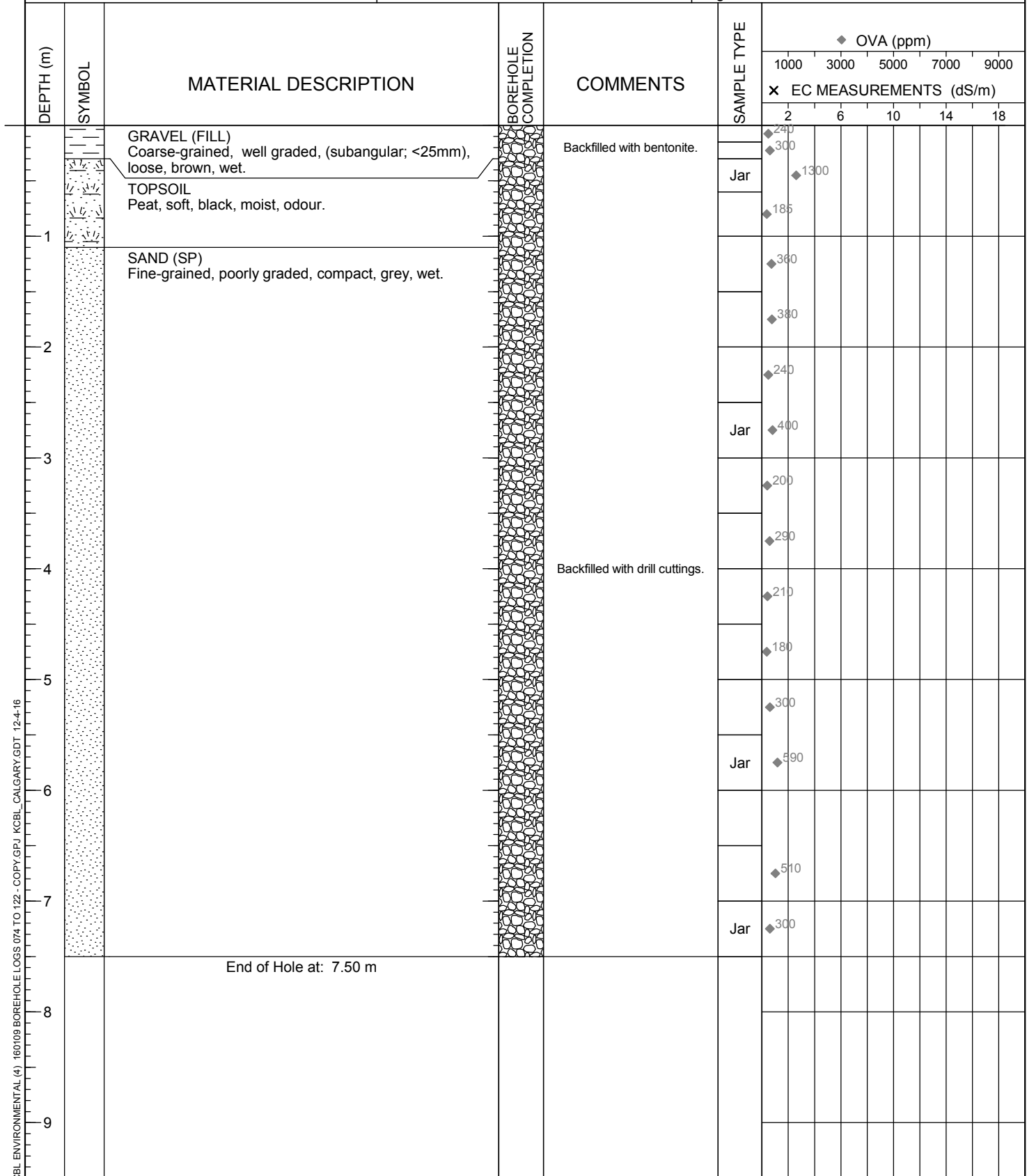


CLIENT: Shell Canada Energy	PROJECT: Camp Farewell 2015 Decommissioning and Soil Assessment Program	
LOCATION: Tank Farm	PROJECT NO.: A04012A07	DATE: August 18, 2015
CO-ORDINATES: Not Measured	GROUND ELEVATION: Not Measured	CASING ELEVATION: N/A
HOLE DIA.: 0.15 m	CASING DIA.: N/A	TOTAL DEPTH OF HOLE: 3 m
DRILLING METHOD: Solid Stem Auger	DRILLING CONTRACTOR: CP Drilling	
LOGGED BY: KS	CHECKED BY: NW	Page 1 of 1

DEPTH (m)	SYMBOL	MATERIAL DESCRIPTION	BOREHOLE COMPLETION	COMMENTS	SAMPLE TYPE	OVA (ppm)					EC MEASUREMENTS (dS/m)									
						1000	3000	5000	7000	9000	2	6	10	14	18					
0.0 - 0.5		GRAVEL (FILL) Coarse-grained, well graded, (subangular; <25mm), loose, brown, wet.		Backfilled with bentonite.		15														
0.5 - 1.0		TOPSOIL Peat, soft, black, moist, odour.			Jar	200	640													
1.0 - 3.0		SAND (SP) Fine-grained, poorly graded, compact, grey, wet.		Backfilled with drill cuttings.	Jar	610														
3.0 - 3.0		End of Hole at: 3.00 m			Jar	20														
3.0 - 3.5						35														
3.5 - 3.8					Jar	15														
3.8 - 4.0																				
4.0 - 5.0																				
5.0 - 6.0																				
6.0 - 7.0																				
7.0 - 8.0																				
8.0 - 9.0																				



CLIENT: Shell Canada Energy	PROJECT: Camp Farewell 2015 Decommissioning and Soil Assessment Program	
LOCATION: Tank Farm	PROJECT NO.: A04012A07	DATE: August 18, 2015
CO-ORDINATES: Not Measured	GROUND ELEVATION: Not Measured	CASING ELEVATION: N/A
HOLE DIA.: 0.15 m	CASING DIA.: N/A	TOTAL DEPTH OF HOLE: 7.5 m
DRILLING METHOD: Solid Stem Auger	DRILLING CONTRACTOR: CP Drilling	
LOGGED BY: KS	CHECKED BY: NW	Page 1 of 1





CLIENT: Shell Canada Energy	PROJECT: Camp Farewell 2015 Decommissioning and Soil Assessment Program	
LOCATION: Tank Farm	PROJECT NO.: A04012A07	DATE: August 18, 2015
CO-ORDINATES: Not Measured	GROUND ELEVATION: Not Measured	CASING ELEVATION: N/A
HOLE DIA.: 0.15 m	CASING DIA.: N/A	TOTAL DEPTH OF HOLE: 3 m
DRILLING METHOD: Solid Stem Auger	DRILLING CONTRACTOR: CP Drilling	
LOGGED BY: KS	CHECKED BY: NW	Page 1 of 1

DEPTH (m)	SYMBOL	MATERIAL DESCRIPTION	BOREHOLE COMPLETION	COMMENTS	SAMPLE TYPE	OVA (ppm)					EC MEASUREMENTS (dS/m)										
						1000	3000	5000	7000	9000	2	6	10	14	18						
0.0 - 0.5		GRAVEL (FILL) Coarse-grained, well graded, (subangular; <25mm), loose, brown, wet, odour, stained.	[Pattern]	Backfilled with bentonite.	Jar	760															
0.5 - 1.0		TOPSOIL Peat, soft, black, wet.					590														
1.0 - 1.5		SAND (SP) Fine-grained, poorly graded, compact, grey, wet.			Backfilled with drill cuttings.	Jar	135														
1.5 - 2.0						15															
2.0 - 2.5						5															
2.5 - 3.0					Jar	70															
3.0 - 3.00		End of Hole at: 3.00 m																			
3.00 - 4.0																					
4.0 - 5.0																					
5.0 - 6.0																					
6.0 - 7.0																					
7.0 - 8.0																					
8.0 - 9.0																					



CLIENT: Shell Canada Energy	PROJECT: Camp Farewell 2015 Decommissioning and Soil Assessment Program	
LOCATION: Tank Farm	PROJECT NO.: A04012A07	DATE: August 18, 2015
CO-ORDINATES: Not Measured	GROUND ELEVATION: Not Measured	CASING ELEVATION: N/A
HOLE DIA.: 0.15 m	CASING DIA.: N/A	TOTAL DEPTH OF HOLE: 3 m
DRILLING METHOD: Solid Stem Auger	DRILLING CONTRACTOR: CP Drilling	
LOGGED BY: KS	CHECKED BY: NW	Page 1 of 1

DEPTH (m)	SYMBOL	MATERIAL DESCRIPTION	BOREHOLE COMPLETION	COMMENTS	SAMPLE TYPE	OVA (ppm)		EC MEASUREMENTS (dS/m)										
						1000	3000	5000	7000	9000	2	6	10	14	18			
0.0 - 0.5	[Symbol]	GRAVEL (FILL) Coarse-grained, well graded, (subangular; <25mm), loose, brown, wet.	[Symbol]	Backfilled with bentonite.	Jar	230												
0.5 - 1.0	[Symbol]	TOPSOIL Peat, soft, black, moist.	[Symbol]	Backfilled with drill cuttings.	Jar	155												
1.0 - 1.5	[Symbol]	SAND (SP) Fine-grained, poorly graded, compact, grey, wet.	[Symbol]		Jar	790												
1.5 - 2.0	[Symbol]	Ice and Gravel	[Symbol]			970												
2.0 - 3.0	[Symbol]		[Symbol]			1050												
3.0 - 3.0		End of Hole at: 3.00 m																
3.0 - 4.0																		
4.0 - 5.0																		
5.0 - 6.0																		
6.0 - 7.0																		
7.0 - 8.0																		
8.0 - 9.0																		



CLIENT: Shell Canada Energy	PROJECT: Camp Farewell 2015 Decommissioning and Soil Assessment Program	
LOCATION: Tank Farm	PROJECT NO.: A04012A07	DATE: August 18, 2015
CO-ORDINATES: Not Measured	GROUND ELEVATION: Not Measured	CASING ELEVATION: N/A
HOLE DIA.: 0.15 m	CASING DIA.: N/A	TOTAL DEPTH OF HOLE: 3 m
DRILLING METHOD: Solid Stem Auger	DRILLING CONTRACTOR: CP Drilling	
LOGGED BY: KS	CHECKED BY: NW	Page 1 of 1

DEPTH (m)	SYMBOL	MATERIAL DESCRIPTION	BOREHOLE COMPLETION	COMMENTS	SAMPLE TYPE	OVA (ppm)					EC MEASUREMENTS (dS/m)									
						1000	3000	5000	7000	9000	2	6	10	14	18					
0.0 - 0.2	[Symbol]	GRAVEL (Fill) Coarse-grained, well graded, (subangular; <25mm), loose, brown, wet.	[Symbol]		Jar	5														
0.2 - 0.8	[Symbol]	TOPSOIL Peat, soft, black, moist.	[Symbol]			860														
0.8 - 3.0	[Symbol]	SAND (SP) Fine-grained, poorly graded, compact, grey, wet.	[Symbol]	Backfilled with drill cuttings.	Jar	410														
3.0 - 3.0		End of Hole at: 3.00 m			Jar	310														
3.0 - 3.2						45														
3.2 - 3.4						35														
3.4 - 3.6					Jar	65														
3.6 - 3.8																				
3.8 - 4.0																				
4.0 - 4.2																				
4.2 - 4.4																				
4.4 - 4.6																				
4.6 - 4.8																				
4.8 - 5.0																				
5.0 - 5.2																				
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8.0 - 8.2																				
8.2 - 8.4																				
8.4 - 8.6																				
8.6 - 8.8																				
8.8 - 9.0																				



CLIENT: Shell Canada Energy	PROJECT: Camp Farewell 2015 Decommissioning and Soil Assessment Program	
LOCATION: Tank Farm	PROJECT NO.: A04012A07	DATE: August 19, 2015
CO-ORDINATES: Not Measured	GROUND ELEVATION: Not Measured	CASING ELEVATION: N/A
HOLE DIA.: 0.15 m	CASING DIA.: N/A	TOTAL DEPTH OF HOLE: 1.5 m
DRILLING METHOD: Solid Stem Auger	DRILLING CONTRACTOR: CP Drilling	
LOGGED BY: KS	CHECKED BY: NW	Page 1 of 1

DEPTH (m)	SYMBOL	MATERIAL DESCRIPTION	BOREHOLE COMPLETION	COMMENTS	SAMPLE TYPE	OVA (ppm)					EC MEASUREMENTS (dS/m)									
						1000	3000	5000	7000	9000	2	6	10	14	18					
0.0 - 0.2	[Symbol]	GRAVEL (FILL) Coarse-grained, well graded, (subangular; <25mm), loose, brown, wet, styrofoam.	[Symbol]	Backfilled with bentonite.	Jar	20														
0.2 - 0.4	[Symbol]	TOPSOIL Peat, soft, black, moist.	[Symbol]		Jar	50														
0.4 - 1.5	[Symbol]	SAND (SP) Fine-grained, poorly graded, compact, grey, wet.	[Symbol]	Backfilled with drill cuttings.	Jar	140														
1.5 - 1.5		End of Hole at: 1.50 m			Jar	70														
1.5 - 2.0						125														
2.0 - 3.0																				
3.0 - 4.0																				
4.0 - 5.0																				
5.0 - 6.0																				
6.0 - 7.0																				
7.0 - 8.0																				
8.0 - 9.0																				



CLIENT: Shell Canada Energy	PROJECT: Camp Farewell 2015 Decommissioning and Soil Assessment Program	
LOCATION: Tank Farm	PROJECT NO.: A04012A07	DATE: August 19, 2015
CO-ORDINATES: Not Measured	GROUND ELEVATION: Not Measured	CASING ELEVATION: N/A
HOLE DIA.: 0.15 m	CASING DIA.: N/A	TOTAL DEPTH OF HOLE: 1.5 m
DRILLING METHOD: Solid Stem Auger	DRILLING CONTRACTOR: CP Drilling	
LOGGED BY: KS	CHECKED BY: NW	Page 1 of 1

DEPTH (m)	SYMBOL	MATERIAL DESCRIPTION	BOREHOLE COMPLETION	COMMENTS	SAMPLE TYPE	OVA (ppm)					EC MEASUREMENTS (dS/m)									
						1000	3000	5000	7000	9000	2	6	10	14	18					
											2	6	10	14	18					
0.0 - 0.2	[Symbol]	GRAVEL Coarse-grained, well graded, (subangular; <25mm), loose, brown, wet.	[Symbol]	Backfilled with bentonite.	5															
0.2 - 0.4	[Symbol]	TOPSOIL Peat, soft, black, moist.	[Symbol]		105															
0.4 - 0.6	[Symbol]	SAND (SP) Fine-grained, poorly graded, compact, grey, wet.	[Symbol]	Backfilled with drill cuttings.	300 0.31															
0.6 - 0.8	[Symbol]		[Symbol]		210 0.52															
0.8 - 1.0	[Symbol]		[Symbol]		110 0.26															
1.0 - 1.5		End of Hole at: 1.50 m																		
1.5 - 2.0																				
2.0 - 2.5																				
2.5 - 3.0																				
3.0 - 3.5																				
3.5 - 4.0																				
4.0 - 4.5																				
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8.5 - 9.0																				
9.0 - 9.5																				
9.5 - 10.0																				



CLIENT: Shell Canada Energy	PROJECT: Camp Farewell 2015 Decommissioning and Soil Assessment Program	
LOCATION: Tank Farm	PROJECT NO.: A04012A07	DATE: August 19, 2015
CO-ORDINATES: Not Measured	GROUND ELEVATION: Not Measured	CASING ELEVATION: N/A
HOLE DIA.: 0.15 m	CASING DIA.: N/A	TOTAL DEPTH OF HOLE: 1.5 m
DRILLING METHOD: Solid Stem Auger	DRILLING CONTRACTOR: CP Drilling	
LOGGED BY: KS	CHECKED BY: NW	Page 1 of 1

DEPTH (m)	SYMBOL	MATERIAL DESCRIPTION	BOREHOLE COMPLETION	COMMENTS	SAMPLE TYPE	OVA (ppm)					EC MEASUREMENTS (dS/m)								
						1000	3000	5000	7000	9000	2	6	10	14	18				
0.0 - 0.2		GRAVEL Coarse-grained, well graded, (subangular; <25mm), loose, brown, wet.		Backfilled with bentonite.	Jar	45					440								
0.2 - 0.3		TOPSOIL Peat, soft, black, moist.			Jar						790								
0.3 - 1.5		SAND (SP) Fine-grained, poorly graded, compact, grey, wet.		Backfilled with drill cuttings.	Jar						145								
1.5 - 1.5		End of Hole at: 1.50 m			Jar						115								
1.5 - 2.0																			
2.0 - 3.0																			
3.0 - 4.0																			
4.0 - 5.0																			
5.0 - 6.0																			
6.0 - 7.0																			
7.0 - 8.0																			
8.0 - 9.0																			

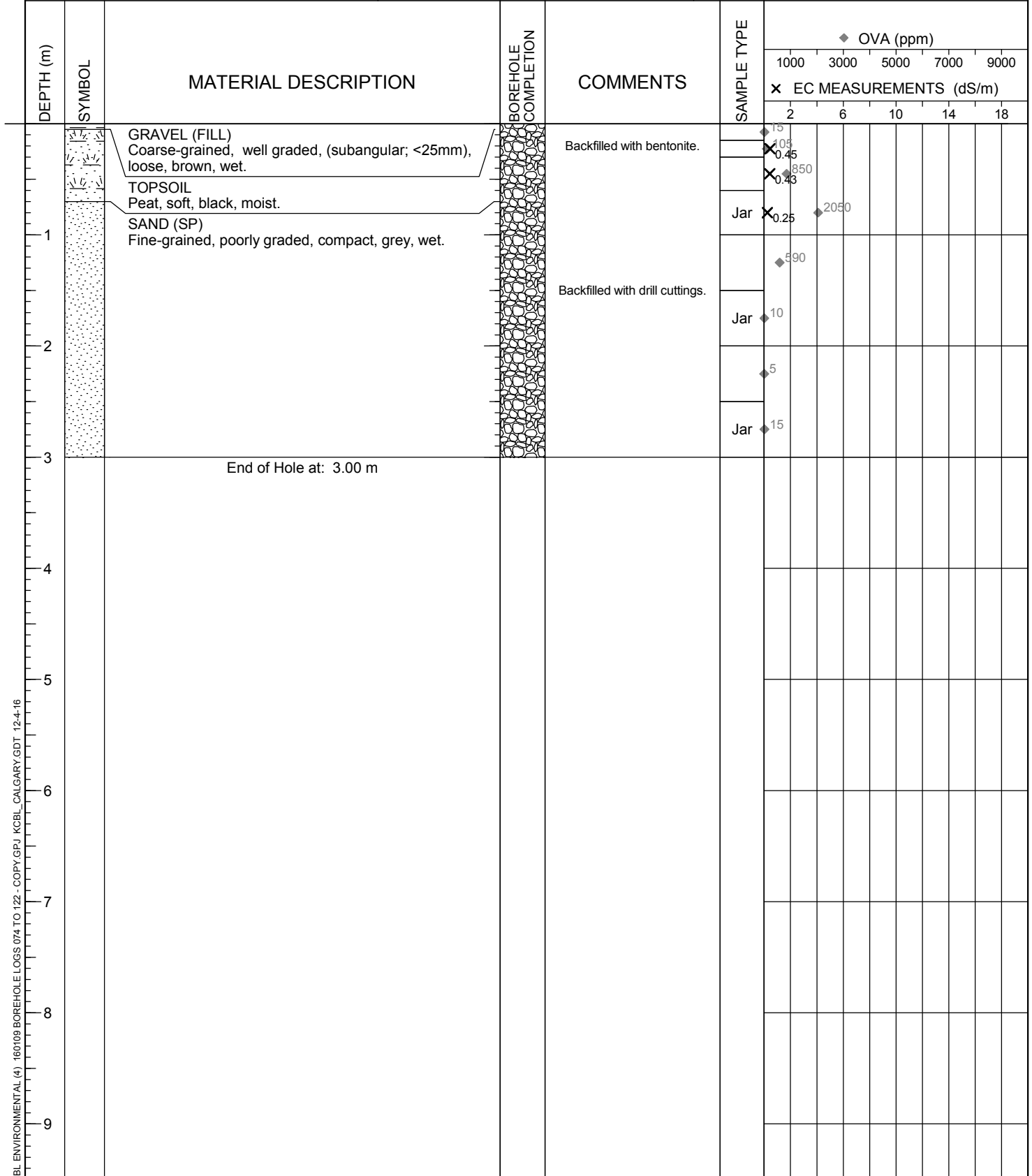


CLIENT: Shell Canada Energy	PROJECT: Camp Farewell 2015 Decommissioning and Soil Assessment Program	
LOCATION: Tank Farm	PROJECT NO.: A04012A07	DATE: August 19, 2015
CO-ORDINATES: Not Measured	GROUND ELEVATION: Not Measured	CASING ELEVATION: N/A
HOLE DIA.: 0.15 m	CASING DIA.: N/A	TOTAL DEPTH OF HOLE: 1.5 m
DRILLING METHOD: Solid Stem Auger	DRILLING CONTRACTOR: CP Drilling	
LOGGED BY: KS	CHECKED BY: NW	Page 1 of 1

DEPTH (m)	SYMBOL	MATERIAL DESCRIPTION	BOREHOLE COMPLETION	COMMENTS	SAMPLE TYPE	OVA (ppm)					EC MEASUREMENTS (dS/m)									
						1000	3000	5000	7000	9000	2	6	10	14	18					
0.0 - 0.1	[Symbol]	GRAVEL (FILL) Coarse-grained, well graded, (subangular; <25mm), loose, brown, wet, styrofoam.	[Symbol]	Backfilled with bentonite.	Jar	15														
0.1 - 0.2	[Symbol]	TOPSOIL Peat, soft, black, moist.	[Symbol]		Jar	160														
0.2 - 0.3	[Symbol]	SAND (SP) Fine-grained, poorly graded, compact, grey, wet.	[Symbol]	Backfilled with drill cuttings.	Jar	290														
0.3 - 1.5		End of Hole at: 1.50 m				310														
1.5 - 2.0						100														
2.0 - 3.0																				
3.0 - 4.0																				
4.0 - 5.0																				
5.0 - 6.0																				
6.0 - 7.0																				
7.0 - 8.0																				
8.0 - 9.0																				



CLIENT: Shell Canada Energy	PROJECT: Camp Farewell 2015 Decommissioning and Soil Assessment Program	
LOCATION: Tank Farm	PROJECT NO.: A04012A07	DATE: August 19, 2015
CO-ORDINATES: Not Measured	GROUND ELEVATION: Not Measured	CASING ELEVATION: N/A
HOLE DIA.: 0.15 m	CASING DIA.: N/A	TOTAL DEPTH OF HOLE: 3 m
DRILLING METHOD: Solid Stem Auger	DRILLING CONTRACTOR: CP Drilling	
LOGGED BY: KS	CHECKED BY: NW	Page 1 of 1





CLIENT: Shell Canada Energy	PROJECT: Camp Farewell 2015 Decommissioning and Soil Assessment Program	
LOCATION: Tank Farm	PROJECT NO.: A04012A07	DATE: August 18, 2015
CO-ORDINATES: Not Measured	GROUND ELEVATION: Not Measured	CASING ELEVATION: N/A
HOLE DIA.: 0.15 m	CASING DIA.: N/A	TOTAL DEPTH OF HOLE: 1.5 m
DRILLING METHOD: Solid Stem Auger	DRILLING CONTRACTOR: CP Drilling	
LOGGED BY: KS	CHECKED BY: NW	Page 1 of 1

DEPTH (m)	SYMBOL	MATERIAL DESCRIPTION	BOREHOLE COMPLETION	COMMENTS	SAMPLE TYPE	OVA (ppm)					EC MEASUREMENTS (dS/m)									
						1000	3000	5000	7000	9000	2	6	10	14	18					
0.00 - 0.35		GRAVEL (FILL) Coarse-grained, well graded, (subangular; <25mm), loose, brown, wet.		Backfilled with bentonite.	Jar															
0.35 - 0.50		TOPSOIL Peat, soft, black, moist.		Backfilled with drill cuttings.	Jar															
0.50 - 1.50		End of Hole at: 1.50 m																		
1.50 - 2.00																				
2.00 - 3.00																				
3.00 - 4.00																				
4.00 - 5.00																				
5.00 - 6.00																				
6.00 - 7.00																				
7.00 - 8.00																				
8.00 - 9.00																				



CLIENT: Shell Canada Energy	PROJECT: Camp Farewell 2015 Decommissioning and Soil Assessment Program	
LOCATION: Tank Farm	PROJECT NO.: A04012A07	DATE: August 19, 2015
CO-ORDINATES: Not Measured	GROUND ELEVATION: Not Measured	CASING ELEVATION: N/A
HOLE DIA.: 0.15 m	CASING DIA.: N/A	TOTAL DEPTH OF HOLE: 1.5 m
DRILLING METHOD: Solid Stem Auger	DRILLING CONTRACTOR: CP Drilling	
LOGGED BY: KS	CHECKED BY: NW	Page 1 of 1

DEPTH (m)	SYMBOL	MATERIAL DESCRIPTION	BOREHOLE COMPLETION	COMMENTS	SAMPLE TYPE	OVA (ppm)					EC MEASUREMENTS (dS/m)									
						1000	3000	5000	7000	9000	2	6	10	14	18					
0.0 - 0.1	[Symbol]	GRAVEL (FILL) Coarse-grained, well graded, (subangular; <25mm), loose, brown, wet, styrofoam.	[Symbol]	Backfilled with bentonite.	Jar	35					270									
0.1 - 0.2	[Symbol]	TOPSOIL Peat, soft, black, moist.	[Symbol]		Jar						360									
0.2 - 1.5	[Symbol]	SAND (SP) Fine-grained, poorly graded, compact, grey, wet.	[Symbol]	Backfilled with drill cuttings.	Jar	510					120									
1.5 - 1.5		End of Hole at: 1.50 m																		
2.0																				
3.0																				
4.0																				
5.0																				
6.0																				
7.0																				
8.0																				
9.0																				



CLIENT: Shell Canada Energy	PROJECT: Camp Farewell 2015 Decommissioning and Soil Assessment Program	
LOCATION: Tank Farm	PROJECT NO.: A04012A07	DATE: August 19, 2015
CO-ORDINATES: Not Measured	GROUND ELEVATION: Not Measured	CASING ELEVATION: N/A
HOLE DIA.: 0.15 m	CASING DIA.: N/A	TOTAL DEPTH OF HOLE: 3 m
DRILLING METHOD: Solid Stem Auger	DRILLING CONTRACTOR: CP Drilling	
LOGGED BY: KS	CHECKED BY: NW	Page 1 of 1

DEPTH (m)	SYMBOL	MATERIAL DESCRIPTION	BOREHOLE COMPLETION	COMMENTS	SAMPLE TYPE	OVA (ppm)					EC MEASUREMENTS (dS/m)									
						1000	3000	5000	7000	9000	2	6	10	14	18					
0.0 - 0.2	[Symbol]	GRAVEL (FILL) Coarse-grained, well graded, (subangular; <25mm), loose, brown, wet, styrofoam.	[Symbol]	Backfilled with bentonite.	Jar	30														
0.2 - 0.4	[Symbol]	TOPSOIL Peat, soft, black, moist.	[Symbol]	Backfilled with bentonite.	Jar	125														
0.4 - 1.0	[Symbol]	SAND (SP) Fine-grained, poorly graded, compact, grey, wet.	[Symbol]	Backfilled with drill cuttings.	Jar	155														
1.0 - 1.5	[Symbol]		[Symbol]		Jar	145														
1.5 - 2.0	[Symbol]		[Symbol]		Jar	35														
2.0 - 2.5	[Symbol]		[Symbol]		Jar	140														
2.5 - 3.0	[Symbol]		[Symbol]		Jar	75														
3.0 - 3.0		End of Hole at: 3.00 m																		
3.0 - 4.0																				
4.0 - 5.0																				
5.0 - 6.0																				
6.0 - 7.0																				
7.0 - 8.0																				
8.0 - 9.0																				



CLIENT: Shell Canada Energy	PROJECT: Camp Farewell 2015 Decommissioning and Soil Assessment Program	
LOCATION: Tank Farm	PROJECT NO.: A04012A07	DATE: August 19, 2015
CO-ORDINATES: Not Measured	GROUND ELEVATION: Not Measured	CASING ELEVATION: N/A
HOLE DIA.: 0.15 m	CASING DIA.: N/A	TOTAL DEPTH OF HOLE: 3 m
DRILLING METHOD: Solid Stem Auger	DRILLING CONTRACTOR: CP Drilling	
LOGGED BY: KS	CHECKED BY: NW	Page 1 of 1

DEPTH (m)	SYMBOL	MATERIAL DESCRIPTION	BOREHOLE COMPLETION	COMMENTS	SAMPLE TYPE	OVA (ppm)					EC MEASUREMENTS (dS/m)									
						1000	3000	5000	7000	9000	2	6	10	14	18					
0.0 - 0.5		GRAVEL (FILL) Coarse-grained, well graded, (subangular; <25mm), loose, brown, wet, styrofoam.		Backfilled with bentonite.	Jar	5														
0.5 - 1.0		TOPSOIL Peat, soft, black, moist.																		
1.0 - 3.0		SAND (SP) Fine-grained, poorly graded, compact, grey, moist.		Backfilled with drill cuttings.	Jar	10														
3.0 - 3.0		End of Hole at: 3.00 m			Jar	5														
3.0 - 4.0																				
4.0 - 5.0																				
5.0 - 6.0																				
6.0 - 7.0																				
7.0 - 8.0																				
8.0 - 9.0																				



CLIENT: Shell Canada Energy	PROJECT: Camp Farewell 2015 Decommissioning and Soil Assessment Program	
LOCATION: Tank Farm	PROJECT NO.: A04012A07	DATE: August 19, 2015
CO-ORDINATES: Not Measured	GROUND ELEVATION: Not Measured	CASING ELEVATION: N/A
HOLE DIA.: 0.15 m	CASING DIA.: N/A	TOTAL DEPTH OF HOLE: 3 m
DRILLING METHOD: Solid Stem Auger	DRILLING CONTRACTOR: CP Drilling	
LOGGED BY: KS	CHECKED BY: NW	Page 1 of 1

DEPTH (m)	SYMBOL	MATERIAL DESCRIPTION	BOREHOLE COMPLETION	COMMENTS	SAMPLE TYPE	OVA (ppm)		EC MEASUREMENTS (dS/m)											
						1000	3000	5000	7000	9000	2	6	10	14	18				
0.0 - 0.5		GRAVEL (FILL) Coarse-grained, well graded, (subangular; <25mm), loose, brown, wet.		Backfilled with bentonite.	Jar	45													
0.5 - 1.0		TOPSOIL Peat, soft, black, moist.		Backfilled with bentonite.	Jar	240													
1.0 - 3.0		SAND (SP) Fine-grained, poorly graded, compact, grey, wet.		Backfilled with drill cuttings.	Jar	1550													
3.0		End of Hole at: 3.00 m			Jar	820													
3.0 - 3.5						350													
3.5 - 4.0						0.71													
4.0 - 4.5						0.54													
4.5 - 5.0						60													
5.0 - 6.0																			
6.0 - 7.0																			
7.0 - 8.0																			
8.0 - 9.0																			



CLIENT: Shell Canada Energy	PROJECT: Camp Farewell 2015 Decommissioning and Soil Assessment Program	
LOCATION: Tank Farm	PROJECT NO.: A04012A07	DATE: August 19, 2015
CO-ORDINATES: Not Measured	GROUND ELEVATION: Not Measured	CASING ELEVATION: N/A
HOLE DIA.: 0.15 m	CASING DIA.: N/A	TOTAL DEPTH OF HOLE: 3 m
DRILLING METHOD: Solid Stem Auger	DRILLING CONTRACTOR: CP Drilling	
LOGGED BY: KS	CHECKED BY: NW	Page 1 of 1

DEPTH (m)	SYMBOL	MATERIAL DESCRIPTION	BOREHOLE COMPLETION	COMMENTS	SAMPLE TYPE	OVA (ppm)					EC MEASUREMENTS (dS/m)									
						1000	3000	5000	7000	9000	2	6	10	14	18					
0.0 - 0.5	[Symbol]	GRAVEL (FILL) Coarse-grained, well graded, (subangular; <25mm), loose, brown, wet, staining, odour.	[Symbol]	Backfilled with bentonite.		20														
0.5 - 1.0	[Symbol]	TOPSOIL Peat, soft, black, moist.	[Symbol]		Bag/Jar	100														
1.0 - 3.0	[Symbol]	SAND (SP) Fine-grained, poorly graded, compact, grey, wet.	[Symbol]	Backfilled with drill cuttings.		510														
3.0		End of Hole at: 3.00 m			Jar	50														
4.0																				
5.0																				
6.0																				
7.0																				
8.0																				
9.0																				



CLIENT: Shell Canada Energy	PROJECT: Camp Farewell 2015 Decommissioning and Soil Assessment Program	
LOCATION: Tank Farm	PROJECT NO.: A04012A07	DATE: August 19, 2015
CO-ORDINATES: Not Measured	GROUND ELEVATION: Not Measured	CASING ELEVATION: N/A
HOLE DIA.: 0.15 m	CASING DIA.: N/A	TOTAL DEPTH OF HOLE: 3 m
DRILLING METHOD: Solid Stem Auger	DRILLING CONTRACTOR: CP Drilling	
LOGGED BY: KS	CHECKED BY: NW	Page 1 of 1

DEPTH (m)	SYMBOL	MATERIAL DESCRIPTION	BOREHOLE COMPLETION	COMMENTS	SAMPLE TYPE	OVA (ppm)		EC MEASUREMENTS (dS/m)											
						1000	3000	5000	7000	9000	2	6	10	14	18				
0.0 - 0.5	[Symbol]	GRAVEL (FILL) Coarse-grained, well graded, (subangular; <25mm), loose, brown, wet.	[Symbol]	Backfilled with bentonite.		10													
0.5 - 1.0	[Symbol]	TOPSOIL Peat, soft, black, moist.	[Symbol]	Backfilled with bentonite.		5													
1.0 - 1.5	[Symbol]		[Symbol]			270													
1.5 - 2.0	[Symbol]	SAND (SP) Fine-grained, poorly graded, compact, grey, wet.	[Symbol]	Backfilled with drill cuttings.	Jar	490													
2.0 - 2.5	[Symbol]		[Symbol]		Jar	790													
2.5 - 3.0	[Symbol]		[Symbol]		Jar	25													
3.0 - 3.5	[Symbol]		[Symbol]			40													
3.5 - 4.0	[Symbol]	End of Hole at: 3.00 m	[Symbol]		Jar	115													
4.0 - 4.5	[Symbol]		[Symbol]																
4.5 - 5.0	[Symbol]		[Symbol]																
5.0 - 5.5	[Symbol]		[Symbol]																
5.5 - 6.0	[Symbol]		[Symbol]																
6.0 - 6.5	[Symbol]		[Symbol]																
6.5 - 7.0	[Symbol]		[Symbol]																
7.0 - 7.5	[Symbol]		[Symbol]																
7.5 - 8.0	[Symbol]		[Symbol]																
8.0 - 8.5	[Symbol]		[Symbol]																
8.5 - 9.0	[Symbol]		[Symbol]																



CLIENT: Shell Canada Energy	PROJECT: Camp Farewell 2015 Decommissioning and Soil Assessment Program	
LOCATION: Tank Farm	PROJECT NO.: A04012A07	DATE: August 19, 2015
CO-ORDINATES: Not Measured	GROUND ELEVATION: Not Measured	CASING ELEVATION: N/A
HOLE DIA.: 0.15 m	CASING DIA.: N/A	TOTAL DEPTH OF HOLE: 1.5 m
DRILLING METHOD: Solid Stem Auger	DRILLING CONTRACTOR: CP Drilling	
LOGGED BY: KS	CHECKED BY: NW	Page 1 of 1

DEPTH (m)	SYMBOL	MATERIAL DESCRIPTION	BOREHOLE COMPLETION	COMMENTS	SAMPLE TYPE	OVA (ppm)					EC MEASUREMENTS (dS/m)				
						1000	3000	5000	7000	9000	2	6	10	14	18
		GRAVEL (FILL) Coarse-grained, well graded, (subangular; <25mm), loose, brown, wet.			Jar										
1		TOPSOIL Peat, soft, black, moist.		Backfilled with drill cuttings.	Jar										
		SAND (SP) Fine-grained, poorly graded, compact, grey, wet.			Jar										
		End of Hole at: 1.50 m													
2															
3															
4															
5															
6															
7															
8															
9															



CLIENT: Shell Canada Energy	PROJECT: Camp Farewell 2015 Decommissioning and Soil Assessment Program	
LOCATION: Tank Farm	PROJECT NO.: A04012A07	DATE: August 19, 2015
CO-ORDINATES: Not Measured	GROUND ELEVATION: Not Measured	CASING ELEVATION: N/A
HOLE DIA.: 0.15 m	CASING DIA.: N/A	TOTAL DEPTH OF HOLE: 1.5 m
DRILLING METHOD: Solid Stem Auger	DRILLING CONTRACTOR: CP Drilling	
LOGGED BY: KS	CHECKED BY: NW	Page 1 of 1

DEPTH (m)	SYMBOL	MATERIAL DESCRIPTION	BOREHOLE COMPLETION	COMMENTS	SAMPLE TYPE	OVA (ppm)		EC MEASUREMENTS (dS/m)										
						1000	3000	5000	7000	9000	2	6	10	14	18			
0.0 - 0.2		GRAVEL (FILL) Coarse-grained, well graded, (subangular; <25mm), loose, brown, wet.			Jar	35												
0.2 - 0.3		TOPSOIL Peat, soft, black, moist.			Jar	1250												
0.3 - 0.4		SAND (SP) Fine-grained, poorly graded, compact, grey, wet.		Backfilled with drill cuttings.		380												
0.4 - 1.5		End of Hole at: 1.50 m			Jar	45												
1.5 - 2.0																		
2.0 - 3.0																		
3.0 - 4.0																		
4.0 - 5.0																		
5.0 - 6.0																		
6.0 - 7.0																		
7.0 - 8.0																		
8.0 - 9.0																		



CLIENT: Shell Canada Energy	PROJECT: Camp Farewell 2015 Decommissioning and Soil Assessment Program	
LOCATION: Tank Farm	PROJECT NO.: A04012A07	DATE: August 19, 2015
CO-ORDINATES: Not Measured	GROUND ELEVATION: Not Measured	CASING ELEVATION: N/A
HOLE DIA.: 0.15 m	CASING DIA.: N/A	TOTAL DEPTH OF HOLE: 1.5 m
DRILLING METHOD: Solid Stem Auger	DRILLING CONTRACTOR: CP Drilling	
LOGGED BY: KS	CHECKED BY: NW	Page 1 of 1

DEPTH (m)	SYMBOL	MATERIAL DESCRIPTION	BOREHOLE COMPLETION	COMMENTS	SAMPLE TYPE	OVA (ppm)					EC MEASUREMENTS (dS/m)									
						1000	3000	5000	7000	9000	2	6	10	14	18					
0.0 - 0.2		GRAVEL (FILL) Coarse-grained, well graded, (subangular; <25mm), loose, brown, wet, styrofoam.		Backfilled with bentonite.	Jar	65														
0.2 - 0.5		TOPSOIL Peat, soft, black, moist.			Jar	300														
0.5 - 1.0		SAND (SP) Fine-grained, poorly graded, compact, grey, wet.			Jar	300														
1.0 - 1.5		End of Hole at: 1.50 m																		
1.5 - 2.0																				
2.0 - 3.0																				
3.0 - 4.0																				
4.0 - 5.0																				
5.0 - 6.0																				
6.0 - 7.0																				
7.0 - 8.0																				
8.0 - 9.0																				



CLIENT: Shell Canada Energy	PROJECT: Camp Farewell 2015 Decommissioning and Soil Assessment Program	
LOCATION: Tank Farm	PROJECT NO.: A04012A07	DATE: August 19, 2015
CO-ORDINATES: Not Measured	GROUND ELEVATION: Not Measured	CASING ELEVATION: N/A
HOLE DIA.: 0.15 m	CASING DIA.: N/A	TOTAL DEPTH OF HOLE: 1.5 m
DRILLING METHOD: Solid Stem Auger	DRILLING CONTRACTOR: CP Drilling	
LOGGED BY: KS	CHECKED BY: NW	Page 1 of 1

DEPTH (m)	SYMBOL	MATERIAL DESCRIPTION	BOREHOLE COMPLETION	COMMENTS	SAMPLE TYPE	OVA (ppm)					EC MEASUREMENTS (dS/m)									
						1000	3000	5000	7000	9000	2	6	10	14	18					
						2	6	10	14	18	2	6	10	14	18					
0.0 - 0.1	[Symbol]	GRAVEL (FILL) Coarse-grained, well graded, (subangular; <25mm), loose, brown, wet, styrofoam.	[Symbol]	Backfilled with bentonite.	Jar	75														
0.1 - 0.2	[Symbol]	TOPSOIL Peat, soft, black, moist.	[Symbol]		Jar	140														
0.2 - 0.3	[Symbol]	SAND (SP) Fine-grained, poorly graded, compact, grey, wet.	[Symbol]	Backfilled with drill cuttings.	Jar	430														
0.3 - 1.5		End of Hole at: 1.50 m																		
1.5 - 2.0																				
2.0 - 3.0																				
3.0 - 4.0																				
4.0 - 5.0																				
5.0 - 6.0																				
6.0 - 7.0																				
7.0 - 8.0																				
8.0 - 9.0																				

KCBL ENVIRONMENTAL (4) 160109 BOREHOLE LOGS 074 TO 122 - COPY.GPJ_KCBL_CALGARY.GDT 12-4-16



CLIENT: Shell Canada Energy	PROJECT: Camp Farewell 2015 Decommissioning and Soil Assessment Program	
LOCATION: Tank Farm	PROJECT NO.: A04012A07	DATE: August 19, 2015
CO-ORDINATES: Not Measured	GROUND ELEVATION: Not Measured	CASING ELEVATION: N/A
HOLE DIA.: 0.15 m	CASING DIA.: N/A	TOTAL DEPTH OF HOLE: 3 m
DRILLING METHOD: Solid Stem Auger	DRILLING CONTRACTOR: CP Drilling	
LOGGED BY: KS	CHECKED BY: NW	Page 1 of 1

DEPTH (m)	SYMBOL	MATERIAL DESCRIPTION	BOREHOLE COMPLETION	COMMENTS	SAMPLE TYPE	OVA (ppm)		EC MEASUREMENTS (dS/m)											
						1000	3000	5000	7000	9000	2	6	10	14	18				
0.0 - 0.2	[Symbol]	GRAVEL (FILL) Coarse-grained, well graded, (subangular; <25mm), loose, brown, wet, odour, staining, styrofoam.	[Symbol]		Bag/Jar	40													
0.2 - 0.5	[Symbol]	TOPSOIL Peat, soft, black, moist.	[Symbol]		Jar	105													
0.5 - 3.0	[Symbol]	SAND (SP) Fine-grained, poorly graded, compact, grey, wet.	[Symbol]	Backfilled with drill cuttings.	Jar	470													
3.0 - 3.0		End of Hole at: 3.00 m			Jar	0													
3.0 - 9.0																			

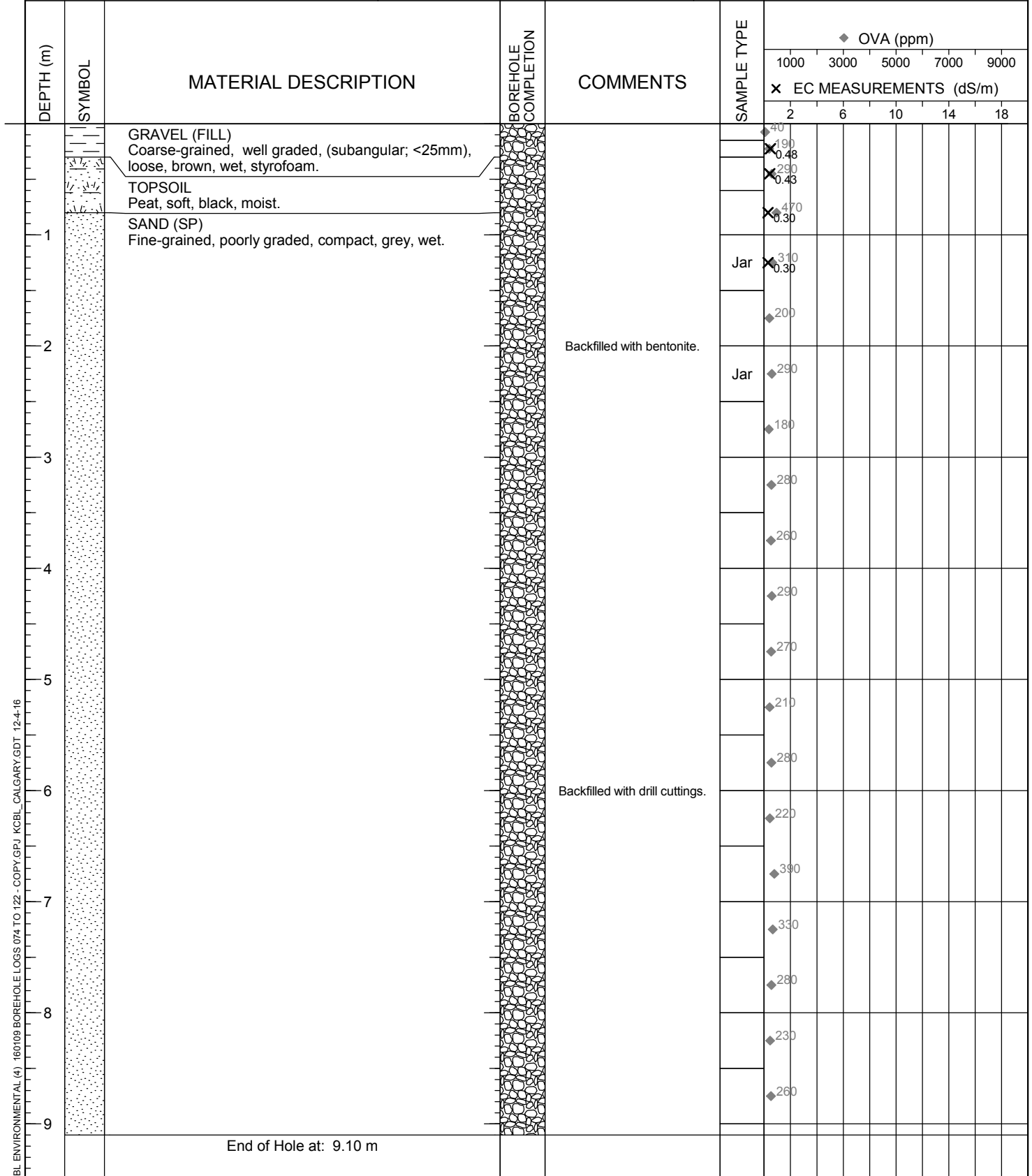


CLIENT: Shell Canada Energy	PROJECT: Camp Farewell 2015 Decommissioning and Soil Assessment Program	
LOCATION: Tank Farm	PROJECT NO.: A04012A07	DATE: August 19, 2015
CO-ORDINATES: Not Measured	GROUND ELEVATION: Not Measured	CASING ELEVATION: N/A
HOLE DIA.: 0.15 m	CASING DIA.: N/A	TOTAL DEPTH OF HOLE: 3 m
DRILLING METHOD: Solid Stem Auger	DRILLING CONTRACTOR: CP Drilling	
LOGGED BY: KS	CHECKED BY: NW	Page 1 of 1

DEPTH (m)	SYMBOL	MATERIAL DESCRIPTION	BOREHOLE COMPLETION	COMMENTS	SAMPLE TYPE	OVA (ppm)					EC MEASUREMENTS (dS/m)							
						1000	3000	5000	7000	9000	2	6	10	14	18			
0.0 - 0.5	[Symbol]	GRAVEL (FILL) Coarse-grained, well graded, (subangular; <25mm), loose, brown, wet, odour, staining, styrofoam.	[Symbol]		Bag/Jar	230					0.47							
0.5 - 1.0	[Symbol]	TOPSOIL Peat, soft, black, moist.	[Symbol]								0.27							
1.0 - 3.0	[Symbol]	SAND (SP) Fine-grained, poorly graded, compact, grey, wet.	[Symbol]	Backfilled with drill cuttings.	Jar						0.27	1850						
3.0 - 3.0		End of Hole at: 3.00 m																



CLIENT: Shell Canada Energy	PROJECT: Camp Farewell 2015 Decommissioning and Soil Assessment Program	
LOCATION: Tank Farm	PROJECT NO.: A04012A07	DATE: August 19, 2015
CO-ORDINATES: Not Measured	GROUND ELEVATION: Not Measured	CASING ELEVATION: N/A
HOLE DIA.: 0.15 m	CASING DIA.: N/A	TOTAL DEPTH OF HOLE: 9.1 m
DRILLING METHOD: Solid Stem Auger	DRILLING CONTRACTOR: CP Drilling	
LOGGED BY: KS	CHECKED BY: NW	Page 1 of 1



KCBL ENVIRONMENTAL (4) 160109 BOREHOLE LOGS 074 TO 122 - COPY.GPJ_KCBL_CALGARY.GDT 12-4-16



CLIENT: Shell Canada Energy	PROJECT: Camp Farewell 2015 Decommissioning and Soil Assessment Program	
LOCATION: Tank Farm	PROJECT NO.: A04012A07	DATE: August 19, 2015
CO-ORDINATES: Not Measured	GROUND ELEVATION: Not Measured	CASING ELEVATION: N/A
HOLE DIA.: 0.15 m	CASING DIA.: N/A	TOTAL DEPTH OF HOLE: 1.5 m
DRILLING METHOD: Solid Stem Auger	DRILLING CONTRACTOR: CP Drilling	
LOGGED BY: KS	CHECKED BY: NW	Page 1 of 1

DEPTH (m)	SYMBOL	MATERIAL DESCRIPTION	BOREHOLE COMPLETION	COMMENTS	SAMPLE TYPE	OVA (ppm)					EC MEASUREMENTS (dS/m)									
						1000	3000	5000	7000	9000	2	6	10	14	18					
						X					X									
0.0 - 0.1	[Symbol]	GRAVEL (FILL) Coarse-grained, well graded, (subangular; <25mm), loose, brown, wet, styrofoam.	[Symbol]	Backfilled with bentonite.	Jar	107														
0.1 - 0.2	[Symbol]	TOPSOIL Peat, soft, black, moist.	[Symbol]		Jar	117														
0.2 - 0.3	[Symbol]	SAND (SP) Fine-grained, poorly graded, compact, grey, wet.	[Symbol]	Backfilled with drill cuttings.	Jar	105														
1.5		End of Hole at: 1.50 m																		
2.0																				
3.0																				
4.0																				
5.0																				
6.0																				
7.0																				
8.0																				
9.0																				



CLIENT: Shell Canada Energy	PROJECT: Camp Farewell 2015 Decommissioning and Soil Assessment Program	
LOCATION: Tank Farm	PROJECT NO.: A04012A07	DATE: August 19, 2015
CO-ORDINATES: Not Measured	GROUND ELEVATION: Not Measured	CASING ELEVATION: N/A
HOLE DIA.: 0.15 m	CASING DIA.: N/A	TOTAL DEPTH OF HOLE: 1.5 m
DRILLING METHOD: Solid Stem Auger	DRILLING CONTRACTOR: CP Drilling	
LOGGED BY: KS	CHECKED BY: NW	Page 1 of 1

DEPTH (m)	SYMBOL	MATERIAL DESCRIPTION	BOREHOLE COMPLETION	COMMENTS	SAMPLE TYPE	OVA (ppm)					EC MEASUREMENTS (dS/m)									
						1000	3000	5000	7000	9000	2	6	10	14	18					
0.0 - 0.2		GRAVEL (FILL) Coarse-grained, well graded, (subangular; <25mm), loose, brown, wet, odour, staining, styrofoam.		Backfilled with bentonite.	Jar	220														
0.2 - 0.3		TOPSOIL Peat, soft, black, moist.			Jar	500														
0.3 - 1.5		SAND (SP) Fine-grained, poorly graded, compact, grey, wet.		Backfilled with drill cuttings.	Jar	700														
1.5 - 1.5		End of Hole at: 1.50 m			Jar	200														
1.5 - 2.0						15														
2.0 - 3.0																				
3.0 - 4.0																				
4.0 - 5.0																				
5.0 - 6.0																				
6.0 - 7.0																				
7.0 - 8.0																				
8.0 - 9.0																				



CLIENT: Shell Canada Energy	PROJECT: Camp Farewell 2015 Decommissioning and Soil Assessment Program	
LOCATION: Tank Farm	PROJECT NO.: A04012A07	DATE: August 19, 2015
CO-ORDINATES: Not Measured	GROUND ELEVATION: Not Measured	CASING ELEVATION: N/A
HOLE DIA.: 0.15 m	CASING DIA.: N/A	TOTAL DEPTH OF HOLE: 3 m
DRILLING METHOD: Solid Stem Auger	DRILLING CONTRACTOR: CP Drilling	
LOGGED BY: KS	CHECKED BY: NW	Page 1 of 1

DEPTH (m)	SYMBOL	MATERIAL DESCRIPTION	BOREHOLE COMPLETION	COMMENTS	SAMPLE TYPE	OVA (ppm)		EC MEASUREMENTS (dS/m)											
						1000	3000	5000	7000	9000	2	6	10	14	18				
0.0 - 0.2	[Symbol]	GRAVEL (FILL) Coarse-grained, well graded, (subangular; <25mm), loose, brown, wet.	[Symbol]	Backfilled with bentonite.	Jar	20													
0.2 - 0.8	[Symbol]	TOPSOIL Peat, soft, black, moist.	[Symbol]			0.72													
0.8 - 1.0	[Symbol]		[Symbol]			0.49													
1.0 - 3.0	[Symbol]	SAND (SP) Fine-grained, poorly graded, compact, grey, wet.	[Symbol]	Backfilled with drill cuttings.	Jar	1050													
3.0 - 3.0		End of Hole at: 3.00 m			Jar	195													
3.0 - 3.2						0													
3.2 - 3.4						5													
3.4 - 3.6					Jar	5													
3.6 - 3.8																			
3.8 - 4.0																			
4.0 - 4.2																			
4.2 - 4.4																			
4.4 - 4.6																			
4.6 - 4.8																			
4.8 - 5.0																			
5.0 - 5.2																			
5.2 - 5.4																			
5.4 - 5.6																			
5.6 - 5.8																			
5.8 - 6.0																			
6.0 - 6.2																			
6.2 - 6.4																			
6.4 - 6.6																			
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6.8 - 7.0																			
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7.8 - 8.0																			
8.0 - 8.2																			
8.2 - 8.4																			
8.4 - 8.6																			
8.6 - 8.8																			
8.8 - 9.0																			



CLIENT: Shell Canada Energy	PROJECT: Camp Farewell 2015 Decommissioning and Soil Assessment Program	
LOCATION: Burn Pit	PROJECT NO.: A04012A07	DATE: August 20, 2015
CO-ORDINATES: Not Measured	GROUND ELEVATION: Not Measured	CASING ELEVATION: N/A
HOLE DIA.: 0.15 m	CASING DIA.: N/A	TOTAL DEPTH OF HOLE: 1.5 m
DRILLING METHOD: Solid Stem Auger	DRILLING CONTRACTOR: CP Drilling	
LOGGED BY: KS	CHECKED BY: NW	Page 1 of 1

DEPTH (m)	SYMBOL	MATERIAL DESCRIPTION	BOREHOLE COMPLETION	COMMENTS	SAMPLE TYPE	OVA (ppm)					EC MEASUREMENTS (dS/m)								
						1000	3000	5000	7000	9000	2	6	10	14	18				
0.00 - 0.15		GRAVEL (FILL) Coarse-grained, well graded, (subangular; <25mm), loose, brown, wet.		Backfilled with bentonite.	Bag/Jar	0.00													
0.15 - 0.25		TOPSOIL Peat, soft, black, moist.			Bag/Jar	0.25													
0.25 - 1.50		SAND (SP) Fine-grained, poorly graded, compact, grey, wet.		Backfilled with drill cuttings.	Bag/Jar	0.00													
1.50 - 1.50		End of Hole at: 1.50 m																	
2.00																			
3.00																			
4.00																			
5.00																			
6.00																			
7.00																			
8.00																			
9.00																			



CLIENT: Shell Canada Energy	PROJECT: Camp Farewell 2015 Decommissioning and Soil Assessment Program	
LOCATION: Burn Pit	PROJECT NO.: A04012A07	DATE: August 20, 2015
CO-ORDINATES: Not Measured	GROUND ELEVATION: Not Measured	CASING ELEVATION: N/A
HOLE DIA.: 0.15 m	CASING DIA.: N/A	TOTAL DEPTH OF HOLE: 1.5 m
DRILLING METHOD: Solid Stem Auger	DRILLING CONTRACTOR: CP Drilling	
LOGGED BY: KS	CHECKED BY: NW	Page 1 of 1

DEPTH (m)	SYMBOL	MATERIAL DESCRIPTION	BOREHOLE COMPLETION	COMMENTS	SAMPLE TYPE	OVA (ppm)					EC MEASUREMENTS (dS/m)									
						1000	3000	5000	7000	9000	2	6	10	14	18					
											2	6	10	14	18					
0.00 - 0.05		TOPSOIL Peat, soft, black, moist.				0.41														
0.05 - 0.15		SAND (SP) Fine-grained, poorly graded, compact, grey, wet.				0.20														
0.15 - 1.50				Backfilled with bentonite.	Bag/Jar	0.35														
1.00 - 1.10					Bag/Jar	0.10														
1.40 - 1.50					Bag/Jar	0.15														
1.50 - 1.50		End of Hole at: 1.50 m				0.27														
2.00																				
3.00																				
4.00																				
5.00																				
6.00																				
7.00																				
8.00																				
9.00																				



CLIENT: Shell Canada Energy	PROJECT: Camp Farewell 2015 Decommissioning and Soil Assessment Program	
LOCATION: Tundra	PROJECT NO.: A04012A07	DATE: August 20, 2015
CO-ORDINATES: Not Measured	GROUND ELEVATION: Not Measured	CASING ELEVATION: N/A
HOLE DIA.: 0.15 m	CASING DIA.: N/A	TOTAL DEPTH OF HOLE: 0.3 m
DRILLING METHOD: Solid Stem Auger	DRILLING CONTRACTOR: CP Drilling	
LOGGED BY: KS	CHECKED BY: NW	Page 1 of 1

DEPTH (m)	SYMBOL	MATERIAL DESCRIPTION	BOREHOLE COMPLETION	COMMENTS	SAMPLE TYPE	OVA (ppm)					EC MEASUREMENTS (dS/m)								
						1000	3000	5000	7000	9000	2	6	10	14	18				
0.00		PEAT Soft, black, wet.		Backfilled with drill cuttings.	Bag/Jar	0.31													
0.30		SAND Sand and ice, frozen.																	
1.00		End of Hole at: 0.30 m																	
2.00																			
3.00																			
4.00																			
5.00																			
6.00																			
7.00																			
8.00																			
9.00																			



CLIENT: Shell Canada Energy	PROJECT: Camp Farewell 2015 Decommissioning and Soil Assessment Program	
LOCATION: Tundra	PROJECT NO.: A04012A07	DATE: August 20, 2015
CO-ORDINATES: Not Measured	GROUND ELEVATION: Not Measured	CASING ELEVATION: N/A
HOLE DIA.: 0.15 m	CASING DIA.: N/A	TOTAL DEPTH OF HOLE: 0.3 m
DRILLING METHOD: Solid Stem Auger	DRILLING CONTRACTOR: CP Drilling	
LOGGED BY: KS	CHECKED BY: NW	Page 1 of 1

DEPTH (m)	SYMBOL	MATERIAL DESCRIPTION	BOREHOLE COMPLETION	COMMENTS	SAMPLE TYPE	OVA (ppm)					EC MEASUREMENTS (dS/m)				
						1000	3000	5000	7000	9000	2	6	10	14	18
0.0		PEAT Soft, black, wet.		Backfilled with drill cuttings.	Bag										
0.0		SAND Sand and ice, frozen.			Bag										
0.3		End of Hole at: 0.30 m													
1.0															
2.0															
3.0															
4.0															
5.0															
6.0															
7.0															
8.0															
9.0															



CLIENT: Shell Canada Energy	PROJECT: Camp Farewell 2015 Decommissioning and Soil Assessment Program	
LOCATION: Tundra	PROJECT NO.: A04012A07	DATE: August 20, 2015
CO-ORDINATES: Not Measured	GROUND ELEVATION: Not Measured	CASING ELEVATION: N/A
HOLE DIA.: 0.15 m	CASING DIA.: N/A	TOTAL DEPTH OF HOLE: 0.3 m
DRILLING METHOD: Solid Stem Auger	DRILLING CONTRACTOR: CP Drilling	
LOGGED BY: KS	CHECKED BY: NW	Page 1 of 1

DEPTH (m)	SYMBOL	MATERIAL DESCRIPTION	BOREHOLE COMPLETION	COMMENTS	SAMPLE TYPE	OVA (ppm)					EC MEASUREMENTS (dS/m)				
						1000	3000	5000	7000	9000	2	6	10	14	18
0		PEAT Soft, black, wet.		Backfilled with drill cuttings.	Bag/Jar										
0.30		SAND Sand and ice, frozen.													
1															
2															
3															
4															
5															
6															
7															
8															
9															



CLIENT: Shell Canada Energy	PROJECT: Camp Farewell 2015 Decommissioning and Soil Assessment Program	
LOCATION: Tundra	PROJECT NO.: A04012A07	DATE: August 20, 2015
CO-ORDINATES: Not Measured	GROUND ELEVATION: Not Measured	CASING ELEVATION: N/A
HOLE DIA.: 0.15 m	CASING DIA.: N/A	TOTAL DEPTH OF HOLE: 0.3 m
DRILLING METHOD: Solid Stem Auger	DRILLING CONTRACTOR: CP Drilling	
LOGGED BY: KS	CHECKED BY: NW	Page 1 of 1

DEPTH (m)	SYMBOL	MATERIAL DESCRIPTION	BOREHOLE COMPLETION	COMMENTS	SAMPLE TYPE	OVA (ppm)					EC MEASUREMENTS (dS/m)				
						1000	3000	5000	7000	9000	2	6	10	14	18
						◆	◆	◆	◆	◆	×	×	×	×	×
0.00		PEAT Soft, black, wet.		Backfilled with drill cuttings.	Bag ◆										
0.00		SAND Sand and ice, frozen.			Bag ◆										
0.30		End of Hole at: 0.30 m													
1.00															
2.00															
3.00															
4.00															
5.00															
6.00															
7.00															
8.00															
9.00															



CLIENT: Shell Canada Energy	PROJECT: Camp Farewell 2015 Decommissioning and Soil Assessment Program	
LOCATION: Tundra	PROJECT NO.: A04012A07	DATE: August 20, 2015
CO-ORDINATES: Not Measured	GROUND ELEVATION: Not Measured	CASING ELEVATION: N/A
HOLE DIA.: 0.15 m	CASING DIA.: N/A	TOTAL DEPTH OF HOLE: 0.3 m
DRILLING METHOD: Solid Stem Auger	DRILLING CONTRACTOR: CP Drilling	
LOGGED BY: KS	CHECKED BY: NW	Page 1 of 1

DEPTH (m)	SYMBOL	MATERIAL DESCRIPTION	BOREHOLE COMPLETION	COMMENTS	SAMPLE TYPE	OVA (ppm)					EC MEASUREMENTS (dS/m)								
						1000	3000	5000	7000	9000	2	6	10	14	18				
						◆	◆	◆	◆	◆	×	×	×	×	×				
0.00		PEAT Soft, black, wet.			Bag														
0.00		SAND Sand and ice, frozen.		Backfilled with drill cuttings.	Bag														
0.30		End of Hole at: 0.30 m																	
1.00																			
2.00																			
3.00																			
4.00																			
5.00																			
6.00																			
7.00																			
8.00																			
9.00																			



CLIENT: Shell Canada Energy	PROJECT: Camp Farewell 2015 Decommissioning and Soil Assessment Program	
LOCATION: Tundra	PROJECT NO.: A04012A07	DATE: August 20, 2015
CO-ORDINATES: Not Measured	GROUND ELEVATION: Not Measured	CASING ELEVATION: N/A
HOLE DIA.: 0.15 m	CASING DIA.: N/A	TOTAL DEPTH OF HOLE: 0.3 m
DRILLING METHOD: Solid Stem Auger	DRILLING CONTRACTOR: CP Drilling	
LOGGED BY: KS	CHECKED BY: NW	Page 1 of 1

DEPTH (m)	SYMBOL	MATERIAL DESCRIPTION	BOREHOLE COMPLETION	COMMENTS	SAMPLE TYPE	OVA (ppm)					EC MEASUREMENTS (dS/m)				
						1000	3000	5000	7000	9000	2	6	10	14	18
											0.00	0.00			
0.00		PEAT Soft, black, wet.		Backfilled with drill cuttings.	Bag/Jar										
0.30		SAND Sand and ice, frozen.													
1.00															
2.00															
3.00															
4.00															
5.00															
6.00															
7.00															
8.00															
9.00															



CLIENT: Shell Canada Energy	PROJECT: Camp Farewell 2015 Decommissioning and Soil Assessment Program	
LOCATION: Tundra	PROJECT NO.: A04012A07	DATE: August 20, 2015
CO-ORDINATES: Not Measured	GROUND ELEVATION: Not Measured	CASING ELEVATION: N/A
HOLE DIA.: 0.15 m	CASING DIA.: N/A	TOTAL DEPTH OF HOLE: 0.3 m
DRILLING METHOD: Solid Stem Auger	DRILLING CONTRACTOR: CP Drilling	
LOGGED BY: KS	CHECKED BY: NW	Page 1 of 1

DEPTH (m)	SYMBOL	MATERIAL DESCRIPTION	BOREHOLE COMPLETION	COMMENTS	SAMPLE TYPE	OVA (ppm)					EC MEASUREMENTS (dS/m)				
						1000	3000	5000	7000	9000	2	6	10	14	18
0		PEAT Soft, black, wet.		Backfilled with drill cuttings.	Bag/Jar										
0.30		SAND Sand and ice, frozen.													
1															
2															
3															
4															
5															
6															
7															
8															
9															



CLIENT: Shell Canada Energy	PROJECT: Camp Farewell 2015 Decommissioning and Soil Assessment Program	
LOCATION: Tundra	PROJECT NO.: A04012A07	DATE: August 20, 2015
CO-ORDINATES: Not Measured	GROUND ELEVATION: Not Measured	CASING ELEVATION: N/A
HOLE DIA.: 0.15 m	CASING DIA.: N/A	TOTAL DEPTH OF HOLE: 1.5 m
DRILLING METHOD: Solid Stem Auger	DRILLING CONTRACTOR: CP Drilling	
LOGGED BY: KS	CHECKED BY: NW	Page 1 of 1

DEPTH (m)	SYMBOL	MATERIAL DESCRIPTION	BOREHOLE COMPLETION	COMMENTS	SAMPLE TYPE	OVA (ppm)					EC MEASUREMENTS (dS/m)								
						1000	3000	5000	7000	9000	2	6	10	14	18				
											2	6	10	14	18				
0.00 - 0.18		SAND (SP) Fine-grained, poorly graded, loose, brown.		Backfilled with drill cuttings.	Bag/Jar	0.18													
0.18 - 0.20		TOPSOIL Peat, soft, black, moist.			Jar	0.20													
0.20 - 0.39		SAND (SP) Fine-grained, poorly graded, compact, grey, wet.			Jar	0.39													
1.50		End of Hole at: 1.50 m																	



**CLIENT NAME: KLOHN CRIPPEN
500-2618 HOPEWELL PLACE NE
CALGARY, AB T1Y7J7
(403) 274-3424**

ATTENTION TO: Nicole Wills

PROJECT: A04012A07

AGAT WORK ORDER: 15E009548

SOIL ANALYSIS REVIEWED BY: Michael Beach, Reporter

TRACE ORGANICS REVIEWED BY: Ngoc (Ruby) Vu, Lab Technician

DATE REPORTED: Aug 29, 2015

PAGES (INCLUDING COVER): 35

VERSION*: 1

Should you require any information regarding this analysis please contact your client services representative at (780) 395-2525

*NOTES

All samples will be disposed of within 30 days following analysis. Please contact the lab if you require additional sample storage time.



Certificate of Analysis

AGAT WORK ORDER: 15E009548

PROJECT: A04012A07

6310 ROPER ROAD
EDMONTON, ALBERTA
CANADA T6B 3P9
TEL (780)395-2525
FAX (780)462-2490
<http://www.agatlabs.com>

CLIENT NAME: KLOHN CRIPPEN

ATTENTION TO: Nicole Wills

SAMPLING SITE:

SAMPLED BY:

CCME / Tier 1 Metals

DATE RECEIVED: 2015-08-19

DATE REPORTED: 2015-08-27

Parameter	Unit	SAMPLE DESCRIPTION:		BH15-001 (0.	BH15-001 (2.	BH15-001 (3.	BH15-001 (5.	BH15-001 (5.		BH15-002 (0.	
		Soil		15-0.3)	5-3.0)	5-4.0)	0-5.5)	5-6.0)		3-0.6)	
		Soil		Soil	Soil	Soil	Soil	Soil		Soil	
		DATE SAMPLED:		8/14/2015	8/14/2015	8/14/2015	8/14/2015	8/14/2015		8/14/2015	
		G / S	RDL	6882353	6882355	6882357	6882358	RDL	6882359	RDL	6882360
Antimony	mg/kg	20	0.5	<0.5	<0.5	<0.5	<0.5	0.5	<0.5	0.5	<0.5
Arsenic	mg/kg	17	0.5	5.5	4.3	4.7	5.3	0.5	5.8	0.5	4.9
Barium	mg/kg	750	0.5	291	95.2	105	138	0.5	122	0.5	120
Beryllium	mg/kg	5	0.5	<0.5	<0.5	<0.5	<0.5	0.5	<0.5	0.5	<0.5
Cadmium	mg/kg	1.4	0.5	<0.5	<0.5	<0.5	<0.5	0.5	<0.5	0.5	<0.5
Chromium	mg/kg	64	0.5	15.1	9.3	13.1	13.2	0.5	8.9	0.5	10.0
Cobalt	mg/kg	20	0.5	3.0	3.3	3.5	4.4	0.5	4.3	0.5	4.5
Copper	mg/kg	63	0.5	4.3	3.3	3.3	5.4	5	52	0.5	2.7
Lead	mg/kg	70	0.5	5.3	2.4	2.8	3.5	0.5	5.6	0.5	3.1
Molybdenum	mg/kg	4	0.5	1.2	0.7	1.0	1.2	0.5	0.8	0.5	0.6
Nickel	mg/kg	50	0.5	10.5	10.1	11.4	13.4	0.5	11.1	0.5	9.8
Selenium	mg/kg	1	0.5	<0.5	<0.5	<0.5	<0.5	0.5	<0.5	0.5	<0.5
Silver	mg/kg	20	0.5	<0.5	<0.5	<0.5	<0.5	0.5	<0.5	0.5	<0.5
Thallium	mg/kg	1	0.5	<0.5	<0.5	<0.5	<0.5	0.5	<0.5	0.5	<0.5
Tin	mg/kg	5	0.5	<0.5	<0.5	<0.5	<0.5	0.5	<0.5	0.5	<0.5
Uranium	mg/kg	23	0.5	<0.5	<0.5	<0.5	<0.5	0.5	<0.5	0.5	<0.5
Vanadium	mg/kg	130	0.5	17.5	11.9	13.5	15.1	0.5	15.3	0.5	15.5
Zinc	mg/kg	200	1	22	19	20	30	1	59	1	21

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Certificate of Analysis

AGAT WORK ORDER: 15E009548

PROJECT: A04012A07

6310 ROPER ROAD
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CLIENT NAME: KLOHN CRIPPEN

ATTENTION TO: Nicole Wills

SAMPLING SITE:

SAMPLED BY:

CCME / Tier 1 Metals

DATE RECEIVED: 2015-08-19

DATE REPORTED: 2015-08-27

Parameter	Unit	SAMPLE DESCRIPTION:		BH15-002 (1.	BH15-002 (2.	BH15-001	BH15-001 (4.	BH15-003 (0.	BH15-003 (0.	BH15-003 (1.	BH15-004 (0.	
		G / S	RDL	0-1.5)	5-3.0)	(2.02.5)	0-4.5)	3-0.6)	6-1.0)	0-1.5)	6-1.0)	
		SAMPLE TYPE:		Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil
		DATE SAMPLED:		8/14/2015	8/14/2015	8/14/2015	8/14/2015	8/14/2015	8/14/2015	8/14/2015	8/14/2015	8/14/2015
		6882362	6882363	6882414	6882415	6882416	6882417	6882418	6882419	6882419		
Antimony	mg/kg	20	0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	
Arsenic	mg/kg	17	0.5	5.5	4.6	4.4	5.1	6.2	6.3	5.9	5.0	
Barium	mg/kg	750	0.5	108	107	99.9	108	160	116	117	239	
Beryllium	mg/kg	5	0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	
Cadmium	mg/kg	1.4	0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	
Chromium	mg/kg	64	0.5	8.3	10.7	8.7	12.0	10.4	8.4	8.6	15.6	
Cobalt	mg/kg	20	0.5	4.0	3.5	3.3	3.9	4.7	4.2	4.0	3.6	
Copper	mg/kg	63	0.5	3.0	3.7	3.5	4.5	6.9	4.9	4.7	5.0	
Lead	mg/kg	70	0.5	3.3	3.4	3.2	3.0	4.3	3.4	3.4	4.7	
Molybdenum	mg/kg	4	0.5	0.5	0.8	0.6	0.9	<0.5	1.0	0.6	0.9	
Nickel	mg/kg	50	0.5	10.6	10.1	9.5	11.7	12.8	12.8	11.3	10.6	
Selenium	mg/kg	1	0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.5	
Silver	mg/kg	20	0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	
Thallium	mg/kg	1	0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	
Tin	mg/kg	5	0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	
Uranium	mg/kg	23	0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	
Vanadium	mg/kg	130	0.5	15.7	13.2	12.4	14.1	20.1	17.0	15.3	21.2	
Zinc	mg/kg	200	1	24	22	19	27	24	25	23	18	

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AGAT WORK ORDER: 15E009548

PROJECT: A04012A07

6310 ROPER ROAD
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<http://www.agatlabs.com>

CLIENT NAME: KLOHN CRIPPEN

ATTENTION TO: Nicole Wills

SAMPLING SITE:

SAMPLED BY:

CCME / Tier 1 Metals

DATE RECEIVED: 2015-08-19

DATE REPORTED: 2015-08-27

Parameter	Unit	SAMPLE DESCRIPTION:		BH15-004 (1.	BH15-004 (2.	BH15-005 (0.	BH15-005 (1.	BH15-005 (2.	BH15-006 (0.	BH15-006 (1.	BH15-006 (2.	
		G / S	RDL	5-2.0)	5-3.0)	6-1.0)	0-1.5)	5-3.0)	6-1.0)	0-1.5)	0-2.5)	
		SAMPLE TYPE:		Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil
		DATE SAMPLED:		8/14/2015	8/14/2015	8/14/2015	8/14/2015	8/14/2015	8/14/2015	8/14/2015	8/14/2015	8/14/2015
		6882420	6882421	6882422	6882423	6882424	6882425	6882426	6882427	6882427		
Antimony	mg/kg	20	0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	
Arsenic	mg/kg	17	0.5	5.3	6.2	4.7	2.7	6.0	3.6	3.7	5.1	
Barium	mg/kg	750	0.5	135	152	337	181	142	319	271	231	
Beryllium	mg/kg	5	0.5	<0.5	<0.5	0.6	<0.5	<0.5	<0.5	<0.5	<0.5	
Cadmium	mg/kg	1.4	0.5	<0.5	<0.5	0.5	<0.5	<0.5	<0.5	<0.5	<0.5	
Chromium	mg/kg	64	0.5	9.5	10.2	14.3	9.6	17.9	17.3	20.0	18.4	
Cobalt	mg/kg	20	0.5	3.4	3.9	7.0	3.2	3.7	4.8	3.6	2.2	
Copper	mg/kg	63	0.5	3.6	4.8	13.0	6.8	4.0	5.5	10.4	4.0	
Lead	mg/kg	70	0.5	3.4	3.7	5.1	2.5	3.6	5.6	5.3	5.5	
Molybdenum	mg/kg	4	0.5	0.8	0.8	0.6	0.9	1.7	1.3	1.2	1.4	
Nickel	mg/kg	50	0.5	9.1	10.6	23.9	9.6	13.2	12.6	14.8	10.5	
Selenium	mg/kg	1	0.5	<0.5	<0.5	1.7	0.8	<0.5	0.9	0.9	<0.5	
Silver	mg/kg	20	0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	
Thallium	mg/kg	1	0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	
Tin	mg/kg	5	0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.5	<0.5	
Uranium	mg/kg	23	0.5	<0.5	<0.5	1.8	0.6	<0.5	<0.5	0.8	<0.5	
Vanadium	mg/kg	130	0.5	16.0	15.6	25.3	10.9	13.8	25.2	22.4	17.2	
Zinc	mg/kg	200	1	21	24	17	10	24	15	63	13	

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AGAT WORK ORDER: 15E009548

PROJECT: A04012A07

6310 ROPER ROAD
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FAX (780)462-2490
<http://www.agatlabs.com>

CLIENT NAME: KLOHN CRIPPEN

ATTENTION TO: Nicole Wills

SAMPLING SITE:

SAMPLED BY:

CCME / Tier 1 Metals

DATE RECEIVED: 2015-08-19

DATE REPORTED: 2015-08-27

Parameter	Unit	SAMPLE DESCRIPTION:											
		G / S		RDL		BH15-007 (0.15-0.3)	BH15-007 (0.6-1.0)	BH15-007 (1.0-1.5)	BH15-008 (0.15-0.3)	BH15-008 (0.3-0.6)	BH15-008 (1.0-1.5)	BH15-009 (0.3-0.6)	BH15-009 (0.6-1.0)
		DATE SAMPLED:		DATE SAMPLED:		8/14/2015	8/14/2015	8/14/2015	8/14/2015	8/14/2015	8/14/2015	8/14/2015	8/14/2015
		6882428	6882429	6882430	6882431	6882432	6882433	6882434	6882435				
Antimony	mg/kg	20	0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	
Arsenic	mg/kg	17	0.5	5.7	3.6	2.4	2.9	2.0	1.2	4.2	3.6	3.6	
Barium	mg/kg	750	0.5	339	314	243	220	200	88.7	225	273	273	
Beryllium	mg/kg	5	0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	
Cadmium	mg/kg	1.4	0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	
Chromium	mg/kg	64	0.5	20.4	35.9	12.6	13.2	10.4	4.8	20.3	16.9	16.9	
Cobalt	mg/kg	20	0.5	3.9	2.3	2.7	1.9	1.6	1.4	2.9	3.1	3.1	
Copper	mg/kg	63	0.5	5.4	5.5	6.1	4.2	5.3	4.6	5.2	6.0	6.0	
Lead	mg/kg	70	0.5	8.1	8.2	4.0	4.0	3.3	1.5	7.7	6.0	6.0	
Molybdenum	mg/kg	4	0.5	1.9	3.3	1.0	0.8	0.7	0.5	1.6	1.0	1.0	
Nickel	mg/kg	50	0.5	10.9	18.2	8.9	8.8	7.7	5.9	11.2	11.0	11.0	
Selenium	mg/kg	1	0.5	<0.5	<0.5	0.8	1.0	1.0	1.0	0.6	0.7	0.7	
Silver	mg/kg	20	0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	
Thallium	mg/kg	1	0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	
Tin	mg/kg	5	0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	
Uranium	mg/kg	23	0.5	<0.5	<0.5	<0.5	<0.5	1.0	1.3	<0.5	<0.5	<0.5	
Vanadium	mg/kg	130	0.5	18.3	16.0	11.9	11.7	10.1	5.5	17.8	18.6	18.6	
Zinc	mg/kg	200	1	12	16	9	8	6	6	19	28	28	

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Certificate of Analysis

AGAT WORK ORDER: 15E009548

PROJECT: A04012A07

6310 ROPER ROAD
EDMONTON, ALBERTA
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CLIENT NAME: KLOHN CRIPPEN

ATTENTION TO: Nicole Wills

SAMPLING SITE:

SAMPLED BY:

CCME / Tier 1 Metals

DATE RECEIVED: 2015-08-19

DATE REPORTED: 2015-08-27

Parameter	Unit	SAMPLE DESCRIPTION:		BH15-009 (1.	BH10-010 (0.	BH10-010 (0.	BH10-010 (2.	BH10-011 (0.	BH10-011 (1.	BH10-011 (2.	BH10-012	
		G / S	RDL	0-1.5)	3-0.6)	6-1.0)	5-3.0)	6-1.0)	0-1.5)	5-3.0)	(0-0.15)	
		SAMPLE TYPE:		Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil
		DATE SAMPLED:		8/14/2015	8/14/2015	8/14/2015	8/14/2015	8/14/2015	8/14/2015	8/14/2015	8/14/2015	8/14/2015
		6882436	6882453	6882461	6882462	6882463	6882464	6882465	6882466	6882466		
Antimony	mg/kg	20	0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	
Arsenic	mg/kg	17	0.5	4.1	6.4	3.0	5.0	4.1	5.5	5.0	5.8	
Barium	mg/kg	750	0.5	207	279	178	114	257	187	104	104	
Beryllium	mg/kg	5	0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	
Cadmium	mg/kg	1.4	0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	
Chromium	mg/kg	64	0.5	22.9	29.1	9.2	12.6	14.2	11.5	9.1	9.0	
Cobalt	mg/kg	20	0.5	2.4	2.4	1.9	3.6	3.0	3.6	4.2	4.4	
Copper	mg/kg	63	0.5	4.0	6.4	4.0	3.7	6.6	5.1	3.9	5.6	
Lead	mg/kg	70	0.5	4.6	10.1	3.6	3.0	4.8	4.7	2.8	3.5	
Molybdenum	mg/kg	4	0.5	1.8	2.6	<0.5	1.0	0.9	0.7	0.6	0.6	
Nickel	mg/kg	50	0.5	13.0	15.5	6.6	11.1	11.1	10.9	10.8	10.9	
Selenium	mg/kg	1	0.5	<0.5	<0.5	0.6	<0.5	0.7	<0.5	<0.5	<0.5	
Silver	mg/kg	20	0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	
Thallium	mg/kg	1	0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	
Tin	mg/kg	5	0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	
Uranium	mg/kg	23	0.5	<0.5	<0.5	<0.5	<0.5	0.5	<0.5	<0.5	<0.5	
Vanadium	mg/kg	130	0.5	13.1	17.9	13.0	13.3	19.1	16.2	15.8	16.9	
Zinc	mg/kg	200	1	15	18	10	21	19	23	25	22	

Certified By:



Certificate of Analysis

AGAT WORK ORDER: 15E009548

PROJECT: A04012A07

6310 ROPER ROAD
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CLIENT NAME: KLOHN CRIPPEN

ATTENTION TO: Nicole Wills

SAMPLING SITE:

SAMPLED BY:

CCME / Tier 1 Metals

DATE RECEIVED: 2015-08-19

DATE REPORTED: 2015-08-27

Parameter	Unit	G / S	RDL	BH10-012 (0.	BH10-012 (0.	BH10-012 (0.	BH10-012 (1.	BH10-012 (1.	BH10-012 (2.	BH10-012 (2.
				15-0.3)	3-0.6)	6-1.0)	0-1.5)	5-2.0)	0-2.5)	5-3.0)
				SAMPLE DESCRIPTION:	Soil	Soil	Soil	Soil	Soil	Soil
				SAMPLE TYPE:	Soil	Soil	Soil	Soil	Soil	Soil
DATE SAMPLED:	8/14/2015	8/14/2015	8/14/2015	8/14/2015	8/14/2015	8/14/2015	8/14/2015	8/14/2015	8/14/2015	
				6882467	6882468	6882469	6882470	6882471	6882472	6882473
Antimony	mg/kg	20	0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Arsenic	mg/kg	17	0.5	6.1	5.4	5.5	6.1	5.6	5.5	5.6
Barium	mg/kg	750	0.5	138	163	119	109	140	117	110
Beryllium	mg/kg	5	0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Cadmium	mg/kg	1.4	0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Chromium	mg/kg	64	0.5	8.6	20.8	7.2	8.5	11.0	8.4	7.7
Cobalt	mg/kg	20	0.5	3.8	3.4	3.4	3.8	3.5	3.5	3.4
Copper	mg/kg	63	0.5	5.1	4.0	4.2	4.3	3.9	3.9	3.6
Lead	mg/kg	70	0.5	3.6	3.6	3.5	3.4	3.2	3.0	2.9
Molybdenum	mg/kg	4	0.5	0.8	2.0	0.6	0.7	1.0	0.7	0.6
Nickel	mg/kg	50	0.5	11.1	15.5	8.8	10.4	11.2	9.9	9.6
Selenium	mg/kg	1	0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Silver	mg/kg	20	0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Thallium	mg/kg	1	0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Tin	mg/kg	5	0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Uranium	mg/kg	23	0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Vanadium	mg/kg	130	0.5	15.1	12.2	13.7	13.8	13.1	12.4	10.8
Zinc	mg/kg	200	1	26	22	25	28	24	26	28

Comments: RDL - Reported Detection Limit; G / S - Guideline / Standard: Refers to ABTier1 Soil (Ag, F)

6882353-6882421 Results are based on the dry weight of the sample.

6882422 Results are based on the dry weight of the sample.
Values verified with repeat analysis

6882423-6882473 Results are based on the dry weight of the sample.

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AGAT WORK ORDER: 15E009548

PROJECT: A04012A07

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CLIENT NAME: KLOHN CRIPPEN

ATTENTION TO: Nicole Wills

SAMPLING SITE:

SAMPLED BY:

Particle Size by Sieve

DATE RECEIVED: 2015-08-19

DATE REPORTED: 2015-08-26

Parameter	Unit			BH15-001 (0.	BH15-001 (2.	BH15-001 (3.	BH15-001 (5.	BH15-002 (1.	BH15-001	BH15-003 (0.	BH10-012 (0.
		SAMPLE DESCRIPTION:		15-0.3)	5-3.0)	5-4.0)	5-6.0)	0-1.5)	(2.02.5)	6-1.0)	3-0.6)
		SAMPLE TYPE:		Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil
		DATE SAMPLED:		8/14/2015	8/14/2015	8/14/2015	8/14/2015	8/14/2015	8/14/2015	8/14/2015	8/14/2015
		G / S	RDL	6882353	6882355	6882357	6882359	6882362	6882414	6882417	6882468
Sieve Analysis	%		N/A	80	84	87	86	91	87	92	88
Sieve Texture				Coarse	Coarse	Coarse	Coarse	Coarse	Coarse	Coarse	Coarse
Parameter	Unit			BH10-012 (1.	BH10-012 (1.	BH10-012 (2.					
		SAMPLE DESCRIPTION:		0-1.5)	5-2.0)	5-3.0)					
		SAMPLE TYPE:		Soil	Soil	Soil					
		DATE SAMPLED:		8/14/2015	8/14/2015	8/14/2015					
		G / S	RDL	6882470	6882471	6882473					
Sieve Analysis	%		N/A	84	88	89					
Sieve Texture				Coarse	Coarse	Coarse					

Comments: RDL - Reported Detection Limit; G / S - Guideline / Standard

6882353-6882473 Value reported is amount of sample retained on a 75 micron sieve after wash with water and represents proportion by weight particles larger than indicated sieve size.

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PROJECT: A04012A07

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CLIENT NAME: KLOHN CRIPPEN

ATTENTION TO: Nicole Wills

SAMPLING SITE:

SAMPLED BY:

Soil Analysis - Barium by Fusion ICP

DATE RECEIVED: 2015-08-19

DATE REPORTED: 2015-08-28

Parameter	Unit	G / S		RDL		BH15-001 (0.	BH15-001 (1.	BH15-001 (2.	BH15-001 (3.	BH15-001 (3.	BH15-001 (5.	BH15-001 (5.	BH15-002 (0.
						15-0.3)	5-2.0)	5-3.0)	0-3.5)	5-4.0)	0-5.5)	5-6.0)	3-0.6)
						Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil
						8/14/2015	8/14/2015	8/14/2015	8/14/2015	8/14/2015	8/14/2015	8/14/2015	8/14/2015
True Barium by Fusion ICP	mg/kg			50	706	584	636	680	695	758	685	690	
		G / S		RDL		BH15-002 (1.	BH15-002 (2.	BH15-003 (0.	BH15-003 (0.	BH15-003 (1.	BH15-004 (0.	BH15-004 (1.	BH15-004 (2.
						0-1.5)	5-3.0)	3-0.6)	6-1.0)	0-1.5)	6-1.0)	5-2.0)	5-3.0)
						Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil
						8/14/2015	8/14/2015	8/14/2015	8/14/2015	8/14/2015	8/14/2015	8/14/2015	8/14/2015
True Barium by Fusion ICP	mg/kg			50	754	541	919	651	623	502	537	586	
		G / S		RDL		BH15-005 (0.	BH15-005 (1.	BH15-005 (2.	BH15-006 (0.	BH15-006 (1.	BH15-006 (2.	BH15-007 (0.	BH15-007 (0.
						6-1.0)	0-1.5)	5-3.0)	6-1.0)	0-1.5)	0-2.5)	15-0.3)	6-1.0)
						Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil
						8/14/2015	8/14/2015	8/14/2015	8/14/2015	8/14/2015	8/14/2015	8/14/2015	8/14/2015
True Barium by Fusion ICP	mg/kg			50	515	323	762	667	902	818	956	840	
		G / S		RDL		BH15-007 (1.	BH15-008 (0.	BH15-008 (0.	BH15-008 (1.	BH15-009 (0.	BH15-009 (0.	BH15-009 (1.	BH10-010 (0.
						0-1.5)	15-0.3)	3-0.6)	0-1.5)	3-0.6)	6-1.0)	0-1.5)	3-0.6)
						Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil
						8/14/2015	8/14/2015	8/14/2015	8/14/2015	8/14/2015	8/14/2015	8/14/2015	8/14/2015
True Barium by Fusion ICP	mg/kg			50	439	480	366	160	563	655	634	847	
		G / S		RDL		BH10-010 (0.	BH10-010 (2.	BH10-011 (0.	BH10-011 (1.	BH10-011 (2.	BH10-012	BH10-012 (0.	BH10-012 (0.
						6-1.0)	5-3.0)	6-1.0)	0-1.5)	5-3.0)	(0-0.15)	15-0.3)	3-0.6)
						Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil
						8/14/2015	8/14/2015	8/14/2015	8/14/2015	8/14/2015	8/14/2015	8/14/2015	8/14/2015
True Barium by Fusion ICP	mg/kg			50	558	686	688	606	644	692	735	716	

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AGAT WORK ORDER: 15E009548

PROJECT: A04012A07

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CLIENT NAME: KLOHN CRIPPEN

ATTENTION TO: Nicole Wills

SAMPLING SITE:

SAMPLED BY:

Soil Analysis - Barium by Fusion ICP

DATE RECEIVED: 2015-08-19

DATE REPORTED: 2015-08-28

Parameter	Unit	SAMPLE DESCRIPTION:				
		BH10-012 (0.6-1.0)	BH10-012 (1.0-1.5)	BH10-012 (1.5-2.0)	BH10-012 (2.0-2.5)	BH10-012 (2.5-3.0)
		SAMPLE TYPE:				
		Soil				
		DATE SAMPLED:				
		8/14/2015				
		G / S	RDL			
True Barium by Fusion ICP	mg/kg	50	751	643	624	666
						660

Comments: RDL - Reported Detection Limit; G / S - Guideline / Standard
6882353-6882473 Result is based on the dry weight of the sample.

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AGAT WORK ORDER: 15E009548

PROJECT: A04012A07

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CLIENT NAME: KLOHN CRIPPEN

ATTENTION TO: Nicole Wills

SAMPLING SITE:

SAMPLED BY:

Soil Analysis - Detailed Salinity

DATE RECEIVED: 2015-08-19

DATE REPORTED: 2015-08-26

Parameter	Unit	SAMPLE DESCRIPTION:		BH15-001 (0.	BH15-001 (2.	BH15-001 (3.	BH15-001 (5.	BH15-001 (5.	BH15-002 (0.	BH15-002 (1.	BH15-002 (2.
		15-0.3)		5-3.0)	5-4.0)	0-5.5)	5-6.0)	3-0.6)	0-1.5)	5-3.0)	
		Soil		Soil	Soil	Soil	Soil	Soil	Soil	Soil	
		DATE SAMPLED:		8/14/2015	8/14/2015	8/14/2015	8/14/2015	8/14/2015	8/14/2015	8/14/2015	8/14/2015
G / S		RDL	6882353	6882355	6882357	6882358	6882359	6882360	6882362	6882363	
pH (Saturated Paste)	pH Units	N/A	6.21	7.44	7.45	7.42	7.28	6.99	7.30	7.24	
Electrical Conductivity (Sat. Paste)	dS/m	0.05	0.31	0.50	0.74	0.60	1.12	0.15	0.25	1.22	
Sodium Adsorption Ratio	N/A		0.60	1.21	1.43	1.23	1.12	0.23	0.48	0.71	
Saturation Percentage	%	1	90	34	42	33	31	55	33	38	
Chloride, Soluble	mg/L	5	29	41	66	57	87	10	14	25	
Calcium, Soluble	mg/L	1	37	37	64	48	119	23	34	165	
Potassium, Soluble	mg/L	2	5	11	10	11	16	2	<2	16	
Magnesium, Soluble	mg/L	2	10	12	17	15	30	7	8	33	
Sodium, Soluble	mg/L	2	16	33	50	38	53	5	12	38	
Sulfate, Soluble	mg/L	2	39	99	198	129	379	12	19	552	
Calcium, Soluble (meq/L)	meq/L	0.05	1.85	1.85	3.19	2.40	5.94	1.15	1.70	8.23	
Calcium, Soluble (mg/kg)	mg/kg	1	33	13	27	16	37	13	11	63	
Chloride, Soluble (meq/L)	meq/L	0.06	0.82	1.16	1.86	1.61	2.45	0.28	0.39	0.71	
Chloride, Soluble (mg/kg)	mg/kg	2	26	14	28	19	27	6	5	10	
Magnesium, Soluble (meq/L)	meq/L	0.08	0.82	0.99	1.40	1.23	2.47	0.58	0.66	2.72	
Magnesium, Soluble (mg/kg)	mg/kg	1	9	4	7	5	9	4	3	13	
Potassium, Soluble (meq/L)	meq/L	0.05	0.13	0.28	0.26	0.28	0.41	0.05	<0.05	0.41	
Potassium, Soluble (mg/kg)	mg/kg	2	5	4	4	4	5	<2	<2	6	
Sodium, Soluble (meq/L)	meq/L	0.09	0.70	1.44	2.17	1.65	2.31	0.22	0.52	1.65	
Sodium, Soluble (mg/kg)	mg/kg	2	14	11	21	13	16	3	4	14	
Sulfur (as Sulfate), Soluble (meq/L)	meq/L	0.04	0.81	2.06	4.12	2.69	7.89	0.25	0.40	11.5	
Sulfur (as Sulfate), Soluble (mg/kg)	mg/kg	2	35	34	83	43	117	7	6	210	
Theoretical Gypsum Requirement	tonnes/ha	0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	

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AGAT WORK ORDER: 15E009548

PROJECT: A04012A07

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CLIENT NAME: KLOHN CRIPPEN

ATTENTION TO: Nicole Wills

SAMPLING SITE:

SAMPLED BY:

Soil Analysis - Detailed Salinity

DATE RECEIVED: 2015-08-19

DATE REPORTED: 2015-08-26

Parameter	Unit	SAMPLE DESCRIPTION:		BH15-001	BH15-001 (4.	BH15-003 (0.	BH15-003 (0.	BH15-003 (1.	BH15-004 (0.	BH15-004 (1.	BH15-004 (2.
		G / S		(2.02.5)	0-4.5)	3-0.6)	6-1.0)	0-1.5)	6-1.0)	5-2.0)	5-3.0)
		RDL		Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil
		DATE SAMPLED:		8/14/2015	8/14/2015	8/14/2015	8/14/2015	8/14/2015	8/14/2015	8/14/2015	8/14/2015
		6882414	6882415	6882416	6882417	6882418	6882419	6882420	6882421	6882421	
pH (Saturated Paste)	pH Units	N/A	7.61	7.48	6.15	7.02	6.98	5.59	7.28	7.24	
Electrical Conductivity (Sat. Paste)	dS/m	0.05	0.42	0.64	0.27	0.22	0.31	0.20	0.34	0.34	
Sodium Adsorption Ratio	N/A		1.17	1.42	0.19	0.25	0.54	0.18	0.60	0.83	
Saturation Percentage	%	1	38	36	31	44	40	100	40	42	
Chloride, Soluble	mg/L	5	36	52	7	13	15	11	22	20	
Calcium, Soluble	mg/L	1	30	53	32	30	33	24	40	24	
Potassium, Soluble	mg/L	2	9	11	2	3	3	<2	4	5	
Magnesium, Soluble	mg/L	2	10	14	11	9	11	8	13	12	
Sodium, Soluble	mg/L	2	29	45	5	6	14	4	17	20	
Sulfate, Soluble	mg/L	2	74	161	28	14	24	38	39	53	
Calcium, Soluble (meq/L)	meq/L	0.05	1.50	2.64	1.60	1.50	1.65	1.20	2.00	1.20	
Calcium, Soluble (mg/kg)	mg/kg	1	11	19	10	13	13	24	16	10	
Chloride, Soluble (meq/L)	meq/L	0.06	1.02	1.47	0.20	0.37	0.42	0.31	0.62	0.56	
Chloride, Soluble (mg/kg)	mg/kg	2	14	19	2	6	6	11	9	8	
Magnesium, Soluble (meq/L)	meq/L	0.08	0.82	1.15	0.91	0.74	0.91	0.66	1.07	0.99	
Magnesium, Soluble (mg/kg)	mg/kg	1	4	5	3	4	4	8	5	5	
Potassium, Soluble (meq/L)	meq/L	0.05	0.23	0.28	0.05	0.08	0.08	<0.05	0.10	0.13	
Potassium, Soluble (mg/kg)	mg/kg	2	3	4	<2	<2	<2	<2	<2	2	
Sodium, Soluble (meq/L)	meq/L	0.09	1.26	1.96	0.22	0.26	0.61	0.17	0.74	0.87	
Sodium, Soluble (mg/kg)	mg/kg	2	11	16	<2	3	6	4	7	8	
Sulfur (as Sulfate), Soluble (meq/L)	meq/L	0.04	1.54	3.35	0.58	0.29	0.50	0.79	0.81	1.10	
Sulfur (as Sulfate), Soluble (mg/kg)	mg/kg	2	28	58	9	6	10	38	16	22	
Theoretical Gypsum Requirement	tonnes/ha	0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	

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Certificate of Analysis

AGAT WORK ORDER: 15E009548

PROJECT: A04012A07

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CLIENT NAME: KLOHN CRIPPEN

ATTENTION TO: Nicole Wills

SAMPLING SITE:

SAMPLED BY:

Soil Analysis - Detailed Salinity

DATE RECEIVED: 2015-08-19

DATE REPORTED: 2015-08-26

Parameter	Unit	Soil Analysis - Detailed Salinity																	
		G / S	BH15-005 (0.6-1.0)		BH15-005 (1.0-1.5)		BH15-005 (2.0-3.0)		BH15-006 (0.6-1.0)		BH15-006 (1.0-1.5)		BH15-006 (2.0-2.5)		BH15-007 (0.15-0.3)		BH15-007 (0.6-1.0)		
			RDL	6-1.0		0-1.5		5-3.0		6-1.0		0-1.5		0-2.5		15-0.3		6-1.0	
				8/14/2015	8/14/2015	8/14/2015	8/14/2015	8/14/2015	8/14/2015	8/14/2015	8/14/2015	8/14/2015	8/14/2015	8/14/2015	8/14/2015	8/14/2015	8/14/2015	8/14/2015	
pH (Saturated Paste)	pH Units	N/A	6.00	5.78	7.64	5.74	6.19	7.51	7.14	6.13									
Electrical Conductivity (Sat. Paste)	dS/m	0.05	0.22	0.28	0.35	0.29	0.45	0.39	0.27	0.30									
Sodium Adsorption Ratio	N/A		0.24	0.31	1.57	0.20	0.26	0.28	0.16	0.22									
Saturation Percentage	%	1	165	331	56	147	112	41	31	96									
Chloride, Soluble	mg/L	5	17	23	26	19	25	14	5	13									
Calcium, Soluble	mg/L	1	31	47	16	43	79	58	40	37									
Potassium, Soluble	mg/L	2	<2	<2	4	<2	3	4	3	3									
Magnesium, Soluble	mg/L	2	9	9	12	16	22	12	5	11									
Sodium, Soluble	mg/L	2	6	9	34	6	10	9	4	6									
Sulfate, Soluble	mg/L	2	34	26	42	49	83	61	30	56									
Calcium, Soluble (meq/L)	meq/L	0.05	1.55	2.35	0.80	2.15	3.94	2.89	2.00	1.85									
Calcium, Soluble (mg/kg)	mg/kg	1	51	156	9	63	88	24	12	36									
Chloride, Soluble (meq/L)	meq/L	0.06	0.48	0.65	0.73	0.54	0.71	0.39	0.14	0.37									
Chloride, Soluble (mg/kg)	mg/kg	2	28	76	15	28	28	6	<2	12									
Magnesium, Soluble (meq/L)	meq/L	0.08	0.74	0.74	0.99	1.32	1.81	0.99	0.41	0.91									
Magnesium, Soluble (mg/kg)	mg/kg	1	15	30	7	24	25	5	2	11									
Potassium, Soluble (meq/L)	meq/L	0.05	<0.05	<0.05	0.10	<0.05	0.08	0.10	0.08	0.08									
Potassium, Soluble (mg/kg)	mg/kg	2	<2	<2	2	<2	3	<2	<2	3									
Sodium, Soluble (meq/L)	meq/L	0.09	0.26	0.39	1.48	0.26	0.43	0.39	0.17	0.26									
Sodium, Soluble (mg/kg)	mg/kg	2	10	30	19	9	11	4	<2	6									
Sulfur (as Sulfate), Soluble (meq/L)	meq/L	0.04	0.71	0.54	0.87	1.02	1.73	1.27	0.62	1.17									
Sulfur (as Sulfate), Soluble (mg/kg)	mg/kg	2	56	86	24	72	93	25	9	54									
Theoretical Gypsum Requirement	tonnes/ha	0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01									

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AGAT WORK ORDER: 15E009548

PROJECT: A04012A07

6310 ROPER ROAD
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CLIENT NAME: KLOHN CRIPPEN

ATTENTION TO: Nicole Wills

SAMPLING SITE:

SAMPLED BY:

Soil Analysis - Detailed Salinity

DATE RECEIVED: 2015-08-19

DATE REPORTED: 2015-08-26

Parameter	Unit	SAMPLE DESCRIPTION:		BH15-007 (1.	BH15-008 (0.	BH15-008 (0.	BH15-008 (1.	BH15-009 (0.	RDL	BH15-009 (0.	BH15-009 (1.
		G / S	RDL	0-1.5)	15-0.3)	3-0.6)	0-1.5)	3-0.6)		6-1.0)	0-1.5)
		SAMPLE TYPE:		Soil	Soil	Soil	Soil	Soil		Soil	Soil
		DATE SAMPLED:		8/14/2015	8/14/2015	8/14/2015	8/14/2015	8/14/2015		8/14/2015	8/14/2015
		6882430	6882431	6882432	6882433	6882434			6882435	6882436	
pH (Saturated Paste)	pH Units	N/A	6.10	5.99	6.12	5.88	7.35	N/A	7.07	7.25	
Electrical Conductivity (Sat. Paste)	dS/m	0.05	0.18	0.52	0.28	0.18	2.70	0.05	2.40	2.03	
Sodium Adsorption Ratio	N/A		0.23	0.43	0.47	0.38	0.16		0.20	0.15	
Saturation Percentage	%	1	303	177	340	541	197	1	176	115	
Chloride, Soluble	mg/L	5	12	19	26	17	238	5	37	66	
Calcium, Soluble	mg/L	1	23	58	32	19	635	1	530	447	
Potassium, Soluble	mg/L	2	<2	3	<2	<2	10	2	10	7	
Magnesium, Soluble	mg/L	2	7	21	11	4	62	2	58	41	
Sodium, Soluble	mg/L	2	5	15	12	7	16	2	18	12	
Sulfate, Soluble	mg/L	2	25	169	49	14	1670	6	1450	1250	
Calcium, Soluble (meq/L)	meq/L	0.05	1.15	2.89	1.60	0.95	31.7	0.05	26.4	22.3	
Calcium, Soluble (mg/kg)	mg/kg	1	70	103	109	103	1250	1	933	514	
Chloride, Soluble (meq/L)	meq/L	0.06	0.34	0.54	0.73	0.48	6.71	0.06	1.04	1.86	
Chloride, Soluble (mg/kg)	mg/kg	2	36	34	88	92	469	2	65	76	
Magnesium, Soluble (meq/L)	meq/L	0.08	0.58	1.73	0.91	0.33	5.10	0.08	4.77	3.37	
Magnesium, Soluble (mg/kg)	mg/kg	1	21	37	37	22	122	1	102	47	
Potassium, Soluble (meq/L)	meq/L	0.05	<0.05	0.08	<0.05	<0.05	0.26	0.05	0.26	0.18	
Potassium, Soluble (mg/kg)	mg/kg	2	<2	5	<2	<2	20	2	18	8	
Sodium, Soluble (meq/L)	meq/L	0.09	0.22	0.65	0.52	0.30	0.70	0.09	0.78	0.52	
Sodium, Soluble (mg/kg)	mg/kg	2	15	27	41	38	32	2	32	14	
Sulfur (as Sulfate), Soluble (meq/L)	meq/L	0.04	0.52	3.52	1.02	0.29	34.8	0.04	30.2	26.0	
Sulfur (as Sulfate), Soluble (mg/kg)	mg/kg	2	76	299	167	76	3290	2	2550	1440	
Theoretical Gypsum Requirement	tonnes/ha	0.01	<0.01	<0.01	<0.01	<0.01	<0.01	0.01	<0.01	<0.01	

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AGAT WORK ORDER: 15E009548

PROJECT: A04012A07

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CLIENT NAME: KLOHN CRIPPEN

ATTENTION TO: Nicole Wills

SAMPLING SITE:

SAMPLED BY:

Soil Analysis - Detailed Salinity

DATE RECEIVED: 2015-08-19

DATE REPORTED: 2015-08-26

Parameter	Unit	SAMPLE DESCRIPTION:		BH10-010 (0.	BH10-010 (0.	BH10-010 (2.	BH10-011 (0.	BH10-011 (1.	BH10-011 (2.	BH10-012	BH10-012 (0.
		3-0.6)		6-1.0)	5-3.0)	6-1.0)	0-1.5)	5-3.0)	(0-0.15)	15-0.3)	
		SAMPLE TYPE:		Soil	Soil	Soil	Soil	Soil	Soil	Soil	
		DATE SAMPLED:		8/14/2015	8/14/2015	8/14/2015	8/14/2015	8/14/2015	8/14/2015	8/14/2015	8/14/2015
		G / S	RDL	6882453	6882461	6882462	6882463	6882464	6882465	6882466	6882467
pH (Saturated Paste)	pH Units		N/A	6.53	6.19	7.53	6.38	6.92	7.67	7.35	7.43
Electrical Conductivity (Sat. Paste)	dS/m		0.05	0.31	0.24	0.46	0.24	0.51	0.49	0.48	0.37
Sodium Adsorption Ratio	N/A			0.28	0.30	0.80	0.23	0.30	0.93	0.79	0.70
Saturation Percentage	%		1	74	117	32	174	36	32	33	40
Chloride, Soluble	mg/L		5	17	23	16	17	18	27	49	27
Calcium, Soluble	mg/L		1	34	34	45	33	73	42	56	41
Potassium, Soluble	mg/L		2	7	3	7	<2	5	8	5	5
Magnesium, Soluble	mg/L		2	9	12	11	11	19	13	12	9
Sodium, Soluble	mg/L		2	7	8	23	6	11	27	25	19
Sulfate, Soluble	mg/L		2	61	28	109	31	33	106	35	24
Calcium, Soluble (meq/L)	meq/L		0.05	1.70	1.70	2.25	1.65	3.64	2.10	2.79	2.05
Calcium, Soluble (mg/kg)	mg/kg		1	25	40	14	57	26	13	18	16
Chloride, Soluble (meq/L)	meq/L		0.06	0.48	0.65	0.45	0.48	0.51	0.76	1.38	0.76
Chloride, Soluble (mg/kg)	mg/kg		2	13	27	5	30	6	9	16	11
Magnesium, Soluble (meq/L)	meq/L		0.08	0.74	0.99	0.91	0.91	1.56	1.07	0.99	0.74
Magnesium, Soluble (mg/kg)	mg/kg		1	7	14	4	19	7	4	4	4
Potassium, Soluble (meq/L)	meq/L		0.05	0.18	0.08	0.18	<0.05	0.13	0.20	0.13	0.13
Potassium, Soluble (mg/kg)	mg/kg		2	5	4	2	<2	<2	3	<2	2
Sodium, Soluble (meq/L)	meq/L		0.09	0.30	0.35	1.00	0.26	0.48	1.17	1.09	0.83
Sodium, Soluble (mg/kg)	mg/kg		2	5	9	7	10	4	9	8	8
Sulfur (as Sulfate), Soluble (meq/L)	meq/L		0.04	1.27	0.58	2.27	0.65	0.69	2.21	0.73	0.50
Sulfur (as Sulfate), Soluble (mg/kg)	mg/kg		2	45	33	35	54	12	34	12	10
Theoretical Gypsum Requirement	tonnes/ha		0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01

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PROJECT: A04012A07

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CLIENT NAME: KLOHN CRIPPEN

ATTENTION TO: Nicole Wills

SAMPLING SITE:

SAMPLED BY:

Soil Analysis - Detailed Salinity

DATE RECEIVED: 2015-08-19

DATE REPORTED: 2015-08-26

Parameter	Unit	SAMPLE DESCRIPTION:		BH10-012 (0.	BH10-012 (0.	BH10-012 (1.	BH10-012 (1.	BH10-012 (2.	BH10-012 (2.
		SAMPLE TYPE:		3-0.6)	6-1.0)	0-1.5)	5-2.0)	0-2.5)	5-3.0)
		DATE SAMPLED:		Soil	Soil	Soil	Soil	Soil	Soil
		G / S	RDL	8/14/2015	8/14/2015	8/14/2015	8/14/2015	8/14/2015	8/14/2015
pH (Saturated Paste)	pH Units	N/A	7.11	7.21	7.30	7.20	7.22	7.25	
Electrical Conductivity (Sat. Paste)	dS/m	0.05	0.29	0.35	0.38	1.40	1.12	0.85	
Sodium Adsorption Ratio	N/A		0.57	0.79	0.87	1.17	1.04	1.42	
Saturation Percentage	%	1	54	29	29	28	39	39	
Chloride, Soluble	mg/L	5	13	30	34	79	68	88	
Calcium, Soluble	mg/L	1	33	34	36	164	130	72	
Potassium, Soluble	mg/L	2	4	5	5	14	12	11	
Magnesium, Soluble	mg/L	2	8	9	10	38	28	20	
Sodium, Soluble	mg/L	2	14	20	23	64	50	53	
Sulfate, Soluble	mg/L	2	14	25	31	570	415	217	
Calcium, Soluble (meq/L)	meq/L	0.05	1.65	1.70	1.80	8.18	6.49	3.59	
Calcium, Soluble (mg/kg)	mg/kg	1	18	10	10	46	51	28	
Chloride, Soluble (meq/L)	meq/L	0.06	0.37	0.85	0.96	2.23	1.92	2.48	
Chloride, Soluble (mg/kg)	mg/kg	2	7	9	10	22	27	34	
Magnesium, Soluble (meq/L)	meq/L	0.08	0.66	0.74	0.82	3.13	2.30	1.65	
Magnesium, Soluble (mg/kg)	mg/kg	1	4	3	3	11	11	8	
Potassium, Soluble (meq/L)	meq/L	0.05	0.10	0.13	0.13	0.36	0.31	0.28	
Potassium, Soluble (mg/kg)	mg/kg	2	2	<2	<2	4	5	4	
Sodium, Soluble (meq/L)	meq/L	0.09	0.61	0.87	1.00	2.78	2.17	2.31	
Sodium, Soluble (mg/kg)	mg/kg	2	8	6	7	18	20	21	
Sulfur (as Sulfate), Soluble (meq/L)	meq/L	0.04	0.29	0.52	0.65	11.9	8.64	4.52	
Sulfur (as Sulfate), Soluble (mg/kg)	mg/kg	2	8	7	9	160	162	85	
Theoretical Gypsum Requirement	tonnes/ha	0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	

Comments: RDL - Reported Detection Limit; G / S - Guideline / Standard

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CLIENT NAME: KLOHN CRIPPEN

ATTENTION TO: Nicole Wills

SAMPLING SITE:

SAMPLED BY:

Petroleum Hydrocarbons (BTEX/F1-F4) in Soil (CWS)

DATE RECEIVED: 2015-08-19

DATE REPORTED: 2015-08-26

Parameter	Unit	SAMPLE DESCRIPTION:		BH15-001 (0.	BH15-001 (1.	BH15-001 (2.	BH15-001 (3.	BH15-001 (3.	BH15-001 (5.	BH15-002 (0.	BH15-002 (0.
		Soil		15-0.3)	5-2.0)	5-3.0)	0-3.5)	5-4.0)	5-6.0)	3-0.6)	6-1.0)
		Soil		Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil
		DATE SAMPLED:		8/14/2015	8/14/2015	8/14/2015	8/14/2015	8/14/2015	8/14/2015	8/14/2015	8/14/2015
		G / S	RDL	6882353	6882354	6882355	6882356	6882357	6882359	6882360	6882361
Benzene	mg/kg		0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Toluene	mg/kg		0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Ethylbenzene	mg/kg		0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Xylenes	mg/kg		0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
C6 - C10 (F1)	mg/kg		10	<10	<10	<10	<10	<10	<10	<10	<10
C6 - C10 (F1 minus BTEX)	mg/kg		10	<10	<10	<10	<10	<10	<10	<10	<10
C10 - C16 (F2)	mg/kg		10	<10	<10	<10	<10	<10	<10	<10	<10
C16 - C34 (F3)	mg/kg		10	296	<10	<10	<10	<10	<10	<10	<10
C34 - C50 (F4)	mg/kg		10	94	<10	<10	<10	<10	<10	<10	<10
Gravimetric Heavy Hydrocarbons	mg/kg		1000	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Moisture Content	%		1	42	16	17	19	17	19	18	18
Surrogate	Unit	Acceptable Limits									
Toluene-d8 (BTEX)	%	50-150		100	102	102	102	101	102	101	102
Ethylbenzene-d10 (BTEX)	%	50-150		114	106	106	110	113	105	101	96
o-Terphenyl (F2-F4)	%	50-150		106	90	99	100	99	104	102	95

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AGAT WORK ORDER: 15E009548

PROJECT: A04012A07

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CLIENT NAME: KLOHN CRIPPEN

ATTENTION TO: Nicole Wills

SAMPLING SITE:

SAMPLED BY:

Petroleum Hydrocarbons (BTEX/F1-F4) in Soil (CWS)

DATE RECEIVED: 2015-08-19

DATE REPORTED: 2015-08-26

Parameter	Unit	SAMPLE DESCRIPTION:		BH15-002 (1.	BH15-002 (2.	BH15-003 (0.	BH15-003 (0.	BH15-003 (1.	BH15-004 (0.	BH15-004 (1.	BH15-004 (2.
		Soil		0-1.5)	5-3.0)	3-0.6)	6-1.0)	0-1.5)	6-1.0)	5-2.0)	5-3.0)
		Soil		Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil
		DATE SAMPLED:		8/14/2015	8/14/2015	8/14/2015	8/14/2015	8/14/2015	8/14/2015	8/14/2015	8/14/2015
G / S	RDL	6882362	6882363	6882416	6882417	6882418	6882419	6882420	6882421		
Benzene	mg/kg	0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Toluene	mg/kg	0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Ethylbenzene	mg/kg	0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Xylenes	mg/kg	0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
C6 - C10 (F1)	mg/kg	10	<10	<10	<10	<10	<10	<10	<10	<10	<10
C6 - C10 (F1 minus BTEX)	mg/kg	10	<10	<10	<10	<10	<10	<10	<10	<10	<10
C10 - C16 (F2)	mg/kg	10	<10	<10	<10	<10	<10	<10	22	<10	<10
C16 - C34 (F3)	mg/kg	10	14	<10	21	18	<10	436	46	12	
C34 - C50 (F4)	mg/kg	10	<10	<10	<10	<10	<10	219	14	<10	
Gravimetric Heavy Hydrocarbons	mg/kg	1000	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	
Moisture Content	%	1	15	17	13	16	20	32	16	12	
Surrogate	Unit	Acceptable Limits									
Toluene-d8 (BTEX)	%	50-150	101	100	100	101	102	100	102	102	
Ethylbenzene-d10 (BTEX)	%	50-150	100	116	98	114	111	103	109	95	
o-Terphenyl (F2-F4)	%	50-150	98	101	107	98	95	99	85	91	

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CLIENT NAME: KLOHN CRIPPEN

ATTENTION TO: Nicole Wills

SAMPLING SITE:

SAMPLED BY:

Petroleum Hydrocarbons (BTEX/F1-F4) in Soil (CWS)

DATE RECEIVED: 2015-08-19

DATE REPORTED: 2015-08-26

Parameter	Unit	SAMPLE DESCRIPTION:									
		G / S		BH15-005 (0.	BH15-005 (1.	BH15-005 (2.	BH15-006 (0.	BH15-006 (1.	BH15-006 (2.	BH15-007 (0.	BH15-007 (0.
		RDL		6-1.0)	0-1.5)	5-3.0)	6-1.0)	0-1.5)	0-2.5)	15-0.3)	6-1.0)
		DATE SAMPLED:		Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil
DATE SAMPLED:		8/14/2015	8/14/2015	8/14/2015	8/14/2015	8/14/2015	8/14/2015	8/14/2015	8/14/2015	8/14/2015	
Benzene	mg/kg	0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	
Toluene	mg/kg	0.05	0.22	1.66	<0.05	0.41	4.45	0.14	<0.05	<0.05	
Ethylbenzene	mg/kg	0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	
Xylenes	mg/kg	0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	
C6 - C10 (F1)	mg/kg	10	<10	<10	<10	<10	<10	<10	<10	<10	
C6 - C10 (F1 minus BTEX)	mg/kg	10	<10	<10	<10	<10	<10	<10	<10	<10	
C10 - C16 (F2)	mg/kg	10	59	<10	<10	<10	<10	<10	<10	<10	
C16 - C34 (F3)	mg/kg	10	1060	425	<10	173	437	36	17	30	
C34 - C50 (F4)	mg/kg	10	657	383	<10	180	374	34	19	14	
Gravimetric Heavy Hydrocarbons	mg/kg	1000	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	
Moisture Content	%	1	42	73	16	9	54	14	50	32	
Surrogate	Unit	Acceptable Limits									
Toluene-d8 (BTEX)	%	50-150	100	100	100	98	98	102	102	101	
Ethylbenzene-d10 (BTEX)	%	50-150	109	107	108	83	119	94	132	108	
o-Terphenyl (F2-F4)	%	50-150	96	98	98	100	88	85	87	86	

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CLIENT NAME: KLOHN CRIPPEN

ATTENTION TO: Nicole Wills

SAMPLING SITE:

SAMPLED BY:

Petroleum Hydrocarbons (BTEX/F1-F4) in Soil (CWS)

DATE RECEIVED: 2015-08-19

DATE REPORTED: 2015-08-26

Parameter	Unit	SAMPLE DESCRIPTION:									
		G / S		BH15-007 (1.0-1.5)	BH15-008 (0.15-0.3)	BH15-008 (0.3-0.6)	BH15-008 (1.0-1.5)	BH15-009 (0.3-0.6)	BH15-009 (0.6-1.0)	BH10-010 (0.3-0.6)	BH10-010 (1.0-1.5)
		RDL		0-1.5	15-0.3	3-0.6	0-1.5	3-0.6	6-1.0	3-0.6	6-1.0
		DATE SAMPLED:		8/14/2015	8/14/2015	8/14/2015	8/14/2015	8/14/2015	8/14/2015	8/14/2015	8/14/2015
Benzene	mg/kg	0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	
Toluene	mg/kg	0.05	<0.05	<0.05	8.14	52.9	<0.05	<0.05	<0.05	<0.05	
Ethylbenzene	mg/kg	0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	
Xylenes	mg/kg	0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	
C6 - C10 (F1)	mg/kg	10	<10	<10	<10	53	<10	<10	<10	<10	
C6 - C10 (F1 minus BTEX)	mg/kg	10	<10	<10	<10	<10	<10	<10	<10	<10	
C10 - C16 (F2)	mg/kg	10	<10	11	<10	<10	13	<10	<10	<10	
C16 - C34 (F3)	mg/kg	10	136	1140	184	1160	182	70	180	446	
C34 - C50 (F4)	mg/kg	10	95	<10	130	829	163	72	135	309	
Gravimetric Heavy Hydrocarbons	mg/kg	1000	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	
Moisture Content	%	1	55	57	66	78	50	69	44	37	
Surrogate	Unit	Acceptable Limits									
Toluene-d8 (BTEX)	%	50-150	98	101	100	100	101	102	101	102	
Ethylbenzene-d10 (BTEX)	%	50-150	105	111	113	121	115	118	105	103	
o-Terphenyl (F2-F4)	%	50-150	84	84	85	88	77	89	88	83	

Certified By:



Certificate of Analysis

AGAT WORK ORDER: 15E009548

PROJECT: A04012A07

6310 ROPER ROAD
EDMONTON, ALBERTA
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<http://www.agatlabs.com>

CLIENT NAME: KLOHN CRIPPEN

ATTENTION TO: Nicole Wills

SAMPLING SITE:

SAMPLED BY:

Petroleum Hydrocarbons (BTEX/F1-F4) in Soil (CWS)

DATE RECEIVED: 2015-08-19

DATE REPORTED: 2015-08-26

Parameter	Unit	SAMPLE DESCRIPTION:		BH10-010 (2.)	BH10-011 (0.)	BH10-011 (1.)	BH10-011 (2.)	BH10-012 (0.)	BH10-012 (0.)	BH10-012 (1.)	BH10-012 (2.)
		Soil		5-3.0)	6-1.0)	0-1.5)	5-3.0)	3-0.6)	6-1.0)	0-1.5)	5-3.0)
		Soil		Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil
		DATE SAMPLED:		8/14/2015	8/14/2015	8/14/2015	8/14/2015	8/14/2015	8/14/2015	8/14/2015	8/14/2015
G / S	RDL	6882462	6882463	6882464	6882465	6882468	6882469	6882470	6882473		
Benzene	mg/kg		0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Toluene	mg/kg		0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Ethylbenzene	mg/kg		0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Xylenes	mg/kg		0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
C6 - C10 (F1)	mg/kg		10	<10	<10	<10	<10	<10	<10	<10	<10
C6 - C10 (F1 minus BTEX)	mg/kg		10	<10	<10	<10	<10	<10	<10	<10	<10
C10 - C16 (F2)	mg/kg		10	<10	<10	<10	<10	<10	<10	<10	<10
C16 - C34 (F3)	mg/kg		10	15	198	54	12	20	16	22	12
C34 - C50 (F4)	mg/kg		10	<10	181	50	20	19	23	20	<10
Gravimetric Heavy Hydrocarbons	mg/kg		1000	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Moisture Content	%		1	15	23	23	19	19	19	15	17
Surrogate	Unit	Acceptable Limits									
Toluene-d8 (BTEX)	%	50-150	102	101	101	102	102	102	103	102	102
Ethylbenzene-d10 (BTEX)	%	50-150	103	105	101	100	95	102	102	108	100
o-Terphenyl (F2-F4)	%	50-150	90	86	87	86	85	85	91	108	83

Comments: RDL - Reported Detection Limit; G / S - Guideline / Standard

6882353-6882473 Results are based on the dry weight of the sample.

The C6-C10 (F1) fraction is calculated using toluene response factor.

The C10 - C16 (F2), C16 - C34 (F3), and C34 - C50 (F4) fractions are calculated using the average response factor for n-C10, n-C16, and n-C34.

Gravimetric Heavy Hydrocarbons (F4g) are not included in and cannot be added to the Total C6-C50 and are only determined if the chromatogram of the C34 - C50 hydrocarbons indicates that hydrocarbons >C50 are present.

Total C6 - C50 results are corrected for BTEX and PAH contributions (if requested).

Quality control data is available upon request.

Assistance in the interpretation of data is available upon request.

This method complies with the Reference Method for the CWS PHC and is validated for use in the laboratory.

nC6 and nC10 response factors are within 30% of Toluene response factor.

nC10, nC16 and nC34 response factors are within 10% of their average.

C50 response factor is within 70% of nC10 + nC16 + nC34 average.

Linearity is within 15%.

The chromatogram returned to baseline by the retention time of nC50.

Extraction and holding times were met for this sample.

Certified By:



Certificate of Analysis

AGAT WORK ORDER: 15E009548

PROJECT: A04012A07

6310 ROPER ROAD
EDMONTON, ALBERTA
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<http://www.agatlabs.com>

CLIENT NAME: KLOHN CRIPPEN

ATTENTION TO: Nicole Wills

SAMPLING SITE:

SAMPLED BY:

Polyaromatic Hydrocarbon Analysis - Soil

DATE RECEIVED: 2015-08-19

DATE REPORTED: 2015-08-25

		BH15-002 (1.		
SAMPLE DESCRIPTION:		0-1.5)		
SAMPLE TYPE:		Soil		
DATE SAMPLED:		8/14/2015		
Parameter	Unit	G / S	RDL	6882362
Naphthalene	mg/kg		0.005	<0.005
2-Methylnaphthalene	mg/kg		0.005	<0.005
Acenaphthylene	mg/kg		0.005	<0.005
Acenaphthene	mg/kg		0.005	<0.005
Fluorene	mg/kg		0.02	<0.02
Phenanthrene	mg/kg		0.02	<0.02
Anthracene	mg/kg		0.004	<0.004
Fluoranthene	mg/kg		0.01	<0.01
Pyrene	mg/kg		0.01	<0.01
Benzo[a]anthracene	mg/kg		0.03	<0.03
Chrysene	mg/kg		0.05	<0.05
Benzo[b+ j]fluoranthene	mg/kg		0.05	<0.05
Benzo[k]fluoranthene	mg/kg		0.05	<0.05
Benzo[a]pyrene	mg/kg		0.03	<0.03
Indeno[1,2,3-cd]pyrene	mg/kg		0.05	<0.05
Dibenzo[ah]anthracene	mg/kg		0.005	<0.005
Benzo[ghi]perylene	mg/kg		0.05	<0.05
B[a]P TPE	mg/kg		0.027	0.027
IARC (coarse)			0.11	0.11
IARC (fine)			0.22	0.22
Surrogate	Unit	Acceptable Limits		
2-Fluorobiphenyl (PAH)	%		50-150	89
p-Terphenyl-d14 (PAH)	%		50-150	100

Comments: RDL - Reported Detection Limit; G / S - Guideline / Standard

6882362 Results are based on the dry weight of the sample.

Based on GC/MS target ion analysis.

Isomers Benzo(b)fluoranthene and Benzo(j)fluoranthene have the same GC retention time and are reported as the sum of the two.

Certified By:

Quality Assurance

CLIENT NAME: KLOHN CRIPPEN
AGAT WORK ORDER: 15E009548
PROJECT: A04012A07
ATTENTION TO: Nicole Wills
SAMPLING SITE:
SAMPLED BY:

Soil Analysis															
RPT Date:			DUPLICATE				Method Blank	REFERENCE MATERIAL			METHOD BLANK SPIKE		MATRIX SPIKE		
PARAMETER	Batch	Sample Id	Dup #1	Dup #2	RPD	Measured Value		Acceptable Limits		Recovery	Acceptable Limits		Recovery	Acceptable Limits	
								Lower	Upper		Lower	Upper		Lower	Upper

Soil Analysis - Detailed Salinity

pH (Saturated Paste)	236	6882420	7.28	7.18	1.4%	N/A	98%	90%	110%					
Electrical Conductivity (Sat. Paste)	236	6882420	0.34	0.37	10.2%	< 0.05	104%	90%	110%					
Saturation Percentage	236	6882420	40	34	16.2%	< 1	118%	80%	120%					
Chloride, Soluble	1324	6882420	22	24	8.7%	< 5	97%	80%	120%					
Calcium, Soluble	238	6882420	40	35	13.3%	< 1	101%	80%	120%			90%	80%	120%
Potassium, Soluble	238	6882420	4	4	0.0%	< 2	93%	80%	120%			92%	80%	120%
Magnesium, Soluble	238	6882420	13	11	16.7%	< 2	102%	80%	120%			95%	80%	120%
Sodium, Soluble	238	6882420	17	15	12.5%	< 2	96%	80%	120%			85%	80%	120%
Sulfate, Soluble	238	6882420	39	34	13.7%	< 2	100%	80%	120%			96%	80%	120%

Comments: If the RPD value is NA, the results of the duplicates are under 5X the RDL and will not be calculated.
If Matrix spike value is NA, the spiked analyte concentration was lower than that of the matrix contribution.

Soil Analysis - Detailed Salinity

pH (Saturated Paste)	236	6882424	7.64	7.72	1.0%	N/A	101%	90%	110%					
Electrical Conductivity (Sat. Paste)	236	6882424	0.35	0.34	2.9%	< 0.05	104%	90%	110%					
Saturation Percentage	236	6882424	56	59	5.2%	< 1	108%	80%	120%					
Chloride, Soluble	1325	6882424	26	29	10.9%	< 5	106%	80%	120%					
Calcium, Soluble	238	6882424	16	17	6.1%	< 1	102%	80%	120%			107%	80%	120%
Potassium, Soluble	238	6882424	4	4	0.0%	< 2	96%	80%	120%			99%	80%	120%
Magnesium, Soluble	238	6882424	12	13	8.0%	< 2	103%	80%	120%			113%	80%	120%
Sodium, Soluble	238	6882424	34	36	5.7%	< 2	96%	80%	120%			104%	80%	120%
Sulfate, Soluble	238	6882424	42	48	13.3%	< 2	92%	80%	120%			116%	80%	120%

Comments: If the RPD value is NA, the results of the duplicates are under 5X the RDL and will not be calculated.
If Matrix spike value is NA, the spiked analyte concentration was lower than that of the matrix contribution.

Soil Analysis - Detailed Salinity

pH (Saturated Paste)	236	6882468	7.11	7.01	1.4%	N/A	98%	90%	110%					
Electrical Conductivity (Sat. Paste)	236	6882468	0.29	0.29	0.3%	< 0.05	104%	90%	110%					
Saturation Percentage	236	6882468	54	54	0.0%	< 1	115%	80%	120%					
Chloride, Soluble	1325	6882468	13	12	8.0%	< 5	107%	80%	120%					
Calcium, Soluble	238	6882468	33	33	0.0%	< 1	105%	80%	120%			107%	80%	120%
Potassium, Soluble	238	6882468	4	4	0.0%	< 2	99%	80%	120%			101%	80%	120%
Magnesium, Soluble	238	6882468	8	8	0.0%	< 2	103%	80%	120%			108%	80%	120%
Sodium, Soluble	238	6882468	14	14	0.0%	< 2	97%	80%	120%			100%	80%	120%
Sulfate, Soluble	238	6882468	15	18	18.2%	< 2	95%	80%	120%			99%	80%	120%

Quality Assurance

CLIENT NAME: KLOHN CRIPPEN
AGAT WORK ORDER: 15E009548
PROJECT: A04012A07
ATTENTION TO: Nicole Wills
SAMPLING SITE:
SAMPLED BY:

Soil Analysis (Continued)															
RPT Date:			DUPLICATE				Method Blank	REFERENCE MATERIAL			METHOD BLANK SPIKE		MATRIX SPIKE		
PARAMETER	Batch	Sample Id	Dup #1	Dup #2	RPD	Measured Value		Acceptable Limits		Recovery	Acceptable Limits		Recovery	Acceptable Limits	
								Lower	Upper		Lower	Upper		Lower	Upper

Comments: If the RPD value is NA, the results of the duplicates are under 5X the RDL and will not be calculated.
If Matrix spike value is NA, the spiked analyte concentration was lower than that of the matrix contribution.

CCME / Tier 1 Metals

Antimony	6882353	6882353	<0.5	<0.5	NA	< 0.5	107%	80%	120%		103%	80%	120%
Arsenic	6882353	6882353	5.5	5.0	8.6%	< 0.5	103%	80%	120%		95%	80%	120%
Barium	6882353	6882353	291	264	9.6%	< 0.5	101%	80%	120%		111%	80%	120%
Beryllium	6882353	6882353	<0.5	<0.5	NA	< 0.5	94%	80%	120%		113%	80%	120%
Cadmium	6882353	6882353	<0.5	<0.5	NA	< 0.5	114%	80%	120%		90%	80%	120%
Chromium	6882353	6882353	15.1	16.3	8.0%	< 0.5	100%	80%	120%		108%	80%	120%
Cobalt	6882353	6882353	3.0	2.7	10.6%	< 0.5	107%	80%	120%		103%	80%	120%
Copper	6882353	6882353	4.3	5.2	18.8%	< 0.5	94%	80%	120%		98%	80%	120%
Lead	6882353	6882353	5.3	5.3	0.9%	< 0.5	93%	80%	120%		103%	80%	120%
Molybdenum	6882353	6882353	1.2	1.3	0.0%	< 0.5	102%	80%	120%		106%	80%	120%
Nickel	6882353	6882353	10.5	11.3	7.1%	< 0.5	101%	80%	120%		100%	80%	120%
Selenium	6882353	6882353	<0.5	<0.5	NA	< 0.5	94%	80%	120%		91%	80%	120%
Silver	6882353	6882353	<0.5	<0.5	NA	< 0.5	90%	80%	120%		102%	80%	120%
Thallium	6882353	6882353	<0.5	<0.5	NA	< 0.5	82%	80%	120%		100%	80%	120%
Tin	6882353	6882353	<0.5	<0.5	NA	< 0.5	94%	80%	120%		93%	80%	120%
Uranium	6882353	6882353	<0.5	<0.5	NA	< 0.5	107%	80%	120%		110%	80%	120%
Vanadium	6882353	6882353	17.5	16.0	9.3%	< 0.5	100%	80%	120%		112%	80%	120%
Zinc	6882353	6882353	22	26	18.2%	< 1	93%	80%	120%		95%	80%	120%

Comments: If Matrix spike value is NA, the spiked analyte concentration was lower than that of the matrix contribution.
If the RPD value is NA, the results of the duplicates are under 5X the RDL and will not be calculated.

CCME / Tier 1 Metals

Antimony	237	6882426	<0.5	<0.5	NA	< 0.5	104%	80%	120%		98%	80%	120%
Arsenic	237	6882426	3.7	3.6	2.4%	< 0.5	102%	80%	120%		95%	80%	120%
Barium	237	6882426	271	246	9.6%	< 0.5	92%	80%	120%		94%	80%	120%
Beryllium	237	6882426	<0.5	<0.5	NA	< 0.5	110%	80%	120%		109%	80%	120%
Cadmium	237	6882426	<0.5	<0.5	NA	< 0.5	116%	80%	120%		88%	80%	120%
Chromium	237	6882426	20.0	17.3	14.5%	< 0.5	107%	80%	120%		110%	80%	120%
Cobalt	237	6882426	3.6	3.2	11.8%	< 0.5	109%	80%	120%		111%	80%	120%
Copper	237	6882426	10.4	8.7	17.8%	< 0.5	99%	80%	120%		110%	80%	120%
Lead	237	6882426	5.1	5.3	3.8%	< 0.5	90%	80%	120%		95%	80%	120%
Molybdenum	237	6882426	1.2	1.0	18.2%	< 0.5	95%	80%	120%		103%	80%	120%
Nickel	237	6882426	14.8	13.3	10.7%	< 0.5	110%	80%	120%		111%	80%	120%
Selenium	237	6882426	0.9	0.7	NA	< 0.5	109%	80%	120%		106%	80%	120%

Quality Assurance

CLIENT NAME: KLOHN CRIPPEN
AGAT WORK ORDER: 15E009548
PROJECT: A04012A07
ATTENTION TO: Nicole Wills
SAMPLING SITE:
SAMPLED BY:

Soil Analysis (Continued)															
RPT Date:			DUPLICATE				Method Blank	REFERENCE MATERIAL			METHOD BLANK SPIKE		MATRIX SPIKE		
PARAMETER	Batch	Sample Id	Dup #1	Dup #2	RPD	Measured Value		Acceptable Limits		Recovery	Acceptable Limits		Recovery	Acceptable Limits	
								Lower	Upper		Lower	Upper		Lower	Upper
Silver	237	6882426	<0.5	<0.5	NA	< 0.5	91%	80%	120%			87%	80%	120%	
Thallium	237	6882426	<0.5	<0.5	NA	< 0.5	86%	80%	120%			95%	80%	120%	
Tin	237	6882426	0.5	<0.5	NA	< 0.5	92%	80%	120%			89%	80%	120%	
Uranium	237	6882426	0.8	0.8	0.0%	< 0.5	102%	80%	120%			105%	80%	120%	
Vanadium	237	6882426	22.4	19.5	13.8%	< 0.5	111%	80%	120%			111%	80%	120%	
Zinc	237	6882426	63	39	47.1%	< 1	105%	80%	120%			119%	80%	120%	

Comments: If Matrix spike value is NA, the spiked analyte concentration was lower than that of the matrix contribution.
If the RPD value is NA, the results of the duplicates are under 5X the RDL and will not be calculated.

CCME / Tier 1 Metals

Antimony	238	6738252	<0.5	<0.5	NA	< 0.5	106%	80%	120%			98%	80%	120%
Arsenic	238	6738252	7.9	8.0	1.3%	< 0.5	115%	80%	120%			99%	80%	120%
Barium	238	6738252	202	209	3.4%	< 0.5	98%	80%	120%			119%	80%	120%
Beryllium	238	6738252	0.5	0.6	18.2%	< 0.5	100%	80%	120%			93%	80%	120%
Cadmium	238	6738252	<0.5	<0.5	NA	< 0.5	95%	80%	120%			97%	80%	120%
Chromium	238	6738252	20.3	20.7	2.0%	< 0.5	91%	80%	120%			96%	80%	120%
Cobalt	238	6738252	8.6	8.7	1.2%	< 0.5	102%	80%	120%			97%	80%	120%
Copper	238	6738252	18.9	19.4	2.6%	< 0.5	99%	80%	120%			100%	80%	120%
Lead	238	6738252	9.6	9.9	3.1%	< 0.5	96%	80%	120%			98%	80%	120%
Molybdenum	238	6738252	0.6	0.6	0.0%	< 0.5	93%	80%	120%			102%	80%	120%
Nickel	238	6738252	24.2	24.9	2.9%	< 0.5	103%	80%	120%			100%	80%	120%
Selenium	238	6738252	<0.5	<0.5	NA	< 0.5	95%	80%	120%			98%	80%	120%
Silver	238	6738252	<0.5	<0.5	NA	< 0.5	96%	80%	120%			97%	80%	120%
Thallium	238	6738252	<0.5	<0.5	NA	< 0.5	91%	80%	120%			99%	80%	120%
Tin	238	6738252	<0.5	<0.5	NA	< 0.5	99%	80%	120%			99%	80%	120%
Uranium	238	6738252	0.7	0.8	13.3%	< 0.5	101%	80%	120%			102%	80%	120%
Vanadium	238	6738252	28.0	28.1	0.4%	< 0.5	99%	80%	120%			108%	80%	120%
Zinc	238	6738252	57	57	0.0%	< 1	99%	80%	120%			105%	80%	120%

Comments: If Matrix spike value is NA, the spiked analyte concentration was lower than that of the matrix contribution.
If the RPD value is NA, the results of the duplicates are under 5X the RDL and will not be calculated.

Soil Analysis - Barium by Fusion ICP

Barium by Fusion ICP-OES	6882416	6882416	947	840	11.9%	< 40	108%	80%	120%			NA	80%	120%
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Comments: If the RPD value is NA, the results of the duplicates are under 5X the RDL and will not be calculated.

Soil Analysis - Barium by Fusion ICP

Barium by Fusion ICP-OES	6882467	6882467	750	787	4.9%	< 40	104%	80%	120%			NA	80%	120%
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Quality Assurance

CLIENT NAME: KLOHN CRIPPEN
PROJECT: A04012A07
SAMPLING SITE:

AGAT WORK ORDER: 15E009548
ATTENTION TO: Nicole Wills
SAMPLED BY:

Soil Analysis (Continued)

RPT Date:			DUPLICATE			Method Blank	REFERENCE MATERIAL			METHOD BLANK SPIKE			MATRIX SPIKE		
PARAMETER	Batch	Sample Id	Dup #1	Dup #2	RPD		Measured Value	Acceptable Limits		Recovery	Acceptable Limits		Recovery	Acceptable Limits	
								Lower	Upper		Lower	Upper		Lower	Upper

Comments: If the RPD value is NA, the results of the duplicates are under 5X the RDL and will not be calculated.

Soil Analysis - Barium by Fusion ICP

Barium by Fusion ICP-OES	6882469	6882469	766	748	2.4%	< 40	100%	80%	120%		NA	80%	120%
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Comments: If the RPD value is NA, the results of the duplicates are under 5X the RDL and will not be calculated.

Particle Size by Sieve

Sieve Analysis	238	6884796	92	92	0.0%	N/A	105%	80%	120%
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Certified By: _____

Quality Assurance

CLIENT NAME: KLOHN CRIPPEN
AGAT WORK ORDER: 15E009548
PROJECT: A04012A07
ATTENTION TO: Nicole Wills
SAMPLING SITE:
SAMPLED BY:

Trace Organics Analysis

RPT Date:			DUPLICATE				Method Blank	REFERENCE MATERIAL			METHOD BLANK SPIKE			MATRIX SPIKE		
PARAMETER	Batch	Sample Id	Dup #1	Dup #2	RPD	Measured Value		Acceptable Limits		Recovery	Acceptable Limits		Recovery	Acceptable Limits		
								Lower	Upper		Lower	Upper		Lower	Upper	
Petroleum Hydrocarbons (BTEX/F1-F4) in Soil (CWS)																
Benzene	900	6882420	< 0.005	< 0.005	NA	< 0.005	98%	80%	120%	98%	80%	120%	97%	60%	140%	
Toluene	900	6882420	< 0.05	< 0.05	NA	< 0.05	96%	80%	120%	95%	80%	120%	91%	60%	140%	
Ethylbenzene	900	6882420	< 0.01	< 0.01	NA	< 0.01	102%	80%	120%	112%	80%	120%	109%	60%	140%	
Xylenes	900	6882420	< 0.05	< 0.05	NA	< 0.05	112%	80%	120%	90%	80%	120%	87%	60%	140%	
C6 - C10 (F1)	900	6882420	< 10	< 10	NA	< 10	98%	80%	120%	112%	80%	120%	113%	60%	140%	
C10 - C16 (F2)	722	6882420	<10	<10	NA	< 10	118%	80%	120%	106%	80%	120%	104%	60%	140%	
C16 - C34 (F3)	722	6882420	46	32	NA	< 10	118%	80%	120%	107%	80%	120%	105%	60%	140%	
C34 - C50 (F4)	722	6882420	14	<10	NA	< 10	117%	80%	120%	108%	80%	120%	106%	60%	140%	
Moisture Content	722	6882420	16	16	NA	< 1										

Comments: If the RPD value is NA, the results of the duplicates are under 5X the RDL and will not be calculated.

Petroleum Hydrocarbons (BTEX/F1-F4) in Soil (CWS)

C10 - C16 (F2)	580	6882426	<10	<10	NA	< 10	87%	80%	120%	119%	80%	120%	108%	60%	140%
C16 - C34 (F3)	580	6882426	437	314	33.0%	< 10	88%	80%	120%	101%	80%	120%	110%	60%	140%
C34 - C50 (F4)	580	6882426	374	281	28.0%	< 10	85%	80%	120%	97%	80%	120%	99%	60%	140%
Moisture Content	580	6882426	45	54	18.2%	< 1									

Comments: If the RPD value is NA, the results of the duplicates are under 5X the RDL and will not be calculated.

Polyaromatic Hydrocarbon Analysis - Soil

Naphthalene	743	6879884	3.86	2.97	26.0%	< 0.005	117%	70%	130%	107%	70%	130%	89%	70%	130%
2-Methylnaphthalene	743	6879884	0.113	0.080	34.0%	< 0.005				99%	70%	130%	85%	70%	130%
Acenaphthylene	743	6879884	< 0.005	< 0.005	NA	< 0.005	87%	70%	130%	74%	70%	130%	72%	70%	130%
Acenaphthene	743	6879884	0.044	0.031	34.7%	< 0.005	116%	70%	130%	101%	70%	130%	89%	70%	130%
Fluorene	743	6879884	< 0.02	< 0.02	NA	< 0.02	110%	70%	130%	97%	70%	130%	87%	70%	130%
Phenanthrene	743	6879884	0.02	<0.02	NA	< 0.02	122%	70%	130%	97%	70%	130%	90%	70%	130%
Anthracene	743	6879884	< 0.004	< 0.004	NA	< 0.004	96%	70%	130%	95%	70%	130%	105%	70%	130%
Fluoranthene	743	6879884	0.01	<0.01	NA	< 0.01	105%	70%	130%	89%	70%	130%	92%	70%	130%
Pyrene	743	6879884	< 0.01	< 0.01	NA	< 0.01	106%	70%	130%	90%	70%	130%	90%	70%	130%
Benzo[a]anthracene	743	6879884	< 0.03	< 0.03	NA	< 0.03	90%	70%	130%	81%	70%	130%	83%	70%	130%
Chrysene	743	6879884	< 0.05	< 0.05	NA	< 0.05	126%	70%	130%	111%	70%	130%	92%	70%	130%
Benzo[b+j]fluoranthene	743	6879884	< 0.05	< 0.05	NA	< 0.05	111%	70%	130%	90%	70%	130%	70%	70%	130%
Benzo[k]fluoranthene	743	6879884	< 0.05	< 0.05	NA	< 0.05	120%	70%	130%	103%	70%	130%	85%	70%	130%
Benzo[a]pyrene	743	6879884	< 0.03	< 0.03	NA	< 0.03	89%	70%	130%	83%	70%	130%	75%	70%	130%
Indeno[1,2,3-cd]pyrene	743	6879884	< 0.05	< 0.05	NA	< 0.05	108%	70%	130%	91%	70%	130%	84%	70%	130%
Dibenzo[ah]anthracene	743	6879884	< 0.005	< 0.005	NA	< 0.005	115%	70%	130%	101%	70%	130%	88%	70%	130%
Benzo[ghi]perylene	743	6879884	< 0.05	< 0.05	NA	< 0.05	124%	70%	130%	101%	70%	130%	92%	70%	130%

Comments: If the RPD value is NA, the results of the duplicates are under 5X the RDL and will not be calculated.



Quality Assurance

CLIENT NAME: KLOHN CRIPPEN
PROJECT: A04012A07
SAMPLING SITE:

AGAT WORK ORDER: 15E009548
ATTENTION TO: Nicole Wills
SAMPLED BY:

Trace Organics Analysis (Continued)

RPT Date:			DUPLICATE			Method Blank	REFERENCE MATERIAL			METHOD BLANK SPIKE			MATRIX SPIKE		
PARAMETER	Batch	Sample Id	Dup #1	Dup #2	RPD		Measured Value	Acceptable Limits		Recovery	Acceptable Limits		Recovery	Acceptable Limits	
								Lower	Upper		Lower	Upper		Lower	Upper

Certified By: _____

Method Summary

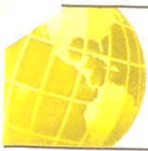
CLIENT NAME: KLOHN CRIPPEN
AGAT WORK ORDER: 15E009548
PROJECT: A04012A07
ATTENTION TO: Nicole Wills
SAMPLING SITE:
SAMPLED BY:

PARAMETER	AGAT S.O.P	LITERATURE REFERENCE	ANALYTICAL TECHNIQUE
Soil Analysis			
Antimony	INOR-171-6006, INOR-171-6202	EPA SW 846-3050/6010; SHEPPARD	ICP-MS
Arsenic	INOR-171-6006, INOR-171-6202	EPA SW 846-3050/6010; SHEPPARD S	ICP-MS
Barium	INOR-171-6006, INOR-171-6202	EPA SW 846-3050/6010; SHEPPARD	ICP-MS
Beryllium	INOR-171-6006, INOR-171-6202	EPA SW 846-3050/6010; SHEPPARD	ICP-MS
Cadmium	INOR-171-6006, INOR-171-6202	EPA SW 846-3050/6010; SHEPPARD	ICP-MS
Chromium	INOR-171-6006, INOR-171-6202	EPA SW 846-3050/6010; SHEPPARD	ICP/MS
Cobalt	INOR-171-6006, INOR-171-6202	EPA SW 846-3050/6010; SHEPPARD	ICP-MS
Copper	INOR-171-6006, INOR-171-6202	EPA SW 846-3050/6010; SHEPPARD	ICP-MS
Lead	INOR-171-6006, INOR-171-6202	EPA SW 846-3050/6010; SHEPPARD	ICP-MS
Molybdenum	INOR-171-6006, INOR-171-6202	EPA SW 846-3050/6010; SHEPPARD	ICP-MS
Nickel	INOR-171-6006, INOR-171-6202	EPA SW 846-3050/6010; SHEPPARD	ICP-MS
Selenium	INORG-171-6006, INOR-171-6202	EPA SW 846-3050/6010; SHEPPARD S	ICP-MS
Silver	INOR-171-6006, INOR-171-6202	EPA SW 846-3050/6010; SHEPPARD	ICP-MS
Thallium	INOR-171-6006, INOR-171-6202	EPA SW 846-3050/6010; SHEPPARD	ICP-MS
Tin	INOR-171-6006, INOR-171-6202	EPA SW 846-3050/6010; SHEPPARD	ICP-MS
Uranium	INOR-171-6006, INOR-171-6202	EPA SW 846-3050/6010; SHEPPARD	ICP-MS
Vanadium	INOR-171-6006, INOR-171-6202	EPA SW 846-3050/6010; SHEPPARD	ICP-MS
Zinc	INOR-171-6006, INOR-171-6202	EPA SW 846-3050/6010; SHEPPARD	ICP-MS
Sieve Analysis	INOR-171-6009	KROETSCH 2007; SHEPPARD 2007	SIEVE
True Barium by Fusion ICP	INOR-171-60008	ASTM D4503.08	ICP/OES
pH (Saturated Paste)	INOR-171-6206	SHEPPARD 2007; MILLER 2007	PH METER
Electrical Conductivity (Sat. Paste)	INO-171-6206	SHEPPARD 2007; MILLER 2007	CONDUCTIVITY METER
Sodium Adsorption Ratio	INOR-171-6201 & INOR-171-6002	McKeague 3.26	CALCULATION
Saturation Percentage	SOIL 0140; SOIL 0110; SOIL 0120	MILLER 2007; SHEPPARD 2007	GRAVIMETRIC
Chloride, Soluble	SOIL 0110; SOIL 0120; INST 0330	Carter & Gregorich 2007; SM 4500E	COLORIMETER
Calcium, Soluble	SOIL 0110; SOIL 0120; INST 0140	CARTER & GREGORICH 2007, SM 3120B	ICP/OES
Potassium, Soluble	SOIL 0110; SOIL 0120; INST 0140	CARTER & GREGORICH 2007, SM 3120B	ICP/OES
Magnesium, Soluble	SOIL 0110; SOIL 0120; INST 0140	CARTER & GREGORICH 2007, SM 3120B	ICP/OES
Sodium, Soluble	SOIL 0110; SOIL 0120; INST 0140	CARTER & GREGORICH 2007, SM 3120B	ICP/OES

Method Summary

CLIENT NAME: KLOHN CRIPPEN
AGAT WORK ORDER: 15E009548
PROJECT: A04012A07
ATTENTION TO: Nicole Wills
SAMPLING SITE:
SAMPLED BY:

PARAMETER	AGAT S.O.P	LITERATURE REFERENCE	ANALYTICAL TECHNIQUE
Sulfate, Soluble	SOIL 0110; SOIL 0120; INST 0140	SHEPPARD 2007; EATON 2005	ICP/OES
Trace Organics Analysis			
Benzene	ORG-170-5110/5140/5430/5440	EPA SW-846 8260-S	GC/MS
Toluene	ORG-170-5110/5140/5430/5440	EPA SW-846 8260-S	GC/MS
Ethylbenzene	ORG-170-5110/5140/5430/5440	EPA SW-846 8260-S	GC/MS
Xylenes	ORG-170-5110/5140/5430/5440	EPA SW-846 8260-S	GC/MS
C6 - C10 (F1)	ORG-170-5110/5140/5430/5440	CCME Tier 1 Method-S L	GC/FID
C6 - C10 (F1 minus BTEX)	ORG-170-5110/5140/5430/5440	CCME Tier 1 Method-S L	GC/FID
C10 - C16 (F2)	ORG-170-5120/5300	CCME Tier 1 Method-S H	GC/FID
C16 - C34 (F3)	ORG-170-5120/5300	CCME Tier 1 Method-S H	GC/FID
C34 - C50 (F4)	ORG-170-5120/5300	CCME Tier 1 Method-S H	GC/FID
Gravimetric Heavy Hydrocarbons	ORG-170-5120/5300	CCME Tier 1 Method-S H	GC/FID
Moisture Content	LAB-175-4002	CCME Tier 1 Method-S %	GRAVIMETRIC
Toluene-d8 (BTEX)	ORG-170-5110/5140/5430/5440	EPA SW-846 8260-S	GC/MS
Ethylbenzene-d10 (BTEX)	ORG-170-5110/5140/5430/5440	EPA SW-846 8260-S	GC/MS
o-Terphenyl (F2-F4)	ORG-170-5120/5300	CCME Tier 1 Method-S H	GC/FID
Naphthalene	ORG-170-5420	EPA SW846 8270 D/3540 C/3570	GC/MS
2-Methylnaphthalene	ORG-170-5420	EPA SW846 8270 D/3540 C/3570	GC/MS
Acenaphthylene	ORG-170-5420	EPA SW846 8270 D/3540 C/3570	GC/MS
Acenaphthene	ORG-170-5420	EPA SW846 8270 D/3540 C/3570	GC/MS
Fluorene	ORG-170-5420	EPA SW846 8270 D/3540 C/3570	GC/MS
Phenanthrene	ORG-170-5420	EPA SW846 8270 D/3540 C/3570	GC/MS
Anthracene	ORG-170-5420	EPA SW846 8270 D/3540 C/3570	GC/MS
Fluoranthene	ORG-170-5420	EPA SW846 8270 D/3540 C/3570	GC/MS
Pyrene	ORG-170-5420	EPA SW846 8270 D/3540 C/3570	GC/MS
Benzo[a]anthracene	ORG-170-5420	EPA SW846 8270 D/3540 C/3570	GC/MS
Chrysene	ORG-170-5420	EPA SW846 8270 D/3540 C/3570	GC/MS
Benzo[b+]fluoranthene	ORG-170-5420	EPA SW846 8270 D/3540 C/3570	GC/MS
Benzo[k]fluoranthene	ORG-170-5420	EPA SW846 8270 D/3540 C/3570	GC/MS
Benzo[a]pyrene	ORG-170-5420	EPA SW846 8270 D/3540 C/3570	GC/MS
Indeno[1,2,3-cd]pyrene	ORG-170-5420	EPA SW846 8270 D/3540 C/3570	GC/MS
Dibenzo[ah]anthracene	ORG-170-5420	EPA SW846 8270 D/3540 C/3570	GC/MS
Benzo[ghi]perylene	ORG-170-5420	EPA SW846 8270 D/3540 C/3570	GC/MS
2-Fluorobiphenyl (PAH)	TO 0500	EPA SW846 8270 D/3540 C/3570	GC/MS
p-Terphenyl-d14 (PAH)	TO 0500	EPA SW846 8270 D/3540 C/3570	GC/MS
B[a]P TPE	ORG-170-5420		CALCULATION
IARC (coarse)			GC/MS
IARC (fine)			GC/MS



Laboratory Use Only

Arrival Temperature: 2.35 °C
AGAT Job Number: 15E009548
Date and Time: 15 AUG 19 11:36

Chain of Custody Record

Report Information
Company: KCB
Contact: Nicole Willis
Address: 2618 Hopewell place
Calgary, Alberta
Phone: 403-730-6809 Fax: _____
LSD: _____
Client Project #: A07012A07

Report Information
1. Name: Nicole Willis
Email: Nwillis@klohn.com
2. Name: Konrad Ross
Email: KRoss@klohn.com
3. Name: Ken Smart
Email: KSmart@klohn.com

Report Format
 Single Sample per Page
 Multiple Samples per Page

Turnaround Time Required (TAT)

Regular TAT 5 to 7 business days
Rush TAT Less than 24 hours
 24 to 48 hours
 48 to 72 hours

RUSH TAT REQUESTS
UPON SELECTING A RUSH TAT, THE CLIENT ACCEPTS THAT A RUSH SURCHARGE WILL BE ADDED TO THE INVOICE. SEE BACK FOR SURCHARGE.

Date Required: _____

Invoice To Same Yes / No
Company: _____
Contact: _____
Address: _____
Phone: _____ Fax: _____
PO/AFE#: _____

Requirements (Selection may impact detection limits)

<input type="checkbox"/> CCME	<input type="checkbox"/> AB Tier 1	<input type="checkbox"/> BC CSR
<input type="checkbox"/> Agricultural	<input type="checkbox"/> Agricultural	<input type="checkbox"/> AW
<input type="checkbox"/> Industrial	<input type="checkbox"/> Industrial	<input type="checkbox"/> IW
<input type="checkbox"/> Residential/Park	<input type="checkbox"/> Residential/Park	<input type="checkbox"/> LW
<input type="checkbox"/> Commercial	<input type="checkbox"/> Commercial	<input type="checkbox"/> DW
<input type="checkbox"/> Drinking Water	<input type="checkbox"/> Natural Area	
<input type="checkbox"/> FWAL	<input type="checkbox"/> AB Surface Water	
<input type="checkbox"/> Other		
<input type="checkbox"/> D50 (Drilling)	<input type="checkbox"/> SPIGEC	

LABORATORY USE (LAB ID #)	SAMPLE IDENTIFICATION	SAMPLE MATRIX	DATE/TIME SAMPLED	COMMENTS - SITE SAMPLE INFO. SAMPLE CONTAINMENT	# OF CONTAINERS	Detailed Soil Salinity (Saturated Paste)	CCME BTEX/F1-F4	Soil Metals HWS-B Cr ⁶ Hg	Water Metals Dissolved Total Hg Cr ⁶	Routine Water Potability	AB Class 2 Landfill	BC Landfill	D50 Detailed Soil Salinity (As Received)	Microtox	BTEX/VP/EPH LEPH/HEPH	Particle Size	Barium (Fusion)	PAH	HOLD FOR 60 DAYS	PRESERVED (Y/N)	CONTAMINATED/HAZARDOUS (Y/N)
6882353	BH15-001 (0.15-0.3)	SOIL	AUG 14 / 15		3	X	X	X								X	X				
354	BH15-001 (1.5-2.0)				2	X	X	X								X	X				
355	BH15-001 (2.5-3.0)				2	X	X	X								X	X				
356	BH15-001 (3.0-3.5)				2	X	X	X								X	X				
357	BH15-001 (3.5-4.0)				3	X	X	X								X	X				
358	BH15-001 (5.0-5.5)				3	X	X	X								X	X				
359	BH15-001 (5.5-6.0)				3	X	X	X								X	X				
360	BH15-002 (0.3-0.6)				3	X	X	X								X					
361	BH15-002 (0.6-1.0)				2	X	X	X								X					
362	BH15-002 (1.0-1.5)				5	X	X	X								X	X	X			
363	BH15-002 (2.5-3.0)				3	X	X	X								X					

Samples Relinquished By (Print Name and Sign):	Date/Time	Samples Received By (Print Name and Sign): <u>ABB</u>	Date/Time	Pink Copy - Client	Page <u>1</u> of <u>3</u>
Samples Relinquished By (Print Name and Sign):	Date/Time	Samples Received By (Print Name and Sign): <u>gn</u>	Date/Time	Yellow Copy - AGAT	N ^o : AB 000856
Samples Relinquished By (Print Name and Sign):	Date/Time	Samples Received By (Print Name and Sign): <u>15 AUG 15</u>	Date/Time	White Copy - AGAT	



AGAT

Laboratories

2.4°C

15E009548

6310 Roper Road
Edmonton, Alberta T6B 3P9
P: 780.395.2525 • F: 780.462.2490
webearth.agatlabs.com

Chain of Custody Record

Report to:

Company: _____ Same as COC#: _____

LABORATORY USE (LAB ID #)	SAMPLE IDENTIFICATION	SAMPLE MATRIX	DATE/TIME SAMPLED	COMMENTS - SITE SAMPLE INFO. SAMPLE CONTAINMENT	# OF CONTAINERS	Detailed Soil Salinity (Saturated Paste)	CCME BTEX/F1-F4	Soil Metals	Water Metals	Routine Water Potability	AB Class 2 Landfill	BC Landfill	D50 Detailed Soil Salinity (As Received)	Microtox	BTEXS/VP/EPH	LEPH/HEPH	Particle Size	Barium (Fusion)	PAH	HOLD FOR 60 DAYS	PRESERVED (Y/N)	CONTAMINATED/HAZARDOUS (Y/N)		
						<input checked="" type="checkbox"/>		<input type="checkbox"/> Cr ⁶ <input type="checkbox"/> Hg															<input type="checkbox"/> Total <input type="checkbox"/> Hg <input type="checkbox"/> Cr ⁶	
2414	BH15-001 (2.0-2.5)	SOIL	Aug 14 /15		1	X		X									X							
415	BH15-001 (4.0-4.5)	↓	↓		1	X		X																
416	BH15-003 (0.3-0.6)				3	X	X	X																
417	BH15-003 (0.6-1.0)				3	X	X	X											X	X				
418	BH15-003 (1.0-1.5)				3	X	X	X																
419	BH15-004 (0.6-1.0)				3	X	X	X																
420	BH15-004 (1.5-2.0)				3	X	X	X																
421	BH15-004 (2.5-3.0)				3	X	X	X																
422	BH15-005 (0.6-1.0)				3	X	X	X																
423	BH15-005 (1.0-1.5)				3	X	X	X																
424	BH15-005 (2.5-3.0)				3	X	X	X																
425	BH15-006 (0.6-1.0)				3	X	X	X																
426	BH15-006 (1.0-1.5)				3	X	X	X																
427	BH15-006 (2.0-2.5)				2	X	X	X																
428	BH15-007 (0.15-0.3)				3	X	X	X																
429	BH15-007 (0.6-1.0)				3	X	X	X																
430	BH15-007 (1.0-1.5)				2	X	X	X																
431	BH15-008 (0.15-0.3)				3	X	X	X																
432	BH15-008 (0.3-0.6)				3	X	X	X																
433	BH15-008 (1.0-1.5)				3	X	X	X																
434	BH15-009 (0.3-0.6)				3	X	X	X																
435	BH15-009 (0.6-1.0)				3	X	X	X																
436	BH15-009 (1.0-1.5)				1	X	X																	

Samples Relinquished By (Print Name and Sign):	Date/Time:	Samples Received By (Print Name and Sign): <i>ASB</i>	Date/Time:	Pink Copy - Client	Page 2 of 25
Samples Relinquished By (Print Name and Sign):	Date/Time:	Samples Received By (Print Name and Sign): <i>[Signature]</i>	Date/Time:	Yellow Copy - AGAT	Nº: AB 000856 A
Samples Relinquished By (Print Name and Sign):	Date/Time:	Samples Received By (Print Name and Sign): <i>[Signature]</i>	Date/Time:	White Copy - AGAT	



Chain of Custody Record

Report to:

Company: _____ Same as COC#: _____

LABORATORY USE (LAB ID #)	SAMPLE IDENTIFICATION	SAMPLE MATRIX	DATE/TIME SAMPLED	COMMENTS - SITE SAMPLE INFO. SAMPLE CONTAINMENT	# OF CONTAINERS	Detailed Soil Salinity (Saturated Paste)	CCME BTEX/F1-F4	Soil Metals <input type="checkbox"/> HWS-B <input type="checkbox"/> Cr ⁶ <input type="checkbox"/> Hg	Water Metals <input type="checkbox"/> Dissolved <input type="checkbox"/> Total <input type="checkbox"/> Hg <input type="checkbox"/> Cr ⁶	Routine Water Potability	AB Class 2 Landfill	BC Landfill	D50 Detailed Soil Salinity (As Received)	Microtox	BTEXS/VPH/EPH <input type="checkbox"/> LEPH/HEPH <input type="checkbox"/>	Particle Size	Barium (Fusion)	PAH	HOLD FOR 60 DAYS	PRESERVED (Y/N)	CONTAMINATED/HAZARDOUS (Y/N)
2453	BH15-010 (0.3-0.6)	SOIL	Aug 14 /15		3	X	X	X													
461	BH15-010 (0.6-1.0)	↓	↓		3	X	X	X													
462	BH15-010 (2.5-3.0)			3	X	X	X														
463	BH15-011 (0.6-1.0)			3	X	X	X														
464	BH15-011 (1.0-1.5)			3	X	X	X														
465	BH15-011 (2.5-3.0)			3	X	X	X														
466	BH15-012 (0-0.15)			1	X	X															
467	BH15-012 (0.15-0.3)			1	X	X															
468	BH15-012 (0.3-0.6)			3	X	X	X											X			
469	BH15-012 (0.6-1.0)			3	X	X	X											X			
470	BH15-012 (1.0-1.5)			3	X	X	X											X			
471	BH15-012 (1.5-2.0)			1	X	X												X			
472	BH15-012 (2.0-2.5)			1	X	X												X			
473	BH15-012 (2.5-3.0)			3	X	X	X											X			

Samples Relinquished By (Print Name and Sign):	Date/Time:	Samples Received By (Print Name and Sign):	Date/Time:	Pink Copy - Client	Page 3 of 3
Samples Relinquished By (Print Name and Sign):	Date/Time:	Samples Received By (Print Name and Sign):	Date/Time:	Yellow Copy - AGAT	
Samples Relinquished By (Print Name and Sign):	Date/Time:	Samples Received By (Print Name and Sign):	Date/Time:	White Copy - AGAT	N ^o : AB 000868 A



AGAT Laboratories

SAMPLE INTEGRITY RECEIPT FORM

RECEIVING BASICS - Shipping

Company/Consultant: KCB
 Courier: Canadian North Prepaid Collect
 Waybill #: 518 YEV 7060-3072
 Branch: EDM GP FN FM RD VAN LYD FSJ EST Other: _____
 Custody Seal Intact: Yes No NA
 TAT: <24hr 24-48hr 48-72hr Reg Other _____
 Cooler Quantity: 4

TIME SENSITIVE ISSUES - Shipping

Earliest Date Sampled: Aug. 14, 2015 ALREADY EXCEEDED? Yes No
 MIBI/Time Sensitive Test*: n/a Expiry: n/a
 Hydrocarbon Test: BTEX F1 Expiry: Aug. 21, 2015
 Are samples received more than 5 days after sampling: Yes No
 *Residual Chlorine, DO, Turbidity, BOD, Nitrate/Nitrite, Microtox

Temperature (to be recorded from bottles/jars only)

N/A – Only Soil Bags Received

(1) (Bottle/Jar) $3.2 + 3.5 + 3.2 = 3.3$ °C (2) (Bottle/Jar) $3.4 + 0.3 + 0.5 = 1.4$ °C
 (3) (Bottle/Jar) _____ + _____ + _____ = _____ °C (4) (Bottle/Jar) _____ + _____ + _____ = _____ °C
 (5) (Bottle/Jar) _____ + _____ + _____ = _____ °C (6) (Bottle/Jar) _____ + _____ + _____ = _____ °C

(If more than 6 coolers are received use another sheet of paper and attach)

SAMPLE INTEGRITY - Shipping

Hazardous Samples: Why Hazardous: n/a
 Precaution taken: n/a
 Legal Samples: Yes No
 International Samples: Yes No Tape Sealed: Yes No
 Coolant used: Icepack Bagged Ice Free Ice Free Water None

LOGISTICS USE ONLY

Workorder No: 15E009548
 Samples Damaged: Yes No If YES why?
 No Bubble Wrap Frozen Courier
 Other: _____
 Correct Sample Requirements for Testing
 Correct Bottles: Yes No Correct Amount: Yes No
 Correct Labels: Yes No
 If NO to any of the above, explain why:

Visible Sediment in Waters : Yes No

Additional Integrity Issues or concerns:

3 samples, not 5, received for B415-002(1.0-15)
ID:362

Account Project Manager: Avelyn have they been notified of the above issues: Yes No

Whom spoken to: Avelyn Date/Time: 20 Aug 15

CPM Initial _____

518 YEV 7060-3072

SHIPPER'S ACCOUNT NUMBER

518-YEV-7060-3072

SHIPPER'S NAME AND ADDRESS
IEG Consultants
C/O Northwind Ind.
Inuvik, NT
867 777 2426 A04012A07.002.002
RSJLFW1460441

NOT NEGOTIABLE
AIR WAYBILL
(AIR CONSIGNMENT NOTE)
Canadian North
101 3731 52 Ave E
Edmonton Int Arpt, AB T9E 0V4
Canada

GST #: R 892440629

Copies 1, 2 and 3 of this Air Waybill are originals and have the same validity. It is agreed that the goods described herein are accepted in accordance with the goods order and condition (except as noted) for carriage SUBJECT TO THE CONDITIONS OF CONTRACT ON THE REVERSE HEREOF. ALL GOODS MAY BE CARRIED BY ANY OTHER MEANS INCLUDING ROAD OR ANY OTHER MEANS UNLESS SPECIFIC CONTRARY INSTRUCTIONS ARE GIVEN HEREON BY THE SHIPPER AND THE SHIPPER AGREES THAT THE SHIPMENTS MAY BE CARRIED VIA INTERMEDIATE STOPPING PLACES WHICH THE CARRIER DEEMS APPROPRIATE. THE SHIPPER'S ATTENTION IS DRAWN TO THE NOTICE CONCERNING CARRIER'S LIMITATION OF LIABILITY. Shipper may increase such limitation of liability by declaring a higher value for carriage and paying a supplemental charge if required.

CONSIGNEE'S ACCOUNT NUMBER
AGAT100CW

CONSIGNEE'S NAME AND ADDRESS
AGAT Laboratories Ltd
6310 Roper Road
Edmonton, AB T6B 3P9
Canada
780 243 8889 Alvelyn Pasco

SIGNATURE RECEIVED IN GOOD ORDER PLACE DATE/TIME

ISSUING CARRIER'S AGENT NAME AND CITY

PRINTED NAME
ALSO NOTIFY: NAME AND ADDRESS (OPTIONAL ACCOUNTING INFORMATION)
Acc. #: KLO100CW

AGENT'S IATA CODE
ACCOUNT NO.

Klohn Crippen Berger Ltd
500 - 2618 Hopewell Place NE
Calgary, AB T1Y 7J7

Mary Mack, 403-291-0777
TO EXPEDITE MOVEMENT, SHIPMENT MAY BE DIVERTED TO MOTOR OR OTHER CARRIER UNLESS SHIPPER COPIES OTHER INSTRUCTIONS HERE
DOMESTIC LIABILITY.

AIRPORT OF DEPARTURE (ADDR OF FIRST CARRIER) AND REQUESTED ROUTING
Inuvik

ROUTING AND DESTINATION

TO BY FIRST CARRIER TO BY TO BY
YEG Canadian North
AIRPORT OF DESTINATION
Edmonton
FOR CARRIER USE ONLY
FLIGHT/DATE
445/18 AU

CURRENCY CAD 3RD X
WT/VOL OTHER DECLARED VALUE FOR CARRIAGE
PPD COLI PRD COLI NVD
DECLARED VALUE FOR CUSTOMS
NCV
AMOUNT OF INSURANCE NIL
INSURANCE - If carrier offers insurance, and such insurance is requested in accordance with the conditions thereof, indicate amount to be insured in figures in box marked "Amount of Insurance".
INITIALS

HANDLING INFORMATION These commodities licensed by US for ultimate destination
HFPU KEEP COOL A04012A07.002.002

DUPLICATE COPY

NO. OF PIECES RCP	GROSS WEIGHT kg lb	RATE CLASS COMMODITY ITEM NO.	CHARGEABLE WEIGHT	RATE / CHARGE	TOTAL	NATURE AND QUANTITY OF GOODS (INCL DIMENSIONS OR VOLUME)					
							PREPAID	WEIGHT CHARGE	COLLECT	PICKUP CHARGES ZONE	DELIVERY CHARGES ZONE
14	449	GAD 00	449	\$7.20	3,232.80	Soil Samples DIMS 48x40x44IN (bulk)					
VALUATION CHARGE 0.00 TAX 210.13 TOTAL OTHER CHARGES DUE AGENT 0.00 TOTAL OTHER CHARGES DUE CARRIER 969.84											
TOTAL PREPAID 4,412.77 TOTAL COLLECT 0.00 TOTAL CHARGES 4,412.77											

SHIPPER certifies that the particulars on the face hereof are correct and that insofar as any part of the consignment contains dangerous goods, such part is properly described by name and is in proper condition for carriage by air according to the applicable Dangerous Goods Regulations.

RE-WEIGHT/DIMENSIONAL WEIGHT AND SHIPPER GUARANTEES ALL CHARGES SUBJECT TO RATE AUDIT

COD → CURRENCY CAD
TOTAL PREPAID 4,412.77
TOTAL COLLECT 0.00
TOTAL CHARGES 4,412.77

PRINTED NAME
SIGNATURE OF SHIPPER ABOVE AND INITIAL APPLICABLE BOX BELOW:
 THIS SHIPMENT DOES NOT CONTAIN DANGEROUS GOODS REGULATED IN AIR TRANSPORT.
 THIS SHIPMENT DOES CONTAIN DANGEROUS GOODS REGULATED IN AIR TRANSPORT.
EXECUTED ON 8/18/2015 11:25
(Date) (Time)

SIGNATURE OF ISSUING CARRIER OR ITS AGENT
995107
at Pasco

518-YEV-7060-3072



CLIENT NAME: KLOHN CRIPPEN
500-2618 HOPEWELL PLACE NE
CALGARY, AB T1Y7J7
(403) 274-3424

ATTENTION TO: Nicole Wills

PROJECT: A04012A07

AGAT WORK ORDER: 15E009623

SOIL ANALYSIS REVIEWED BY: Ngoc (Ruby) Vu, Lab Technician

TRACE ORGANICS REVIEWED BY: Ran Ma, Trace Organics Supervisor

DATE REPORTED: Aug 28, 2015

PAGES (INCLUDING COVER): 43

VERSION*: 1

Should you require any information regarding this analysis please contact your client services representative at (780) 395-2525

*NOTES

All samples will be disposed of within 30 days following analysis. Please contact the lab if you require additional sample storage time.



Certificate of Analysis

AGAT WORK ORDER: 15E009623

PROJECT: A04012A07

6310 ROPER ROAD
EDMONTON, ALBERTA
CANADA T6B 3P9
TEL (780)395-2525
FAX (780)462-2490
<http://www.agatlabs.com>

CLIENT NAME: KLOHN CRIPPEN

ATTENTION TO: Nicole Wills

SAMPLING SITE:

SAMPLED BY:

CCME / Tier 1 Metals

DATE RECEIVED: 2015-08-19

DATE REPORTED: 2015-08-24

Parameter	Unit	G / S	RDL	BH15-033 0.	BH15-033 1.	BH15-033 2.	BH15-034 0.	BH15-034 0.	BH15-034 1.	BH15-035 0.	BH15-035 1.	
				SAMPLE DESCRIPTION:	3-0.6	0-1.5	5-3.0	15-0.3	3-0.6	0-1.5	3-0.6	0-1.5
				SAMPLE TYPE:	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil
				DATE SAMPLED:	8/16/2015	8/16/2015	8/16/2015	8/16/2015	8/16/2015	8/16/2015	8/16/2015	8/16/2015
				6882660	6882665	6882666	6882668	6882669	6882670	6882672	6882673	
Antimony	mg/kg	20	0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	
Arsenic	mg/kg	17	0.5	4.7	6.6	5.5	1.7	5.2	5.7	5.5	5.7	
Barium	mg/kg	750	0.5	256	224	126	147	251	133	414	123	
Beryllium	mg/kg	5	0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	
Cadmium	mg/kg	1.4	0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	
Chromium	mg/kg	64	0.5	11.0	22.4	10.3	2.9	15.8	9.9	15.5	9.6	
Cobalt	mg/kg	20	0.5	2.3	4.0	4.3	1.9	3.1	4.3	2.9	3.9	
Copper	mg/kg	63	0.5	4.4	6.2	4.0	3.5	5.7	6.2	6.4	4.5	
Lead	mg/kg	70	0.5	5.2	5.2	3.1	1.5	4.2	4.6	5.5	3.5	
Molybdenum	mg/kg	4	0.5	<0.5	1.7	0.9	<0.5	0.9	0.7	1.3	0.6	
Nickel	mg/kg	50	0.5	8.1	15.6	11.4	4.1	11.6	12.9	11.2	10.5	
Selenium	mg/kg	1	0.5	0.6	<0.5	<0.5	<0.5	<0.5	<0.5	0.5	<0.5	
Silver	mg/kg	20	0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	
Thallium	mg/kg	1	0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	
Tin	mg/kg	5	0.5	<0.5	0.8	<0.5	<0.5	<0.5	<0.5	12.0	1.8	
Uranium	mg/kg	23	0.5	<0.5	<0.5	0.8	<0.5	<0.5	<0.5	<0.5	<0.5	
Vanadium	mg/kg	130	0.5	17.9	15.9	11.9	4.4	15.6	16.6	14.9	13.8	
Zinc	mg/kg	200	1	16	22	26	9	20	25	20	25	

Certified By:



Certificate of Analysis

AGAT WORK ORDER: 15E009623

PROJECT: A04012A07

6310 ROPER ROAD
EDMONTON, ALBERTA
CANADA T6B 3P9
TEL (780)395-2525
FAX (780)462-2490
<http://www.agatlabs.com>

CLIENT NAME: KLOHN CRIPPEN

ATTENTION TO: Nicole Wills

SAMPLING SITE:

SAMPLED BY:

CCME / Tier 1 Metals

DATE RECEIVED: 2015-08-19

DATE REPORTED: 2015-08-24

Parameter	Unit	G / S	RDL	BH15-035 2.	BH15-036 0.	BH15-036 0.	BH15-036 1.	BH15-037 0.	BH15-037 0.	BH15-037 1.	
				SAMPLE DESCRIPTION:	0-2.5	15-0.3	3-0.6	0-1.5	3-0.6	6-1.0	0-1.5
				SAMPLE TYPE:	Soil	Soil	Soil	Soil	Soil	Soil	Soil
				DATE SAMPLED:	8/16/2015	8/16/2015	8/16/2015	8/16/2015	8/16/2015	8/16/2015	8/16/2015
				6882674	6882675	6882676	6882677	6882678	6882679	RDL	6882680
Antimony	mg/kg	20	0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.5	<0.5
Arsenic	mg/kg	17	0.5	5.4	6.5	2.8	5.8	6.6	5.5	0.5	4.0
Barium	mg/kg	750	0.5	240	385	255	167	242	103	0.5	311
Beryllium	mg/kg	5	0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.5	<0.5
Cadmium	mg/kg	1.4	0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.5	<0.5
Chromium	mg/kg	64	0.5	8.2	8.5	12.3	17.0	14.8	10.8	5	12
Cobalt	mg/kg	20	0.5	3.7	2.7	2.8	3.6	4.1	3.8	0.5	2.8
Copper	mg/kg	63	0.5	4.2	5.5	6.8	4.0	6.2	3.8	0.5	6.5
Lead	mg/kg	70	0.5	3.6	7.5	2.8	6.5	5.4	3.5	0.5	6.5
Molybdenum	mg/kg	4	0.5	0.6	0.6	1.1	1.3	0.9	0.8	0.5	0.8
Nickel	mg/kg	50	0.5	9.6	6.5	9.3	13.2	13.3	11.4	0.5	23.8
Selenium	mg/kg	1	0.5	<0.5	<0.5	<0.5	<0.5	0.7	<0.5	0.5	<0.5
Silver	mg/kg	20	0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.5	<0.5
Thallium	mg/kg	1	0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.5	<0.5
Tin	mg/kg	5	0.5	<0.5	0.8	7.8	3.2	<0.5	<0.5	0.5	0.8
Uranium	mg/kg	23	0.5	<0.5	<0.5	<0.5	<0.5	0.5	<0.5	0.5	<0.5
Vanadium	mg/kg	130	0.5	12.0	14.2	9.9	14.5	20.9	13.2	0.5	13.1
Zinc	mg/kg	200	1	22	21.7	38	22	18	25	1	19

Certified By:



Certificate of Analysis

AGAT WORK ORDER: 15E009623

PROJECT: A04012A07

6310 ROPER ROAD
EDMONTON, ALBERTA
CANADA T6B 3P9
TEL (780)395-2525
FAX (780)462-2490
<http://www.agatlabs.com>

CLIENT NAME: KLOHN CRIPPEN

ATTENTION TO: Nicole Wills

SAMPLING SITE:

SAMPLED BY:

CCME / Tier 1 Metals

DATE RECEIVED: 2015-08-19

DATE REPORTED: 2015-08-24

Parameter	Unit	G / S	RDL	BH15-038 0.	BH15-038 0.	BH15-038 1.	BH15-039 0.	BH15-039 0.	BH15-039 1.	BH15-040 0-0.15	BH15-040 0.	
				SAMPLE DESCRIPTION:	15-0.3	3-0.6	0-1.5	15-0.3	6-1.0	0-1.5	15-0.3	6-1.0
				SAMPLE TYPE:	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil
				DATE SAMPLED:	8/16/2015	8/16/2015	8/16/2015	8/16/2015	8/16/2015	8/16/2015	8/16/2015	8/16/2015
				6882681	6882682	6882683	6882684	6882685	6882686	6882687	6882688	
Antimony	mg/kg	20	0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	
Arsenic	mg/kg	17	0.5	4.0	6.1	5.3	5.7	5.3	7.9	4.6	6.0	
Barium	mg/kg	750	0.5	248	168	103	244	145	123	297	134	
Beryllium	mg/kg	5	0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	
Cadmium	mg/kg	1.4	0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	
Chromium	mg/kg	64	0.5	12.0	12.8	15.0	6.5	9.6	9.4	6.7	11.0	
Cobalt	mg/kg	20	0.5	2.0	3.2	3.6	2.5	3.0	5.0	2.4	3.7	
Copper	mg/kg	63	0.5	4.0	7.0	3.9	5.0	2.9	4.3	5.2	3.4	
Lead	mg/kg	70	0.5	4.8	5.7	3.7	6.1	4.6	4.2	6.1	3.4	
Molybdenum	mg/kg	4	0.5	0.7	0.7	1.0	0.5	0.6	0.8	0.6	0.8	
Nickel	mg/kg	50	0.5	6.3	9.6	12.6	5.9	7.9	12.1	6.2	10.4	
Selenium	mg/kg	1	0.5	<0.5	0.6	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	
Silver	mg/kg	20	0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	
Thallium	mg/kg	1	0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	
Tin	mg/kg	5	0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	
Uranium	mg/kg	23	0.5	<0.5	<0.5	<0.5	0.5	<0.5	<0.5	<0.5	<0.5	
Vanadium	mg/kg	130	0.5	15.5	17.4	12.4	14.9	16.1	15.5	12.5	13.8	
Zinc	mg/kg	200	1	18	27	24	17	20	33	26	25	

Certified By:



Certificate of Analysis

AGAT WORK ORDER: 15E009623

PROJECT: A04012A07

6310 ROPER ROAD
EDMONTON, ALBERTA
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FAX (780)462-2490
<http://www.agatlabs.com>

CLIENT NAME: KLOHN CRIPPEN

ATTENTION TO: Nicole Wills

SAMPLING SITE:

SAMPLED BY:

CCME / Tier 1 Metals

DATE RECEIVED: 2015-08-19

DATE REPORTED: 2015-08-24

Parameter	Unit	SAMPLE DESCRIPTION:		BH15-040 1.	BH15-041 0.	BH15-041 0.	BH15-041 1.	BH15-042 0.	BH15-042 0.	BH15-042 1.	BH15-043 0.	
		G / S	RDL	0-1.5	3-0.6	6-1.0	0-1.5	15-0.3	6-1.0	0-1.5	3-0.6	
		SAMPLE TYPE:		Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil
		DATE SAMPLED:		8/16/2015	8/16/2015	8/16/2015	8/16/2015	8/16/2015	8/16/2015	8/16/2015	8/16/2015	8/16/2015
Antimony	mg/kg	20	0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	
Arsenic	mg/kg	17	0.5	5.7	4.4	8.4	6.2	6.7	5.1	6.6	4.3	
Barium	mg/kg	750	0.5	160	211	223	98.4	468	216	148	300	
Beryllium	mg/kg	5	0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	
Cadmium	mg/kg	1.4	0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	
Chromium	mg/kg	64	0.5	7.1	12.0	13.0	9.7	48.9	12.4	9.8	14.6	
Cobalt	mg/kg	20	0.5	3.3	2.6	4.4	4.0	2.9	4.1	3.1	3.9	
Copper	mg/kg	63	0.5	3.7	4.8	5.7	3.7	5.6	6.1	3.5	7.5	
Lead	mg/kg	70	0.5	4.0	4.3	5.8	3.5	18.1	4.8	4.0	5.3	
Molybdenum	mg/kg	4	0.5	0.8	0.9	0.5	0.8	0.9	0.6	0.9	1.1	
Nickel	mg/kg	50	0.5	8.8	9.2	14.4	11.1	23.9	13.6	9.6	12.8	
Selenium	mg/kg	1	0.5	<0.5	0.6	0.7	<0.5	<0.5	0.5	<0.5	0.6	
Silver	mg/kg	20	0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	
Thallium	mg/kg	1	0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	
Tin	mg/kg	5	0.5	<0.5	<0.5	<0.5	<0.5	1.9	<0.5	<0.5	10.1	
Uranium	mg/kg	23	0.5	<0.5	0.5	0.6	<0.5	<0.5	0.5	<0.5	0.6	
Vanadium	mg/kg	130	0.5	15.0	18.6	25.5	15.3	15.3	20.5	13.6	19.4	
Zinc	mg/kg	200	1	23	20	17	27	19	21	21	28	

Certified By:



Certificate of Analysis

AGAT WORK ORDER: 15E009623

PROJECT: A04012A07

6310 ROPER ROAD
EDMONTON, ALBERTA
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FAX (780)462-2490
<http://www.agatlabs.com>

CLIENT NAME: KLOHN CRIPPEN

ATTENTION TO: Nicole Wills

SAMPLING SITE:

SAMPLED BY:

CCME / Tier 1 Metals

DATE RECEIVED: 2015-08-19

DATE REPORTED: 2015-08-24

Parameter	Unit	SAMPLE DESCRIPTION:		BH15-043 1.	BH15-043 2.	BH15-044 0.	BH15-044 0.	BH15-044 1.	BH15-045 0.	BH15-045 0.	BH15-045 1.	
		G / S	RDL	0-1.5	5-3.0	15-0.3	6-1.0	0-1.5	15-0.3	6-1.0	0-1.5	
		SAMPLE TYPE:		Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil
		DATE SAMPLED:		8/16/2015	8/16/2015	8/16/2015	8/16/2015	8/16/2015	8/16/2015	8/16/2015	8/16/2015	8/16/2015
Antimony	mg/kg	20	0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	
Arsenic	mg/kg	17	0.5	6.6	4.7	4.4	4.9	7.8	4.2	6.0	5.0	
Barium	mg/kg	750	0.5	130	110	302	408	161	296	94.5	93.0	
Beryllium	mg/kg	5	0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	
Cadmium	mg/kg	1.4	0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	
Chromium	mg/kg	64	0.5	9.9	10.3	18.8	16.0	14.5	13.2	10.6	8.9	
Cobalt	mg/kg	20	0.5	3.5	3.6	1.6	4.8	2.9	3.3	4.0	3.3	
Copper	mg/kg	63	0.5	4.3	3.6	4.2	7.7	3.6	5.6	3.5	3.4	
Lead	mg/kg	70	0.5	3.6	3.1	6.8	5.0	4.2	5.2	3.3	3.5	
Molybdenum	mg/kg	4	0.5	0.9	0.8	1.6	1.5	1.3	0.6	0.8	0.7	
Nickel	mg/kg	50	0.5	11.5	10.7	10.7	16.8	10.7	10.6	11.6	9.9	
Selenium	mg/kg	1	0.5	<0.5	<0.5	<0.5	0.8	<0.5	0.9	<0.5	<0.5	
Silver	mg/kg	20	0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	
Thallium	mg/kg	1	0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	
Tin	mg/kg	5	0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	
Uranium	mg/kg	23	0.5	<0.5	<0.5	<0.5	0.7	<0.5	1.2	<0.5	<0.5	
Vanadium	mg/kg	130	0.5	14.2	13.5	14.9	22.0	14.9	20.1	15.2	13.9	
Zinc	mg/kg	200	1	21	26	12	21	18	14	23	21	

Certified By:



Certificate of Analysis

AGAT WORK ORDER: 15E009623

PROJECT: A04012A07

6310 ROPER ROAD
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CLIENT NAME: KLOHN CRIPPEN

ATTENTION TO: Nicole Wills

SAMPLING SITE:

SAMPLED BY:

CCME / Tier 1 Metals

DATE RECEIVED: 2015-08-19

DATE REPORTED: 2015-08-24

Parameter	Unit	SAMPLE DESCRIPTION:		BH15-046 0.	BH15-046 0.	BH15-046 1.	BH15-047 0.	BH15-047 1.	BH15-047 2.	BH15-048 0.	BH15-048 0.	
		G / S	RDL	15-0.3	3-0.6	0-1.5	15-0.3	0-1.5	5-3.0	15-0.3	6-1.0	
		SAMPLE TYPE:		Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil
		DATE SAMPLED:		8/16/2015	8/16/2015	8/16/2015	8/16/2015	8/16/2015	8/16/2015	8/16/2015	8/16/2015	8/16/2015
Antimony	mg/kg	20	0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	
Arsenic	mg/kg	17	0.5	4.7	3.5	6.7	6.8	5.9	5.2	5.8	6.4	
Barium	mg/kg	750	0.5	277	220	120	189	142	115	218	132	
Beryllium	mg/kg	5	0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	
Cadmium	mg/kg	1.4	0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	
Chromium	mg/kg	64	0.5	34.9	8.9	9.6	10.7	8.6	16.5	13.2	9.2	
Cobalt	mg/kg	20	0.5	2.0	2.6	3.5	2.6	3.7	3.8	3.2	3.5	
Copper	mg/kg	63	0.5	5.1	3.9	4.0	5.1	3.8	4.0	4.7	4.0	
Lead	mg/kg	70	0.5	7.0	3.8	3.6	4.9	3.5	3.2	4.8	4.0	
Molybdenum	mg/kg	4	0.5	3.2	0.5	0.8	<0.5	0.7	1.4	0.9	0.7	
Nickel	mg/kg	50	0.5	17.7	7.9	10.8	10.0	10.2	13.2	9.1	9.9	
Selenium	mg/kg	1	0.5	<0.5	0.7	<0.5	0.7	<0.5	<0.5	<0.5	<0.5	
Silver	mg/kg	20	0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	
Thallium	mg/kg	1	0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	
Tin	mg/kg	5	0.5	0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	
Uranium	mg/kg	23	0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	
Vanadium	mg/kg	130	0.5	19.9	14.8	12.7	21.0	13.9	13.0	17.7	14.5	
Zinc	mg/kg	200	1	16	10	22	13	23	21	21	23	

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PROJECT: A04012A07

6310 ROPER ROAD
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CLIENT NAME: KLOHN CRIPPEN

ATTENTION TO: Nicole Wills

SAMPLING SITE:

SAMPLED BY:

CCME / Tier 1 Metals

DATE RECEIVED: 2015-08-19

DATE REPORTED: 2015-08-24

Parameter	Unit	G / S	RDL	BH15-048 1.	BH15-049 0.	BH15-049 0.	BH15-049 1.	BH15-050 0.	BH15-050 1.	BH15-050 2.	BH15-051 0.	
				SAMPLE DESCRIPTION:	0-1.5	15-0.3	3-0.6	0-1.5	3-0.6	0-1.5	5-3.0	3-0.6
				SAMPLE TYPE:	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil
				DATE SAMPLED:	8/16/2015	8/16/2015	8/16/2015	8/16/2015	8/16/2015	8/16/2015	8/16/2015	8/16/2015
				6882715	6882716	6882717	6882718	6882719	6882720	6882721	6882722	
Antimony	mg/kg	20	0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	
Arsenic	mg/kg	17	0.5	7.4	5.3	4.9	6.3	5.1	6.8	5.2	5.5	
Barium	mg/kg	750	0.5	139	286	197	117	291	142	109	210	
Beryllium	mg/kg	5	0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	
Cadmium	mg/kg	1.4	0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	
Chromium	mg/kg	64	0.5	12.3	20.4	9.8	9.0	13.4	9.5	7.0	30.5	
Cobalt	mg/kg	20	0.5	3.7	3.0	3.0	4.1	3.7	2.8	3.9	2.3	
Copper	mg/kg	63	0.5	3.5	5.8	5.3	4.7	6.0	3.3	3.9	4.0	
Lead	mg/kg	70	0.5	4.4	7.5	5.3	3.9	5.3	4.1	3.3	5.8	
Molybdenum	mg/kg	4	0.5	1.2	1.8	<0.5	0.7	1.0	1.0	0.6	2.5	
Nickel	mg/kg	50	0.5	12.8	11.4	8.7	10.9	12.5	9.1	10.1	15.7	
Selenium	mg/kg	1	0.5	<0.5	<0.5	0.6	<0.5	1.0	<0.5	<0.5	<0.5	
Silver	mg/kg	20	0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	
Thallium	mg/kg	1	0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	
Tin	mg/kg	5	0.5	<0.5	0.6	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	
Uranium	mg/kg	23	0.5	<0.5	0.6	<0.5	<0.5	0.7	<0.5	0.5	<0.5	
Vanadium	mg/kg	130	0.5	14.8	20.1	18.4	16.1	14.6	11.9	13.5	19.7	
Zinc	mg/kg	200	1	25	37	17	27	12	16	25	14	

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PROJECT: A04012A07

6310 ROPER ROAD
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CLIENT NAME: KLOHN CRIPPEN

ATTENTION TO: Nicole Wills

SAMPLING SITE:

SAMPLED BY:

CCME / Tier 1 Metals

DATE RECEIVED: 2015-08-19

DATE REPORTED: 2015-08-24

Parameter	Unit	G / S	RDL	BH15-051 0.	BH15-051 1.	BH15-052 0.	BH15-052 0.	BH15-052 1.	BH15-053 0.	BH15-053 0.	BH15-053 1.	
				SAMPLE DESCRIPTION:	6-1.0	0-1.5	3-0.6	6-1.0	0-1.5	0-0.15	3-0.6	0-1.5
				SAMPLE TYPE:	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil
				DATE SAMPLED:	8/16/2015	8/16/2015	8/16/2015	8/16/2015	8/16/2015	8/16/2015	8/16/2015	8/16/2015
				6882723	6882724	6882725	6882726	6882727	6882728	6882729	6882731	
Antimony	mg/kg	20	0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	
Arsenic	mg/kg	17	0.5	7.1	6.2	4.1	5.9	5.0	6.2	5.6	6.3	
Barium	mg/kg	750	0.5	165	125	312	127	94.9	568	363	127	
Beryllium	mg/kg	5	0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	
Cadmium	mg/kg	1.4	0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	
Chromium	mg/kg	64	0.5	10.2	11.2	11.3	10.2	7.6	7.5	7.7	9.1	
Cobalt	mg/kg	20	0.5	5.1	3.9	3.9	3.9	3.1	3.7	2.5	3.5	
Copper	mg/kg	63	0.5	6.5	3.8	5.8	4.1	3.1	5.8	5.6	4.2	
Lead	mg/kg	70	0.5	5.0	3.7	4.9	3.8	3.1	5.9	8.6	4.3	
Molybdenum	mg/kg	4	0.5	0.9	1.0	0.9	0.9	0.7	0.7	<0.5	0.7	
Nickel	mg/kg	50	0.5	13.8	11.4	10.3	12.1	9.3	10.2	7.1	12.8	
Selenium	mg/kg	1	0.5	0.6	<0.5	0.8	<0.5	<0.5	<0.5	<0.5	<0.5	
Silver	mg/kg	20	0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	
Thallium	mg/kg	1	0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	
Tin	mg/kg	5	0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.8	<0.5	
Uranium	mg/kg	23	0.5	1.6	<0.5	0.6	<0.5	<0.5	<0.5	<0.5	<0.5	
Vanadium	mg/kg	130	0.5	19.7	15.0	17.2	15.0	10.9	16.2	17.2	15.0	
Zinc	mg/kg	200	1	25	25	21	23	20	23	17	20	

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AGAT WORK ORDER: 15E009623

PROJECT: A04012A07

6310 ROPER ROAD
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CLIENT NAME: KLOHN CRIPPEN

ATTENTION TO: Nicole Wills

SAMPLING SITE:

SAMPLED BY:

CCME / Tier 1 Metals

DATE RECEIVED: 2015-08-19

DATE REPORTED: 2015-08-24

Parameter	Unit	SAMPLE DESCRIPTION:		DUP A	DUP B	DUP C	DUP D	DUP E
		SAMPLE TYPE:		Soil	Soil	Soil	Soil	Soil
		DATE SAMPLED:		8/16/2015	8/16/2015	8/16/2015	8/16/2015	8/16/2015
		G / S	RDL	6882732	6882733	6882734	6882735	6882736
Antimony	mg/kg	20	0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Arsenic	mg/kg	17	0.5	4.5	5.9	6.3	5.4	5.8
Barium	mg/kg	750	0.5	232	193	103	507	92.2
Beryllium	mg/kg	5	0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Cadmium	mg/kg	1.4	0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Chromium	mg/kg	64	0.5	15.3	12.1	5.3	10.2	7.0
Cobalt	mg/kg	20	0.5	2.2	4.2	3.6	4.4	4.0
Copper	mg/kg	63	0.5	4.1	4.1	3.5	6.8	3.6
Lead	mg/kg	70	0.5	4.8	5.0	3.4	9.3	3.4
Molybdenum	mg/kg	4	0.5	0.7	0.5	0.5	1.1	0.7
Nickel	mg/kg	50	0.5	9.3	10.4	9.6	13.9	10.5
Selenium	mg/kg	1	0.5	<0.5	<0.5	<0.5	0.8	<0.5
Silver	mg/kg	20	0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Thallium	mg/kg	1	0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Tin	mg/kg	5	0.5	2.5	<0.5	<0.5	<0.5	<0.5
Uranium	mg/kg	23	0.5	<0.5	<0.5	<0.5	0.7	<0.5
Vanadium	mg/kg	130	0.5	18.4	19.8	12.8	22.0	13.4
Zinc	mg/kg	200	1	12	18	22	23	24

Comments: RDL - Reported Detection Limit; G / S - Guideline / Standard: Refers to ABTier1 Soil (Ag, F)

6882660-6882670 Results are based on the dry weight of the sample.

6882672 Results are based on the dry weight of the sample.
Values verified with repeat analysis

6882673-6882675 Results are based on the dry weight of the sample.

6882676 Results are based on the dry weight of the sample.
Values verified with repeat analysis

6882677-6882696 Results are based on the dry weight of the sample.

6882697 Results are based on the dry weight of the sample.
Values verified with repeat analysis

6882698-6882736 Results are based on the dry weight of the sample.

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AGAT WORK ORDER: 15E009623

PROJECT: A04012A07

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CLIENT NAME: KLOHN CRIPPEN

ATTENTION TO: Nicole Wills

SAMPLING SITE:

SAMPLED BY:

Soil Analysis - Barium by Fusion ICP

DATE RECEIVED: 2015-08-19

DATE REPORTED: 2015-08-27

Parameter	Unit	G / S	RDL	BH15-033 0.	BH15-033 1.	BH15-033 2.	BH15-034 0.	BH15-034 0.	BH15-034 1.	BH15-035 0.	BH15-035 1.
				SAMPLE DESCRIPTION:	SAMPLE TYPE:	DATE SAMPLED:	SAMPLE DESCRIPTION:	SAMPLE TYPE:	DATE SAMPLED:	SAMPLE DESCRIPTION:	SAMPLE TYPE:
True Barium by Fusion ICP	mg/kg	50	653	824	665	756	688	685	856	779	
True Barium by Fusion ICP	mg/kg	50	1440	1870	546	586	792	819	546	738	
True Barium by Fusion ICP	mg/kg	50	751	751	335	795	704	1240	769	703	
True Barium by Fusion ICP	mg/kg	50	714	781	710	2550	807	550	687	794	
True Barium by Fusion ICP	mg/kg	50	607	1010	793	893	889	776	756	939	

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AGAT WORK ORDER: 15E009623

PROJECT: A04012A07

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CLIENT NAME: KLOHN CRIPPEN

ATTENTION TO: Nicole Wills

SAMPLING SITE:

SAMPLED BY:

Soil Analysis - Barium by Fusion ICP

DATE RECEIVED: 2015-08-19

DATE REPORTED: 2015-08-27

Parameter	Unit	G / S		BH15-046 0.	BH15-046 1.	BH15-047 0.	BH15-047 1.	BH15-047 2.	BH15-048 0.	BH15-048 0.	BH15-048 1.
		RDL									
SAMPLE DESCRIPTION:				3-0.6	0-1.5	15-0.3	0-1.5	5-3.0	15-0.3	6-1.0	0-1.5
SAMPLE TYPE:				Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil
DATE SAMPLED:				8/16/2015	8/16/2015	8/16/2015	8/16/2015	8/16/2015	8/16/2015	8/16/2015	8/16/2015
True Barium by Fusion ICP	mg/kg	50		717	784	760	733	680	841	780	691
SAMPLE DESCRIPTION:				BH15-049 0.	BH15-049 0.	BH15-049 1.	BH15-050 0.	BH15-050 1.	BH15-050 2.	BH15-051 0.	BH15-051 0.
SAMPLE TYPE:				15-0.3	3-0.6	0-1.5	3-0.6	0-1.5	5-3.0	3-0.6	6-1.0
DATE SAMPLED:				8/16/2015	8/16/2015	8/16/2015	8/16/2015	8/16/2015	8/16/2015	8/16/2015	8/16/2015
True Barium by Fusion ICP	mg/kg	50		740	763	687	622	745	734	781	824
SAMPLE DESCRIPTION:				BH15-051 1.	BH15-052 0.	BH15-052 0.	BH15-052 1.	BH15-053 0.	BH15-053 0.	BH15-053 1.	DUP A
SAMPLE TYPE:				0-1.5	3-0.6	6-1.0	0-1.5	0-0.15	3-0.6	0-1.5	Soil
DATE SAMPLED:				8/16/2015	8/16/2015	8/16/2015	8/16/2015	8/16/2015	8/16/2015	8/16/2015	8/16/2015
True Barium by Fusion ICP	mg/kg	50		717	763	855	698	3550	868	666	619
SAMPLE DESCRIPTION:				DUP B	DUP C	DUP D	DUP E				
SAMPLE TYPE:				Soil	Soil	Soil	Soil				
DATE SAMPLED:				8/16/2015	8/16/2015	8/16/2015	8/16/2015				
True Barium by Fusion ICP	mg/kg	50		720	747	1110	687				

Comments: RDL - Reported Detection Limit; G / S - Guideline / Standard
6882660-6882736 Result is based on the dry weight of the sample.

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AGAT WORK ORDER: 15E009623

PROJECT: A04012A07

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CLIENT NAME: KLOHN CRIPPEN

ATTENTION TO: Nicole Wills

SAMPLING SITE:

SAMPLED BY:

Soil Analysis - Detailed Salinity

DATE RECEIVED: 2015-08-19

DATE REPORTED: 2015-08-26

Parameter	Unit	Soil Analysis - Detailed Salinity									
		SAMPLE DESCRIPTION:		BH15-033 0.	BH15-033 1.	BH15-033 2.	BH15-034 0.	BH15-034 0.	BH15-034 1.	BH15-035 0.	BH15-035 1.
		SAMPLE TYPE:		3-0.6	0-1.5	5-3.0	15-0.3	3-0.6	0-1.5	3-0.6	0-1.5
		DATE SAMPLED:		Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil
		G / S	RDL	8/16/2015	8/16/2015	8/16/2015	8/16/2015	8/16/2015	8/16/2015	8/16/2015	
pH (Saturated Paste)	pH Units	N/A	5.66	6.79	7.24	5.72	5.52	6.83	5.86	7.00	
Electrical Conductivity (Sat. Paste)	dS/m	0.05	0.86	0.78	0.50	1.76	1.28	0.93	0.38	0.50	
Sodium Adsorption Ratio	N/A		1.06	1.53	1.26	3.70	3.99	4.20	0.93	0.88	
Saturation Percentage	%	1	106	32	38	233	117	34	236	39	
Chloride, Soluble	mg/L	5	188	152	38	263	359	98	38	61	
Calcium, Soluble	mg/L	1	66	67	37	106	61	50	26	54	
Potassium, Soluble	mg/L	2	23	4	10	35	12	5	10	4	
Magnesium, Soluble	mg/L	2	25	19	13	36	23	11	10	14	
Sodium, Soluble	mg/L	2	40	55	35	173	144	126	22	28	
Sulfate, Soluble	mg/L	2	51	46	88	475	25	132	90	23	
Calcium, Soluble (meq/L)	meq/L	0.05	3.29	3.34	1.85	5.29	3.04	2.50	1.30	2.69	
Calcium, Soluble (mg/kg)	mg/kg	1	70	21	14	247	71	17	61	21	
Chloride, Soluble (meq/L)	meq/L	0.06	5.30	4.29	1.07	7.42	10.1	2.76	1.07	1.72	
Chloride, Soluble (mg/kg)	mg/kg	2	199	49	14	613	420	33	90	24	
Magnesium, Soluble (meq/L)	meq/L	0.08	2.06	1.56	1.07	2.96	1.89	0.91	0.82	1.15	
Magnesium, Soluble (mg/kg)	mg/kg	1	27	6	5	84	27	4	24	5	
Potassium, Soluble (meq/L)	meq/L	0.05	0.59	0.10	0.26	0.90	0.31	0.13	0.26	0.10	
Potassium, Soluble (mg/kg)	mg/kg	2	24	<2	4	82	14	<2	24	<2	
Sodium, Soluble (meq/L)	meq/L	0.09	1.74	2.39	1.52	7.53	6.26	5.48	0.96	1.22	
Sodium, Soluble (mg/kg)	mg/kg	2	42	18	13	403	168	43	52	11	
Sulfur (as Sulfate), Soluble (meq/L)	meq/L	0.04	1.06	0.96	1.83	9.89	0.52	2.75	1.87	0.48	
Sulfur (as Sulfate), Soluble (mg/kg)	mg/kg	2	54	15	33	1110	29	45	212	9	
Theoretical Gypsum Requirement	tonnes/ha	0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	

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PROJECT: A04012A07

6310 ROPER ROAD
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CLIENT NAME: KLOHN CRIPPEN

ATTENTION TO: Nicole Wills

SAMPLING SITE:

SAMPLED BY:

Soil Analysis - Detailed Salinity

DATE RECEIVED: 2015-08-19

DATE REPORTED: 2015-08-26

Parameter	Unit	SAMPLE DESCRIPTION:		BH15-035 2.	BH15-036 0.	BH15-036 0.	BH15-036 1.	BH15-037 0.	BH15-037 0.	BH15-037 1.	BH15-038 0.
		SAMPLE TYPE:		0-2.5	15-0.3	3-0.6	0-1.5	3-0.6	6-1.0	0-1.5	15-0.3
		DATE SAMPLED:		Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil
		G / S	RDL	8/16/2015	8/16/2015	8/16/2015	8/16/2015	8/16/2015	8/16/2015	8/16/2015	8/16/2015
pH (Saturated Paste)	pH Units	N/A	7.27	7.02	5.61	6.79	5.72	6.49	7.12	5.97	
Electrical Conductivity (Sat. Paste)	dS/m	0.05	0.81	0.45	0.51	0.37	0.57	0.53	0.73	0.27	
Sodium Adsorption Ratio	N/A		1.37	0.62	0.79	0.64	3.51	4.21	2.88	0.23	
Saturation Percentage	%	1	30	40	129	41	156	71	35	94	
Chloride, Soluble	mg/L	5	62	14	28	24	17	67	81	6	
Calcium, Soluble	mg/L	1	64	45	48	33	22	32	34	35	
Potassium, Soluble	mg/L	2	11	13	11	7	39	14	33	3	
Magnesium, Soluble	mg/L	2	25	12	17	12	6	7	13	10	
Sodium, Soluble	mg/L	2	51	18	25	17	72	101	78	6	
Sulfate, Soluble	mg/L	2	223	77	145	35	166	52	71	35	
Calcium, Soluble (meq/L)	meq/L	0.05	3.19	2.25	2.40	1.65	1.10	1.60	1.70	1.75	
Calcium, Soluble (mg/kg)	mg/kg	1	19	18	62	14	34	23	12	33	
Chloride, Soluble (meq/L)	meq/L	0.06	1.75	0.39	0.79	0.68	0.48	1.89	2.28	0.17	
Chloride, Soluble (mg/kg)	mg/kg	2	19	6	36	10	27	48	28	6	
Magnesium, Soluble (meq/L)	meq/L	0.08	2.06	0.99	1.40	0.99	0.49	0.58	1.07	0.82	
Magnesium, Soluble (mg/kg)	mg/kg	1	8	5	22	5	9	5	5	9	
Potassium, Soluble (meq/L)	meq/L	0.05	0.28	0.33	0.28	0.18	1.00	0.36	0.84	0.08	
Potassium, Soluble (mg/kg)	mg/kg	2	3	5	14	3	61	10	12	3	
Sodium, Soluble (meq/L)	meq/L	0.09	2.22	0.78	1.09	0.74	3.13	4.39	3.39	0.26	
Sodium, Soluble (mg/kg)	mg/kg	2	15	7	32	7	112	72	27	6	
Sulfur (as Sulfate), Soluble (meq/L)	meq/L	0.04	4.64	1.60	3.02	0.73	3.46	1.08	1.48	0.73	
Sulfur (as Sulfate), Soluble (mg/kg)	mg/kg	2	67	31	187	14	259	37	25	33	
Theoretical Gypsum Requirement	tonnes/ha	0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	

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Soil Analysis - Detailed Salinity

DATE RECEIVED: 2015-08-19

DATE REPORTED: 2015-08-26

Parameter	Unit	SAMPLE DESCRIPTION:		BH15-038 0.	BH15-038 1.	BH15-039 0.	BH15-039 0.	BH15-039 1.	BH15-040 0.	BH15-040 1.	
		SAMPLE TYPE:		3-0.6	0-1.5	15-0.3	6-1.0	0-1.5	BH15-040 0-0.15	6-1.0	0-1.5
		DATE SAMPLED:		Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil
		G / S	RDL	8/16/2015	8/16/2015	8/16/2015	8/16/2015	8/16/2015	8/16/2015	8/16/2015	8/16/2015
				6882682	6882683	6882684	6882685	6882686	6882687	6882688	
pH (Saturated Paste)	pH Units	N/A		5.96	7.02	6.60	6.22	6.78	5.94	7.07	
Electrical Conductivity (Sat. Paste)	dS/m	0.05		0.20	0.36	0.11	0.21	0.13	0.29	0.26	
Sodium Adsorption Ratio	N/A			0.26	0.26	0.27	0.20	0.21	0.19	0.20	
Saturation Percentage	%	1		53	34	51	61	46	128	39	
Chloride, Soluble	mg/L	5		9	5	<5	6	<5	7	<5	
Calcium, Soluble	mg/L	1		27	40	12	30	20	38	37	
Potassium, Soluble	mg/L	2		3	14	<2	<2	<2	2	3	
Magnesium, Soluble	mg/L	2		8	10	3	10	5	10	6	
Sodium, Soluble	mg/L	2		6	7	4	5	4	5	5	
Sulfate, Soluble	mg/L	2		24	23	12	21	9	61	14	
Calcium, Soluble (meq/L)	meq/L	0.05		1.35	2.00	0.60	1.50	1.00	1.90	1.85	
Calcium, Soluble (mg/kg)	mg/kg	1		14	14	6	18	9	49	14	
Chloride, Soluble (meq/L)	meq/L	0.06		0.25	0.14	<0.06	0.17	<0.06	0.20	<0.06	
Chloride, Soluble (mg/kg)	mg/kg	2		5	<2	<2	4	<2	9	<2	
Magnesium, Soluble (meq/L)	meq/L	0.08		0.66	0.82	0.25	0.82	0.41	0.82	0.49	
Magnesium, Soluble (mg/kg)	mg/kg	1		4	3	2	6	2	13	2	
Potassium, Soluble (meq/L)	meq/L	0.05		0.08	0.36	<0.05	<0.05	<0.05	0.05	0.08	
Potassium, Soluble (mg/kg)	mg/kg	2		<2	5	<2	<2	<2	3	<2	
Sodium, Soluble (meq/L)	meq/L	0.09		0.26	0.30	0.17	0.22	0.17	0.22	0.22	
Sodium, Soluble (mg/kg)	mg/kg	2		3	2	2	3	<2	6	2	
Sulfur (as Sulfate), Soluble (meq/L)	meq/L	0.04		0.50	0.48	0.25	0.44	0.19	1.27	0.29	
Sulfur (as Sulfate), Soluble (mg/kg)	mg/kg	2		13	8	6	13	4	78	5	
Theoretical Gypsum Requirement	tonnes/ha	0.01		<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	

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Parameter	Unit	G / S	RDL	BH15-041 0.	BH15-041 0.	BH15-041 1.	BH15-042 0.	BH15-042 0.	BH15-042 1.	BH15-043 0.	BH15-043 1.	
				SAMPLE DESCRIPTION:	3-0.6	6-1.0	0-1.5	15-0.3	6-1.0	0-1.5	3-0.6	0-1.5
				SAMPLE TYPE:	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil
				DATE SAMPLED:	8/16/2015	8/16/2015	8/16/2015	8/16/2015	8/16/2015	8/16/2015	8/16/2015	8/16/2015
				6882690	6882691	6882692	6882693	6882695	6882696	6882697	6882698	
pH (Saturated Paste)	pH Units		N/A	5.82	6.01	7.26	7.14	5.83	6.81	5.98	6.78	
Electrical Conductivity (Sat. Paste)	dS/m	0.05	0.43	0.30	0.40	0.32	0.48	0.48	0.37	0.88	0.62	
Sodium Adsorption Ratio	N/A		0.38	0.60	1.18	0.23	0.49	0.68	1.09	1.00	1.00	
Saturation Percentage	%		1	119	70	38	55	67	28	140	33	
Chloride, Soluble	mg/L		5	14	17	44	<5	40	28	117	86	
Calcium, Soluble	mg/L		1	49	31	38	42	48	39	83	60	
Potassium, Soluble	mg/L		2	4	3	11	8	6	6	14	5	
Magnesium, Soluble	mg/L		2	17	10	11	6	19	12	24	17	
Sodium, Soluble	mg/L		2	12	15	32	6	16	19	44	34	
Sulfate, Soluble	mg/L		2	114	45	38	53	65	50	190	51	
Calcium, Soluble (meq/L)	meq/L	0.05	2.45	1.55	1.90	2.10	2.40	1.95	4.14	2.99	2.99	
Calcium, Soluble (mg/kg)	mg/kg	1	58	22	14	23	32	11	116	20	20	
Chloride, Soluble (meq/L)	meq/L	0.06	0.39	0.48	1.24	<0.06	1.13	0.79	3.30	2.43	2.43	
Chloride, Soluble (mg/kg)	mg/kg	2	17	12	17	<2	27	8	164	28	28	
Magnesium, Soluble (meq/L)	meq/L	0.08	1.40	0.82	0.91	0.49	1.56	0.99	1.97	1.40	1.40	
Magnesium, Soluble (mg/kg)	mg/kg	1	20	7	4	3	13	3	34	6	6	
Potassium, Soluble (meq/L)	meq/L	0.05	0.10	0.08	0.28	0.20	0.15	0.15	0.36	0.13	0.13	
Potassium, Soluble (mg/kg)	mg/kg	2	5	2	4	4	4	<2	20	<2	<2	
Sodium, Soluble (meq/L)	meq/L	0.09	0.52	0.65	1.39	0.26	0.70	0.83	1.91	1.48	1.48	
Sodium, Soluble (mg/kg)	mg/kg	2	14	11	12	3	11	5	62	11	11	
Sulfur (as Sulfate), Soluble (meq/L)	meq/L	0.04	2.37	0.94	0.79	1.10	1.35	1.04	3.96	1.06	1.06	
Sulfur (as Sulfate), Soluble (mg/kg)	mg/kg	2	136	32	14	29	44	14	266	17	17	
Theoretical Gypsum Requirement	tonnes/ha		0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	

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CLIENT NAME: KLOHN CRIPPEN

ATTENTION TO: Nicole Wills

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Soil Analysis - Detailed Salinity

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Parameter	Unit	SAMPLE DESCRIPTION:		BH15-043 2.	BH15-044 0.	BH15-044 0.	BH15-044 1.	BH15-045 0.	BH15-045 0.	BH15-045 1.	BH15-046 0.	
		SAMPLE TYPE:		5-3.0	15-0.3	6-1.0	0-1.5	15-0.3	6-1.0	0-1.5	15-0.3	
		DATE SAMPLED:		Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil
		G / S	RDL	8/16/2015	8/16/2015	8/16/2015	8/16/2015	8/16/2015	8/16/2015	8/16/2015	8/16/2015	8/16/2015
			6882699	6882701	6882702	6882703	6882704	6882705	6882706	6882706	6882707	
pH (Saturated Paste)	pH Units	N/A	7.45	6.79	5.63	6.34	6.18	7.15	6.99	6.31	6.31	
Electrical Conductivity (Sat. Paste)	dS/m	0.05	0.60	0.30	0.39	0.31	0.48	0.40	0.40	0.40	0.32	
Sodium Adsorption Ratio	N/A		1.16	0.68	0.50	0.53	0.58	2.11	0.76	0.76	1.16	
Saturation Percentage	%	1	38	42	230	35	135	31	36	36	45	
Chloride, Soluble	mg/L	5	64	19	40	23	57	47	20	20	19	
Calcium, Soluble	mg/L	1	46	30	42	30	59	33	36	36	26	
Potassium, Soluble	mg/L	2	10	3	2	4	<2	<2	5	5	3	
Magnesium, Soluble	mg/L	2	16	7	11	9	18	9	13	13	9	
Sodium, Soluble	mg/L	2	36	16	14	13	20	53	21	21	27	
Sulfate, Soluble	mg/L	2	111	46	69	30	57	38	23	23	52	
Calcium, Soluble (meq/L)	meq/L	0.05	2.30	1.50	2.10	1.50	2.94	1.65	1.80	1.80	1.30	
Calcium, Soluble (mg/kg)	mg/kg	1	17	13	97	11	80	10	13	13	12	
Chloride, Soluble (meq/L)	meq/L	0.06	1.81	0.54	1.13	0.65	1.61	1.33	0.56	0.56	0.54	
Chloride, Soluble (mg/kg)	mg/kg	2	24	8	92	8	77	15	7	7	9	
Magnesium, Soluble (meq/L)	meq/L	0.08	1.32	0.58	0.91	0.74	1.48	0.74	1.07	1.07	0.74	
Magnesium, Soluble (mg/kg)	mg/kg	1	6	3	25	3	24	3	5	5	4	
Potassium, Soluble (meq/L)	meq/L	0.05	0.26	0.08	0.05	0.10	<0.05	<0.05	0.13	0.13	0.08	
Potassium, Soluble (mg/kg)	mg/kg	2	4	<2	5	<2	<2	<2	<2	<2	<2	
Sodium, Soluble (meq/L)	meq/L	0.09	1.57	0.70	0.61	0.57	0.87	2.31	0.91	0.91	1.17	
Sodium, Soluble (mg/kg)	mg/kg	2	14	7	32	5	27	16	8	8	12	
Sulfur (as Sulfate), Soluble (meq/L)	meq/L	0.04	2.31	0.96	1.44	0.62	1.19	0.79	0.48	0.48	1.08	
Sulfur (as Sulfate), Soluble (mg/kg)	mg/kg	2	42	19	159	11	77	12	8	8	23	
Theoretical Gypsum Requirement	tonnes/ha	0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	

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Soil Analysis - Detailed Salinity

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Parameter	Unit	SAMPLE DESCRIPTION:		BH15-046 0.	BH15-046 1.	BH15-047 0.	BH15-047 1.	BH15-047 2.	BH15-048 0.	BH15-048 0.	BH15-048 1.
		SAMPLE TYPE:		3-0.6	0-1.5	15-0.3	0-1.5	5-3.0	15-0.3	6-1.0	0-1.5
		DATE SAMPLED:		Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil
		G / S	RDL	8/16/2015	8/16/2015	8/16/2015	8/16/2015	8/16/2015	8/16/2015	8/16/2015	8/16/2015
pH (Saturated Paste)	pH Units	N/A	5.79	7.15	6.08	7.38	7.51	6.34	7.04	7.38	
Electrical Conductivity (Sat. Paste)	dS/m	0.05	0.26	0.34	0.36	0.44	0.44	0.42	0.44	0.35	
Sodium Adsorption Ratio	N/A		0.53	0.60	0.60	0.70	0.98	0.89	0.44	0.72	
Saturation Percentage	%	1	137	32	95	31	33	88	28	32	
Chloride, Soluble	mg/L	5	27	23	22	39	45	20	21	27	
Calcium, Soluble	mg/L	1	32	35	40	46	35	45	48	34	
Potassium, Soluble	mg/L	2	2	5	4	6	7	2	5	4	
Magnesium, Soluble	mg/L	2	8	11	13	14	11	15	17	15	
Sodium, Soluble	mg/L	2	13	16	17	21	26	27	14	20	
Sulfate, Soluble	mg/L	2	25	29	30	49	72	45	24	26	
Calcium, Soluble (meq/L)	meq/L	0.05	1.60	1.75	2.00	2.30	1.75	2.25	2.40	1.70	
Calcium, Soluble (mg/kg)	mg/kg	1	44	11	38	14	12	40	13	11	
Chloride, Soluble (meq/L)	meq/L	0.06	0.76	0.65	0.62	1.10	1.27	0.56	0.59	0.76	
Chloride, Soluble (mg/kg)	mg/kg	2	37	7	21	12	15	18	6	9	
Magnesium, Soluble (meq/L)	meq/L	0.08	0.66	0.91	1.07	1.15	0.91	1.23	1.40	1.23	
Magnesium, Soluble (mg/kg)	mg/kg	1	11	4	12	4	4	13	5	5	
Potassium, Soluble (meq/L)	meq/L	0.05	0.05	0.13	0.10	0.15	0.18	0.05	0.13	0.10	
Potassium, Soluble (mg/kg)	mg/kg	2	3	<2	4	<2	2	<2	<2	<2	
Sodium, Soluble (meq/L)	meq/L	0.09	0.57	0.70	0.74	0.91	1.13	1.17	0.61	0.87	
Sodium, Soluble (mg/kg)	mg/kg	2	18	5	16	7	9	24	4	6	
Sulfur (as Sulfate), Soluble (meq/L)	meq/L	0.04	0.52	0.60	0.62	1.02	1.50	0.94	0.50	0.54	
Sulfur (as Sulfate), Soluble (mg/kg)	mg/kg	2	34	9	29	15	24	40	7	8	
Theoretical Gypsum Requirement	tonnes/ha	0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	

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Parameter	Unit	Soil Analysis - Detailed Salinity									
		G / S	RDL	BH15-049 0.	BH15-049 0.	BH15-049 1.	BH15-050 0.	BH15-050 1.	BH15-050 2.	BH15-051 0.	BH15-051 0.
				15-0.3	3-0.6	0-1.5	3-0.6	0-1.5	5-3.0	3-0.6	6-1.0
			SAMPLE DESCRIPTION:	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil
			DATE SAMPLED:	8/16/2015	8/16/2015	8/16/2015	8/16/2015	8/16/2015	8/16/2015	8/16/2015	8/16/2015
				6882716	6882717	6882718	6882719	6882720	6882721	6882722	6882723
pH (Saturated Paste)	pH Units	N/A	6.49	6.22	7.37	6.44	7.19	7.52	6.09	6.48	
Electrical Conductivity (Sat. Paste)	dS/m	0.05	0.38	0.47	0.48	0.50	0.40	0.41	0.44	0.67	
Sodium Adsorption Ratio	N/A		0.69	0.39	0.62	0.36	0.68	1.23	0.43	0.43	
Saturation Percentage	%	1	84	84	30	106	30	42	58	79	
Chloride, Soluble	mg/L	5	34	62	41	42	34	26	52	43	
Calcium, Soluble	mg/L	1	39	59	48	62	43	30	49	49	
Potassium, Soluble	mg/L	2	3	2	5	3	4	8	3	3	
Magnesium, Soluble	mg/L	2	15	22	19	24	14	11	18	18	
Sodium, Soluble	mg/L	2	20	14	20	13	20	31	14	14	
Sulfate, Soluble	mg/L	2	52	26	74	27	28	65	32	32	
Calcium, Soluble (meq/L)	meq/L	0.05	1.95	2.94	2.40	3.09	2.15	1.50	2.45	2.45	
Calcium, Soluble (mg/kg)	mg/kg	1	33	50	14	66	13	13	28	39	
Chloride, Soluble (meq/L)	meq/L	0.06	0.96	1.75	1.16	1.18	0.96	0.73	1.47	1.21	
Chloride, Soluble (mg/kg)	mg/kg	2	29	52	12	45	10	11	30	34	
Magnesium, Soluble (meq/L)	meq/L	0.08	1.23	1.81	1.56	1.97	1.15	0.91	1.48	1.48	
Magnesium, Soluble (mg/kg)	mg/kg	1	13	18	6	25	4	5	10	14	
Potassium, Soluble (meq/L)	meq/L	0.05	0.08	0.05	0.13	0.08	0.10	0.20	0.08	0.08	
Potassium, Soluble (mg/kg)	mg/kg	2	3	<2	<2	3	<2	3	<2	2	
Sodium, Soluble (meq/L)	meq/L	0.09	0.87	0.61	0.87	0.57	0.87	1.35	0.61	0.61	
Sodium, Soluble (mg/kg)	mg/kg	2	17	12	6	14	6	13	8	11	
Sulfur (as Sulfate), Soluble (meq/L)	meq/L	0.04	1.08	0.54	1.54	0.56	0.58	1.35	0.67	0.67	
Sulfur (as Sulfate), Soluble (mg/kg)	mg/kg	2	44	22	22	29	8	27	19	25	
Theoretical Gypsum Requirement	tonnes/ha	0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	

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AGAT WORK ORDER: 15E009623

PROJECT: A04012A07

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CLIENT NAME: KLOHN CRIPPEN

ATTENTION TO: Nicole Wills

SAMPLING SITE:

SAMPLED BY:

Soil Analysis - Detailed Salinity

DATE RECEIVED: 2015-08-19

DATE REPORTED: 2015-08-26

Parameter	Unit	G / S	RDL	BH15-051 1.	BH15-052 0.	BH15-052 0.	BH15-052 1.	BH15-053 0.	BH15-053 0.	BH15-053 1.	DUP A
				0-1.5	3-0.6	6-1.0	0-1.5	0-0.15	3-0.6	0-1.5	Soil
				Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil
				8/16/2015	8/16/2015	8/16/2015	8/16/2015	8/16/2015	8/16/2015	8/16/2015	8/16/2015
pH (Saturated Paste)	pH Units		N/A	7.40	6.25	6.84	7.58	6.99	6.82	6.80	5.60
Electrical Conductivity (Sat. Paste)	dS/m	0.05	0.32	0.31	0.33	0.40	0.40	0.40	0.35	0.41	0.43
Sodium Adsorption Ratio	N/A		0.84	0.31	0.42	0.85	0.32	0.55	0.43	0.43	0.94
Saturation Percentage	%	1	30	134	37	30	40	50	31	128	
Chloride, Soluble	mg/L	5	18	15	13	37	10	8	18	65	
Calcium, Soluble	mg/L	1	34	40	43	39	54	40	51	39	
Potassium, Soluble	mg/L	2	3	<2	3	6	4	3	4	5	
Magnesium, Soluble	mg/L	2	11	14	12	13	11	10	12	14	
Sodium, Soluble	mg/L	2	22	9	12	24	10	15	13	27	
Sulfate, Soluble	mg/L	2	18	30	17	30	63	41	29	34	
Calcium, Soluble (meq/L)	meq/L	0.05	1.70	2.00	2.15	1.95	2.69	2.00	2.54	1.95	
Calcium, Soluble (mg/kg)	mg/kg	1	10	54	16	12	22	20	16	50	
Chloride, Soluble (meq/L)	meq/L	0.06	0.51	0.42	0.37	1.04	0.28	0.23	0.51	1.83	
Chloride, Soluble (mg/kg)	mg/kg	2	5	20	5	11	4	4	6	83	
Magnesium, Soluble (meq/L)	meq/L	0.08	0.91	1.15	0.99	1.07	0.91	0.82	0.99	1.15	
Magnesium, Soluble (mg/kg)	mg/kg	1	3	19	4	4	4	5	4	18	
Potassium, Soluble (meq/L)	meq/L	0.05	0.08	<0.05	0.08	0.15	0.10	0.08	0.10	0.13	
Potassium, Soluble (mg/kg)	mg/kg	2	<2	<2	<2	<2	<2	<2	<2	6	
Sodium, Soluble (meq/L)	meq/L	0.09	0.96	0.39	0.52	1.04	0.43	0.65	0.57	1.17	
Sodium, Soluble (mg/kg)	mg/kg	2	7	12	4	7	4	8	4	35	
Sulfur (as Sulfate), Soluble (meq/L)	meq/L	0.04	0.37	0.62	0.35	0.62	1.31	0.85	0.60	0.71	
Sulfur (as Sulfate), Soluble (mg/kg)	mg/kg	2	5	40	6	9	25	21	9	44	
Theoretical Gypsum Requirement	tonnes/ha	0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	

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CLIENT NAME: KLOHN CRIPPEN

ATTENTION TO: Nicole Wills

SAMPLING SITE:

SAMPLED BY:

Soil Analysis - Detailed Salinity

DATE RECEIVED: 2015-08-19

DATE REPORTED: 2015-08-26

Parameter	Unit	SAMPLE DESCRIPTION:		DUP B	DUP C	DUP D	DUP E
		G / S	RDL	6882733	6882734	6882735	6882736
pH (Saturated Paste)	pH Units		N/A	6.34	7.23	5.62	7.25
Electrical Conductivity (Sat. Paste)	dS/m	0.05		0.56	0.28	0.29	0.32
Sodium Adsorption Ratio	N/A			4.33	0.24	0.45	0.57
Saturation Percentage	%		1	73	28	196	36
Chloride, Soluble	mg/L		5	84	5	44	17
Calcium, Soluble	mg/L		1	33	39	33	34
Potassium, Soluble	mg/L		2	15	3	<2	3
Magnesium, Soluble	mg/L		2	6	6	8	11
Sodium, Soluble	mg/L		2	103	6	11	15
Sulfate, Soluble	mg/L		2	71	19	27	25
Calcium, Soluble (meq/L)	meq/L	0.05		1.65	1.95	1.65	1.70
Calcium, Soluble (mg/kg)	mg/kg		1	24	11	65	12
Chloride, Soluble (meq/L)	meq/L	0.06		2.37	0.14	1.24	0.48
Chloride, Soluble (mg/kg)	mg/kg		2	61	<2	86	6
Magnesium, Soluble (meq/L)	meq/L	0.08		0.49	0.49	0.66	0.91
Magnesium, Soluble (mg/kg)	mg/kg		1	4	2	16	4
Potassium, Soluble (meq/L)	meq/L	0.05		0.38	0.08	<0.05	0.08
Potassium, Soluble (mg/kg)	mg/kg		2	11	<2	<2	<2
Sodium, Soluble (meq/L)	meq/L	0.09		4.48	0.26	0.48	0.65
Sodium, Soluble (mg/kg)	mg/kg		2	75	<2	22	5
Sulfur (as Sulfate), Soluble (meq/L)	meq/L	0.04		1.48	0.40	0.56	0.52
Sulfur (as Sulfate), Soluble (mg/kg)	mg/kg		2	52	5	53	9
Theoretical Gypsum Requirement	tonnes/ha		0.01	<0.01	<0.01	<0.01	<0.01

Comments: RDL - Reported Detection Limit; G / S - Guideline / Standard

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CLIENT NAME: KLOHN CRIPPEN

ATTENTION TO: Nicole Wills

SAMPLING SITE:

SAMPLED BY:

Petroleum Hydrocarbons (BTEX/F1-F4) in Soil (CWS)

DATE RECEIVED: 2015-08-19

DATE REPORTED: 2015-08-28

Parameter	Unit	SAMPLE DESCRIPTION:		BH15-033 0.	BH15-033 1.	BH15-033 2.	BH15-034 0.	BH15-034 0.	BH15-034 1.	BH15-035 0.	BH15-035 1.	
		Soil		3-0.6	0-1.5	5-3.0	15-0.3	3-0.6	0-1.5	3-0.6	0-1.5	
		Soil		Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil
		DATE SAMPLED:		8/16/2015	8/16/2015	8/16/2015	8/16/2015	8/16/2015	8/16/2015	8/16/2015	8/16/2015	8/16/2015
G / S	RDL	6882660	6882665	6882666	6882668	6882669	6882670	6882672	6882673			
Benzene	mg/kg	0.005	0.052	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	
Toluene	mg/kg	0.05	4.16	<0.05	<0.05	5.17	2.21	<0.05	3.56	0.15		
Ethylbenzene	mg/kg	0.01	0.07	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	
Xylenes	mg/kg	0.05	0.22	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	
C6 - C10 (F1)	mg/kg	10	<10	<10	<10	<10	<10	<10	<10	<10	<10	
C6 - C10 (F1 minus BTEX)	mg/kg	10	<10	<10	<10	<10	<10	<10	<10	<10	<10	
C10 - C16 (F2)	mg/kg	10	42	<10	<10	<10	60	<10	<10	<10	<10	
C16 - C34 (F3)	mg/kg	10	948	<10	<10	207	1940	<10	434	<10	<10	
C34 - C50 (F4)	mg/kg	10	446	<10	<10	13	904	<10	209	<10	<10	
Gravimetric Heavy Hydrocarbons	mg/kg	1000	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	
Moisture Content	%	1	31	15	25	62	39	14	55	16		
Surrogate	Unit	Acceptable Limits										
Toluene-d8 (BTEX)	%	50-150	101	107	99	99	111	100	100	100	99	
Ethylbenzene-d10 (BTEX)	%	50-150	99	81	100	112	122	94	108	106	106	
o-Terphenyl (F2-F4)	%	50-150	111	107	90	112	114	108	109	107	107	

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CLIENT NAME: KLOHN CRIPPEN

ATTENTION TO: Nicole Wills

SAMPLING SITE:

SAMPLED BY:

Petroleum Hydrocarbons (BTEX/F1-F4) in Soil (CWS)

DATE RECEIVED: 2015-08-19

DATE REPORTED: 2015-08-28

Parameter	Unit	SAMPLE DESCRIPTION:									
		DATE SAMPLED:		BH15-035 2.	BH15-036 0.	BH15-036 0.	BH15-036 1.	BH15-037 0.	BH15-037 0.	BH15-037 1.	BH15-038 0.
		G / S	RDL	0-2.5	15-0.3	3-0.6	0-1.5	3-0.6	6-1.0	0-1.5	15-0.3
				Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil
Benzene	mg/kg	0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	
Toluene	mg/kg	0.05	<0.05	<0.05	0.27	0.09	<0.05	<0.05	<0.05	<0.05	
Ethylbenzene	mg/kg	0.01	<0.01	<0.01	0.08	<0.01	0.01	<0.01	<0.01	0.05	
Xylenes	mg/kg	0.05	<0.05	<0.05	0.88	<0.05	0.11	<0.05	<0.05	1.30	
C6 - C10 (F1)	mg/kg	10	<10	<10	<10	<10	<10	<10	<10	<10	
C6 - C10 (F1 minus BTEX)	mg/kg	10	<10	<10	<10	<10	<10	<10	<10	<10	
C10 - C16 (F2)	mg/kg	10	<10	329	40	<10	207	14	<10	240	
C16 - C34 (F3)	mg/kg	10	<10	60	322	<10	354	442	<10	647	
C34 - C50 (F4)	mg/kg	10	<10	<10	194	<10	84	218	<10	343	
Gravimetric Heavy Hydrocarbons	mg/kg	1000	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	
Moisture Content	%	1	18	7	26	15	30	25	18	29	
Surrogate	Unit	Acceptable Limits									
Toluene-d8 (BTEX)	%	50-150	103	99	100	101	101	98	98	99	
Ethylbenzene-d10 (BTEX)	%	50-150	102	97	103	98	94	94	89	113	
o-Terphenyl (F2-F4)	%	50-150	85	99	107	87	106	87	88	100	

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CLIENT NAME: KLOHN CRIPPEN

ATTENTION TO: Nicole Wills

SAMPLING SITE:

SAMPLED BY:

Petroleum Hydrocarbons (BTEX/F1-F4) in Soil (CWS)

DATE RECEIVED: 2015-08-19

DATE REPORTED: 2015-08-28

Parameter	Unit	SAMPLE DESCRIPTION:		BH15-038 0.	BH15-038 1.	BH15-039 0.	BH15-039 0.	BH15-039 1.	BH15-040 0.	BH15-040 1.	
		SAMPLE TYPE:		3-0.6	0-1.5	15-0.3	6-1.0	0-1.5	BH15-040 0-0.15	6-1.0	0-1.5
		DATE SAMPLED:		Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil
		G / S	RDL	8/16/2015	8/16/2015	8/16/2015	8/16/2015	8/16/2015	8/16/2015	8/16/2015	8/16/2015
Benzene	mg/kg	0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	
Toluene	mg/kg	0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	
Ethylbenzene	mg/kg	0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	
Xylenes	mg/kg	0.05	0.12	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	
C6 - C10 (F1)	mg/kg	10	<10	<10	<10	<10	<10	<10	<10	<10	
C6 - C10 (F1 minus BTEX)	mg/kg	10	<10	<10	<10	<10	<10	<10	<10	<10	
C10 - C16 (F2)	mg/kg	10	32	<10	116	<10	<10	17	<10	<10	
C16 - C34 (F3)	mg/kg	10	322	<10	58	17	<10	176	18	<10	
C34 - C50 (F4)	mg/kg	10	160	<10	10	<10	<10	83	<10	<10	
Gravimetric Heavy Hydrocarbons	mg/kg	1000	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	
Moisture Content	%	1	14	18	5	10	11	29	14	13	
Surrogate	Unit	Acceptable Limits									
Toluene-d8 (BTEX)	%	50-150	94	101	101	99	107	96	98	101	
Ethylbenzene-d10 (BTEX)	%	50-150	87	94	93	93	108	97	97	100	
o-Terphenyl (F2-F4)	%	50-150	106	106	115	112	89	94	116	108	

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CLIENT NAME: KLOHN CRIPPEN

ATTENTION TO: Nicole Wills

SAMPLING SITE:

SAMPLED BY:

Petroleum Hydrocarbons (BTEX/F1-F4) in Soil (CWS)

DATE RECEIVED: 2015-08-19

DATE REPORTED: 2015-08-28

Parameter	Unit	SAMPLE DESCRIPTION:									
		DATE SAMPLED:		BH15-041 0.	BH15-041 0.	BH15-041 1.	BH15-042 0.	BH15-042 0.	BH15-042 1.	BH15-043 0.	BH15-043 1.
		G / S	RDL	3-0.6	6-1.0	0-1.5	15-0.3	6-1.0	0-1.5	3-0.6	0-1.5
				Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil
Benzene	mg/kg	0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	0.005	<0.005	
Toluene	mg/kg	0.05	1.44	2.70	<0.05	<0.05	2.51	<0.05	7.63	0.15	
Ethylbenzene	mg/kg	0.01	0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	
Xylenes	mg/kg	0.05	0.11	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	
C6 - C10 (F1)	mg/kg	10	27	<10	<10	<10	<10	<10	<10	<10	
C6 - C10 (F1 minus BTEX)	mg/kg	10	25	<10	<10	<10	<10	<10	<10	<10	
C10 - C16 (F2)	mg/kg	10	17	20	<10	<10	<10	<10	<10	<10	
C16 - C34 (F3)	mg/kg	10	366	890	<10	363	895	<10	468	50	
C34 - C50 (F4)	mg/kg	10	186	515	<10	48	519	<10	250	35	
Gravimetric Heavy Hydrocarbons	mg/kg	1000	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	
Moisture Content	%	1	49	25	16	7	31	13	44	17	
Surrogate	Unit	Acceptable Limits									
Toluene-d8 (BTEX)	%	50-150	100	98	100	99	98	96	99	100	
Ethylbenzene-d10 (BTEX)	%	50-150	108	95	96	101	101	91	114	105	
o-Terphenyl (F2-F4)	%	50-150	100	115	121	123	98	115	123	94	

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SAMPLING SITE:

SAMPLED BY:

Petroleum Hydrocarbons (BTEX/F1-F4) in Soil (CWS)

DATE RECEIVED: 2015-08-19

DATE REPORTED: 2015-08-28

Parameter	Unit	SAMPLE DESCRIPTION:		BH15-043 2.	BH15-044 0.	BH15-044 0.	BH15-044 1.	BH15-045 0.	BH15-045 0.	BH15-045 1.	BH15-046 0.	
		SAMPLE TYPE:		5-3.0	15-0.3	6-1.0	0-1.5	15-0.3	6-1.0	0-1.5	15-0.3	
		DATE SAMPLED:		Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil
		G / S	RDL	8/16/2015	8/16/2015	8/16/2015	8/16/2015	8/16/2015	8/16/2015	8/16/2015	8/16/2015	8/16/2015
Benzene	mg/kg	0.005	<0.005	<0.005	0.023	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	
Toluene	mg/kg	0.05	<0.05	<0.05	8.04	0.31	9.34	<0.05	<0.05	<0.05	<0.05	
Ethylbenzene	mg/kg	0.01	<0.01	<0.01	3.54	0.09	<0.01	<0.01	<0.01	<0.01	<0.01	
Xylenes	mg/kg	0.05	<0.05	<0.05	20.0	0.50	<0.05	<0.05	<0.05	<0.05	<0.05	
C6 - C10 (F1)	mg/kg	10	<10	<10	31	<10	<10	<10	<10	<10	<10	
C6 - C10 (F1 minus BTEX)	mg/kg	10	<10	<10	<10	<10	<10	<10	<10	<10	<10	
C10 - C16 (F2)	mg/kg	10	<10	<10	<10	<10	11	<10	<10	<10	14	
C16 - C34 (F3)	mg/kg	10	16	44	842	331	463	<10	<10	<10	40	
C34 - C50 (F4)	mg/kg	10	12	25	320	125	225	<10	<10	<10	18	
Gravimetric Heavy Hydrocarbons	mg/kg	1000	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	
Moisture Content	%	1	25	7	56	17	38	17	19	19	13	
Surrogate	Unit	Acceptable Limits										
Toluene-d8 (BTEX)	%	50-150	102	99	98	99	100	101	100	100	100	
Ethylbenzene-d10 (BTEX)	%	50-150	99	93	101	92	96	86	90	86	86	
o-Terphenyl (F2-F4)	%	50-150	106	114	92	82	90	107	113	113	122	

Certified By:



Certificate of Analysis

AGAT WORK ORDER: 15E009623

PROJECT: A04012A07

6310 ROPER ROAD
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<http://www.agatlabs.com>

CLIENT NAME: KLOHN CRIPPEN

ATTENTION TO: Nicole Wills

SAMPLING SITE:

SAMPLED BY:

Petroleum Hydrocarbons (BTEX/F1-F4) in Soil (CWS)

DATE RECEIVED: 2015-08-19

DATE REPORTED: 2015-08-28

Parameter	Unit	SAMPLE DESCRIPTION:		BH15-046 0.	BH15-046 1.	BH15-047 0.	BH15-047 1.	BH15-047 2.	BH15-048 0.	BH15-048 0.	BH15-048 1.	
		SAMPLE TYPE:		3-0.6	0-1.5	15-0.3	0-1.5	5-3.0	15-0.3	6-1.0	0-1.5	
		DATE SAMPLED:		Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil
		G / S	RDL	8/16/2015	8/16/2015	8/16/2015	8/16/2015	8/16/2015	8/16/2015	8/16/2015	8/16/2015	8/16/2015
Benzene	mg/kg	0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	
Toluene	mg/kg	0.05	8.20	<0.05	7.20	<0.05	<0.05	<0.05	4.91	0.10	<0.05	
Ethylbenzene	mg/kg	0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	
Xylenes	mg/kg	0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	
C6 - C10 (F1)	mg/kg	10	<10	<10	14	<10	<10	<10	<10	<10	<10	
C6 - C10 (F1 minus BTEX)	mg/kg	10	<10	<10	<10	<10	<10	<10	<10	<10	<10	
C10 - C16 (F2)	mg/kg	10	64	<10	<10	<10	<10	<10	<10	<10	<10	
C16 - C34 (F3)	mg/kg	10	1210	<10	892	<10	<10	<10	249	<10	<10	
C34 - C50 (F4)	mg/kg	10	583	29	471	<10	<10	<10	68	<10	<10	
Gravimetric Heavy Hydrocarbons	mg/kg	1000	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	
Moisture Content	%	1	36	17	30	19	24	36	14	15		
Surrogate	Unit	Acceptable Limits										
Toluene-d8 (BTEX)	%	50-150	98	101	101	101	101	101	99	102	101	
Ethylbenzene-d10 (BTEX)	%	50-150	88	90	109	107	108	108	102	106	104	
o-Terphenyl (F2-F4)	%	50-150	109	94	93	105	94	94	111	93	93	

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CLIENT NAME: KLOHN CRIPPEN

ATTENTION TO: Nicole Wills

SAMPLING SITE:

SAMPLED BY:

Petroleum Hydrocarbons (BTEX/F1-F4) in Soil (CWS)

DATE RECEIVED: 2015-08-19

DATE REPORTED: 2015-08-28

Parameter	Unit	SAMPLE DESCRIPTION:									
		G / S		BH15-049 0.	BH15-049 0.	BH15-049 1.	BH15-050 0.	BH15-050 1.	BH15-050 2.	BH15-051 0.	BH15-051 0.
		RDL		15-0.3	3-0.6	0-1.5	3-0.6	0-1.5	5-3.0	3-0.6	6-1.0
		DATE SAMPLED:		Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil
DATE SAMPLED:		8/16/2015		8/16/2015		8/16/2015		8/16/2015		8/16/2015	
Benzene	mg/kg	0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Toluene	mg/kg	0.05	2.62	1.09	<0.05	2.17	<0.05	<0.05	4.28	<0.05	<0.05
Ethylbenzene	mg/kg	0.01	0.27	0.04	0.03	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Xylenes	mg/kg	0.05	31.8	0.98	0.27	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
C6 - C10 (F1)	mg/kg	10	320	<10	<10	<10	<10	<10	<10	<10	<10
C6 - C10 (F1 minus BTEX)	mg/kg	10	286	<10	<10	<10	<10	<10	<10	<10	<10
C10 - C16 (F2)	mg/kg	10	8709	371	<10	<10	<10	21	<10	<10	<10
C16 - C34 (F3)	mg/kg	10	520	852	<10	682	<10	22	393	<10	<10
C34 - C50 (F4)	mg/kg	10	52	463	<10	280	<10	11	220	<10	<10
Gravimetric Heavy Hydrocarbons	mg/kg	1000	NA	N/A	N/A	N/A	N/A	NA	NA	NA	NA
Moisture Content	%	1	37	36	17	51	13	24	21	19	19
Surrogate	Unit	Acceptable Limits									
Toluene-d8 (BTEX)	%	50-150	98	99	100	97	100	99	101	102	102
Ethylbenzene-d10 (BTEX)	%	50-150	95	107	103	93	98	105	104	108	108
o-Terphenyl (F2-F4)	%	50-150	95	90	92	93	85	94	94	94	94

Certified By:



Certificate of Analysis

AGAT WORK ORDER: 15E009623

PROJECT: A04012A07

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CLIENT NAME: KLOHN CRIPPEN

ATTENTION TO: Nicole Wills

SAMPLING SITE:

SAMPLED BY:

Petroleum Hydrocarbons (BTEX/F1-F4) in Soil (CWS)

DATE RECEIVED: 2015-08-19

DATE REPORTED: 2015-08-28

Parameter	Unit	SAMPLE DESCRIPTION:		BH15-051 1.	BH15-052 0.	BH15-052 0.	BH15-052 1.	BH15-053 0.	BH15-053 0.	BH15-053 1.	DUP A		
		SAMPLE TYPE:		0-1.5	3-0.6	6-1.0	0-1.5	0-0.15	3-0.6	0-1.5		Soil	
		DATE SAMPLED:		Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil
		G / S	RDL	8/16/2015	8/16/2015	8/16/2015	8/16/2015	8/16/2015	8/16/2015	8/16/2015	8/16/2015	8/16/2015	8/16/2015
Benzene	mg/kg	0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005		
Toluene	mg/kg	0.05	<0.05	0.11	0.82	<0.05	<0.05	<0.05	<0.05	<0.05	11.0		
Ethylbenzene	mg/kg	0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	2.48		
Xylenes	mg/kg	0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05		
C6 - C10 (F1)	mg/kg	10	<10	<10	<10	<10	<10	<10	<10	<10	13		
C6 - C10 (F1 minus BTEX)	mg/kg	10	<10	<10	<10	<10	<10	<10	<10	<10	<10		
C10 - C16 (F2)	mg/kg	10	<10	21	<10	<10	<10	<10	<10	<10	102		
C16 - C34 (F3)	mg/kg	10	<10	1480	261	<10	76	147	<10	<10	2040		
C34 - C50 (F4)	mg/kg	10	<10	682	133	<10	28	17	<10	<10	1030		
Gravimetric Heavy Hydrocarbons	mg/kg	1000	NA	NA	NA	NA	NA	NA	NA	NA	N/A		
Moisture Content	%	1	16	42	35	18	11	55	17	17	45		
Surrogate	Unit	Acceptable Limits											
Toluene-d8 (BTEX)	%	50-150	100	104	100	101	98	98	95	101	101		
Ethylbenzene-d10 (BTEX)	%	50-150	105	120	113	106	90	106	100	127	127		
o-Terphenyl (F2-F4)	%	50-150	99	90	89	86	106	86	102	132	132		

Certified By:



Certificate of Analysis

AGAT WORK ORDER: 15E009623

PROJECT: A04012A07

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CLIENT NAME: KLOHN CRIPPEN

ATTENTION TO: Nicole Wills

SAMPLING SITE:

SAMPLED BY:

Petroleum Hydrocarbons (BTEX/F1-F4) in Soil (CWS)

DATE RECEIVED: 2015-08-19

DATE REPORTED: 2015-08-28

Parameter	Unit	SAMPLE DESCRIPTION:		DUP B	DUP C	DUP D	DUP E
		G / S	RDL	6882733	6882734	6882735	6882736
Benzene	mg/kg	0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Toluene	mg/kg	0.05	<0.05	<0.05	3.52	<0.05	<0.05
Ethylbenzene	mg/kg	0.01	<0.01	<0.01	2.48	<0.01	<0.01
Xylenes	mg/kg	0.05	<0.05	<0.05	17.7	<0.05	<0.05
C6 - C10 (F1)	mg/kg	10	<10	<10	24	<10	<10
C6 - C10 (F1 minus BTEX)	mg/kg	10	<10	<10	<10	<10	<10
C10 - C16 (F2)	mg/kg	10	<10	<10	16	<10	<10
C16 - C34 (F3)	mg/kg	10	59	<10	381	<10	<10
C34 - C50 (F4)	mg/kg	10	<10	<10	89	<10	<10
Gravimetric Heavy Hydrocarbons	mg/kg	1000	N/A	N/A	N/A	N/A	N/A
Moisture Content	%	1	25	11	52	15	15
Surrogate	Unit	Acceptable Limits					
Toluene-d8 (BTEX)	%	50-150	93	114	101	98	98
Ethylbenzene-d10 (BTEX)	%	50-150	123	131	132	121	121
o-Terphenyl (F2-F4)	%	50-150	113	106	103	100	100

Comments: RDL - Reported Detection Limit; G / S - Guideline / Standard

6882660-6882736 Results are based on the dry weight of the sample.
 The C6-C10 (F1) fraction is calculated using toluene response factor.
 The C10 - C16 (F2), C16 - C34 (F3), and C34 - C50 (F4) fractions are calculated using the average response factor for n-C10, n-C16, and n-C34.
 Gravimetric Heavy Hydrocarbons (F4g) are not included in and cannot be added to the Total C6-C50 and are only determined if the chromatogram of the C34 - C50 hydrocarbons indicates that hydrocarbons >C50 are present.
 Total C6 - C50 results are corrected for BTEX and PAH contributions (if requested).
 Quality control data is available upon request.
 Assistance in the interpretation of data is available upon request.
 This method complies with the Reference Method for the CWS PHC and is validated for use in the laboratory.
 nC6 and nC10 response factors are within 30% of Toluene response factor.
 nC10, nC16 and nC34 response factors are within 10% of their average.
 C50 response factor is within 70% of nC10 + nC16 + nC34 average.
 Linearity is within 15%.
 The chromatogram returned to baseline by the retention time of nC50.
 Extraction and holding times were met for this sample.

Certified By:

Quality Assurance

 CLIENT NAME: KLOHN CRIPPEN
 PROJECT: A04012A07
 SAMPLING SITE:

 AGAT WORK ORDER: 15E009623
 ATTENTION TO: Nicole Wills
 SAMPLED BY:

Soil Analysis															
RPT Date:			DUPLICATE				Method Blank	REFERENCE MATERIAL			METHOD BLANK SPIKE		MATRIX SPIKE		
PARAMETER	Batch	Sample Id	Dup #1	Dup #2	RPD	Measured Value		Acceptable Limits		Recovery	Acceptable Limits		Recovery	Acceptable Limits	
								Lower	Upper		Lower	Upper		Lower	Upper

Soil Analysis - Barium by Fusion ICP

Barium by Fusion ICP-OES	6809050	6809050	9680	9110	6.1%	< 40	103%	80%	120%		NA	80%	120%
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Comments: If the RPD value is NA, the results of the duplicates are under 5X the RDL and will not be calculated.

Soil Analysis - Barium by Fusion ICP

Barium by Fusion ICP-OES	6882679	6882679	999	1010	0.8%	< 40	105%	80%	120%		NA	80%	120%
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Comments: If the RPD value is NA, the results of the duplicates are under 5X the RDL and will not be calculated.

Soil Analysis - Barium by Fusion ICP

Barium by Fusion ICP-OES	6882717	6882717	898	943	4.9%	< 40	106%	80%	120%		NA	80%	120%
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Comments: If the RPD value is NA, the results of the duplicates are under 5X the RDL and will not be calculated.

CCME / Tier 1 Metals

Antimony	233	6882660	<0.5	<0.5	NA	< 0.5	107%	80%	120%		106%	80%	120%
Arsenic	233	6882660	4.7	4.1	13.6%	< 0.5	98%	80%	120%		98%	80%	120%
Barium	233	6882660	256	237	7.7%	< 0.5	106%	80%	120%		107%	80%	120%
Beryllium	233	6882660	<0.5	<0.5	0.0%	< 0.5	89%	80%	120%		106%	80%	120%
Cadmium	233	6882660	<0.5	<0.5	NA	< 0.5	94%	80%	120%		99%	80%	120%
Chromium	233	6882660	11.0	11.2	1.8%	< 0.5	91%	80%	120%		103%	80%	120%
Cobalt	233	6882660	2.3	2.2	4.4%	< 0.5	96%	80%	120%		101%	80%	120%
Copper	233	6882660	4.4	4.5	2.2%	< 0.5	92%	80%	120%		102%	80%	120%
Lead	233	6882660	5.2	5.0	3.9%	< 0.5	99%	80%	120%		106%	80%	120%
Molybdenum	233	6882660	<0.5	<0.5	NA	< 0.5	95%	80%	120%		105%	80%	120%
Nickel	233	6882660	8.1	7.5	7.7%	< 0.5	101%	80%	120%		94%	80%	120%
Selenium	233	6882660	0.6	<0.5	NA	< 0.5	96%	80%	120%		103%	80%	120%
Silver	233	6882660	<0.5	<0.5	NA	< 0.5	85%	80%	120%		100%	80%	120%
Thallium	233	6882660	<0.5	<0.5	NA	< 0.5	99%	80%	120%		102%	80%	120%
Tin	233	6882660	<0.5	<0.5	NA	< 0.5	98%	80%	120%		99%	80%	120%
Uranium	233	6882660	<0.5	<0.5	NA	< 0.5	99%	80%	120%		102%	80%	120%
Vanadium	233	6882660	17.9	16.8	6.3%	< 0.5	95%	80%	120%		111%	80%	120%
Zinc	233	6882660	16	16	0.0%	< 1	104%	80%	120%		109%	80%	120%

 Comments: If Matrix spike value is NA, the spiked analyte concentration was lower than that of the matrix contribution.
 If the RPD value is NA, the results of the duplicates are under 5X the RDL and will not be calculated.

CCME / Tier 1 Metals

Antimony	234	6882708	<0.5	<0.5	NA	< 0.5	102%	80%	120%		99%	80%	120%
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Quality Assurance

CLIENT NAME: KLOHN CRIPPEN

AGAT WORK ORDER: 15E009623

PROJECT: A04012A07

ATTENTION TO: Nicole Wills

SAMPLING SITE:

SAMPLED BY:

Soil Analysis (Continued)															
RPT Date:			DUPLICATE				Method Blank	REFERENCE MATERIAL			METHOD BLANK SPIKE		MATRIX SPIKE		
PARAMETER	Batch	Sample Id	Dup #1	Dup #2	RPD	Measured Value		Acceptable Limits		Recovery	Acceptable Limits		Recovery	Acceptable Limits	
								Lower	Upper		Lower	Upper		Lower	Upper
Arsenic	234	6882708	3.5	3.3	5.9%	< 0.5	106%	80%	120%			102%	80%	120%	
Barium	234	6882708	220	227	3.1%	< 0.5	92%	80%	120%			93%	80%	120%	
Beryllium	234	6882708	<0.5	<0.5	NA	< 0.5	118%	80%	120%			89%	80%	120%	
Cadmium	234	6882708	<0.5	<0.5	NA	< 0.5	89%	80%	120%			91%	80%	120%	
Chromium	234	6882708	8.9	8.6	3.4%	< 0.5	97%	80%	120%			112%	80%	120%	
Cobalt	234	6882708	2.6	2.6	0.0%	< 0.5	102%	80%	120%			104%	80%	120%	
Copper	234	6882708	3.9	3.9	0.0%	< 0.5	96%	80%	120%			104%	80%	120%	
Lead	234	6882708	3.8	3.9	2.6%	< 0.5	92%	80%	120%			97%	80%	120%	
Molybdenum	234	6882708	0.5	0.5	0.0%	< 0.5	107%	80%	120%			104%	80%	120%	
Nickel	234	6882708	7.9	8.0	1.3%	< 0.5	108%	80%	120%			102%	80%	120%	
Selenium	234	6882708	0.7	0.8	13.3%	< 0.5	97%	80%	120%			102%	80%	120%	
Silver	234	6882708	<0.5	<0.5	NA	< 0.5	90%	80%	120%			99%	80%	120%	
Thallium	234	6882708	<0.5	<0.5	NA	< 0.5	100%	80%	120%			96%	80%	120%	
Tin	234	6882708	<0.5	<0.5	NA	< 0.5	94%	80%	120%			91%	80%	120%	
Uranium	234	6882708	<0.5	<0.5	NA	< 0.5	100%	80%	120%			99%	80%	120%	
Vanadium	234	6882708	14.8	14.3	3.4%	< 0.5	101%	80%	120%			117%	80%	120%	
Zinc	234	6882708	10	11	9.5%	< 1	96%	80%	120%			100%	80%	120%	

Comments: If Matrix spike value is NA, the spiked analyte concentration was lower than that of the matrix contribution.
 If the RPD value is NA, the results of the duplicates are under 5X the RDL and will not be calculated.

CCME / Tier 1 Metals

Antimony	234	6882686	<0.5	<0.5	NA	< 0.5	100%	80%	120%			104%	80%	120%
Arsenic	234	6882686	7.9	6.5	19.4%	< 0.5	112%	80%	120%			94%	80%	120%
Barium	234	6882686	123	110	11.2%	< 0.5	92%	80%	120%			97%	80%	120%
Beryllium	234	6882686	<0.5	<0.5	NA	< 0.5	88%	80%	120%			98%	80%	120%
Cadmium	234	6882686	<0.5	<0.5	NA	< 0.5	120%	80%	120%			99%	80%	120%
Chromium	234	6882686	9.4	9.1	3.2%	< 0.5	102%	80%	120%			103%	80%	120%
Cobalt	234	6882686	5.0	4.2	17.4%	< 0.5	108%	80%	120%			104%	80%	120%
Copper	234	6882686	3.3	3.2	3.1%	< 0.5	101%	80%	120%			97%	80%	120%
Lead	234	6882686	4.2	3.8	10.0%	< 0.5	86%	80%	120%			105%	80%	120%
Molybdenum	234	6882686	0.8	0.7	13.3%	< 0.5	109%	80%	120%			107%	80%	120%
Nickel	234	6882686	12.1	10.2	17.0%	< 0.5	114%	80%	120%			100%	80%	120%
Selenium	234	6882686	<0.5	<0.5	NA	< 0.5	94%	80%	120%			91%	80%	120%
Silver	234	6882686	<0.5	<0.5	NA	< 0.5	108%	80%	120%			100%	80%	120%
Thallium	234	6882686	<0.5	<0.5	NA	< 0.5	92%	80%	120%			104%	80%	120%
Tin	234	6882686	<0.5	<0.5	NA	< 0.5	90%	80%	120%			100%	80%	120%
Uranium	234	6882686	<0.5	<0.5	NA	< 0.5	101%	80%	120%			108%	80%	120%
Vanadium	234	6882686	15.5	14.6	6.0%	< 0.5	112%	80%	120%			99%	80%	120%
Zinc	234	6882686	33	29	12.9%	< 1	93%	80%	120%			85%	80%	120%

Quality Assurance

CLIENT NAME: KLOHN CRIPPEN

AGAT WORK ORDER: 15E009623

PROJECT: A04012A07

ATTENTION TO: Nicole Wills

SAMPLING SITE:

SAMPLED BY:

Soil Analysis (Continued)

RPT Date:			DUPLICATE				Method Blank	REFERENCE MATERIAL			METHOD BLANK SPIKE		MATRIX SPIKE		
PARAMETER	Batch	Sample Id	Dup #1	Dup #2	RPD	Measured Value		Acceptable Limits		Recovery	Acceptable Limits		Recovery	Acceptable Limits	
								Lower	Upper		Lower	Upper		Lower	Upper

Comments: If Matrix spike value is NA, the spiked analyte concentration was lower than that of the matrix contribution.
If the RPD value is NA, the results of the duplicates are under 5X the RDL and will not be calculated.

Soil Analysis - Detailed Salinity

pH (Saturated Paste)	236	6882680	7.12	7.00	1.7%	N/A	100%	90%	110%					
Electrical Conductivity (Sat. Paste)	236	6882680	0.73	0.69	5.6%	< 0.05	104%	90%	110%					
Saturation Percentage	236	6882680	35	36	2.8%	< 1	113%	80%	120%					
Chloride, Soluble	168	6857635	27	27	0.0%	< 5	110%	80%	120%					
Calcium, Soluble	238	6882680	34	35	4.6%	< 1	101%	80%	120%		106%	80%	120%	
Potassium, Soluble	238	6882680	33	35	5.7%	< 2	100%	80%	120%		100%	80%	120%	
Magnesium, Soluble	238	6882680	13	14	6.7%	< 2	102%	80%	120%		105%	80%	120%	
Sodium, Soluble	238	6882680	78	83	6.2%	< 2	98%	80%	120%		100%	80%	120%	
Sulfate, Soluble	238	6882680	71	84	16.8%	< 2	95%	80%	120%		105%	80%	120%	

Comments: If the RPD value is NA, the results of the duplicates are under 5X the RDL and will not be calculated.
If Matrix spike value is NA, the spiked analyte concentration was lower than that of the matrix contribution.

Soil Analysis - Detailed Salinity

pH (Saturated Paste)	236	6882699	7.45	7.24	2.9%	N/A	99%	90%	110%					
Electrical Conductivity (Sat. Paste)	236	6882699	0.60	0.58	3.0%	< 0.05	104%	90%	110%					
Saturation Percentage	236	6882699	38	41	7.6%	< 1	118%	80%	120%					
Chloride, Soluble	168	6882699	64	58	10.5%	< 5	95%	80%	120%					
Calcium, Soluble	238	6898099	27	27	0.0%	< 1	101%	80%	120%		106%	80%	120%	
Potassium, Soluble	238	6898099	7	7	0.0%	< 2	100%	80%	120%		100%	80%	120%	
Magnesium, Soluble	238	6898099	6	6	0.0%	< 2	102%	80%	120%		105%	80%	120%	
Sodium, Soluble	238	6898099	11	11	0.0%	< 2	98%	80%	120%		100%	80%	120%	
Sulfate, Soluble	238	6898099	25	29	14.8%	< 2	95%	80%	120%		105%	80%	120%	

Comments: If the RPD value is NA, the results of the duplicates are under 5X the RDL and will not be calculated.
If Matrix spike value is NA, the spiked analyte concentration was lower than that of the matrix contribution.

Soil Analysis - Detailed Salinity

pH (Saturated Paste)	236	6882714	7.04	6.90	2.0%	N/A	99%	90%	110%					
Electrical Conductivity (Sat. Paste)	236	6882714	0.44	0.40	9.0%	< 0.05	103%	90%	110%					
Saturation Percentage	236	6882714	28	32	13.3%	< 1	109%	80%	120%					
Chloride, Soluble	168	6882468	13	12	8.0%	< 5	94%	80%	120%					
Calcium, Soluble	238	6882699	46	47	2.0%	< 1	102%	80%	120%		106%	80%	120%	
Potassium, Soluble	238	6882699	10	10	0.0%	< 2	98%	80%	120%		104%	80%	120%	
Magnesium, Soluble	238	6882699	16	16	1.2%	< 2	102%	80%	120%		109%	80%	120%	
Sodium, Soluble	238	6882699	36	36	1.9%	< 2	97%	80%	120%		98%	80%	120%	



Quality Assurance

CLIENT NAME: KLOHN CRIPPEN
 PROJECT: A04012A07
 SAMPLING SITE:

AGAT WORK ORDER: 15E009623
 ATTENTION TO: Nicole Wills
 SAMPLED BY:

Soil Analysis (Continued)

RPT Date:			DUPLICATE				Method Blank	REFERENCE MATERIAL			METHOD BLANK SPIKE		MATRIX SPIKE		
PARAMETER	Batch	Sample Id	Dup #1	Dup #2	RPD	Measured Value		Acceptable Limits		Recovery	Acceptable Limits		Recovery	Acceptable Limits	
								Lower	Upper		Lower	Upper		Lower	Upper
Sulfate, Soluble	238	6882699	111	114	2.9%	< 2	92%	80%	120%			108%	80%	120%	

Comments: If the RPD value is NA, the results of the duplicates are under 5X the RDL and will not be calculated.
 If Matrix spike value is NA, the spiked analyte concentration was lower than that of the matrix contribution.

Soil Analysis - Detailed Salinity

pH (Saturated Paste)	236	6882468	7.11	7.01	1.4%	N/A	98%	90%	110%					
Electrical Conductivity (Sat. Paste)	236	6882468	0.29	0.29	0.3%	< 0.05	104%	90%	110%					
Saturation Percentage	236	6882468	54	54	0.0%	< 1	115%	80%	120%					
Chloride, Soluble	1325	6882424	26	29	10.9%	< 5	92%	80%	120%					
Calcium, Soluble	238	6882714	48	50	4.1%	< 1	102%	80%	120%			109%	80%	120%
Potassium, Soluble	238	6882714	5	5	0.0%	< 2	97%	80%	120%			102%	80%	120%
Magnesium, Soluble	238	6882714	17	17	0.0%	< 2	103%	80%	120%			108%	80%	120%
Sodium, Soluble	238	6882714	14	15	6.9%	< 2	97%	80%	120%			100%	80%	120%
Sulfate, Soluble	238	6882714	24	29	18.9%	< 2	97%	80%	120%			101%	80%	120%

Comments: If the RPD value is NA, the results of the duplicates are under 5X the RDL and will not be calculated.
 If Matrix spike value is NA, the spiked analyte concentration was lower than that of the matrix contribution.

Certified By: _____



Quality Assurance

CLIENT NAME: KLOHN CRIPPEN
 PROJECT: A04012A07
 SAMPLING SITE:

AGAT WORK ORDER: 15E009623
 ATTENTION TO: Nicole Wills
 SAMPLED BY:

Trace Organics Analysis

RPT Date:			DUPLICATE				Method Blank	REFERENCE MATERIAL			METHOD BLANK SPIKE		MATRIX SPIKE		
PARAMETER	Batch	Sample Id	Dup #1	Dup #2	RPD	Measured Value		Acceptable Limits		Recovery	Acceptable Limits		Recovery	Acceptable Limits	
								Lower	Upper		Lower	Upper		Lower	Upper
Petroleum Hydrocarbons (BTEX/F1-F4) in Soil (CWS)															
Benzene	741	6895608	< 0.005	< 0.005	NA	< 0.005	94%	80%	120%	87%	80%	120%	83%	60%	140%
Toluene	741	6895608	< 0.05	< 0.05	NA	< 0.05	87%	80%	120%	85%	80%	120%	88%	60%	140%
Ethylbenzene	741	6895608	< 0.01	< 0.01	NA	< 0.01	88%	80%	120%	92%	80%	120%	95%	60%	140%
Xylenes	741	6895608	0.21	0.16	NA	< 0.05	86%	80%	120%	81%	80%	120%	78%	60%	140%
C6 - C10 (F1)	741	6895608	< 10	< 10	NA	< 10	84%	80%	120%	89%	80%	120%	113%	60%	140%
C10 - C16 (F2)	647	6882660	42	58	32.0%	< 10	87%	80%	120%	81%	80%	120%	86%	60%	140%
C16 - C34 (F3)	647	6882660	948	1090	13.9%	< 10	88%	80%	120%	86%	80%	120%	92%	60%	140%
C34 - C50 (F4)	647	6882660	446	571	24.6%	< 10	88%	80%	120%	89%	80%	120%	95%	60%	140%
Moisture Content	647	6882660	31	30	3.3%	< 1									

Comments: If the RPD value is NA, the results of the duplicates are under 5X the RDL and will not be calculated.

Petroleum Hydrocarbons (BTEX/F1-F4) in Soil (CWS)															
Benzene	737	6889326	< 0.005	< 0.005	NA	< 0.005	86%	80%	120%	84%	80%	120%	105%	60%	140%
Toluene	737	6889326	< 0.05	< 0.05	NA	< 0.05	91%	80%	120%	86%	80%	120%	107%	60%	140%
Ethylbenzene	737	6889326	0.02	0.02	NA	< 0.01	100%	80%	120%	98%	80%	120%	118%	60%	140%
Xylenes	737	6889326	< 0.05	< 0.05	NA	< 0.05	104%	80%	120%	82%	80%	120%	99%	60%	140%
C6 - C10 (F1)	737	6889326	< 10	< 10	NA	< 10	115%	80%	120%	83%	80%	120%	80%	60%	140%
C10 - C16 (F2)	678	6891095	<10	<10	NA	< 10	99%	80%	120%	82%	80%	120%	81%	60%	140%
C16 - C34 (F3)	678	6891095	<10	<10	NA	< 10	107%	80%	120%	89%	80%	120%	87%	60%	140%
C34 - C50 (F4)	678	6891095	<10	<10	NA	< 10	97%	80%	120%	90%	80%	120%	89%	60%	140%
Moisture Content	678	6891095	14	14	0.0%	< 1									

Comments: If the RPD value is NA, the results of the duplicates are under 5X the RDL and will not be calculated.

Certified By: _____

Method Summary

CLIENT NAME: KLOHN CRIPPEN

AGAT WORK ORDER: 15E009623

PROJECT: A04012A07

ATTENTION TO: Nicole Wills

SAMPLING SITE:

SAMPLED BY:

PARAMETER	AGAT S.O.P	LITERATURE REFERENCE	ANALYTICAL TECHNIQUE
Soil Analysis			
Antimony	INOR-171-6006, INOR-171-6202	EPA SW 846-3050/6010; SHEPPARD	ICP-MS
Arsenic	INOR-171-6006, INOR-171-6202	EPA SW 846-3050/6010; SHEPPARD S	ICP-MS
Barium	INOR-171-6006, INOR-171-6202	EPA SW 846-3050/6010; SHEPPARD	ICP-MS
Beryllium	INOR-171-6006, INOR-171-6202	EPA SW 846-3050/6010; SHEPPARD	ICP-MS
Cadmium	INOR-171-6006, INOR-171-6202	EPA SW 846-3050/6010; SHEPPARD	ICP-MS
Chromium	INOR-171-6006, INOR-171-6202	EPA SW 846-3050/6010; SHEPPARD	ICP/MS
Cobalt	INOR-171-6006, INOR-171-6202	EPA SW 846-3050/6010; SHEPPARD	ICP-MS
Copper	INOR-171-6006, INOR-171-6202	EPA SW 846-3050/6010; SHEPPARD	ICP-MS
Lead	INOR-171-6006, INOR-171-6202	EPA SW 846-3050/6010; SHEPPARD	ICP-MS
Molybdenum	INOR-171-6006, INOR-171-6202	EPA SW 846-3050/6010; SHEPPARD	ICP-MS
Nickel	INOR-171-6006, INOR-171-6202	EPA SW 846-3050/6010; SHEPPARD	ICP-MS
Selenium	INORG-171-6006, INOR-171-6202	EPA SW 846-3050/6010; SHEPPARD S	ICP-MS
Silver	INOR-171-6006, INOR-171-6202	EPA SW 846-3050/6010; SHEPPARD	ICP-MS
Thallium	INOR-171-6006, INOR-171-6202	EPA SW 846-3050/6010; SHEPPARD	ICP-MS
Tin	INOR-171-6006, INOR-171-6202	EPA SW 846-3050/6010; SHEPPARD	ICP-MS
Uranium	INOR-171-6006, INOR-171-6202	EPA SW 846-3050/6010; SHEPPARD	ICP-MS
Vanadium	INOR-171-6006, INOR-171-6202	EPA SW 846-3050/6010; SHEPPARD	ICP-MS
Zinc	INOR-171-6006, INOR-171-6202	EPA SW 846-3050/6010; SHEPPARD	ICP-MS
True Barium by Fusion ICP	INOR-171-60008	ASTM D4503.08	ICP/OES
pH (Saturated Paste)	INOR-171-6206	SHEPPARD 2007; MILLER 2007	PH METER
Electrical Conductivity (Sat. Paste)	INO-171-6206	SHEPPARD 2007; MILLER 2007	CONDUCTIVITY METER
Sodium Adsorption Ratio	INOR-171-6201 & INOR-171-6002	McKeague 3.26	CALCULATION
Saturation Percentage	SOIL 0140; SOIL 0110; SOIL 0120	MILLER 2007; SHEPPARD 2007	GRAVIMETRIC
Chloride, Soluble	SOIL 0110; SOIL 0120; INST 0330	Carter & Gregorich 2007; SM 4500E	COLORIMETER
Calcium, Soluble	SOIL 0110; SOIL 0120; INST 0140	CARTER & GREGORICH 2007, SM 3120B	ICP/OES
Potassium, Soluble	SOIL 0110; SOIL 0120; INST 0140	CARTER & GREGORICH 2007, SM 3120B	ICP/OES
Magnesium, Soluble	SOIL 0110; SOIL 0120; INST 0140	CARTER & GREGORICH 2007, SM 3120B	ICP/OES
Sodium, Soluble	SOIL 0110; SOIL 0120; INST 0140	CARTER & GREGORICH 2007, SM 3120B	ICP/OES
Sulfate, Soluble	SOIL 0110; SOIL 0120; INST 0140	SHEPPARD 2007; EATON 2005	ICP/OES

Method Summary

CLIENT NAME: KLOHN CRIPPEN

AGAT WORK ORDER: 15E009623

PROJECT: A04012A07

ATTENTION TO: Nicole Wills

SAMPLING SITE:

SAMPLED BY:

PARAMETER	AGAT S.O.P	LITERATURE REFERENCE	ANALYTICAL TECHNIQUE
Trace Organics Analysis			
Benzene	ORG-170- 5110/5140/5430/5440	EPA SW-846 8260-S	GC/MS
Toluene	ORG-170- 5110/5140/5430/5440	EPA SW-846 8260-S	GC/MS
Ethylbenzene	ORG-170- 5110/5140/5430/5440	EPA SW-846 8260-S	GC/MS
Xylenes	ORG-170- 5110/5140/5430/5440	EPA SW-846 8260-S	GC/MS
C6 - C10 (F1)	ORG-170- 5110/5140/5430/5440	CCME Tier 1 Method-S L	GC/FID
C6 - C10 (F1 minus BTEX)	ORG-170- 5110/5140/5430/5440	CCME Tier 1 Method-S L	GC/FID
C10 - C16 (F2)	ORG-170-5120/5300	CCME Tier 1 Method-S H	GC/FID
C16 - C34 (F3)	ORG-170-5120/5300	CCME Tier 1 Method-S H	GC/FID
C34 - C50 (F4)	ORG-170-5120/5300	CCME Tier 1 Method-S H	GC/FID
Gravimetric Heavy Hydrocarbons	ORG-170-5120/5300	CCME Tier 1 Method-S H	GC/FID
Moisture Content	LAB-175-4002	CCME Tier 1 Method-S %	GRAVIMETRIC
Toluene-d8 (BTEX)	ORG-170- 5110/5140/5430/5440	EPA SW-846 8260-S	GC/MS
Ethylbenzene-d10 (BTEX)	ORG-170- 5110/5140/5430/5440	EPA SW-846 8260-S	GC/MS
o-Terphenyl (F2-F4)	ORG-170-5120/5300	CCME Tier 1 Method-S H	GC/FID



Laboratory Use Only

Arrival Temperature: 1.6°C

AGAT Job Number: 15E009623

Date and Time: 75 AUG 19 11:37

Chain of Custody Record

Report Information

Company: KCB

Contact: Nicole Wills

Address: 2618 Hopewell place
Calgary, Alberta

Phone: 403-730-7809 Fax: _____

LSD: _____

Client Project #: A04012 A07

Report Information

1. Name: Nicole Wills
Email: NWills@Klohn.com

2. Name: Konrad Ross
Email: KRoss@Klohn.com

3. Name: Ken Smart
Email: KSmart@Klohn.com

Report Format

Single Sample per Page

Multiple Samples per Page

Turnaround Time Required (TAT)

Regular TAT 5 to 7 business days

Rush TAT Less than 24 hours
 24 to 48 hours
 48 to 72 hours

Date Required: _____

RUSH TAT REQUESTS UPON SELECTING A RUSH TAT, THE CLIENT ACCEPTS THAT A RUSH SURCHARGE WILL BE ADDED TO THE INVOICE. SEE BACK FOR SURCHARGE.

Invoice To Same Yes / No

Company: _____

Contact: _____

Address: _____

Phone: _____ Fax: _____

PO/AFE#: _____

Requirements (Selection may impact detection limits)

CCME AB Tier 1 BC CSR

Agricultural Industrial AW

Residential/Park Commercial LW

Drinking Water Natural Area DW

FWAL AB Surface Water

Other D50 (Drilling) SPIGEC

LABORATORY USE (LAB ID #)	SAMPLE IDENTIFICATION	SAMPLE MATRIX	DATE/TIME SAMPLED	COMMENTS - SITE SAMPLE INFO. SAMPLE CONTAINMENT
6882660	BH15-033 (0.3-0.6)	Soil	Aug 16/15	Samples below 1.0m were frozen. Head space/water possible.
665	BH15-033 (1.0-1.5)			
666	BH15-033 (2.5-3.0)			
668	BH15-034 (0.15-0.3)			
669	BH15-034 (0.3-0.6)			
670	BH15-034 (1.0-1.5)			
672	BH15-035 (0.3-0.6)			
673	BH15-035 (1.0-1.5)			
674	BH15-035 (2.0-2.5)			

# OF CONTAINERS	Detailed Soil Salinity (Saturated Paste)	CCME BTEX/F1-F4	Soil Metals <input type="checkbox"/> HWS-B <input type="checkbox"/> Cr ⁶ <input type="checkbox"/> Hg <input type="checkbox"/> Pb	Water Metals <input type="checkbox"/> Dissolved <input type="checkbox"/> Total <input type="checkbox"/> Hg <input type="checkbox"/> Cr ⁶	Routine Water Potability	AB Class 2 Landfill	BC Landfill	D50 Detailed Soil Salinity (As Received)	Microtox	BTEX/VP/EPH <input type="checkbox"/> LEPH/HEPH <input type="checkbox"/>	Barium (Fusion)	Particle Size	PAH	HOLD FOR 60 DAYS	PRESERVED (Y/N)	CONTAMINATED/HAZARDOUS (Y/N)
3	X	X	X								X	X	X			
3	X	X	X								X	X	X			
3	X	X	X								X	X	X			
3	X	X	X								X	X	X			
3	X	X	X								X	X	X			
3	X	X	X								X	X	X			
3	X	X	X								X	X	X			
3	X	X	X								X	X	X			

Samples Relinquished By (Print Name and Sign): <u>Ken Smart</u>	Date/Time: _____	Samples Received By (Print Name and Sign): <u>ATB/CP</u>	Date/Time: <u>19 AUG 15</u>	Pink Copy - Client Yellow Copy - AGAT White Copy - AGAT	Page <u>1</u> of <u>4</u> N ^o : AB 000860
Samples Relinquished By (Print Name and Sign): _____	Date/Time: _____	Samples Received By (Print Name and Sign): _____	Date/Time: <u>@ 11:37</u>		
Samples Relinquished By (Print Name and Sign): _____	Date/Time: _____	Samples Received By (Print Name and Sign): _____	Date/Time: _____		



Chain of Custody Record

15E009623

Report to:

Company: _____ Same as COC#: _____

LABORATORY USE (LAB ID #)	SAMPLE IDENTIFICATION	SAMPLE MATRIX	DATE/TIME SAMPLED	COMMENTS - SITE SAMPLE INFO. SAMPLE CONTAINMENT	# OF CONTAINERS	Detailed Soil Salinity (Saturated Paste)	CCME BTEX/F1-F4	Soil Metals <input type="checkbox"/> HWS-B <input type="checkbox"/> Cr ⁶ <input type="checkbox"/> Hg	Water Metals <input type="checkbox"/> Dissolved <input type="checkbox"/> Total <input type="checkbox"/> Hg <input type="checkbox"/> Cr ⁶	Routine Water Potability	AB Class 2 Landfill	BC Landfill	D50 Detailed Soil Salinity (As Received)	Microtox	BTEX/VPH/EPH <input type="checkbox"/> LEPH/HEPH <input type="checkbox"/>	Barium (fusion)	Particle Size	PAH	HOLD FOR 60 DAYS	PRESERVED (Y/N)	CONTAMINATED/HAZARDOUS (Y/N)
6882675	BH15-036 (0.15-0.3)	SOIL	Avg 16/15		3	X	X	X													
676	BH15-036 (0.3-0.6)	↓	↓		3	X	X	X													
677	BH15-036 (1.0-1.5)			3	X	X	X														
678	BH15-037 (0.3-0.6)			3	X	X	X														
679	BH15-037 (0.6-1.0)			3	X	X	X														
680	BH15-037 (1.0-1.5)			3	X	X	X														
681	BH15-038 (0.15-0.3)			3	X	X	X														
682	BH15-038 (0.3-0.6)			3	X	X	X														
683	BH15-038 (1.0-1.5)			3	X	X	X														
684	BH15-039 (0.15-0.3)			3	X	X	X														
685	BH15-039 (0.6-1.0)			3	X	X	X														
686	BH15-039 (1.0-1.5)			3	X	X	X														
687	BH15-040 (0-0.15)			3	X	X	X														
688	BH15-040 (0.6-1.0)			3	X	X	X														
689	BH15-040 (1.0-1.5)			3	X	X	X														
690	BH15-041 (0.3-0.6)			3	X	X	X														
691	BH15-041 (0.6-1.0)			3	X	X	X														
692	BH15-041 (1.0-1.5)			3	X	X	X														
693	BH15-042 (0.15-0.3)			3	X	X	X														
695	BH15-042 (0.6-1.0)			3	X	X	X														
696	BH15-042 (1.0-1.5)			3	X	X	X														
697	BH15-043 (0.3-0.6)	3	X	X	X																
698	BH15-043 (1.0-1.5)	3	X	X	X																
699	BH15-043 (2.5-3.0)	3	X	X	X																

Samples Relinquished By (Print Name and Sign):	Date/Time	Samples Received By (Print Name and Sign):	Date/Time	Pink Copy - Client Yellow Copy - AGAT White Copy - AGAT	Page <u>2</u> of <u>4</u> N ^o : AB 000860 A
Samples Relinquished By (Print Name and Sign):	Date/Time	Samples Received By (Print Name and Sign):	Date/Time		
Samples Relinquished By (Print Name and Sign):	Date/Time	Samples Received By (Print Name and Sign):	Date/Time		



Chain of Custody Record

15E009623

Report to:

Company:

Same as COC#:

LABORATORY USE (LAB ID #)	SAMPLE IDENTIFICATION	SAMPLE MATRIX	DATE/TIME SAMPLED	COMMENTS - SITE SAMPLE INFO. SAMPLE CONTAINMENT	# OF CONTAINERS	Detailed Soil Salinity (Saturated Paste)	CCME BTEX/F1-F4	Soil Metals <input type="checkbox"/> HWS-B <input type="checkbox"/> Cr ⁶ <input type="checkbox"/> Hg	Water Metals <input type="checkbox"/> Dissolved <input type="checkbox"/> Total <input type="checkbox"/> Hg <input type="checkbox"/> Cr ⁶	Routine Water Potability	AB Class 2 Landfill	BC Landfill	D50 Detailed Soil Salinity (As Received)	Microtox	BTEXS/VPH/EPH <input type="checkbox"/> LEPH/HEPH <input type="checkbox"/>	Barium (fusion)	HOLD FOR 60 DAYS	PRESERVED (Y/N)	CONTAMINATED/HAZARDOUS (Y/N)	
6882701	BH15-044 (0.15-0.3)	SOIL	Aug 16 /15	Samples below 1.0m were frozen. Head space water possible.	3	X	X	X								X				
702	BH15-044 (0.6-1.0)				3	X	X	X									X			
703	BH15-044 (1.0-1.5)				3	X	X	X									X			
704	BH15-045 (0.15-0.3)				3	X	X	X									X			
705	BH15-045 (0.6-1.0)				3	X	X	X									X			
706	BH15-045 (1.0-1.5)				3	X	X	X									X			
707	BH15-046 (0.15-0.3)				3	X	X	X									X			
708	BH15-046 (0.3-0.6)				3	X	X	X									X			
709	BH15-046 (1.0-1.5)				3	X	X	X									X			
710	BH15-047 (0.15-0.3)				3	X	X	X									X			
711	BH15-047 (1.0-1.5)				3	X	X	X									X			
712	BH15-047 (2.5-3.0)				3	X	X	X									X			
713	BH15-048 (0.15-0.3)				3	X	X	X									X			
714	BH15-048 (0.6-1.0)				3	X	X	X									X			
715	BH15-048 (1.0-1.5)				3	X	X	X									X			
716	BH15-049 (0.15-0.3)				3	X	X	X									X			
717	BH15-049 (0.3-0.6)				3	X	X	X									X			
718	BH15-049 (1.0-1.5)				3	X	X	X									X			
719	BH15-050 (0.3-0.6)				3	X	X	X									X			
720	BH15-050 (1.0-1.5)				3	X	X	X									X			
721	BH15-050 (2.5-3.0)				3	X	X	X									X			
722	BH15-051 (0.3-0.6)				3	X	X	X									X			
723	BH15-051 (0.6-1.0)				3	X	X	X									X			
724	BH15-051 (1.0-1.5)				3	X	X	X									X			

Samples Relinquished By (Print Name and Sign):	Date/Time	Samples Received By (Print Name and Sign):	Date/Time	Pink Copy - Client Yellow Copy - AGAT White Copy- AGAT	Page <u>3</u> of <u>4</u> N ^o : AB 000861 A
Samples Relinquished By (Print Name and Sign):	Date/Time	Samples Received By (Print Name and Sign):	Date/Time		
Samples Relinquished By (Print Name and Sign):	Date/Time	Samples Received By (Print Name and Sign):	Date/Time		



Chain of Custody Record

15E009623

Report to:

Company: _____ Same as COC#: _____

LABORATORY USE (LAB ID #)	SAMPLE IDENTIFICATION	SAMPLE MATRIX	DATE/TIME SAMPLED	COMMENTS - SITE SAMPLE INFO. SAMPLE CONTAINMENT	# OF CONTAINERS	Detailed Soil Salinity (Saturated Paste)	CCME BTEX/F1-F4	Soil Metals <input type="checkbox"/> HWS-B <input type="checkbox"/> Cr ⁶ <input type="checkbox"/> Hg <input type="checkbox"/> Pb	Water Metals <input type="checkbox"/> Dissolved <input type="checkbox"/> Total <input type="checkbox"/> Hg <input type="checkbox"/> Cr ⁶	Routine Water Potability	AB Class 2 Landfill	BC Landfill	D50 Detailed Soil Salinity (As Received)	Microtox	BTEXS/VP/EPH <input type="checkbox"/> LEPH/HEPH <input type="checkbox"/>	Barium (fusion)	HOLD FOR 60 DAYS	PRESERVED (Y/N)	CONTAMINATED/HAZARDOUS (Y/N)	
6882725	BH15-052 (0.3-0.6)	SOIL	Aug 16 / 15	Samples below 1.0m were frozen. Head Space/water possible	3	X	X	X												
726	BH15-052 (0.6-1.0)	↓	↓		3	X	X	X												
727	BH15-052 (1.0-1.5)	↓	↓		3	X	X	X												
728	BH15-053 (0.0-0.15)	↓	↓		3	X	X	X												
729	BH15-053 (0.3-0.6)	↓	↓		3	X	X	X												
731	BH15-053 (1.0-1.5)	↓	↓		3	X	X	X												
732	DUP A	↓	↓		3	X	X	X												
733	DUP B	↓	↓		3	X	X	X												
734	DUP C	↓	↓		3	X	X	X												
735	DUP D	↓	↓		3	X	X	X												
736	DUP E	↓	↓	3	X	X	X													

Samples Relinquished By (Print Name and Sign):	Date/Time	Samples Received By (Print Name and Sign):	Date/Time	Pink Copy - Client Yellow Copy - AGAT White Copy- AGAT	Page <u>4</u> of <u>4</u>
Samples Relinquished By (Print Name and Sign):	Date/Time	Samples Received By (Print Name and Sign):	Date/Time		No: AB 000862 A
Samples Relinquished By (Print Name and Sign):	Date/Time	Samples Received By (Print Name and Sign):	Date/Time		



AGAT Laboratories

SAMPLE INTEGRITY RECEIPT FORM

RECEIVING BASICS - Shipping

Company/Consultant: KCB
 Courier: Canadian North Prepaid Collect
 Waybill #: 518 YEV 7060-3072
 Branch: EDM GP FN FM RD VAN LYD FSJ EST Other: _____
 Custody Seal Intact: Yes No NA
 TAT: <24hr 24-48hr 48-72hr Reg Other _____
 Cooler Quantity: 5

TIME SENSITIVE ISSUES - Shipping

Earliest Date Sampled: Aug. 16, 2015 ALREADY EXCEEDED? Yes No
 MIBI/Time Sensitive Test*: n/a Expiry: w/c
 Hydrocarbon Test: BTEX P1 Expiry: Aug. 23, 2015
 Are samples received more than 5 days after sampling: Yes No

**Residual Chlorine, DO, Turbidity, BOD, Nitrate/Nitrite, Microtox*

Temperature (to be recorded from bottles/jars only)

N/A – Only Soil Bags Received

(1) (Bottle/Jar) 2.4 + 2.4 + 0.8 = 1.9 °C (2) (Bottle/Jar) 1.4 + 1.8 + 2.0 = 1.7 °C
 (3) (Bottle/Jar) 2.2 + 2.2 + 2.2 = 2.2 °C (4) (Bottle/Jar) 0.9 + 1.0 + 1.2 = 1.0 °C
 (5) (Bottle/Jar) ___ + ___ + ___ = ___ °C (6) (Bottle/Jar) ___ + ___ + ___ = ___ °C

(If more than 6 coolers are received use another sheet of paper and attach)

SAMPLE INTEGRITY - Shipping

Hazardous Samples: Why Hazardous: n/a
 Precaution taken: n/a
 Legal Samples: Yes No
 International Samples: Yes No Tape Sealed: Yes No
 Coolant used: Icepack Bagged Ice Free Ice Free Water None

LOGISTICS USE ONLY

Workorder No: 15E 009623
 Samples Damaged: Yes No If YES why?
 No Bubble Wrap Frozen Courier
 Other: _____
 Correct Sample Requirements for Testing
 Correct Bottles: Yes No Correct Amount: Yes No
 Correct Labels: Yes No
 If NO to any of the above, explain why:

Visible Sediment in Waters : Yes No

Additional Integrity Issues or concerns:

Account Project Manager: _____ have they been notified of the above issues: Yes No

Whom spoken to: _____ Date/Time: _____

CPM Initial _____

1.9 °C

518 YEY 7060-3072

518-YEV-7060-3072

SHIPPER'S NAME AND ADDRESS
IEG Consultants
C/O Northwind Ind.
Inuvik, NT
867 777 2426 A04012A07.002.002
RSJLFW1460441

NOT NEGOTIABLE
AIR WAYBILL
(AIR CONSIGNMENT NOTE)
Canadian North
101 3731 52 Ave E
Edmonton Int Apt, AB T9E 0V4
Canada

GST #: R 892440629
Copies 1, 2 and 3 of this Air Waybill are originals and have the same validity.
It is agreed that the goods described herein are to be carried in apparent good order and condition (except as noted) for
damage SUBJECT TO THE CONDITIONS OF CONTRACT HEREON. FOR ALL GOODS MAY BE
CARRIED BY ANY OTHER MEANS INCLUDING ROAD OR ANY OTHER MODE OF TRANSPORT UNLESS SPECIFIC CONTRARY
INSTRUCTIONS ARE GIVEN HEREON BY THE SHIPPER, AND THE SHIPPER AGREES. UNLESS SPECIFIC CONTRARY
INSTRUCTIONS ARE GIVEN HEREON BY THE SHIPPER, AND THE SHIPPER AGREES, ALL SHIPMENTS MAY
BE CARRIED VIA INTERMEDIATE STOPPING PLACES WHICH THE CARRIER DEEMS APPROPRIATE. THE
SHIPPER'S ATTENTION IS DRAWN TO THE NOTICE CONCERNING CARRIER'S LIMITATION OF LIABILITY. Shipper
may increase such limitation of liability by declaring a higher value for damage and paying a supplemental charge if
required.

CONSIGNEE'S NAME AND ADDRESS
AGAT Laboratories Ltd
6310 Roper Road
Edmonton, AB T6B 3P9
Canada
780 243 8889 Alvelyn Pasco

SIGNATURE _____ RECEIVED IN GOOD ORDER _____ PLACE _____ DATE/TIME _____

ISSUING CARRIER'S AGENT NAME AND CITY
ACCOUNT NO.
AIRPORT OF DEPARTURE (ADDR OF FIRST CARRIER) AND REQUESTED ROUTING
Inuvik

PRINTED NAME
ALSO NOTIFY: NAME AND ADDRESS (OPTIONAL ACCOUNTING INFORMATION)
Acc. #: KLO100CW
Klohn Crippen Berger Ltd
500 - 2618 Hopewell Place NE
Calgary, AB T1Y 7J7
Mary Mack, 403-291-0777
TO EXPEDITE MOVEMENT, SHIPMENT MAY BE DELETED TO MOTOR OR OTHER CARRIER UNLESS SHIPPER GIVES OTHER INSTRUCTIONS HERE
DOMESTIC LIABILITY:

ROUTING AND DESTINATION
TO BY FIRST CARRIER TO BY TO BY
YEG Canadian North
AIRPORT OF DESTINATION
Edmonton

CURRENCY CAD 3RD X W/TVAL OTHER DECLARED VALUE FOR CARRIAGE DECLARED VALUE FOR CUSTOMS
PPD COL PPD COL NVD NCV
AMOUNT OF INSURANCE NIL INSURANCE - If carrier offers insurance, and such insurance is requested in accordance with the conditions thereof, indicate amount to be insured in figures in box marked "Amount of Insurance".
INSURANCE DECLARED IN BOX MARKED "AMOUNT OF INSURANCE".

HANDLING INFORMATION These commodities licensed by US for ultimate destination
HPPU KEEP COOL A04012A07.002.002

DUPLICATE COPY

DUPLICATE COPY

NO. OF PIECES RCP	GROSS WEIGHT kg / lb	RATE CLASS COMMODITY ITEM NO.	CHARGEABLE WEIGHT	RATE / CHARGE	TOTAL	NATURE AND QUANTITY OF GOODS (INCL. DIMENSIONS OR VOLUME)
14	449 K	CAD 00	449	\$7.20	3,232.80	Soil Samples DIMS 48x40x44IN (bulk)
14	449				3,232.80	

PREPAID	3,232.80	WEIGHT CHARGE	0.00	PICKUP CHARGES	0.00	ORIGIN ADVANCE CHARGES	0.00	DESCRIPTION OF ORIGIN ADVANCE
VALUATION CHARGE	0.00	DELIVERY CHARGE	0.00	DELIVERY CHARGES	0.00	DEST. ADVANCE CHARGES	0.00	DESCRIPTION OF DEST. ADVANCE
TAX	210.13	TOTAL OTHER CHARGES DUE AGENT	0.00	OTHER CHARGES AND DESCRIPTION	969.84	Nav Canada Charge, Fuel S		ITEMS PREPAID
TOTAL OTHER CHARGES DUE CARRIER	969.84	TOTAL OTHER CHARGES DUE AGENT	0.00	TOTAL COLLECT	0.00			ITEMS COLLECT

Shipper certifies that the particulars on the face hereof are correct and that, insofar as any part of the consignment contains dangerous goods, such part is properly described by name and is in proper condition for carriage by air according to the applicable Dangerous Goods Regulations.

RE-WEIGHT/DIMENSIONAL WEIGHT AND SHIPPER GUARANTEES ALL CHARGES SUBJECT TO RATE AUDIT

COD	CURRENCY CAD	TOTAL PREPAID	4,412.77	TOTAL COLLECT	0.00	SIGNATURE OF SHIPPER ABOVE AND INITIAL APPLICABLE BOX BELOW: <input checked="" type="checkbox"/> THIS SHIPMENT DOES NOT CONTAIN DANGEROUS GOODS REGULATED IN AIR TRANSPORT. <input type="checkbox"/> THIS SHIPMENT DOES CONTAIN DANGEROUS GOODS REGULATED IN AIR TRANSPORT.
CURRENCY CONVERSION RATES	TOTAL CARRIER'S CHARGES AT DESTINATION	TOTAL CARRIER'S CHARGES AT DESTINATION	8/18/2015 11:25	TOTAL COLLECT CHARGES	0.00	SIGNATURE OF ISSUING CARRIER OR U.S. AGENT

995107
SIGNATURE OF ISSUING CARRIER OR U.S. AGENT

518-YEV-7060-3072



CLIENT NAME: KLOHN CRIPPEN
500-2618 HOPEWELL PLACE NE
CALGARY, AB T1Y7J7
(403) 274-3424

ATTENTION TO: Nicole Wills

PROJECT: A04012A07

AGAT WORK ORDER: 15E009678

SOIL ANALYSIS REVIEWED BY: Jennifer Liu, Analyst

TRACE ORGANICS REVIEWED BY: Ngoc (Ruby) Vu, Lab Technician

DATE REPORTED: Aug 27, 2015

PAGES (INCLUDING COVER): 44

VERSION*: 1

Should you require any information regarding this analysis please contact your client services representative at (780) 395-2525

*NOTES

All samples will be disposed of within 30 days following analysis. Please contact the lab if you require additional sample storage time.



Certificate of Analysis

AGAT WORK ORDER: 15E009678

PROJECT: A04012A07

6310 ROPER ROAD
EDMONTON, ALBERTA
CANADA T6B 3P9
TEL (780)395-2525
FAX (780)462-2490
<http://www.agatlabs.com>

CLIENT NAME: KLOHN CRIPPEN

ATTENTION TO: Nicole Wills

SAMPLING SITE:

SAMPLED BY:

CCME / Tier 1 Metals (soil)

DATE RECEIVED: 2015-08-19

DATE REPORTED: 2015-08-27

Parameter	Unit	SAMPLE DESCRIPTION:		BH15-013 0.	BH15-013 0.	BH15-013 2.	BH15-013 4.	RDL	BH15-014 0.	RDL	BH15-014 0.
		G / S	RDL	3-0.6	6-1.0	5-3.0	0-4.5		3-0.6		6-1.0
		SAMPLE TYPE:		Soil	Soil	Soil	Soil		Soil		Soil
		DATE SAMPLED:		8/15/2015	8/15/2015	8/15/2015	8/15/2015		8/15/2015		8/15/2015
Antimony	mg/kg	20	0.5	1.2	0.7	<0.5	<0.5	0.5	6.3	0.5	1.1
Arsenic	mg/kg	17	0.5	6.9	6.0	6.0	6.4	0.5	10.6	0.5	5.6
Barium	mg/kg	750	0.5	437	308	107	142	5	6990	0.5	1660
Beryllium	mg/kg	5	0.5	<0.5	<0.5	<0.5	<0.5	0.5	<0.5	0.5	<0.5
Cadmium	mg/kg	1.4	0.5	<0.5	<0.5	<0.5	<0.5	0.5	1.3	0.5	<0.5
Chromium	mg/kg	64	0.5	14.4	11.6	8.9	10.7	0.5	34.1	0.5	10.9
Cobalt	mg/kg	20	0.5	5.6	5.7	4.6	5.0	0.5	19.1	0.5	6.8
Copper	mg/kg	63	0.5	14.5	11.2	5.7	6.3	5	140	0.5	23.2
Lead	mg/kg	70	0.5	27.5	17.6	4.3	6.2	5	534	0.5	59.3
Molybdenum	mg/kg	4	0.5	1.4	1.6	0.7	0.6	0.5	1.6	0.5	1.0
Nickel	mg/kg	50	0.5	13.6	12.0	13.0	13.6	0.5	19.9	0.5	10.8
Selenium	mg/kg	1	0.5	<0.5	0.7	<0.5	<0.5	0.5	<0.5	0.5	<0.5
Silver	mg/kg	20	0.5	<0.5	<0.5	<0.5	<0.5	0.5	<0.5	0.5	<0.5
Thallium	mg/kg	1	0.5	<0.5	<0.5	<0.5	<0.5	0.5	<0.5	0.5	<0.5
Tin	mg/kg	5	0.5	0.6	<0.5	<0.5	<0.5	0.5	3.0	0.5	<0.5
Uranium	mg/kg	23	0.5	0.6	0.8	0.6	0.6	0.5	0.9	0.5	0.6
Vanadium	mg/kg	130	0.5	25.2	22.2	16.6	18.6	0.5	26.4	0.5	20.1
Zinc	mg/kg	200	1	70	58	39	45	1	472	1	68

Certified By:



Certificate of Analysis

AGAT WORK ORDER: 15E009678

PROJECT: A04012A07

6310 ROPER ROAD
EDMONTON, ALBERTA
CANADA T6B 3P9
TEL (780)395-2525
FAX (780)462-2490
<http://www.agatlabs.com>

CLIENT NAME: KLOHN CRIPPEN

ATTENTION TO: Nicole Wills

SAMPLING SITE:

SAMPLED BY:

CCME / Tier 1 Metals (soil)

DATE RECEIVED: 2015-08-19

DATE REPORTED: 2015-08-27

Parameter	Unit	G / S	RDL	BH15-014 2.	BH15-015 0.	BH15-015 0.	BH15-015 1.	BH15-016 0.	BH15-016 0.	BH15-016 1.	BH15-017 0.	
				SAMPLE DESCRIPTION:	5-3.0	15-0.3	6-1.0	0-1.5	3-0.6	6-1.0	0-1.5	3-0.6
				SAMPLE TYPE:	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil
				DATE SAMPLED:	8/15/2015	8/15/2015	8/15/2015	8/15/2015	8/15/2015	8/15/2015	8/15/2015	8/15/2015
				6883591	6883599	6883606	6883607	6883609	6883610	6883611	6883613	
Antimony	mg/kg	20	0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	
Arsenic	mg/kg	17	0.5	6.3	6.8	6.5	5.6	7.4	5.0	6.5	8.4	
Barium	mg/kg	750	0.5	125	270	116	125	229	285	124	210	
Beryllium	mg/kg	5	0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	
Cadmium	mg/kg	1.4	0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	
Chromium	mg/kg	64	0.5	8.3	9.9	9.0	7.8	7.6	11.2	8.9	7.1	
Cobalt	mg/kg	20	0.5	4.1	4.0	4.5	4.2	3.4	6.5	4.8	3.4	
Copper	mg/kg	63	0.5	4.5	7.8	3.0	4.2	6.3	6.7	4.5	5.6	
Lead	mg/kg	70	0.5	4.2	8.9	4.1	3.9	6.5	5.8	4.5	5.8	
Molybdenum	mg/kg	4	0.5	0.6	0.8	0.5	<0.5	0.6	0.8	0.5	0.7	
Nickel	mg/kg	50	0.5	10.7	10.1	10.7	10.7	9.2	11.7	12.7	8.3	
Selenium	mg/kg	1	0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	
Silver	mg/kg	20	0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	
Thallium	mg/kg	1	0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	
Tin	mg/kg	5	0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	
Uranium	mg/kg	23	0.5	<0.5	0.8	<0.5	<0.5	0.6	0.6	0.5	0.5	
Vanadium	mg/kg	130	0.5	15.4	19.7	17.9	15.8	17.8	21.0	19.1	15.8	
Zinc	mg/kg	200	1	33	38	36	33	28	50	42	26	

Certified By:



Certificate of Analysis

AGAT WORK ORDER: 15E009678

PROJECT: A04012A07

6310 ROPER ROAD
EDMONTON, ALBERTA
CANADA T6B 3P9
TEL (780)395-2525
FAX (780)462-2490
<http://www.agatlabs.com>

CLIENT NAME: KLOHN CRIPPEN

ATTENTION TO: Nicole Wills

SAMPLING SITE:

SAMPLED BY:

CCME / Tier 1 Metals (soil)

DATE RECEIVED: 2015-08-19

DATE REPORTED: 2015-08-27

Parameter	Unit	SAMPLE DESCRIPTION:		BH15-017 0.	BH15-017 1.	BH15-018 0.	BH15-018 1.	BH15-018 2.	BH15-019 0.	BH15-019 1.	BH15-019 2.	
		G / S	RDL	6-1.0	0-1.5	6-1.0	0-1.5	5-3.0	6-1.0	0-1.5	5-3.0	
		SAMPLE TYPE:		Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil
		DATE SAMPLED:		8/15/2015	8/15/2015	8/15/2015	8/15/2015	8/15/2015	8/15/2015	8/15/2015	8/15/2015	8/15/2015
Antimony	mg/kg	20	0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	
Arsenic	mg/kg	17	0.5	3.8	5.8	4.9	5.5	5.0	3.2	4.1	5.4	
Barium	mg/kg	750	0.5	317	105	313	92.6	90.6	235	78.2	102	
Beryllium	mg/kg	5	0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	
Cadmium	mg/kg	1.4	0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	
Chromium	mg/kg	64	0.5	11.2	8.1	10.6	8.5	7.1	9.5	6.5	7.3	
Cobalt	mg/kg	20	0.5	7.0	4.1	4.4	3.8	3.6	3.7	3.5	3.8	
Copper	mg/kg	63	0.5	7.4	3.1	8.0	3.4	4.9	5.5	3.6	3.9	
Lead	mg/kg	70	0.5	5.5	4.0	6.4	3.8	3.1	4.2	3.1	3.9	
Molybdenum	mg/kg	4	0.5	0.8	<0.5	0.8	<0.5	<0.5	0.5	<0.5	<0.5	
Nickel	mg/kg	50	0.5	12.4	10.0	11.9	10.0	9.3	9.0	8.5	10.1	
Selenium	mg/kg	1	0.5	0.9	<0.5	0.9	<0.5	<0.5	0.7	<0.5	<0.5	
Silver	mg/kg	20	0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	
Thallium	mg/kg	1	0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	
Tin	mg/kg	5	0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	
Uranium	mg/kg	23	0.5	0.7	<0.5	0.7	<0.5	<0.5	0.5	<0.5	<0.5	
Vanadium	mg/kg	130	0.5	21.6	18.2	20.0	17.6	13.7	17.9	12.9	15.2	
Zinc	mg/kg	200	1	37	30	64	31	31	29	28	33	

Certified By:



Certificate of Analysis

AGAT WORK ORDER: 15E009678

PROJECT: A04012A07

6310 ROPER ROAD
EDMONTON, ALBERTA
CANADA T6B 3P9
TEL (780)395-2525
FAX (780)462-2490
<http://www.agatlabs.com>

CLIENT NAME: KLOHN CRIPPEN

ATTENTION TO: Nicole Wills

SAMPLING SITE:

SAMPLED BY:

CCME / Tier 1 Metals (soil)

DATE RECEIVED: 2015-08-19

DATE REPORTED: 2015-08-27

Parameter	Unit	G / S	RDL	BH15-020 0.	BH15-020 0.	BH15-020 1.	BH15-021 0.	BH15-021 1.	BH15-021 2.	BH15-022 0.	BH15-022 1.	
				SAMPLE DESCRIPTION:	3-0.6	6-1.0	0-1.5	6-1.0	0-1.5	5-3.0	3-0.6	0-1.5
				SAMPLE TYPE:	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil
				DATE SAMPLED:	8/15/2015	8/15/2015	8/15/2015	8/15/2015	8/15/2015	8/15/2015	8/15/2015	8/15/2015
				6883632	6883634	6883635	6883636	6883637	6883638	6883639	6883640	
Antimony	mg/kg	20	0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	
Arsenic	mg/kg	17	0.5	5.9	7.0	5.4	2.9	5.7	6.6	3.0	7.1	
Barium	mg/kg	750	0.5	350	285	124	123	94.7	104	207	150	
Beryllium	mg/kg	5	0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	
Cadmium	mg/kg	1.4	0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	
Chromium	mg/kg	64	0.5	12.9	12.4	9.5	7.4	6.7	8.8	7.4	10.2	
Cobalt	mg/kg	20	0.5	4.9	2.8	4.7	3.0	4.1	4.6	1.7	5.1	
Copper	mg/kg	63	0.5	8.3	5.7	8.5	3.4	3.7	4.4	3.2	6.2	
Lead	mg/kg	70	0.5	6.7	6.2	4.2	3.6	3.7	3.9	3.9	5.3	
Molybdenum	mg/kg	4	0.5	1.0	0.5	<0.5	<0.5	<0.5	0.5	<0.5	0.7	
Nickel	mg/kg	50	0.5	14.4	10.6	17.0	7.5	10.2	11.5	6.4	13.5	
Selenium	mg/kg	1	0.5	0.7	0.9	<0.5	<0.5	<0.5	<0.5	0.6	<0.5	
Silver	mg/kg	20	0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	
Thallium	mg/kg	1	0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	
Tin	mg/kg	5	0.5	2.2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	
Uranium	mg/kg	23	0.5	0.8	0.6	0.6	<0.5	<0.5	0.5	<0.5	0.5	
Vanadium	mg/kg	130	0.5	21.8	30.3	19.6	16.5	14.8	17.5	15.3	20.9	
Zinc	mg/kg	200	1	51	20	33	19	30	37	11	37	

Certified By:



Certificate of Analysis

AGAT WORK ORDER: 15E009678

PROJECT: A04012A07

6310 ROPER ROAD
EDMONTON, ALBERTA
CANADA T6B 3P9
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FAX (780)462-2490
<http://www.agatlabs.com>

CLIENT NAME: KLOHN CRIPPEN

ATTENTION TO: Nicole Wills

SAMPLING SITE:

SAMPLED BY:

CCME / Tier 1 Metals (soil)

DATE RECEIVED: 2015-08-19

DATE REPORTED: 2015-08-27

Parameter	Unit	G / S	RDL	BH15-022 2.	BH15-023 0.	BH15-023 0.	BH15-023 1.	BH15-024 0.	BH15-024 0.	BH15-024 1.	BH15-025 0.	
				SAMPLE DESCRIPTION:	5-3.0	3-0.6	6-1.0	0-1.5	3-0.6	6-1.0	0-1.5	0-0.15
				SAMPLE TYPE:	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil
				DATE SAMPLED:	8/15/2015	8/15/2015	8/15/2015	8/15/2015	8/15/2015	8/15/2015	8/15/2015	8/15/2015
				6883641	6883642	6883643	6883645	6883650	6883652	6883653	6883655	
Antimony	mg/kg	20	0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	
Arsenic	mg/kg	17	0.5	5.6	3.9	6.5	6.2	8.4	5.9	6.0	7.8	
Barium	mg/kg	750	0.5	106	260	162	104	1990	537	330	1810	
Beryllium	mg/kg	5	0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	
Cadmium	mg/kg	1.4	0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	
Chromium	mg/kg	64	0.5	7.7	9.1	10.0	8.9	11.1	10.5	12.2	10.1	
Cobalt	mg/kg	20	0.5	4.0	4.6	4.5	4.5	4.7	5.0	4.8	4.1	
Copper	mg/kg	63	0.5	3.9	8.6	6.6	4.7	13.6	9.6	10.9	9.4	
Lead	mg/kg	70	0.5	3.7	4.8	5.0	4.3	16.1	6.6	6.1	18.4	
Molybdenum	mg/kg	4	0.5	0.6	<0.5	0.5	0.5	1.0	1.0	0.7	0.8	
Nickel	mg/kg	50	0.5	10.5	12.2	11.9	11.8	12.4	11.7	14.4	11.0	
Selenium	mg/kg	1	0.5	<0.5	0.7	<0.5	<0.5	<0.5	0.6	0.6	<0.5	
Silver	mg/kg	20	0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	
Thallium	mg/kg	1	0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	
Tin	mg/kg	5	0.5	<0.5	0.7	<0.5	<0.5	<0.5	<0.5	<0.5	0.7	
Uranium	mg/kg	23	0.5	<0.5	1.2	0.7	<0.5	0.9	0.9	0.8	<0.5	
Vanadium	mg/kg	130	0.5	14.1	17.5	19.7	16.9	22.5	18.2	24.8	19.2	
Zinc	mg/kg	200	1	35	34	37	40	49	59	46	47	

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AGAT WORK ORDER: 15E009678

PROJECT: A04012A07

6310 ROPER ROAD
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CLIENT NAME: KLOHN CRIPPEN

ATTENTION TO: Nicole Wills

SAMPLING SITE:

SAMPLED BY:

CCME / Tier 1 Metals (soil)

DATE RECEIVED: 2015-08-19

DATE REPORTED: 2015-08-27

Parameter	Unit	G / S	RDL	BH15-025 0.	BH15-025 1.	BH15-026 0.	BH15-026 1.	BH15-026 2.	BH15-027 0.	BH15-027 0.	BH15-027 1.	
				SAMPLE DESCRIPTION:	6-1.0	0-1.5	6-1.0	0-1.5	5-3.0	3-0.6	6-1.0	0-1.5
				SAMPLE TYPE:	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil
				DATE SAMPLED:	8/15/2015	8/15/2015	8/15/2015	8/15/2015	8/15/2015	8/15/2015	8/15/2015	8/15/2015
				6883656	6883658	6883659	6883660	6883661	6883663	6883665	6883666	
Antimony	mg/kg	20	0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	
Arsenic	mg/kg	17	0.5	3.2	6.4	5.4	7.1	5.7	5.0	6.3	6.8	
Barium	mg/kg	750	0.5	266	114	90.3	98.8	102	240	210	95.0	
Beryllium	mg/kg	5	0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	<0.5	
Cadmium	mg/kg	1.4	0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	
Chromium	mg/kg	64	0.5	8.2	8.5	7.4	8.2	7.2	12.0	12.0	8.1	
Cobalt	mg/kg	20	0.5	3.9	4.3	3.9	4.3	4.0	4.5	5.7	4.5	
Copper	mg/kg	63	0.5	8.6	5.2	3.8	4.3	3.6	8.7	9.1	4.4	
Lead	mg/kg	70	0.5	3.8	4.1	3.4	4.0	3.7	6.1	6.3	4.2	
Molybdenum	mg/kg	4	0.5	0.8	<0.5	<0.5	<0.5	0.5	0.9	0.5	0.5	
Nickel	mg/kg	50	0.5	10.9	13.1	10.3	11.5	10.3	11.8	16.7	12.1	
Selenium	mg/kg	1	0.5	0.6	<0.5	<0.5	<0.5	<0.5	0.7	0.6	<0.5	
Silver	mg/kg	20	0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	
Thallium	mg/kg	1	0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	
Tin	mg/kg	5	0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	
Uranium	mg/kg	23	0.5	0.7	0.6	<0.5	0.6	0.5	0.8	0.8	0.5	
Vanadium	mg/kg	130	0.5	13.8	17.3	15.1	16.4	13.7	20.2	23.6	16.1	
Zinc	mg/kg	200	1	38	39	32	38	31	71	34	35	

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AGAT WORK ORDER: 15E009678

PROJECT: A04012A07

6310 ROPER ROAD
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CLIENT NAME: KLOHN CRIPPEN

ATTENTION TO: Nicole Wills

SAMPLING SITE:

SAMPLED BY:

CCME / Tier 1 Metals (soil)

DATE RECEIVED: 2015-08-19

DATE REPORTED: 2015-08-27

Parameter	Unit	G / S	RDL	BH15-028 0.	BH15-028 0.	BH15-028 1.	BH15-029 0.	BH15-029 0.	BH15-029 1.	BH15-030 0.	BH15-030 0.	
				SAMPLE DESCRIPTION:	15-0.3	3-0.6	0-1.5	3-0.6	6-1.0	0-1.5	0-0.15	15-0.3
				SAMPLE TYPE:	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil
				DATE SAMPLED:	8/15/2015	8/15/2015	8/15/2015	8/15/2015	8/15/2015	8/15/2015	8/15/2015	8/15/2015
				6883669	6883671	6883672	6883674	6883681	6883683	6883685	6883686	
Antimony	mg/kg	20	0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	
Arsenic	mg/kg	17	0.5	5.1	5.5	6.4	8.5	3.7	6.6	3.9	5.9	
Barium	mg/kg	750	0.5	911	125	102	172	196	107	203	151	
Beryllium	mg/kg	5	0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	
Cadmium	mg/kg	1.4	0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	
Chromium	mg/kg	64	0.5	9.2	8.2	8.9	8.4	7.0	8.1	8.4	9.7	
Cobalt	mg/kg	20	0.5	4.7	4.3	4.5	3.9	2.8	4.2	6.2	5.2	
Copper	mg/kg	63	0.5	6.8	4.3	4.2	5.8	4.9	3.3	5.1	4.9	
Lead	mg/kg	70	0.5	6.9	4.1	4.1	5.8	3.4	4.4	4.0	5.0	
Molybdenum	mg/kg	4	0.5	0.7	<0.5	0.5	0.7	0.6	0.5	0.5	<0.5	
Nickel	mg/kg	50	0.5	10.2	8.9	12.5	8.5	7.7	9.7	10.9	11.1	
Selenium	mg/kg	1	0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	
Silver	mg/kg	20	0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	
Thallium	mg/kg	1	0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	
Tin	mg/kg	5	0.5	0.6	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	
Uranium	mg/kg	23	0.5	0.6	<0.5	0.7	0.6	<0.5	<0.5	<0.5	0.5	
Vanadium	mg/kg	130	0.5	17.5	17.1	17.9	17.2	12.7	14.8	15.3	19.4	
Zinc	mg/kg	200	1	43	24	37	29	29	35	28	30	

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AGAT WORK ORDER: 15E009678

PROJECT: A04012A07

6310 ROPER ROAD
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CLIENT NAME: KLOHN CRIPPEN

ATTENTION TO: Nicole Wills

SAMPLING SITE:

SAMPLED BY:

CCME / Tier 1 Metals (soil)

DATE RECEIVED: 2015-08-19

DATE REPORTED: 2015-08-27

Parameter	Unit	G / S	RDL	BH15-030 1.	BH15-031 0.	BH15-031 0.	BH15-031 1.	BH15-032 1.	BH15-032 2.	BH15-032 4.	
				SAMPLE DESCRIPTION:	0-1.5	15-0.3	3-0.6	0-1.5	0-1.5	5-3.0	0-4.5
				SAMPLE TYPE:	Soil	Soil	Soil	Soil	Soil	Soil	Soil
				DATE SAMPLED:	8/15/2015	8/15/2015	8/15/2015	8/15/2015	8/15/2015	8/15/2015	8/15/2015
				6883693	6883695	6883697	6883698	6883700	6883701	6883706	
Antimony	mg/kg	20	0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	
Arsenic	mg/kg	17	0.5	6.6	6.5	6.1	5.8	6.6	6.0	6.1	
Barium	mg/kg	750	0.5	89.3	481	305	96.6	90.4	103	133	
Beryllium	mg/kg	5	0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	
Cadmium	mg/kg	1.4	0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	
Chromium	mg/kg	64	0.5	7.8	12.0	12.8	7.0	8.0	8.1	7.4	
Cobalt	mg/kg	20	0.5	4.3	5.8	5.1	4.2	4.7	4.8	4.4	
Copper	mg/kg	63	0.5	4.3	8.1	6.1	4.8	5.1	5.0	4.4	
Lead	mg/kg	70	0.5	4.0	6.9	6.4	4.0	4.4	3.9	3.7	
Molybdenum	mg/kg	4	0.5	0.6	1.0	0.8	0.5	0.5	0.6	0.5	
Nickel	mg/kg	50	0.5	12.3	13.0	11.9	12.1	12.7	11.9	11.6	
Selenium	mg/kg	1	0.5	<0.5	0.7	0.7	<0.5	<0.5	<0.5	<0.5	
Silver	mg/kg	20	0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	
Thallium	mg/kg	1	0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	
Tin	mg/kg	5	0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	
Uranium	mg/kg	23	0.5	0.6	0.8	0.7	0.5	<0.5	0.7	<0.5	
Vanadium	mg/kg	130	0.5	14.9	22.8	23.3	14.8	16.9	14.5	14.7	
Zinc	mg/kg	200	1	35	40	32	32	36	34	35	

Comments: RDL - Reported Detection Limit; G / S - Guideline / Standard: Refers to Alberta Tier 1 - Soil - Agricultural - Fine

6883578-6883584 Note: Results over guideline have been confirmed through repeat analysis.

6883650 Note: Results over guideline have been confirmed through repeat analysis.

6883655 Note: Results over guideline have been confirmed through repeat analysis.

6883669 Note: Results over guideline have been confirmed through repeat analysis.

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AGAT WORK ORDER: 15E009678

PROJECT: A04012A07

6310 ROPER ROAD
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CLIENT NAME: KLOHN CRIPPEN

ATTENTION TO: Nicole Wills

SAMPLING SITE:

SAMPLED BY:

Particle Size by Sieve

DATE RECEIVED: 2015-08-19

DATE REPORTED: 2015-08-27

		BH15-013 0.	BH15-014 0.	BH15-020 0.	BH15-021 0.	BH15-024 0.	BH15-026 2.		
SAMPLE DESCRIPTION:		6-1.0	6-1.0	3-0.6	6-1.0	3-0.6	5-3.0		
SAMPLE TYPE:		Soil	Soil	Soil	Soil	Soil	Soil		
DATE SAMPLED:		8/15/2015	8/15/2015	8/15/2015	8/15/2015	8/15/2015	8/15/2015		
Parameter	Unit	G / S	RDL	6883575	6883584	6883632	6883636	6883650	6883661
Sieve Analysis - 75 microns	%	0.2	46.4	59.0	87.7	62.1	96.8	89.4	
Sieve Texture	NA		Fine	Coarse	Coarse	Coarse	Coarse	Coarse	Coarse

Comments: RDL - Reported Detection Limit; G / S - Guideline / Standard

6883575-6883661 Value reported is amount of sample retained on sieve after wash with water and represents proportion by weight particles larger than indicated sieve size.

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CLIENT NAME: KLOHN CRIPPEN

ATTENTION TO: Nicole Wills

SAMPLING SITE:

SAMPLED BY:

Soil Analysis - Barium by Fusion ICP

DATE RECEIVED: 2015-08-19

DATE REPORTED: 2015-08-27

Parameter	Unit	G / S		RDL		BH15-013 0.	BH15-013 0.	BH15-013 2.	BH15-013 4.	BH15-014 0.	BH15-014 0.	BH15-014 2.	BH15-015 0.
		G / S	RDL	G / S	RDL	3-0.6	6-1.0	5-3.0	0-4.5	3-0.6	6-1.0	5-3.0	15-0.3
True Barium by Fusion ICP	mg/kg	50	1410	50	1410	1410	853	691	787	90900	4760	776	1280
Parameter	Unit	G / S		RDL		BH15-015 0.	BH15-015 1.	BH15-016 0.	BH15-016 0.	BH15-016 1.	BH15-017 0.	BH15-017 0.	BH15-017 1.
		G / S	RDL	G / S	RDL	6-1.0	0-1.5	3-0.6	6-1.0	0-1.5	3-0.6	6-1.0	0-1.5
True Barium by Fusion ICP	mg/kg	50	877	50	877	877	869	1080	995	731	949	729	755
Parameter	Unit	G / S		RDL		BH15-018 0.	BH15-018 1.	BH15-018 2.	BH15-019 0.	BH15-019 1.	BH15-019 2.	BH15-020 0.	BH15-020 0.
		G / S	RDL	G / S	RDL	6-1.0	0-1.5	5-3.0	6-1.0	0-1.5	5-3.0	3-0.6	6-1.0
True Barium by Fusion ICP	mg/kg	50	842	50	842	842	588	723	750	767	679	836	702
Parameter	Unit	G / S		RDL		BH15-020 1.	BH15-021 0.	BH15-021 1.	BH15-021 2.	BH15-022 0.	BH15-022 1.	BH15-022 2.	BH15-023 0.
		G / S	RDL	G / S	RDL	0-1.5	6-1.0	0-1.5	5-3.0	3-0.6	0-1.5	5-3.0	3-0.6
True Barium by Fusion ICP	mg/kg	50	740	50	740	740	806	683	581	642	637	749	713
Parameter	Unit	G / S		RDL		BH15-023 0.	BH15-023 1.	BH15-024 0.	BH15-024 0.	BH15-024 1.	BH15-025 0.	BH15-025 0.	BH15-025 1.
		G / S	RDL	G / S	RDL	6-1.0	0-1.5	3-0.6	6-1.0	0-1.5	0-0.15	6-1.0	0-1.5
True Barium by Fusion ICP	mg/kg	50	812	50	812	812	650	11800	1910	978	5730	633	639

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AGAT WORK ORDER: 15E009678

PROJECT: A04012A07

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CLIENT NAME: KLOHN CRIPPEN

ATTENTION TO: Nicole Wills

SAMPLING SITE:

SAMPLED BY:

Soil Analysis - Barium by Fusion ICP

DATE RECEIVED: 2015-08-19

DATE REPORTED: 2015-08-27

Parameter	Unit	G / S	RDL	BH15-026 0.	BH15-026 1.	BH15-026 2.	BH15-027 0.	BH15-027 0.	BH15-027 1.	BH15-028 0.	BH15-028 0.	
				SAMPLE DESCRIPTION:	SAMPLE TYPE:	DATE SAMPLED:	SAMPLE DESCRIPTION:	SAMPLE TYPE:	DATE SAMPLED:	SAMPLE DESCRIPTION:	SAMPLE TYPE:	DATE SAMPLED:
True Barium by Fusion ICP	mg/kg	50	716	660	746	711	909	670	2230	772		
				BH15-028 1.	BH15-029 0.	BH15-029 0.	BH15-029 1.	BH15-030 0.	BH15-030 0.	BH15-030 1.	BH15-031 0.	
				SAMPLE DESCRIPTION:	0-1.5	3-0.6	6-1.0	0-1.5	0-0.15	15-0.3	0-1.5	15-0.3
				SAMPLE TYPE:	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil
				DATE SAMPLED:	8/15/2015	8/15/2015	8/15/2015	8/15/2015	8/15/2015	8/15/2015	8/15/2015	8/15/2015
True Barium by Fusion ICP	mg/kg	50	754	954	897	743	888	825	652	998		
				BH15-031 0.	BH15-031 1.	BH15-032 1.	BH15-032 2.	BH15-032 4.				
				SAMPLE DESCRIPTION:	3-0.6	0-1.5	0-1.5	5-3.0	0-4.5			
				SAMPLE TYPE:	Soil	Soil	Soil	Soil	Soil			
				DATE SAMPLED:	8/15/2015	8/15/2015	8/15/2015	8/15/2015	8/15/2015			
True Barium by Fusion ICP	mg/kg	50	830	736	756	707	869					

Comments: RDL - Reported Detection Limit; G / S - Guideline / Standard
6883489-6883706 Result is based on the dry weight of the sample.

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PROJECT: A04012A07

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CLIENT NAME: KLOHN CRIPPEN

ATTENTION TO: Nicole Wills

SAMPLING SITE:

SAMPLED BY:

Soil Analysis - Salinity

DATE RECEIVED: 2015-08-19

DATE REPORTED: 2015-08-27

Parameter	Unit	SAMPLE DESCRIPTION:		BH15-013 2.	BH15-014 0.	BH15-015 0.	BH15-016 0.	BH15-017 0.	BH15-020 0.	BH15-020 0.	BH15-020 1.
		SAMPLE TYPE:		5-3.0	6-1.0	6-1.0	6-1.0	3-0.6	3-0.6	6-1.0	0-1.5
		DATE SAMPLED:		Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil
		G / S	RDL	8/15/2015	8/15/2015	8/15/2015	8/15/2015	8/15/2015	8/15/2015	8/15/2015	8/15/2015
pH (Saturated Paste)	pH Units	0.02	7.94	7.33	7.12	5.85	6.76	5.88	6.02	7.43	
Electrical Conductivity (Sat. Paste)	dS/m	0.05	0.41	1.25	0.27	1.88	0.36	0.65	0.39	0.44	
Sodium Adsorption Ratio			0.63	1.47	0.49	0.13	0.33	0.25	0.28	0.38	
Saturation Percentage	%	1	29	80	31	113	37	205	95	38	
Chloride, Soluble	mg/L	5	16	103	14	18	8	14	13	17	
Calcium, Soluble	mg/L	1	47	61	23	338	42	70	42	51	
Potassium, Soluble	mg/L	2	7	236	22	17	4	20	9	20	
Magnesium, Soluble	mg/L	1	9	8	5	71	8	17	12	8	
Sodium, Soluble	mg/L	2	18	46	10	10	9	9	8	11	
Sulfur (as Sulfate), Soluble	mg/L	2	84	353	42	989	75	201	69	34	
Calcium, Soluble (meq/L)	meq/L	0.05	2.35	3.04	1.15	16.9	2.10	3.49	2.10	2.54	
Calcium, Soluble (mg/kg)	mg/kg	1	14	49	7	382	16	144	40	19	
Chloride, Soluble (meq/L)	meq/L	0.14	0.45	2.91	0.39	0.51	0.23	0.39	0.37	0.48	
Chloride, Soluble (mg/kg)	mg/kg	2	5	82	4	20	3	29	12	6	
Magnesium, Soluble (meq/L)	meq/L	0.08	0.74	0.66	0.41	5.84	0.66	1.40	0.99	0.66	
Magnesium, Soluble (mg/kg)	mg/kg	1	3	6	2	80	3	35	11	3	
Potassium, Soluble (meq/L)	meq/L	0.05	0.18	6.04	0.56	0.43	0.10	0.51	0.23	0.51	
Potassium, Soluble (mg/kg)	mg/kg	2	2	189	7	19	<2	41	9	8	
Sodium, Soluble (meq/L)	meq/L	0.09	0.78	2.00	0.43	0.43	0.39	0.39	0.35	0.48	
Sodium, Soluble (mg/kg)	mg/kg	2	5	37	3	11	3	18	8	4	
Sulfur (as Sulfate), Soluble (meq/L)	meq/L	0.04	1.75	7.35	0.87	20.6	1.56	4.19	1.44	0.71	
Sulfur (as Sulfate), Soluble (mg/kg)	mg/kg	2	24	282	13	1120	28	412	66	13	
Theoretical Gypsum Requirement	tonnes/ha	0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	

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CLIENT NAME: KLOHN CRIPPEN

ATTENTION TO: Nicole Wills

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Soil Analysis - Salinity

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Parameter	Unit	SAMPLE DESCRIPTION:		BH15-021 0.	BH15-021 1.	BH15-021 2.	BH15-022 0.	BH15-022 1.	BH15-022 2.	BH15-023 0.	BH15-023 0.
		SAMPLE TYPE:		6-1.0	0-1.5	5-3.0	3-0.6	0-1.5	5-3.0	3-0.6	6-1.0
		DATE SAMPLED:		Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil
		G / S	RDL	8/15/2015	8/15/2015	8/15/2015	8/15/2015	8/15/2015	8/15/2015	8/15/2015	8/15/2015
pH (Saturated Paste)	pH Units	0.02	6.39	7.55	7.38	6.07	7.37	7.78	6.03	6.38	
Electrical Conductivity (Sat. Paste)	dS/m	0.05	0.45	0.40	0.53	0.40	0.56	0.65	0.36	0.67	
Sodium Adsorption Ratio			0.40	0.37	0.84	0.44	0.50	0.69	0.49	0.49	
Saturation Percentage	%	1	76	32	32	126	24	31	192	64	
Chloride, Soluble	mg/L	5	27	24	28	38	28	20	42	37	
Calcium, Soluble	mg/L	1	47	55	47	45	75	71	44	96	
Potassium, Soluble	mg/L	2	21	22	12	12	6	7	3	<2	
Magnesium, Soluble	mg/L	1	6	8	12	12	14	12	11	19	
Sodium, Soluble	mg/L	2	11	11	25	13	18	24	14	20	
Sulfur (as Sulfate), Soluble	mg/L	2	92	27	77	55	54	169	29	40	
Calcium, Soluble (meq/L)	meq/L	0.05	2.35	2.74	2.35	2.25	3.74	3.54	2.20	4.79	
Calcium, Soluble (mg/kg)	mg/kg	1	36	18	15	57	18	22	84	61	
Chloride, Soluble (meq/L)	meq/L	0.14	0.76	0.68	0.79	1.07	0.79	0.56	1.18	1.04	
Chloride, Soluble (mg/kg)	mg/kg	2	21	8	9	48	7	6	81	24	
Magnesium, Soluble (meq/L)	meq/L	0.08	0.49	0.66	0.99	0.99	1.15	0.99	0.91	1.56	
Magnesium, Soluble (mg/kg)	mg/kg	1	5	3	4	15	3	4	21	12	
Potassium, Soluble (meq/L)	meq/L	0.05	0.54	0.56	0.31	0.31	0.15	0.18	0.08	<0.05	
Potassium, Soluble (mg/kg)	mg/kg	2	16	7	4	15	<2	2	6	<2	
Sodium, Soluble (meq/L)	meq/L	0.09	0.48	0.48	1.09	0.57	0.78	1.04	0.61	0.87	
Sodium, Soluble (mg/kg)	mg/kg	2	8	4	8	16	4	7	27	13	
Sulfur (as Sulfate), Soluble (meq/L)	meq/L	0.04	1.92	0.56	1.60	1.15	1.12	3.52	0.60	0.83	
Sulfur (as Sulfate), Soluble (mg/kg)	mg/kg	2	70	9	25	69	13	52	56	26	
Theoretical Gypsum Requirement	tonnes/ha	0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	

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Soil Analysis - Salinity

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Parameter	Unit	SAMPLE DESCRIPTION:		BH15-023 1.	BH15-024 0.	BH15-024 0.	BH15-024 1.	BH15-025 0.	BH15-025 0.	BH15-025 1.	BH15-026 0.	
		SAMPLE TYPE:		0-1.5	3-0.6	6-1.0	0-1.5	0-0.15	6-1.0	0-1.5	6-1.0	
		DATE SAMPLED:		Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil
		G / S	RDL	8/15/2015	8/15/2015	8/15/2015	8/15/2015	8/15/2015	8/15/2015	8/15/2015	8/15/2015	8/15/2015
pH (Saturated Paste)	pH Units		0.02	7.98	7.52	6.28	6.29	7.79	6.52	7.38	7.80	
Electrical Conductivity (Sat. Paste)	dS/m	0.05	0.38	0.38	0.54	0.52	0.40	0.64	0.59	0.58	0.45	
Sodium Adsorption Ratio			1.00	1.00	0.56	0.69	0.77	0.61	0.75	0.75	0.71	
Saturation Percentage	%	1	28	28	29	73	133	28	303	34	29	
Chloride, Soluble	mg/L	5	36	36	22	36	36	44	41	41	41	
Calcium, Soluble	mg/L	1	46	46	56	58	42	98	54	59	42	
Potassium, Soluble	mg/L	2	<2	<2	10	5	3	6	9	14	40	
Magnesium, Soluble	mg/L	1	11	11	13	16	12	12	18	15	11	
Sodium, Soluble	mg/L	2	29	29	18	23	22	24	25	25	20	
Sulfur (as Sulfate), Soluble	mg/L	2	30	30	105	86	43	148	130	56	27	
Calcium, Soluble (meq/L)	meq/L	0.05	2.30	2.30	2.79	2.89	2.10	4.89	2.69	2.94	2.10	
Calcium, Soluble (mg/kg)	mg/kg	1	13	13	16	42	56	27	164	20	12	
Chloride, Soluble (meq/L)	meq/L	0.14	1.02	1.02	0.62	1.02	1.02	1.24	1.16	1.16	1.16	
Chloride, Soluble (mg/kg)	mg/kg	2	10	10	6	26	48	12	124	14	12	
Magnesium, Soluble (meq/L)	meq/L	0.08	0.91	0.91	1.07	1.32	0.99	0.99	1.48	1.23	0.91	
Magnesium, Soluble (mg/kg)	mg/kg	1	3	3	4	12	16	3	55	5	3	
Potassium, Soluble (meq/L)	meq/L	0.05	<0.05	<0.05	0.26	0.13	0.08	0.15	0.23	0.36	1.02	
Potassium, Soluble (mg/kg)	mg/kg	2	<2	<2	3	4	4	<2	27	5	12	
Sodium, Soluble (meq/L)	meq/L	0.09	1.26	1.26	0.78	1.00	0.96	1.04	1.09	1.09	0.87	
Sodium, Soluble (mg/kg)	mg/kg	2	8	8	5	17	29	7	76	9	6	
Sulfur (as Sulfate), Soluble (meq/L)	meq/L	0.04	0.62	0.62	2.19	1.79	0.90	3.08	2.71	1.17	0.56	
Sulfur (as Sulfate), Soluble (mg/kg)	mg/kg	2	8	8	30	63	57	41	394	19	8	
Theoretical Gypsum Requirement	tonnes/ha	0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	

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ATTENTION TO: Nicole Wills

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Soil Analysis - Salinity

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Parameter	Unit	Soil Analysis - Salinity									
		SAMPLE DESCRIPTION:		BH15-026 1.	BH15-026 2.	BH15-027 0.	BH15-027 0.	BH15-027 1.	BH15-028 0.	BH15-028 0.	BH15-028 1.
		SAMPLE TYPE:		0-1.5	5-3.0	3-0.6	6-1.0	0-1.5	15-0.3	3-0.6	0-1.5
		DATE SAMPLED:		Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil
		G / S	RDL	6883660	6883661	6883663	6883665	6883666	6883669	6883671	6883672
pH (Saturated Paste)	pH Units		0.02	7.67	7.89	6.13	6.71	7.97	5.83	6.29	7.88
Electrical Conductivity (Sat. Paste)	dS/m		0.05	0.57	0.85	0.63	0.44	0.38	0.73	0.27	0.37
Sodium Adsorption Ratio				0.88	0.92	0.32	0.39	0.51	0.12	0.24	0.51
Saturation Percentage	%		1	32	29	157	54	32	145	89	29
Chloride, Soluble	mg/L		5	57	66	19	18	30	16	14	29
Calcium, Soluble	mg/L		1	42	90	75	42	48	100	34	46
Potassium, Soluble	mg/L		2	43	14	13	30	10	8	6	7
Magnesium, Soluble	mg/L		1	9	20	18	11	11	22	8	12
Sodium, Soluble	mg/L		2	24	37	12	11	15	5	6	15
Sulfur (as Sulfate), Soluble	mg/L		2	40	216	163	45	26	242	37	33
Calcium, Soluble (meq/L)	meq/L		0.05	2.10	4.49	3.74	2.10	2.40	4.99	1.70	2.30
Calcium, Soluble (mg/kg)	mg/kg		1	13	26	118	23	15	145	30	13
Chloride, Soluble (meq/L)	meq/L		0.14	1.61	1.86	0.54	0.51	0.85	0.45	0.39	0.82
Chloride, Soluble (mg/kg)	mg/kg		2	18	19	30	10	10	23	12	8
Magnesium, Soluble (meq/L)	meq/L		0.08	0.74	1.65	1.48	0.91	0.91	1.81	0.66	0.99
Magnesium, Soluble (mg/kg)	mg/kg		1	3	6	28	6	4	32	7	3
Potassium, Soluble (meq/L)	meq/L		0.05	1.10	0.36	0.33	0.77	0.26	0.20	0.15	0.18
Potassium, Soluble (mg/kg)	mg/kg		2	14	4	20	16	3	12	5	2
Sodium, Soluble (meq/L)	meq/L		0.09	1.04	1.61	0.52	0.48	0.65	0.22	0.26	0.65
Sodium, Soluble (mg/kg)	mg/kg		2	8	11	19	6	5	7	5	4
Sulfur (as Sulfate), Soluble (meq/L)	meq/L		0.04	0.83	4.50	3.39	0.94	0.54	5.04	0.77	0.69
Sulfur (as Sulfate), Soluble (mg/kg)	mg/kg		2	13	63	256	24	8	351	33	10
Theoretical Gypsum Requirement	tonnes/ha		0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01

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Parameter	Unit	Soil Analysis - Salinity										
		G / S	RDL	BH15-029 0.	BH15-029 0.	BH15-029 1.	BH15-030 0.	BH15-030 0.	BH15-030 1.	BH15-031 0.	BH15-031 0.	
			SAMPLE DESCRIPTION: 3-0.6 6-1.0 0-1.5 0-0.15 15-0.3 0-1.5 15-0.3 3-0.6									
			SAMPLE TYPE: Soil Soil Soil Soil Soil Soil Soil Soil Soil									
DATE SAMPLED: 8/15/2015 8/15/2015 8/15/2015 8/15/2015 8/15/2015 8/15/2015 8/15/2015 8/15/2015 8/15/2015 8/15/2015												
pH (Saturated Paste)	pH Units		0.02	6.87	6.20	6.90	6.36	6.49	7.66	6.12	6.19	
Electrical Conductivity (Sat. Paste)	dS/m	0.05	0.22	0.58	0.21	0.51	0.42	0.45	0.91	0.71		
Sodium Adsorption Ratio			0.29	0.22	0.35	0.34	0.51	0.80	0.69	0.65		
Saturation Percentage	%	1	32	63	32	147	74	32	166	94		
Chloride, Soluble	mg/L	5	7	8	9	14	12	30	59	45		
Calcium, Soluble	mg/L	1	25	69	29	77	45	43	104	90		
Potassium, Soluble	mg/L	2	4	5	<2	6	2	3	13	11		
Magnesium, Soluble	mg/L	1	5	21	7	20	13	12	29	24		
Sodium, Soluble	mg/L	2	6	8	8	13	15	23	31	27		
Sulfur (as Sulfate), Soluble	mg/L	2	30	176	25	183	79	43	257	205		
Calcium, Soluble (meq/L)	meq/L	0.05	1.25	3.44	1.45	3.84	2.25	2.15	5.19	4.49		
Calcium, Soluble (mg/kg)	mg/kg	1	8	43	9	113	33	14	173	85		
Chloride, Soluble (meq/L)	meq/L	0.14	0.20	0.23	0.25	0.39	0.34	0.85	1.66	1.27		
Chloride, Soluble (mg/kg)	mg/kg	2	2	5	3	21	9	10	98	42		
Magnesium, Soluble (meq/L)	meq/L	0.08	0.41	1.73	0.58	1.65	1.07	0.99	2.39	1.97		
Magnesium, Soluble (mg/kg)	mg/kg	1	2	13	2	29	10	4	48	23		
Potassium, Soluble (meq/L)	meq/L	0.05	0.10	0.13	<0.05	0.15	0.05	0.08	0.33	0.28		
Potassium, Soluble (mg/kg)	mg/kg	2	<2	3	<2	9	<2	<2	22	10		
Sodium, Soluble (meq/L)	meq/L	0.09	0.26	0.35	0.35	0.57	0.65	1.00	1.35	1.17		
Sodium, Soluble (mg/kg)	mg/kg	2	<2	5	3	19	11	7	51	25		
Sulfur (as Sulfate), Soluble (meq/L)	meq/L	0.04	0.62	3.66	0.52	3.81	1.64	0.90	5.35	4.27		
Sulfur (as Sulfate), Soluble (mg/kg)	mg/kg	2	10	111	8	269	58	14	427	193		
Theoretical Gypsum Requirement	tonnes/ha	0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01		

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Soil Analysis - Salinity

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Parameter	Unit	SAMPLE DESCRIPTION:		BH15-031 1.	BH15-032 1.	BH15-032 2.	BH15-032 4.
		G / S	RDL	0-1.5	0-1.5	5-3.0	0-4.5
		SAMPLE TYPE:		8/15/2015	8/15/2015	8/15/2015	8/15/2015
		DATE SAMPLED:		6883698	6883700	6883701	6883706
pH (Saturated Paste)	pH Units		0.02	7.44	7.58	7.78	7.82
Electrical Conductivity (Sat. Paste)	dS/m		0.05	0.68	0.64	0.88	0.71
Sodium Adsorption Ratio				0.94	1.20	1.40	1.13
Saturation Percentage	%		1	32	30	30	30
Chloride, Soluble	mg/L		5	60	76	131	80
Calcium, Soluble	mg/L		1	79	61	67	74
Potassium, Soluble	mg/L		2	9	16	10	9
Magnesium, Soluble	mg/L		1	23	19	20	19
Sodium, Soluble	mg/L		2	37	42	51	42
Sulfur (as Sulfate), Soluble	mg/L		2	159	60	102	133
Calcium, Soluble (meq/L)	meq/L		0.05	3.94	3.04	3.34	3.69
Calcium, Soluble (mg/kg)	mg/kg		1	25	18	20	22
Chloride, Soluble (meq/L)	meq/L		0.14	1.69	2.14	3.70	2.26
Chloride, Soluble (mg/kg)	mg/kg		2	19	23	39	24
Magnesium, Soluble (meq/L)	meq/L		0.08	1.89	1.56	1.65	1.56
Magnesium, Soluble (mg/kg)	mg/kg		1	7	6	6	6
Potassium, Soluble (meq/L)	meq/L		0.05	0.23	0.41	0.26	0.23
Potassium, Soluble (mg/kg)	mg/kg		2	3	5	3	3
Sodium, Soluble (meq/L)	meq/L		0.09	1.61	1.83	2.22	1.83
Sodium, Soluble (mg/kg)	mg/kg		2	12	13	15	13
Sulfur (as Sulfate), Soluble (meq/L)	meq/L		0.04	3.31	1.25	2.12	2.77
Sulfur (as Sulfate), Soluble (mg/kg)	mg/kg		2	51	18	31	40
Theoretical Gypsum Requirement	tonnes/ha		0.01	<0.01	<0.01	<0.01	<0.01

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Soil Analysis - Salinity

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- Comments: RDL - Reported Detection Limit; G / S - Guideline / Standard
- 6883576-6883606 If sodium results in mg/L are less than detection, SAR is non-calculable and is reported as 0.
 - 6883610 If sodium results in mg/L are less than detection, SAR is non-calculable and is reported as 0.
Note: Organic sample.
 - 6883613 If sodium results in mg/L are less than detection, SAR is non-calculable and is reported as 0.
 - 6883632-6883634 If sodium results in mg/L are less than detection, SAR is non-calculable and is reported as 0.
Note: Organic sample.
 - 6883635 If sodium results in mg/L are less than detection, SAR is non-calculable and is reported as 0.
 - 6883636 If sodium results in mg/L are less than detection, SAR is non-calculable and is reported as 0.
Note: Organic sample.
 - 6883637-6883638 If sodium results in mg/L are less than detection, SAR is non-calculable and is reported as 0.
 - 6883639 If sodium results in mg/L are less than detection, SAR is non-calculable and is reported as 0.
Note: Organic sample.
 - 6883640-6883641 If sodium results in mg/L are less than detection, SAR is non-calculable and is reported as 0.
 - 6883642-6883643 If sodium results in mg/L are less than detection, SAR is non-calculable and is reported as 0.
Note: Organic sample.
 - 6883645-6883652 If sodium results in mg/L are less than detection, SAR is non-calculable and is reported as 0.
 - 6883653 If sodium results in mg/L are less than detection, SAR is non-calculable and is reported as 0.
Note: Organic sample.
 - 6883655 If sodium results in mg/L are less than detection, SAR is non-calculable and is reported as 0.
 - 6883656 If sodium results in mg/L are less than detection, SAR is non-calculable and is reported as 0.
Note: Organic sample.
 - 6883658-6883661 If sodium results in mg/L are less than detection, SAR is non-calculable and is reported as 0.
 - 6883663 If sodium results in mg/L are less than detection, SAR is non-calculable and is reported as 0.
Note: Organic sample.
 - 6883665-6883666 If sodium results in mg/L are less than detection, SAR is non-calculable and is reported as 0.
 - 6883669-6883671 If sodium results in mg/L are less than detection, SAR is non-calculable and is reported as 0.
Note: Organic sample.
 - 6883672-6883683 If sodium results in mg/L are less than detection, SAR is non-calculable and is reported as 0.
 - 6883685 If sodium results in mg/L are less than detection, SAR is non-calculable and is reported as 0.
Note: Organic sample.
 - 6883686-6883693 If sodium results in mg/L are less than detection, SAR is non-calculable and is reported as 0.
 - 6883695 If sodium results in mg/L are less than detection, SAR is non-calculable and is reported as 0.
Note: Organic sample.
 - 6883697-6883706 If sodium results in mg/L are less than detection, SAR is non-calculable and is reported as 0.

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PROJECT: A04012A07

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CLIENT NAME: KLOHN CRIPPEN

ATTENTION TO: Nicole Wills

SAMPLING SITE:

SAMPLED BY:

Petroleum Hydrocarbons (BTEX/F1-F4) in Soil (CWS)

DATE RECEIVED: 2015-08-19

DATE REPORTED: 2015-08-27

Parameter	Unit	SAMPLE DESCRIPTION:		BH15-013 0.	BH15-013 0.	BH15-013 2.	BH15-013 4.	BH15-014 0.	BH15-014 0.	BH15-014 2.	BH15-015 0.
		SAMPLE TYPE:		3-0.6	6-1.0	5-3.0	0-4.5	3-0.6	6-1.0	5-3.0	15-0.3
		DATE SAMPLED:		Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil
		G / S	RDL	8/15/2015	8/15/2015	8/15/2015	8/15/2015	8/15/2015	8/15/2015	8/15/2015	8/15/2015
Benzene	mg/kg	0.005	0.094	0.138	<0.005	0.013	0.094	0.12	<0.005	<0.005	
Toluene	mg/kg	0.05	0.21	0.08	<0.05	<0.05	0.43	0.15	<0.05	<0.05	
Ethylbenzene	mg/kg	0.01	0.34	15.8	<0.01	0.08	0.36	3.98	<0.01	<0.01	
Xylenes	mg/kg	0.05	6.34	88.2	<0.05	0.21	28.3	87.6	<0.05	0.07	
C6 - C10 (F1)	mg/kg	10	364	568	<10	29	566	819	<10	<10	
C6 - C10 (F1 minus BTEX)	mg/kg	10	357	464	<10	29	537	727	<10	<10	
C10 - C16 (F2)	mg/kg	10	17700	4720	<10	426	10200	26000	<10	<10	
C16 - C34 (F3)	mg/kg	10	9390	2260	<10	60	931	5470	<10	347	
C34 - C50 (F4)	mg/kg	10	3770	821	<10	18	126	763	<10	172	
Gravimetric Heavy Hydrocarbons	mg/kg	1000	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	
Moisture Content	%	1	12	38	17	17	8	29	17	54	
Surrogate	Unit	Acceptable Limits									
Toluene-d8 (BTEX)	%	50-150	95	100	102	100	91	93	101	98	
Ethylbenzene-d10 (BTEX)	%	50-150	82	113	111	109	85	86	112	114	
o-Terphenyl (F2-F4)	%	50-150	109	109	109	111	114	97	110	117	

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SAMPLING SITE:

SAMPLED BY:

Petroleum Hydrocarbons (BTEX/F1-F4) in Soil (CWS)

DATE RECEIVED: 2015-08-19

DATE REPORTED: 2015-08-27

Parameter	Unit	SAMPLE DESCRIPTION:									
		G / S		BH15-015 0.	BH15-015 1.	BH15-016 0.	BH15-016 0.	BH15-016 1.	BH15-017 0.	BH15-017 0.	BH15-017 1.
		RDL		6-1.0	0-1.5	3-0.6	6-1.0	0-1.5	3-0.6	6-1.0	0-1.5
		DATE SAMPLED:		8/15/2015	8/15/2015	8/15/2015	8/15/2015	8/15/2015	8/15/2015	8/15/2015	8/15/2015
Benzene	mg/kg	0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Toluene	mg/kg	0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Ethylbenzene	mg/kg	0.01	<0.01	<0.01	<0.01	0.03	<0.01	<0.01	0.11	<0.01	<0.01
Xylenes	mg/kg	0.05	<0.05	<0.05	<0.05	0.33	<0.05	<0.05	1.85	<0.05	0.10
C6 - C10 (F1)	mg/kg	10	<10	<10	<10	<10	<10	67	<10	<10	<10
C6 - C10 (F1 minus BTEX)	mg/kg	10	<10	<10	<10	<10	<10	67	<10	<10	<10
C10 - C16 (F2)	mg/kg	10	<10	<10	64	55	<10	4560	279	48	48
C16 - C34 (F3)	mg/kg	10	20	<10	343	141	<10	365	282	22	22
C34 - C50 (F4)	mg/kg	10	<10	<10	158	59	<10	44	91	16	16
Gravimetric Heavy Hydrocarbons	mg/kg	1000	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Moisture Content	%	1	14	17	5	31	15	20	42	14	14
Surrogate	Unit	Acceptable Limits									
Toluene-d8 (BTEX)	%	50-150	100	101	99	96	99	94	99	99	100
Ethylbenzene-d10 (BTEX)	%	50-150	113	112	99	107	109	90	117	106	106
o-Terphenyl (F2-F4)	%	50-150	118	112	111	106	114	109	113	114	114

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ATTENTION TO: Nicole Wills

SAMPLING SITE:

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Petroleum Hydrocarbons (BTEX/F1-F4) in Soil (CWS)

DATE RECEIVED: 2015-08-19

DATE REPORTED: 2015-08-27

Parameter	Unit	SAMPLE DESCRIPTION:									
		DATE SAMPLED:		BH15-018 0.	BH15-018 1.	BH15-018 2.	BH15-019 0.	BH15-019 1.	BH15-019 2.	BH15-020 0.	BH15-020 0.
		G / S	RDL	6-1.0	0-1.5	5-3.0	6-1.0	0-1.5	5-3.0	3-0.6	6-1.0
				Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil
Benzene	mg/kg	0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Toluene	mg/kg	0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	
Ethylbenzene	mg/kg	0.01	<0.01	<0.01	<0.01	0.25	<0.01	<0.01	<0.01	<0.01	
Xylenes	mg/kg	0.05	<0.05	<0.05	<0.05	1.69	<0.05	<0.05	<0.05	<0.05	
C6 - C10 (F1)	mg/kg	10	<10	<10	<10	<10	<10	<10	<10	<10	
C6 - C10 (F1 minus BTEX)	mg/kg	10	<10	<10	<10	<10	<10	<10	<10	<10	
C10 - C16 (F2)	mg/kg	10	<10	<10	<10	<10	<10	<10	<10	35	
C16 - C34 (F3)	mg/kg	10	196	<10	<10	997	134	<10	202	979	
C34 - C50 (F4)	mg/kg	10	78	<10	<10	402	60	<10	88	465	
Gravimetric Heavy Hydrocarbons	mg/kg	1000	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	
Moisture Content	%	1	32	16	18	28	21	16	49	26	
Surrogate	Unit	Acceptable Limits									
Toluene-d8 (BTEX)	%	50-150	99	120	101	98	100	102	101	97	
Ethylbenzene-d10 (BTEX)	%	50-150	106	125	114	107	95	103	116	106	
o-Terphenyl (F2-F4)	%	50-150	119	112	107	114	106	105	111	114	

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Petroleum Hydrocarbons (BTEX/F1-F4) in Soil (CWS)

DATE RECEIVED: 2015-08-19

DATE REPORTED: 2015-08-27

Parameter	Unit	SAMPLE DESCRIPTION:									
		DATE SAMPLED:		BH15-020 1.	BH15-021 0.	BH15-021 1.	BH15-021 2.	BH15-022 0.	BH15-022 1.	BH15-022 2.	BH15-023 0.
		G / S	RDL	0-1.5	6-1.0	0-1.5	5-3.0	3-0.6	0-1.5	5-3.0	3-0.6
				Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil
Benzene	mg/kg	0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Toluene	mg/kg	0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Ethylbenzene	mg/kg	0.01	<0.01	0.02	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Xylenes	mg/kg	0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
C6 - C10 (F1)	mg/kg	10	<10	<10	<10	<10	<10	<10	<10	<10	<10
C6 - C10 (F1 minus BTEX)	mg/kg	10	<10	<10	<10	<10	<10	<10	<10	<10	<10
C10 - C16 (F2)	mg/kg	10	<10	<10	<10	<10	56	<10	<10	<10	<10
C16 - C34 (F3)	mg/kg	10	31	149	<10	<10	1470	<10	<10	<10	698
C34 - C50 (F4)	mg/kg	10	17	68	<10	<10	694	<10	<10	<10	334
Gravimetric Heavy Hydrocarbons	mg/kg	1000	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Moisture Content	%	1	19	30	17	17	46	12	16	16	61
Surrogate	Unit	Acceptable Limits									
Toluene-d8 (BTEX)	%	50-150	99	97	98	101	100	101	102	102	100
Ethylbenzene-d10 (BTEX)	%	50-150	108	106	107	103	110	101	101	101	112
o-Terphenyl (F2-F4)	%	50-150	110	115	98	131	108	98	101	101	107

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Petroleum Hydrocarbons (BTEX/F1-F4) in Soil (CWS)

DATE RECEIVED: 2015-08-19

DATE REPORTED: 2015-08-27

Parameter	Unit	G / S	RDL	BH15-023 0.	BH15-023 1.	BH15-024 0.	BH15-024 0.	BH15-024 1.	BH15-025 0.	BH15-025 0.	BH15-025 1.	
				SAMPLE DESCRIPTION:	6-1.0	0-1.5	3-0.6	6-1.0	0-1.5	0-0.15	6-1.0	0-1.5
				SAMPLE TYPE:	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil
				DATE SAMPLED:	8/15/2015	8/15/2015	8/15/2015	8/15/2015	8/15/2015	8/15/2015	8/15/2015	8/15/2015
Benzene	mg/kg		0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	
Toluene	mg/kg		0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	0.08	<0.05	
Ethylbenzene	mg/kg		0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	
Xylenes	mg/kg		0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	
C6 - C10 (F1)	mg/kg		10	<10	<10	<10	<10	<10	<10	<10	<10	
C6 - C10 (F1 minus BTEX)	mg/kg		10	<10	<10	<10	<10	<10	<10	<10	<10	
C10 - C16 (F2)	mg/kg		10	<10	<10	256	519	39	<10	<10	<10	
C16 - C34 (F3)	mg/kg		10	<10	<10	33	182	182	30	287	<10	
C34 - C50 (F4)	mg/kg		10	<10	<10	23	70	96	19	82	14	
Gravimetric Heavy Hydrocarbons	mg/kg		1000	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	
Moisture Content	%		1	13	15	9	39	51	6	64	15	
Surrogate	Unit	Acceptable Limits										
Toluene-d8 (BTEX)	%	50-150		102	102	102	101	100	101	100	103	
Ethylbenzene-d10 (BTEX)	%	50-150		104	96	98	110	75	97	112	101	
o-Terphenyl (F2-F4)	%	50-150		105	117	121	110	117	112	115	138	

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SAMPLING SITE:

SAMPLED BY:

Petroleum Hydrocarbons (BTEX/F1-F4) in Soil (CWS)

DATE RECEIVED: 2015-08-19

DATE REPORTED: 2015-08-27

Parameter	Unit	SAMPLE DESCRIPTION:		BH15-026 0.	BH15-026 1.	BH15-026 2.	BH15-027 0.	BH15-027 0.	BH15-027 1.	BH15-028 0.	BH15-028 0.
		SAMPLE TYPE:		6-1.0	0-1.5	5-3.0	3-0.6	6-1.0	0-1.5	15-0.3	3-0.6
		DATE SAMPLED:		Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil
		G / S	RDL	8/15/2015	8/15/2015	8/15/2015	8/15/2015	8/15/2015	8/15/2015	8/15/2015	8/15/2015
Benzene	mg/kg	0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Toluene	mg/kg	0.05	<0.05	<0.05	<0.05	0.08	<0.05	<0.05	<0.05	<0.05	<0.05
Ethylbenzene	mg/kg	0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	0.05
Xylenes	mg/kg	0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	0.07
C6 - C10 (F1)	mg/kg	10	<10	<10	<10	<10	<10	<10	<10	<10	<10
C6 - C10 (F1 minus BTEX)	mg/kg	10	<10	<10	<10	<10	<10	<10	<10	<10	<10
C10 - C16 (F2)	mg/kg	10	<10	<10	<10	18	<10	<10	<10	<10	<10
C16 - C34 (F3)	mg/kg	10	<10	<10	<10	68	61	<10	165	494	
C34 - C50 (F4)	mg/kg	10	<10	<10	<10	71	78	<10	186	<10	
Gravimetric Heavy Hydrocarbons	mg/kg	1000	NA	NA	NA	NA	NA	NA	NA	NA	
Moisture Content	%	1	16	16	15	40	19	17	45	26	
Surrogate	Unit	Acceptable Limits									
Toluene-d8 (BTEX)	%	50-150	101	104	101	100	101	101	101	101	
Ethylbenzene-d10 (BTEX)	%	50-150	112	111	108	121	106	107	129	118	
o-Terphenyl (F2-F4)	%	50-150	105	113	95	90	90	103	119	106	

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SAMPLING SITE:

SAMPLED BY:

Petroleum Hydrocarbons (BTEX/F1-F4) in Soil (CWS)

DATE RECEIVED: 2015-08-19

DATE REPORTED: 2015-08-27

Parameter	Unit	SAMPLE DESCRIPTION:									
		DATE SAMPLED:		BH15-028 1.	BH15-029 0.	BH15-029 0.	BH15-029 1.	BH15-030 0.	BH15-030 0.	BH15-030 1.	BH15-031 0.
		G / S	RDL	0-1.5	3-0.6	6-1.0	0-1.5	0-0.15	15-0.3	0-1.5	15-0.3
				Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil
Benzene	mg/kg	0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Toluene	mg/kg	0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	
Ethylbenzene	mg/kg	0.01	<0.01	<0.01	<0.01	<0.01	0.03	<0.01	<0.01	<0.01	
Xylenes	mg/kg	0.05	<0.05	<0.05	<0.05	<0.05	0.28	<0.05	<0.05	0.07	
C6 - C10 (F1)	mg/kg	10	<10	<10	<10	<10	<10	<10	<10	<10	
C6 - C10 (F1 minus BTEX)	mg/kg	10	<10	<10	<10	<10	<10	<10	<10	<10	
C10 - C16 (F2)	mg/kg	10	<10	296	<10	<10	<10	<10	<10	<10	
C16 - C34 (F3)	mg/kg	10	<10	734	300	<10	98	589	<10	80	
C34 - C50 (F4)	mg/kg	10	13	34	231	<10	95	494	<10	91	
Gravimetric Heavy Hydrocarbons	mg/kg	1000	NA	NA	NA	NA	NA	NA	NA	NA	
Moisture Content	%	1	16	6	39	11	37	31	13	50	
Surrogate	Unit	Acceptable Limits									
Toluene-d8 (BTEX)	%	50-150	101	101	101	102	100	100	101	99	
Ethylbenzene-d10 (BTEX)	%	50-150	113	107	120	111	123	109	101	118	
o-Terphenyl (F2-F4)	%	50-150	103	130	110	100	99	89	104	98	

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SAMPLING SITE:

SAMPLED BY:

Petroleum Hydrocarbons (BTEX/F1-F4) in Soil (CWS)

DATE RECEIVED: 2015-08-19

DATE REPORTED: 2015-08-27

Parameter	Unit	G / S	RDL	BH15-031 0.	BH15-031 1.	BH15-032 1.	BH15-032 2.	BH15-032 4.
				3-0.6	0-1.5	0-1.5	5-3.0	0-4.5
SAMPLE DESCRIPTION:				Soil	Soil	Soil	Soil	Soil
SAMPLE TYPE:				8/15/2015	8/15/2015	8/15/2015	8/15/2015	8/15/2015
DATE SAMPLED:				6883697	6883698	6883700	6883701	6883706
Benzene	mg/kg		0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Toluene	mg/kg		0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Ethylbenzene	mg/kg		0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Xylenes	mg/kg		0.05	<0.05	<0.05	<0.05	<0.05	<0.05
C6 - C10 (F1)	mg/kg		10	<10	<10	<10	<10	<10
C6 - C10 (F1 minus BTEX)	mg/kg		10	<10	<10	<10	<10	<10
C10 - C16 (F2)	mg/kg		10	<10	<10	<10	<10	<10
C16 - C34 (F3)	mg/kg		10	61	249	<10	<10	<10
C34 - C50 (F4)	mg/kg		10	61	210	<10	<10	<10
Gravimetric Heavy Hydrocarbons	mg/kg		1000	NA	NA	NA	NA	NA
Moisture Content	%		1	27	23	13	17	16
Surrogate	Unit	Acceptable Limits						
Toluene-d8 (BTEX)	%	50-150	101	99	93	100	100	100
Ethylbenzene-d10 (BTEX)	%	50-150	110	106	79	100	107	107
o-Terphenyl (F2-F4)	%	50-150	109	116	113	104	106	106

Comments: RDL - Reported Detection Limit; G / S - Guideline / Standard

6883489-6883706 Results are based on the dry weight of the sample.

The C6-C10 (F1) fraction is calculated using toluene response factor.

The C10 - C16 (F2), C16 - C34 (F3), and C34 - C50 (F4) fractions are calculated using the average response factor for n-C10, n-C16, and n-C34.

Gravimetric Heavy Hydrocarbons (F4g) are not included in and cannot be added to the Total C6-C50 and are only determined if the chromatogram of the C34 - C50 hydrocarbons indicates that hydrocarbons >C50 are present.

Total C6 - C50 results are corrected for BTEX and PAH contributions (if requested).

Quality control data is available upon request.

Assistance in the interpretation of data is available upon request.

This method complies with the Reference Method for the CWS PHC and is validated for use in the laboratory.

nC6 and nC10 response factors are within 30% of Toluene response factor.

nC10, nC16 and nC34 response factors are within 10% of their average.

C50 response factor is within 70% of nC10 + nC16 + nC34 average.

Linearity is within 15%.

The chromatogram returned to baseline by the retention time of nC50.

Extraction and holding times were met for this sample.

Certified By:



Certificate of Analysis

AGAT WORK ORDER: 15E009678

PROJECT: A04012A07

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CLIENT NAME: KLOHN CRIPPEN

ATTENTION TO: Nicole Wills

SAMPLING SITE:

SAMPLED BY:

Polyaromatic Hydrocarbon Analysis - Soil

DATE RECEIVED: 2015-08-19

DATE REPORTED: 2015-08-27

Parameter	Unit	SAMPLE DESCRIPTION:		BH15-013 0.	BH15-013 0.	BH15-013 4.	BH15-014 0.	BH15-014 0.	BH15-014 2.	BH15-015 0.	BH15-015 0.
		SAMPLE TYPE:		3-0.6	6-1.0	0-4.5	3-0.6	6-1.0	5-3.0	15-0.3	6-1.0
		DATE SAMPLED:		Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil
		G / S	RDL	8/15/2015	8/15/2015	8/15/2015	8/15/2015	8/15/2015	8/15/2015	8/15/2015	8/15/2015
Naphthalene	mg/kg	0.005	17.5	14.0	0.110	22.8	37.1	0.043	0.043	<0.005	
2-Methylnaphthalene	mg/kg	0.005	57.8	24.0	0.898	56.2	79.4	0.103	0.032	<0.005	
Acenaphthylene	mg/kg	0.005	0.507	0.150	<0.005	0.478	0.687	<0.005	<0.005	<0.005	
Acenaphthene	mg/kg	0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	
Fluorene	mg/kg	0.02	3.28	0.47	0.08	1.86	4.58	<0.02	<0.02	<0.02	
Phenanthrene	mg/kg	0.02	1.06	0.28	0.07	1.40	6.61	<0.02	<0.02	<0.02	
Anthracene	mg/kg	0.004	<0.004	<0.004	<0.004	<0.004	<0.004	<0.004	<0.004	<0.004	
Fluoranthene	mg/kg	0.01	0.09	0.02	<0.01	0.04	<0.01	<0.01	<0.01	<0.01	
Pyrene	mg/kg	0.01	0.23	0.04	0.01	0.11	0.71	<0.01	<0.01	<0.01	
Benzo[a]anthracene	mg/kg	0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	
Chrysene	mg/kg	0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	
Benzo[b+g]fluoranthene	mg/kg	0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	
Benzo[k]fluoranthene	mg/kg	0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	
Benzo[a]pyrene	mg/kg	0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	
Indeno[1,2,3-cd]pyrene	mg/kg	0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	
Dibenzo[ah]anthracene	mg/kg	0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	
Benzo[ghi]perylene	mg/kg	0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	
B[a]P TPE	mg/kg	0.027	0.027	0.027	0.027	0.027	0.027	0.027	0.027	0.027	
IARC (coarse)		0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11	
IARC (fine)		0.22	0.22	0.22	0.22	0.22	0.22	0.22	0.22	0.22	
Surrogate	Unit	Acceptable Limits									
2-Fluorobiphenyl (PAH)	%	50-150	104	95	96	121	85	89	101	107	
p-Terphenyl-d14 (PAH)	%	50-150	99	97	105	123	95	97	110	120	

Certified By:



Certificate of Analysis

AGAT WORK ORDER: 15E009678

PROJECT: A04012A07

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CLIENT NAME: KLOHN CRIPPEN

ATTENTION TO: Nicole Wills

SAMPLING SITE:

SAMPLED BY:

Polyaromatic Hydrocarbon Analysis - Soil

DATE RECEIVED: 2015-08-19

DATE REPORTED: 2015-08-27

Parameter	Unit	SAMPLE DESCRIPTION:		BH15-015 1.	BH15-016 0.	BH15-016 0.	BH15-016 1.	BH15-017 0.	BH15-017 0.	BH15-017 1.	BH15-018 0.	
		SAMPLE TYPE:		0-1.5	3-0.6	6-1.0	0-1.5	3-0.6	6-1.0	0-1.5	6-1.0	
		DATE SAMPLED:		Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil
		G / S	RDL	8/15/2015	8/15/2015	8/15/2015	8/15/2015	8/15/2015	8/15/2015	8/15/2015	8/15/2015	8/15/2015
Naphthalene	mg/kg	0.005	<0.005	<0.005	1.73	0.048	<0.005	1.30	0.106	<0.005		
2-Methylnaphthalene	mg/kg	0.005	<0.005	0.015	0.241	0.061	0.424	1.48	0.154	0.012		
Acenaphthylene	mg/kg	0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005		
Acenaphthene	mg/kg	0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005		
Fluorene	mg/kg	0.02	<0.02	<0.02	<0.02	<0.02	0.15	0.04	<0.02	<0.02		
Phenanthrene	mg/kg	0.02	<0.02	<0.02	<0.02	<0.02	0.08	0.02	<0.02	<0.02		
Anthracene	mg/kg	0.004	<0.004	<0.004	<0.004	<0.004	<0.004	<0.004	<0.004	<0.004		
Fluoranthene	mg/kg	0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01		
Pyrene	mg/kg	0.01	<0.01	<0.01	<0.01	<0.01	0.01	<0.01	<0.01	<0.01		
Benzo[a]anthracene	mg/kg	0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03		
Chrysene	mg/kg	0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05		
Benzo[b+g]fluoranthene	mg/kg	0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05		
Benzo[k]fluoranthene	mg/kg	0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05		
Benzo[a]pyrene	mg/kg	0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03		
Indeno[1,2,3-cd]pyrene	mg/kg	0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05		
Dibenzo[ah]anthracene	mg/kg	0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005		
Benzo[ghi]perylene	mg/kg	0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05		
B[a]P TPE	mg/kg	0.027	0.027	0.027	0.027	0.027	0.027	0.027	0.027	0.027		
IARC (coarse)		0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11		
IARC (fine)		0.22	0.22	0.22	0.22	0.22	0.22	0.22	0.22	0.22		
Surrogate	Unit	Acceptable Limits										
2-Fluorobiphenyl (PAH)	%	50-150	111	119	111	105	94	102	85	111		
p-Terphenyl-d14 (PAH)	%	50-150	121	124	113	111	108	109	101	114		

Certified By:



Certificate of Analysis

AGAT WORK ORDER: 15E009678

PROJECT: A04012A07

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CLIENT NAME: KLOHN CRIPPEN

ATTENTION TO: Nicole Wills

SAMPLING SITE:

SAMPLED BY:

Polyaromatic Hydrocarbon Analysis - Soil

DATE RECEIVED: 2015-08-19

DATE REPORTED: 2015-08-27

Parameter	Unit	G / S	RDL	BH15-018 1.	BH15-018 2.	BH15-019 0.	BH15-019 1.	BH15-019 2.
				0-1.5	5-3.0	6-1.0	0-1.5	5-3.0
SAMPLE DESCRIPTION:		Soil		0-1.5	5-3.0	6-1.0	0-1.5	5-3.0
SAMPLE TYPE:		Soil		Soil	Soil	Soil	Soil	Soil
DATE SAMPLED:		8/15/2015		8/15/2015	8/15/2015	8/15/2015	8/15/2015	8/15/2015
Naphthalene	mg/kg		0.005	<0.005	<0.005	0.042	<0.005	<0.005
2-Methylnaphthalene	mg/kg		0.005	<0.005	<0.005	0.008	<0.005	<0.005
Acenaphthylene	mg/kg		0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Acenaphthene	mg/kg		0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Fluorene	mg/kg		0.02	<0.02	<0.02	<0.02	<0.02	<0.02
Phenanthrene	mg/kg		0.02	<0.02	<0.02	<0.02	<0.02	<0.02
Anthracene	mg/kg		0.004	<0.004	<0.004	<0.004	<0.004	<0.004
Fluoranthene	mg/kg		0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Pyrene	mg/kg		0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Benzo[a]anthracene	mg/kg		0.03	<0.03	<0.03	<0.03	<0.03	<0.03
Chrysene	mg/kg		0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Benzo[b+g]fluoranthene	mg/kg		0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Benzo[k]fluoranthene	mg/kg		0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Benzo[a]pyrene	mg/kg		0.03	<0.03	<0.03	<0.03	<0.03	<0.03
Indeno[1,2,3-cd]pyrene	mg/kg		0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Dibenzo[ah]anthracene	mg/kg		0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Benzo[ghi]perylene	mg/kg		0.05	<0.05	<0.05	<0.05	<0.05	<0.05
B[a]P TPE	mg/kg		0.027	0.027	0.027	0.027	0.027	0.027
IARC (coarse)			0.11	0.11	0.11	0.11	0.11	0.11
IARC (fine)			0.22	0.22	0.22	0.22	0.22	0.22
Surrogate	Unit	Acceptable Limits						
2-Fluorobiphenyl (PAH)	%	50-150	108	101	107	94	90	
p-Terphenyl-d14 (PAH)	%	50-150	115	113	123	110	108	

Comments: RDL - Reported Detection Limit; G / S - Guideline / Standard

6883489-6883630 Results are based on the dry weight of the sample.

Based on GC/MS target ion analysis.

Isomers Benzo(b)fluoranthene and Benzo(j)fluoranthene have the same GC retention time and are reported as the sum of the two.

Certified By:

Quality Assurance

CLIENT NAME: KLOHN CRIPPEN

AGAT WORK ORDER: 15E009678

PROJECT: A04012A07

ATTENTION TO: Nicole Wills

SAMPLING SITE:

SAMPLED BY:

Soil Analysis

RPT Date: Aug 27, 2015			DUPLICATE				Method Blank	REFERENCE MATERIAL			METHOD BLANK SPIKE		MATRIX SPIKE		
PARAMETER	Batch	Sample Id	Dup #1	Dup #2	RPD	Measured Value		Acceptable Limits		Recovery	Acceptable Limits		Recovery	Acceptable Limits	
								Lower	Upper		Lower	Upper		Lower	Upper

Soil Analysis - Salinity

pH (Saturated Paste)	3576		5.88	5.85	0.5%	< 0.02	100%	90%	110%					
Electrical Conductivity (Sat. Paste)	3576		0.665	0.65	2.3%	< 0.05	95%	90%	110%					
Saturation Percentage	3576		205	179	13.5%	< 1	100%	80%	120%					
Chloride, Soluble	6883632	6883632	14	15	6.9%	< 5	96%	80%	120%					
Calcium, Soluble	6883632	6883632	70	69	0.6%	< 1	109%	80%	120%					
Potassium, Soluble	6883632	6883632	20	20	2.5%	< 2	101%	80%	120%					
Magnesium, Soluble	6883632	6883632	17	17	0.8%	< 1	102%	80%	120%					
Sodium, Soluble	6883632	6883632	9	9	0.0%	< 2	103%	80%	120%					
Sulfur (as Sulfate), Soluble	6883632	6883632	201	203	0.8%	< 2	95%	80%	120%					

Comments: If Matrix spike value is NA, the spiked analyte concentration was lower than that of the matrix contribution.
 If the RPD value is NA, the results of the duplicates are under 5X the RDL and will not be calculated.

Soil Analysis - Salinity

pH (Saturated Paste)	3672		7.88	7.86	0.3%	< 0.02	100%	90%	110%					
Electrical Conductivity (Sat. Paste)	3672		0.37	0.38	2.7%	< 0.05	95%	90%	110%					
Saturation Percentage	3672		29	31	6.7%	< 1	100%	80%	120%					
Chloride, Soluble	6883672	6883672	29	28	3.5%	< 5	96%	80%	120%					
Calcium, Soluble	6883672	6883672	46	47	2.4%	< 1	103%	80%	120%					
Potassium, Soluble	6883672	6883672	7	9	NA	< 2	87%	80%	120%					
Magnesium, Soluble	6883672	6883672	12	12	1.4%	< 1	96%	80%	120%					
Sodium, Soluble	6883672	6883672	15	16	1.2%	< 2	96%	80%	120%					
Sulfur (as Sulfate), Soluble	6883672	6883672	33	34	2.5%	< 2	93%	80%	120%					

Comments: If Matrix spike value is NA, the spiked analyte concentration was lower than that of the matrix contribution.
 If the RPD value is NA, the results of the duplicates are under 5X the RDL and will not be calculated.

Soil Analysis - Salinity

pH (Saturated Paste)	3698		7.44	7.46	0.3%	< 0.02	100%	90%	110%					
Electrical Conductivity (Sat. Paste)	3698		0.68	0.69	1.5%	< 0.05	96%	90%	110%					
Saturation Percentage	3698		32	35	9.0%	< 1	102%	80%	120%					
Chloride, Soluble	6883698		60	60	0.0%	< 5	98%	80%	120%					
Calcium, Soluble	6883698	6883698	79	78	0.9%	< 1	107%	80%	120%					
Potassium, Soluble	6883698	6883698	9	7	NA	< 2	93%	80%	120%					
Magnesium, Soluble	6883698	6883698	23	22	2.0%	< 1	100%	80%	120%					
Sodium, Soluble	6883698	6883698	37	36	2.8%	< 2	99%	80%	120%					
Sulfur (as Sulfate), Soluble	6883698	6883698	159	161	1.2%	< 2	93%	80%	120%					

Comments: If Matrix spike value is NA, the spiked analyte concentration was lower than that of the matrix contribution.
 If the RPD value is NA, the results of the duplicates are under 5X the RDL and will not be calculated.

Soil Analysis - Barium by Fusion ICP

Quality Assurance

CLIENT NAME: KLOHN CRIPPEN

AGAT WORK ORDER: 15E009678

PROJECT: A04012A07

ATTENTION TO: Nicole Wills

SAMPLING SITE:

SAMPLED BY:

Soil Analysis (Continued)															
RPT Date: Aug 27, 2015			DUPLICATE				Method Blank	REFERENCE MATERIAL			METHOD BLANK SPIKE		MATRIX SPIKE		
PARAMETER	Batch	Sample Id	Dup #1	Dup #2	RPD	Measured Value		Acceptable Limits		Recovery	Acceptable Limits		Recovery	Acceptable Limits	
								Lower	Upper		Lower	Upper		Lower	Upper

Barium by Fusion ICP-OES	6883489	6883489	1480	1510	1.8%	< 40	102%	80%	120%			NA	80%	120%
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Comments: If Matrix spike value is NA, the spiked analyte concentration was lower than that of the matrix contribution.
 If the RPD value is NA, the results of the duplicates are under 5X the RDL and will not be calculated.

Soil Analysis - Barium by Fusion ICP

Barium by Fusion ICP-OES	6883655	6883655	6030	6240	3.5%	< 40	100%	80%	120%			NA	80%	120%
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Comments: If Matrix spike value is NA, the spiked analyte concentration was lower than that of the matrix contribution.
 If the RPD value is NA, the results of the duplicates are under 5X the RDL and will not be calculated.

Soil Analysis - Barium by Fusion ICP

Barium by Fusion ICP-OES	6883665	6883665	988	996	0.9%	< 40	104%	80%	120%			NA	80%	120%
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Comments: If Matrix spike value is NA, the spiked analyte concentration was lower than that of the matrix contribution.
 If the RPD value is NA, the results of the duplicates are under 5X the RDL and will not be calculated.

CCME / Tier 1 Metals (soil)

Antimony	6883626	6883626	<0.5	<0.5	NA	< 0.5	103%	80%	120%			118%	80%	120%
Arsenic	6883626	6883626	5.0	5.5	10.1%	< 0.5	96%	80%	120%			107%	80%	120%
Barium	6883626	6883626	90.6	98.4	8.3%	< 0.5	103%	80%	120%			94%	80%	120%
Beryllium	6883626	6883626	<0.5	<0.5	NA	< 0.5	114%	80%	120%			106%	80%	120%
Cadmium	6883626	6883626	<0.5	<0.5	NA	< 0.5	100%	80%	120%			111%	80%	120%
Chromium	6883626	6883626	7.1	7.9	11.2%	< 0.5	103%	80%	120%			112%	80%	120%
Cobalt	6883626	6883626	3.6	4.1	12.5%	< 0.5	98%	80%	120%			99%	80%	120%
Copper	6883626	6883626	4.9	5.2	5.2%	< 0.5	97%	80%	120%			92%	80%	120%
Lead	6883626	6883626	3.1	3.6	13.1%	< 0.5	99%	80%	120%			101%	80%	120%
Molybdenum	6883626	6883626	<0.5	<0.5	NA	< 0.5	101%	80%	120%			89%	80%	120%
Nickel	6883626	6883626	9.3	10.6	13.0%	< 0.5	97%	80%	120%			106%	80%	120%
Selenium	6883626	6883626	<0.5	<0.5	NA	< 0.5	95%	80%	120%			116%	80%	120%
Silver	6883626	6883626	<0.5	<0.5	NA	< 0.5	99%	80%	120%			93%	80%	120%
Thallium	6883626	6883626	<0.5	<0.5	NA	< 0.5	101%	80%	120%			111%	80%	120%
Tin	6883626	6883626	<0.5	<0.5	NA	< 0.5	109%	80%	120%			95%	80%	120%
Uranium	6883626	6883626	<0.5	<0.5	NA	< 0.5	100%	80%	120%			116%	80%	120%
Vanadium	6883626	6883626	13.7	15.0	9.3%	< 0.5	104%	80%	120%			103%	80%	120%
Zinc	6883626	6883626	31	33	7.6%	< 1	103%	80%	120%			109%	80%	120%

Comments: If Matrix spike value is NA, the spiked analyte concentration was lower than that of the matrix contribution.
 If the RPD value is NA, the results of the duplicates are under 5X the RDL and will not be calculated.

CCME / Tier 1 Metals (soil)

Antimony	6883629	6883629	<0.5	<0.5	NA	< 0.5	103%	80%	120%			94%	80%	120%
Arsenic	6883629	6883629	4.1	4.1	0.5%	< 0.5	96%	80%	120%			97%	80%	120%

Quality Assurance

CLIENT NAME: KLOHN CRIPPEN
PROJECT: A04012A07
SAMPLING SITE:

AGAT WORK ORDER: 15E009678
ATTENTION TO: Nicole Wills
SAMPLED BY:

Soil Analysis (Continued)															
RPT Date: Aug 27, 2015			DUPLICATE				Method Blank	REFERENCE MATERIAL			METHOD BLANK SPIKE		MATRIX SPIKE		
PARAMETER	Batch	Sample Id	Dup #1	Dup #2	RPD	Measured Value		Acceptable Limits		Recovery	Acceptable Limits		Recovery	Acceptable Limits	
								Lower	Upper		Lower	Upper		Lower	Upper
Barium	6883629	6883629	78.2	85.0	8.4%	< 0.5	103%	80%	120%			96%	80%	120%	
Beryllium	6883629	6883629	<0.5	<0.5	NA	< 0.5	114%	80%	120%			91%	80%	120%	
Cadmium	6883629	6883629	<0.5	<0.5	NA	< 0.5	100%	80%	120%			108%	80%	120%	
Chromium	6883629	6883629	6.5	6.7	2.3%	< 0.5	103%	80%	120%			102%	80%	120%	
Cobalt	6883629	6883629	3.5	3.6	4.5%	< 0.5	98%	80%	120%			88%	80%	120%	
Copper	6883629	6883629	3.6	3.8	5.9%	< 0.5	97%	80%	120%			85%	80%	120%	
Lead	6883629	6883629	3.1	3.1	1.6%	< 0.5	99%	80%	120%			93%	80%	120%	
Molybdenum	6883629	6883629	<0.5	<0.5	NA	< 0.5	101%	80%	120%			87%	80%	120%	
Nickel	6883629	6883629	8.5	8.7	2.1%	< 0.5	97%	80%	120%			87%	80%	120%	
Selenium	6883629	6883629	<0.5	<0.5	NA	< 0.5	95%	80%	120%			112%	80%	120%	
Silver	6883629	6883629	<0.5	<0.5	NA	< 0.5	99%	80%	120%			83%	80%	120%	
Thallium	6883629	6883629	<0.5	<0.5	NA	< 0.5	101%	80%	120%			106%	80%	120%	
Tin	6883629	6883629	<0.5	<0.5	NA	< 0.5	109%	80%	120%			93%	80%	120%	
Uranium	6883629	6883629	<0.5	<0.5	NA	< 0.5	100%	80%	120%			108%	80%	120%	
Vanadium	6883629	6883629	12.9	13.9	7.6%	< 0.5	104%	80%	120%			101%	80%	120%	
Zinc	6883629	6883629	28	28	0.0%	< 1	103%	80%	120%			94%	80%	120%	

Comments: If Matrix spike value is NA, the spiked analyte concentration was lower than that of the matrix contribution.
If the RPD value is NA, the results of the duplicates are under 5X the RDL and will not be calculated.

CCME / Tier 1 Metals (soil)

Antimony	6883659	6883659	<0.5	<0.5	NA	< 0.5	103%	80%	120%			102%	80%	120%
Arsenic	6883659	6883659	5.4	5.7	5.3%	< 0.5	96%	80%	120%			113%	80%	120%
Barium	6883659	6883659	90.3	79.9	12.3%	< 0.5	103%	80%	120%			88%	80%	120%
Beryllium	6883659	6883659	<0.5	<0.5	NA	< 0.5	114%	80%	120%			106%	80%	120%
Cadmium	6883659	6883659	<0.5	<0.5	NA	< 0.5	100%	80%	120%			111%	80%	120%
Chromium	6883659	6883659	7.4	7.6	3.7%	< 0.5	103%	80%	120%			112%	80%	120%
Cobalt	6883659	6883659	3.9	3.9	0.5%	< 0.5	98%	80%	120%			97%	80%	120%
Copper	6883659	6883659	3.8	3.9	2.1%	< 0.5	97%	80%	120%			94%	80%	120%
Lead	6883659	6883659	3.4	3.7	6.5%	< 0.5	99%	80%	120%			106%	80%	120%
Molybdenum	6883659	6883659	<0.5	<0.5	NA	< 0.5	101%	80%	120%			86%	80%	120%
Nickel	6883659	6883659	10.3	10.6	2.9%	< 0.5	97%	80%	120%			106%	80%	120%
Selenium	6883659	6883659	<0.5	<0.5	NA	< 0.5	95%	80%	120%			107%	80%	120%
Silver	6883659	6883659	<0.5	<0.5	NA	< 0.5	99%	80%	120%			93%	80%	120%
Thallium	6883659	6883659	<0.5	<0.5	NA	< 0.5	101%	80%	120%			116%	80%	120%
Tin	6883659	6883659	<0.5	<0.5	NA	< 0.5	109%	80%	120%			99%	80%	120%
Uranium	6883659	6883659	<0.5	<0.5	NA	< 0.5	100%	80%	120%			118%	80%	120%
Vanadium	6883659	6883659	15.1	14.8	1.8%	< 0.5	104%	80%	120%			108%	80%	120%
Zinc	6883659	6883659	32	32	1.5%	< 1	103%	80%	120%			108%	80%	120%

Quality Assurance

 CLIENT NAME: KLOHN CRIPPEN
 PROJECT: A04012A07
 SAMPLING SITE:

 AGAT WORK ORDER: 15E009678
 ATTENTION TO: Nicole Wills
 SAMPLED BY:

Soil Analysis (Continued)															
RPT Date: Aug 27, 2015			DUPLICATE			Method Blank	REFERENCE MATERIAL			METHOD BLANK SPIKE		MATRIX SPIKE			
PARAMETER	Batch	Sample Id	Dup #1	Dup #2	RPD		Measured Value	Acceptable Limits		Recovery	Acceptable Limits		Recovery	Acceptable Limits	
								Lower	Upper		Lower	Upper		Lower	Upper

Comments: If Matrix spike value is NA, the spiked analyte concentration was lower than that of the matrix contribution.
 If the RPD value is NA, the results of the duplicates are under 5X the RDL and will not be calculated.

CCME / Tier 1 Metals (soil)

Antimony	6890996	<0.5	<0.5	NA	< 0.5	100%	80%	120%				88%	80%	120%
Arsenic	6890996	4.4	4.4	0.0%	< 0.5	94%	80%	120%				94%	80%	120%
Barium	6890996	112	115	2.6%	< 0.5	96%	80%	120%				94%	80%	120%
Beryllium	6890996	0.5	0.6	18.2%	< 0.5	114%	80%	120%				104%	80%	120%
Cadmium	6890996	<0.5	<0.5	NA	< 0.5	99%	80%	120%				105%	80%	120%
Chromium	6890996	20.9	22.5	7.4%	< 0.5	99%	80%	120%				95%	80%	120%
Cobalt	6890996	4.2	4.1	2.4%	< 0.5	93%	80%	120%				90%	80%	120%
Copper	6890996	11.4	11.1	2.7%	< 0.5	96%	80%	120%				84%	80%	120%
Lead	6890996	6.7	6.5	3.0%	< 0.5	101%	80%	120%				93%	80%	120%
Molybdenum	6890996	2.7	2.8	3.6%	< 0.5	96%	80%	120%				78%	80%	120%
Nickel	6890996	14.8	15.6	5.3%	< 0.5	95%	80%	120%				96%	80%	120%
Selenium	6890996	3.1	3.0	3.3%	< 0.5	94%	80%	120%				98%	80%	120%
Silver	6890996	<0.5	<0.5	NA	< 0.5	98%	80%	120%				83%	80%	120%
Thallium	6890996	<0.5	<0.5	NA	< 0.5	103%	80%	120%				101%	80%	120%
Tin	6890996	<0.5	<0.5	NA	< 0.5	102%	80%	120%				84%	80%	120%
Uranium	6890996	1.2	1.1	8.7%	< 0.5	107%	80%	120%				98%	80%	120%
Vanadium	6890996	18.7	18.2	2.7%	< 0.5	104%	80%	120%				91%	80%	120%
Zinc	6890996	53	52	1.9%	< 1	100%	80%	120%				92%	80%	120%

Comments: If Matrix spike value is NA, the spiked analyte concentration was lower than that of the matrix contribution.
 If the RPD value is NA, the results of the duplicates are under 5X the RDL and will not be calculated.
 With multi element scans it is acceptable for a maximum of 10% (including non-reported elements) of each QC criteria to fail to an absolute maximum of 10%.

Particle Size by Sieve

Sieve Analysis - 75 microns	3041	97.6	99.0	1.4%	< 0.2	99%	80%	120%
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Comments: If the RPD value is NA, the results of the duplicates are under 5X the RDL and will not be calculated.

Certified By: _____



Quality Assurance

CLIENT NAME: KLOHN CRIPPEN

AGAT WORK ORDER: 15E009678

PROJECT: A04012A07

ATTENTION TO: Nicole Wills

SAMPLING SITE:

SAMPLED BY:

Trace Organics Analysis																
RPT Date: Aug 27, 2015			DUPLICATE				Method Blank	REFERENCE MATERIAL			METHOD BLANK SPIKE			MATRIX SPIKE		
PARAMETER	Batch	Sample Id	Dup #1	Dup #2	RPD	Measured Value		Acceptable Limits		Recovery	Acceptable Limits		Recovery	Acceptable Limits		
								Lower	Upper		Lower	Upper		Lower	Upper	

Petroleum Hydrocarbons (BTEX/F1-F4) in Soil (CWS)

Benzene	1082	6883606	< 0.005	< 0.005	NA	< 0.005	96%	80%	120%	83%	80%	120%	98%	60%	140%
Toluene	1082	6883606	< 0.05	< 0.05	NA	< 0.05	100%	80%	120%	84%	80%	120%	101%	60%	140%
Ethylbenzene	1082	6883606	< 0.01	< 0.01	NA	< 0.01	97%	80%	120%	82%	80%	120%	94%	60%	140%
Xylenes	1082	6883606	< 0.05	< 0.05	NA	< 0.05	98%	80%	120%	82%	80%	120%	92%	60%	140%
C6 - C10 (F1)	1082	6883606	< 10	< 10	NA	< 10	107%	80%	120%	99%	80%	120%	108%	60%	140%
C10 - C16 (F2)	791	6883606	<10	<10	NA	< 10	90%	80%	120%	102%	80%	120%	99%	60%	140%
C16 - C34 (F3)	791	6883606	20	<10	NA	< 10	91%	80%	120%	103%	80%	120%	111%	60%	140%
C34 - C50 (F4)	791	6883606	<10	<10	NA	< 10	92%	80%	120%	98%	80%	120%	103%	60%	140%
Moisture Content	791	6883606	14	14	0.0%	< 1									

Comments: If the RPD value is NA, the results of the duplicates are under 5X the RDL and will not be calculated.

Polyaromatic Hydrocarbon Analysis - Soil

Naphthalene	744	6883606	<0.005	<0.005	NA	< 0.005	117%	70%	130%	96%	70%	130%	95%	70%	130%
2-Methylnaphthalene	744	6883606	<0.005	<0.005	NA	< 0.005				91%	70%	130%	90%	70%	130%
Acenaphthylene	744	6883606	<0.005	<0.005	NA	< 0.005	129%	70%	130%	74%	70%	130%	78%	70%	130%
Acenaphthene	744	6883606	<0.005	<0.005	NA	< 0.005	128%	70%	130%	94%	70%	130%	92%	70%	130%
Fluorene	744	6883606	<0.02	<0.02	NA	< 0.02	127%	70%	130%	93%	70%	130%	96%	70%	130%
Phenanthrene	744	6883606	<0.02	<0.02	NA	< 0.02	110%	70%	130%	96%	70%	130%	91%	70%	130%
Anthracene	744	6883606	<0.004	<0.004	NA	< 0.004	97%	70%	130%	99%	70%	130%	100%	70%	130%
Fluoranthene	744	6883606	<0.01	<0.01	NA	< 0.01	118%	70%	130%	94%	70%	130%	91%	70%	130%
Pyrene	744	6883606	<0.01	<0.01	NA	< 0.01	111%	70%	130%	92%	70%	130%	92%	70%	130%
Benzo[a]anthracene	744	6883606	<0.03	<0.03	NA	< 0.03	129%	70%	130%	82%	70%	130%	88%	70%	130%
Chrysene	744	6883606	<0.05	<0.05	NA	< 0.05	120%	70%	130%	99%	70%	130%	95%	70%	130%
Benzo[b+j]fluoranthene	744	6883606	<0.05	<0.05	NA	< 0.05	110%	70%	130%	95%	70%	130%	77%	70%	130%
Benzo[k]fluoranthene	744	6883606	<0.05	<0.05	NA	< 0.05	113%	70%	130%	93%	70%	130%	86%	70%	130%
Benzo[a]pyrene	744	6883606	<0.03	<0.03	NA	< 0.03	117%	70%	130%	75%	70%	130%	84%	70%	130%
Indeno[1,2,3-cd]pyrene	744	6883606	<0.05	<0.05	NA	< 0.05	129%	70%	130%	83%	70%	130%	91%	70%	130%
Dibenzo[ah]anthracene	744	6883606	<0.005	<0.005	NA	< 0.005	125%	70%	130%	89%	70%	130%	93%	70%	130%
Benzo[ghi]perylene	744	6883606	<0.05	<0.05	NA	< 0.05	128%	70%	130%	90%	70%	130%	97%	70%	130%

Comments: If the RPD value is NA, the results of the duplicates are under 5X the RDL and will not be calculated.

Certified By: _____



QA Violation

CLIENT NAME: KLOHN CRIPPEN

AGAT WORK ORDER: 15E009678

PROJECT: A04012A07

ATTENTION TO: Nicole Wills

RPT Date: Aug 27, 2015			REFERENCE MATERIAL			METHOD BLANK SPIKE			MATRIX SPIKE		
PARAMETER	Sample Id	Sample Description	Measured Value	Acceptable Limits		Recovery	Acceptable Limits		Recovery	Acceptable Limits	
				Lower	Upper		Lower	Upper		Lower	Upper
CCME / Tier 1 Metals (soil)											
Molybdenum		BH15-013 4.0-4.5	96%	80%	120%				78%	80%	120%

Comments: If Matrix spike value is NA, the spiked analyte concentration was lower than that of the matrix contribution.

If the RPD value is NA, the results of the duplicates are under 5X the RDL and will not be calculated.

With multi element scans it is acceptable for a maximum of 10% (including non-reported elements) of each QC criteria to fail to an absolute maximum of 10%.



Method Summary

CLIENT NAME: KLOHN CRIPPEN
PROJECT: A04012A07
SAMPLING SITE:

AGAT WORK ORDER: 15E009678
ATTENTION TO: Nicole Wills
SAMPLED BY:

PARAMETER	AGAT S.O.P	LITERATURE REFERENCE	ANALYTICAL TECHNIQUE
Soil Analysis			
Antimony	SOIL 0390; SOIL 0110; SOIL 0120; INST 0141	EPA SW 846-3050/6010; SHEPPARD	ICP-MS
Arsenic	SOIL 0390; SOIL 0110; SOIL 0120; INST 0141	EPA SW 846-3050/6010; SHEPPARD S	ICP-MS
Barium	SOIL 0390; SOIL 0110; SOIL 0120; INST 0141	EPA SW 846-3050/6010; SHEPPARD	ICP-MS
Beryllium	SOIL 0390; SOIL 0110; SOIL 0120; INST 0141	EPA SW 846-3050/6010; SHEPPARD	ICP-MS
Cadmium	SOIL 0390; SOIL 0110; SOIL 0120; INST 0141	EPA SW 846-3050/6010; SHEPPARD	ICP-MS
Chromium	SOIL 0390; SOIL 0110; SOIL 0120; INST 0141	EPA SW 846-3050/6010; SHEPPARD	ICP/MS
Cobalt	SOIL 0390; SOIL 0110; SOIL 0120; INST 0141	EPA SW 846-3050/6010; SHEPPARD	ICP-MS
Copper	SOIL 0390; SOIL 0110; SOIL 0120; INST 0141	EPA SW 846-3050/6010; SHEPPARD	ICP-MS
Lead	SOIL 0390; SOIL 0110; SOIL 0120; INST 0141	EPA SW 846-3050/6010; SHEPPARD	ICP-MS
Molybdenum	SOIL 0390; SOIL 0110; SOIL 0120; INST 0141	EPA SW 846-3050/6010; SHEPPARD	ICP-MS
Nickel	SOIL 0390; SOIL 0110; SOIL 0120; INST 0141	EPA SW 846-3050/6010; SHEPPARD	ICP-MS
Selenium	SOIL 0390; SOIL 0110; SOIL 0120; INST 0141	EPA SW 846-3050/6010; SHEPPARD S	ICP-MS
Silver	SOIL 0390; SOIL 0110; SOIL 0120; INST 0141	EPA SW 846-3050/6010; SHEPPARD	ICP-MS
Thallium	SOIL 0390; SOIL 0110; SOIL 0120; INST 0141	EPA SW 846-3050/6010; SHEPPARD	ICP-MS
Tin	SOIL 0390; SOIL 0110; SOIL 0120; INST 0141	EPA SW 846-3050/6010; SHEPPARD	ICP-MS
Uranium	SOIL 0390; SOIL 0110; SOIL 0120; INST 0141	EPA SW 846-3050/6010; SHEPPARD S	ICP/MS
Vanadium	SOIL 0390; SOIL 0110; SOIL 0120; INST 0141	EPA SW 846-3050/6010; SHEPPARD	ICP-MS
Zinc	SOIL 0390; SOIL 0110; SOIL 0120; INST 0141	EPA SW 846-3050/6010; SHEPPARD	ICP-MS
Sieve Analysis - 75 microns	SOIL 0540; SOIL 0110	KROETSCH 2007; SHEPPARD 2007	SIEVE
True Barium by Fusion ICP	SOIL- 0620, INST- 0140	ASTM D4503.08 S	ICP/OES
pH (Saturated Paste)	SOIL 0110; SOIL 0120; INST 0104	CARTER & GREGORICH 2007-pH	pH METER
Electrical Conductivity (Sat. Paste)	SOIL 0110; SOIL 0120; INST 0120	SHEPPARD 2007; MILLER 2007-S	CONDUCTIVITY METER
Sodium Adsorption Ratio	SOIL 0110, SOIL 0120, INST 0140	CARTER & GREGORICH 2007, SM 3120B	CALCULATION
Saturation Percentage	SOIL 0140; SOIL 0110; SOIL 0120	CARTER & GREGORICH 2007-%	GRAVIMETRIC
Chloride, Soluble	SHEPPARD 2007, EATON 2005	Carter & Gregorich 2007; SM 4500E	COLORIMETER
Calcium, Soluble	SOIL 0110; SOIL 0120; SOIL 0140; INST 0140	CARTER & GREGORICH 2007, SM 3120B-S	ICP/OES
Potassium, Soluble	SOIL 0110; SOIL 0120; SOIL 0140; INST 0140	CARTER & GREGORICH 2007, SM 3120B-S	ICP/OES
Magnesium, Soluble	SOIL 0110; SOIL 0120; SOIL 0140; INST 0140	CARTER & GREGORICH 2007, SM 3120B-S	ICP/OES

Method Summary

CLIENT NAME: KLOHN CRIPPEN

AGAT WORK ORDER: 15E009678

PROJECT: A04012A07

ATTENTION TO: Nicole Wills

SAMPLING SITE:

SAMPLED BY:

PARAMETER	AGAT S.O.P	LITERATURE REFERENCE	ANALYTICAL TECHNIQUE
Sodium, Soluble	SOIL 0110; SOIL 0120; SOIL 0140; INST 0140	CARTER & GREGORICH 2007, SM 3120B-S	ICP/OES
Sulfur (as Sulfate), Soluble	SOIL 0110; SOIL 0120; SOIL 0140; INST 0140	CARTER & GREGORICH 2007, SM 3120B-S	ICP/OES
Trace Organics Analysis			
Benzene	ORG-170-5110/5140/5430/5440	EPA SW-846 8260-S	GC/MS
Toluene	ORG-170-5110/5140/5430/5440	EPA SW-846 8260-S	GC/MS
Ethylbenzene	ORG-170-5110/5140/5430/5440	EPA SW-846 8260-S	GC/MS
Xylenes	ORG-170-5110/5140/5430/5440	EPA SW-846 8260-S	GC/MS
C6 - C10 (F1)	ORG-170-5110/5140/5430/5440	CCME Tier 1 Method-S L	GC/FID
C6 - C10 (F1 minus BTEX)	ORG-170-5110/5140/5430/5440	CCME Tier 1 Method-S L	GC/FID
C10 - C16 (F2)	ORG-170-5120/5300	CCME Tier 1 Method-S H	GC/FID
C16 - C34 (F3)	ORG-170-5120/5300	CCME Tier 1 Method-S H	GC/FID
C34 - C50 (F4)	ORG-170-5120/5300	CCME Tier 1 Method-S H	GC/FID
Gravimetric Heavy Hydrocarbons	ORG-170-5120/5300	CCME Tier 1 Method-S H	GC/FID
Moisture Content	LAB-175-4002	CCME Tier 1 Method-S %	GRAVIMETRIC
Toluene-d8 (BTEX)	ORG-170-5110/5140/5430/5440	EPA SW-846 8260-S	GC/MS
Ethylbenzene-d10 (BTEX)	ORG-170-5110/5140/5430/5440	EPA SW-846 8260-S	GC/MS
o-Terphenyl (F2-F4)	ORG-170-5120/5300	CCME Tier 1 Method-S H	GC/FID
Naphthalene	ORG-170-5420	EPA SW846 8270 D/3540 C/3570	GC/MS
2-Methylnaphthalene	ORG-170-5420	EPA SW846 8270 D/3540 C/3570	GC/MS
Acenaphthylene	ORG-170-5420	EPA SW846 8270 D/3540 C/3570	GC/MS
Acenaphthene	ORG-170-5420	EPA SW846 8270 D/3540 C/3570	GC/MS
Fluorene	ORG-170-5420	EPA SW846 8270 D/3540 C/3570	GC/MS
Phenanthrene	ORG-170-5420	EPA SW846 8270 D/3540 C/3570	GC/MS
Anthracene	ORG-170-5420	EPA SW846 8270 D/3540 C/3570	GC/MS
Fluoranthene	ORG-170-5420	EPA SW846 8270 D/3540 C/3570	GC/MS
Pyrene	ORG-170-5420	EPA SW846 8270 D/3540 C/3570	GC/MS
Benzo[a]anthracene	ORG-170-5420	EPA SW846 8270 D/3540 C/3570	GC/MS
Chrysene	ORG-170-5420	EPA SW846 8270 D/3540 C/3570	GC/MS
Benzo[b+j]fluoranthene	ORG-170-5420	EPA SW846 8270 D/3540 C/3570	GC/MS
Benzo[k]fluoranthene	ORG-170-5420	EPA SW846 8270 D/3540 C/3570	GC/MS
Benzo[a]pyrene	ORG-170-5420	EPA SW846 8270 D/3540 C/3570	GC/MS
Indeno[1,2,3-cd]pyrene	ORG-170-5420	EPA SW846 8270 D/3540 C/3570	GC/MS
Dibenzo[ah]anthracene	ORG-170-5420	EPA SW846 8270 D/3540 C/3570	GC/MS
Benzo[ghi]perylene	ORG-170-5420	EPA SW846 8270 D/3540 C/3570	GC/MS
2-Fluorobiphenyl (PAH)	TO 0500	EPA SW846 8270 D/3540 C/3570	GC/MS
p-Terphenyl-d14 (PAH)	TO 0500	EPA SW846 8270 D/3540 C/3570	GC/MS
B[a]P TPE	ORG-170-5420		CALCULATION
IARC (coarse)			GC/MS
IARC (fine)			GC/MS



AGAT

Laboratories

6310 Roper Road
 Edmonton, Alberta T6B 3P9
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 webearth.agatlabs.com

Laboratory Use Only

Arrival Temperature: 1.6°C
 AGAT Job Number: 15E001678

Chain of Custody Record

Report Information

Company: KCB
 Contact: Nicole Wills
 Address: 2618 Hopedale place
Calgary Alberta
 Phone: 403-730-6809 Fax: _____
 LSD: _____
 Client Project #: A04012A07

Report Information

1. Name: Nicole Wills
 Email: NWills@klobn.com
 2. Name: Ken Ross
 Email: KRoss@klobn.com
 3. Name: Ken Smart
 Email: KSmart@klobn.com

Requirements (Selection may impact detection limits)

CCME AB Tier 1 BC CSR

Agricultural Industrial AW
 Residential/Park Commercial DW
 Drinking Water Natural Area
 FWAL AB Surface Water
 Other D50 (Drilling) SPIGEC

Invoice To Same Yes No

Company: _____
 Contact: _____
 Address: _____
 Phone: _____ Fax: _____
 PO/AFE#: _____

Turnaround Time Required (TAT)

Regular TAT 5 to 7 business days
 Rush TAT Less than 24 hours
 24 to 48 hours
 48 to 72 hours


Date Required: _____

RUSH TAT REQUESTS UPON SELECTING A RUSH TAT, THE CLIENT ACCEPTS THAT A RUSH SURCHARGE WILL BE ADDED TO THE INVOICE. SEE BACK FOR SURCHARGE.

Report Format

Single Sample per Page
 Multiple Samples per Page

# OF CONTAINERS	Detailed Soil Salinity (Saturated Paste)	CMCME BTEX/F1-F4	Soil Metals <input type="checkbox"/> HWS-B <input type="checkbox"/> C ⁶ <input type="checkbox"/> Hg <input type="checkbox"/> Cr ⁶	Water Metals <input type="checkbox"/> Dissolved <input type="checkbox"/> Total <input type="checkbox"/> Hg <input type="checkbox"/> Cr ⁶	Routine Water Potability	AB Class 2 Landfill	BC Landfill	D50 Detailed Soil Salinity (As Received)	Microtox	BTEX/VPH/EPH <input type="checkbox"/> LEPH/HEPH <input type="checkbox"/>	Barium (Fusion)	Particle Size	PH	HOLD FOR 60 DAYS	PREPARED (Y/N)	CONTAMINATED/HAZARDOUS (Y/N)
5	X	X	X	X							X	X	X			
5	X	X	X	X							X	X	X			
3	X	X	X	X							X	X	X			
4	X	X	X	X							X	X	X			
5	X	X	X	X							X	X	X			
4	X	X	X	X							X	X	X			
5	X	X	X	X							X	X	X			
5	X	X	X	X							X	X	X			
5	X	X	X	X							X	X	X			
5	X	X	X	X							X	X	X			

Samples Relinquished By: (Print Name and Sign): ASBey 
 Date/Time: 8/16/15
 Samples Relinquished By: (Print Name and Sign): _____
 Date/Time: 8/11/17
 Samples Relinquished By: (Print Name and Sign): _____
 Date/Time: _____

Pink Copy - Client
 Yellow Copy - AGAT
 White Copy - AGAT

Page 1 of 4
 NO: AB **000858**



AGAT

Laboratories

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Edmonton, Alberta T6B 3P9
P: 780.395.2525 • F: 780.462.2490
webearth.agatlabs.com

Chain of Custody Record

15E0091078 1.6^u

Report to:

Company:

Same as COC#:

LABORATORY USE (LAB ID #)	SAMPLE IDENTIFICATION	SAMPLE MATRIX	DATE/TIME SAMPLED	COMMENTS - SITE SAMPLE CONTAINMENT	# OF CONTAINERS	Detailed Soil Salinity (Saturated Paste)	CMC BTEX/FT-F4	Soil Metals <input type="checkbox"/> HWS-B <input type="checkbox"/> Cr ⁶ <input type="checkbox"/> Hg	Water Metals <input type="checkbox"/> Dissolved <input type="checkbox"/> Total <input type="checkbox"/> Hg <input type="checkbox"/> Cr ⁶	Routine Water Potability	AB Class 2 Landfill	BC Landfill	D50 Detailed Soil Salinity (As Received)	Microtox	BTEXS/VP/EPH <input type="checkbox"/> LEPH/HEPH <input type="checkbox"/>	Barium (Fusion)	Particle Size	PAH	HOLD FOR 60 DAYS	PRESERVED (Y/N)	CONTAMINATED/HAZARDOUS (Y/N)
609	BH15-016 (0.3-0.6)	SOIL	Aug 15/15		5	X	X	X								X					
610	BH15-016 (0.6-1.0)				5	X	X	X								X					
611	BH15-016 (1.0-1.5)				5	X	X	X								X					
613	BH15-017 (0.3-0.6)				5	X	X	X								X					
615	BH15-017 (0.6-1.0)				5	X	X	X								X					
619	BH15-017 (1.0-1.5)				5	X	X	X								X					
621	BH15-018 (0.6-1.0)				5	X	X	X								X					
623	BH15-018 (1.0-1.5)				5	X	X	X								X					
626	BH15-018 (2.5-3.0)				5	X	X	X								X					
628	BH15-019 (0.6-1.0)				5	X	X	X								X					
629	BH15-019 (1.0-1.5)				5	X	X	X								X					
630	BH15-019 (2.5-3.0)				5	X	X	X								X					
632	BH15-020 (0.3-0.6)				3	X	X	X								X					
634	BH15-020 (0.6-1.0)				3	X	X	X								X					
637	BH15-020 (1.0-1.5)				3	X	X	X								X					
636	BH15-021 (0.6-1.0)				3	X	X	X								X					
637	BH15-021 (1.0-1.5)				3	X	X	X								X					
638	BH15-021 (2.5-3.0)				3	X	X	X								X					
639	BH15-022 (0.3-0.6)				3	X	X	X								X					
640	BH15-022 (1.0-1.5)				3	X	X	X								X					
641	BH15-022 (2.5-3.0)				3	X	X	X								X					
642	BH15-023 (0.3-0.6)				3	X	X	X								X					
643	BH15-023 (0.6-1.0)				3	X	X	X								X					
645	BH15-023 (1.0-1.5)				3	X	X	X								X					

15 AUG 19 11:37

Samples Relinquished By (Print Name and Sign): *ASBEY B.* Date/Time: *15 AUG 15*

Samples Received By (Print Name and Sign): *[Signature]* Date/Time: *11:37*

Samples Relinquished By (Print Name and Sign): _____ Date/Time: _____

Samples Received By (Print Name and Sign): _____ Date/Time: _____

Page *2* of *4*

NC: AB **000858** A



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Laboratory Use Only

Arrival Temperature: 1.6°C
AGAT Job Number: 15E009078

Chain of Custody Record

Report Information

Company: _____
Contact: _____
Address: _____
Phone: _____
LSD: _____
Client Project #: _____

Invoice To Same Yes No

Company: _____
Contact: _____
Address: _____
Phone: _____
PO/A/E#: _____

Report Information

1. Name: _____
Email: _____
2. Name: _____
Email: _____
3. Name: _____
Email: _____

Requirements (Selection may impact detection limits)

CCME AB Tier 1 BC CSR

Agricultural Agricultural AW
 Industrial Industrial IW
 Residential/Park Residential/Park LW
 Commercial Commercial DW
 Drinking Water Natural Area
 FWAL AB Surface Water
 Other D50 (Drilling) SPIGEC

Report Format

Single Sample per Page
 Multiple Samples per Page

Date and Time: 15 AUG 19 11:37

Turnaround Time Required (TAT)

Regular TAT 5 to 7 business days
Rush TAT Less than 24 hours
 24 to 48 hours
 48 to 72 hours

Date Required: _____

RUSH TAT REQUESTS UPON SELECTING A RUSH TAT. THE CLIENT ACCEPTS THAT A RUSH SURCHARGE WILL BE ADDED TO THE INVOICE. SEE BACK FOR SURCHARGE.

LABORATORY USE (LAB ID #)	SAMPLE IDENTIFICATION	SAMPLE MATRIX	DATE/TIME SAMPLED	COMMENTS - SITE SAMPLE INFO. SAMPLE CONTAINMENT	# OF CONTAINERS	Detailed Soil Salinity (Saturated Paste)	CMCME BTEX/F1-F4	Soil Metals <input type="checkbox"/> HWS-B <input type="checkbox"/> Cr ⁶ <input type="checkbox"/> Hg	Water Metals <input type="checkbox"/> Dissolved <input type="checkbox"/> Total <input type="checkbox"/> Hg <input type="checkbox"/> Cr ⁶	Routine Water Potability	AB Class 2 Landfill	BC Landfill	D50 Detailed Soil Salinity (As Received)	Microtox	BTEXS/VPH/EPH <input type="checkbox"/> LEPH/HEPH <input type="checkbox"/>	RESERVED (Y/N)	CONTAMINATED/HAZARDOUS (Y/N)
<u>650</u>	<u>BH15-024 (0.3-0.6)</u>	<u>SOIL</u>	<u>Aug 15/15</u>	<u>Samples below 1.0m were frozen, head space/water possible.</u>	<u>3</u>	<u>XX</u>	<u>XX</u>	<u>XX</u>	<u>XX</u>								
<u>651</u>	<u>BH15-024 (0.6-1.0)</u>				<u>3</u>	<u>XX</u>	<u>XX</u>	<u>XX</u>	<u>XX</u>								
<u>652</u>	<u>BH15-024 (1.0-1.5)</u>				<u>3</u>	<u>XX</u>	<u>XX</u>	<u>XX</u>	<u>XX</u>								
<u>653</u>	<u>BH15-025 (0.0-0.15)</u>				<u>3</u>	<u>XX</u>	<u>XX</u>	<u>XX</u>	<u>XX</u>								
<u>654</u>	<u>BH15-025 (0.6-1.0)</u>				<u>3</u>	<u>XX</u>	<u>XX</u>	<u>XX</u>	<u>XX</u>								
<u>655</u>	<u>BH15-025 (1.0-1.5)</u>				<u>3</u>	<u>XX</u>	<u>XX</u>	<u>XX</u>	<u>XX</u>								
<u>656</u>	<u>BH15-026 (0.6-1.0)</u>				<u>3</u>	<u>XX</u>	<u>XX</u>	<u>XX</u>	<u>XX</u>								
<u>657</u>	<u>BH15-026 (1.0-1.5)</u>				<u>3</u>	<u>XX</u>	<u>XX</u>	<u>XX</u>	<u>XX</u>								
<u>658</u>	<u>BH15-026 (2.5-3.0)</u>				<u>3</u>	<u>XX</u>	<u>XX</u>	<u>XX</u>	<u>XX</u>								

Samples Relinquished By: (Print Name and Sign): _____ Date/Time: _____

Samples Relinquished By: (Print Name and Sign): Abbey B. Date/Time: 19 AUG 15

Samples Relinquished By: (Print Name and Sign): _____ Date/Time: _____

Samples Relinquished By: (Print Name and Sign): _____ Date/Time: @ 11:37

Pink Copy - Client Page 3 of 4

Yellow Copy - AGAT No: AB 000859

White Copy - AGAT



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Chain of Custody Record

Report to:

Company:

Same as COC#:

1.6^{oc} 15E009678

LABORATORY USE (LAB ID #)	SAMPLE IDENTIFICATION	SAMPLE MATRIX	DATE/TIME SAMPLED	COMMENTS - SITE SAMPLE INFO. SAMPLE CONTAINMENT	# OF CONTAINERS	Detailed Soil Salinity (Saturated Paste)	CMC ME BTEX/FT-F4	Soil Metals <input type="checkbox"/> HWS-B <input type="checkbox"/> Cr ⁶ <input type="checkbox"/> Hg	Water Metals <input type="checkbox"/> Dissolved <input type="checkbox"/> Total <input type="checkbox"/> Hg <input type="checkbox"/> Cr ⁶	Routine Water Potability	AB Class 2 Landfill	BC Landfill	D50 Detailed Soil Salinity (As Received)	Microtox	BTEXS/VP/EPH <input type="checkbox"/> LEPH/HEPH <input type="checkbox"/>	Bismuth (fusion) <input type="checkbox"/> Particle Size <input type="checkbox"/> PAH	HOLD FOR 60 DAYS	PRESERVED (Y/N)	CONTAMINATED/HAZARDOUS (Y/N)
663	BH15-027 (0.3-0.6)	SOIL	Aug 15/15		3	X	X	X											
665	BH15-027 (0.6-1.0)				3	X	X	X											
666	BH15-027 (1.0-1.5)				3	X	X	X											
669	BH15-028 (0.15-0.3)				3	X	X	X											
672	BH15-028 (0.3-0.6)				3	X	X	X											
672	BH15-028 (1.0-1.5)				3	X	X	X											
674	BH15-029 (0.3-0.6)				3	X	X	X											
681	BH15-029 (0.6-1.0)				3	X	X	X											
683	BH15-029 (1.0-1.5)				3	X	X	X											
685	BH15-030 (0.0-0.15)				3	X	X	X											
686	BH15-030 (0.15-0.3)				3	X	X	X											
693	BH15-030 (1.0-1.5)				3	X	X	X											
695	BH15-031 (0.15-0.3)				3	X	X	X											
697	BH15-031 (0.3-0.6)				3	X	X	X											
698	BH15-031 (1.0-1.5)				3	X	X	X											
700	BH15-032 (1.0-1.5)				3	X	X	X											
701	BH15-032 (2.5-3.0)				3	X	X	X											
706	BH15-032 (4.0-4.5)				3	X	X	X											

15 AUG 19 11 27

Samples Relinquished By (Print Name and Sign): _____ Date/Time: _____

Samples Relinquished By (Print Name and Sign): _____ Date/Time: _____

Samples Relinquished By (Print Name and Sign): _____ Date/Time: _____

Samples Received By (Print Name and Sign): _____ Date/Time: _____

Samples Received By (Print Name and Sign): _____ Date/Time: _____

Samples Received By (Print Name and Sign): _____ Date/Time: _____

Pink Copy - Client
Yellow Copy - AGAT
White Copy - AGAT

Page 4 of 4

N^o: AB **000859** A



AGAT Laboratories

SAMPLE INTEGRITY RECEIPT FORM

RECEIVING BASICS - Shipping

Company/Consultant: KCB Prepaid Collect

Courier: Canadian North

Waybill #: 518 YEV 7060 - 3072

Branch: EDM GP FN FM RD VAN LYD FSJ EST Other: _____

Custody Seal Intact: Yes No

TAT: <24hr 24-48hr 48-72hr Reg Other _____

Cooler Quantity: 5

TIME SENSITIVE ISSUES - Shipping

Earliest Date Sampled: AUG. 15, 2015 ALREADY EXCEEDED? Yes No

MIBI/Time Sensitive Test*: y/g Expiry: y/g

Hydrocarbon Test: TEX PI Expiry: AUG. 22, 2015

Are samples received more than 5 days after sampling: Yes No

**Residual Chlorine, DO, Turbidity, BOD, Nitrate/Nitrite, Microtox*

Temperature (to be recorded from bottles/jars only)

N/A - Only Soil Bags Received

(1) (Bottle/Jar) 2.7 + 2.6 + 0.3 = 1.9 °C (2) (Bottle/Jar) 1.2 + 1.1 + 1.0 = 1.1 °C

(3) (Bottle/Jar) 1.8 + 1.5 + 1.7 = 1.7 °C (4) (Bottle/Jar) _____ + _____ = _____ °C

(5) (Bottle/Jar) _____ + _____ = _____ °C (6) (Bottle/Jar) _____ + _____ = _____ °C

(If more than 6 coolers are received use another sheet of paper and attach)

SAMPLE INTEGRITY - Shipping

Hazardous Samples: Why Hazardous: y/g

Precaution taken: y/g

Legal Samples: Yes No

International Samples: Yes No Tape Sealed: Yes No

Coolant used: Icepack Bagged Ice Free Ice Free Water None

LOGISTICS USE ONLY

Workorder No: 15E 009678

Samples Damaged: Yes No If YES why? _____

No Bubble Wrap Frozen Courier

Other: _____

Correct Sample Requirements for Testing

Correct Bottles: Yes No Correct Amount: Yes No

Correct Labels: Yes No

If NO to any of the above, explain why: _____

Visible Sediment in Waters: Yes No

Additional Integrity Issues or concerns: _____

Account Project Manager: _____ have they been notified of the above issues: Yes No

Whom spoken to: _____ Date/Time: _____

CPM Initial _____



CLIENT NAME: KLOHN CRIPPEN
500-2618 HOPEWELL PLACE NE
CALGARY, AB T1Y7J7
(403) 274-3424

ATTENTION TO: Nicole Wills

PROJECT: A04012A07

AGAT WORK ORDER: 15E011146

SOIL ANALYSIS REVIEWED BY: Shanna Mills, Inorganics Manager

TRACE ORGANICS REVIEWED BY: Jarrod Roberts, Operations Manager

DATE REPORTED: Sep 04, 2015

PAGES (INCLUDING COVER): 73

VERSION*: 1

Should you require any information regarding this analysis please contact your client services representative at (780) 395-2525

*NOTES

All samples will be disposed of within 30 days following analysis. Please contact the lab if you require additional sample storage time.



Certificate of Analysis

AGAT WORK ORDER: 15E011146

PROJECT: A04012A07

6310 ROPER ROAD
EDMONTON, ALBERTA
CANADA T6B 3P9
TEL (780)395-2525
FAX (780)462-2490
<http://www.agatlabs.com>

CLIENT NAME: KLOHN CRIPPEN

ATTENTION TO: Nicole Wills

SAMPLING SITE:

SAMPLED BY:

CCME / Tier 1 Metals

DATE RECEIVED: 2015-08-24

DATE REPORTED: 2015-09-04

Parameter	Unit	G / S	RDL	BH15-054 (0.	BH15-054 (0.	BH15-054 (1.	BH15-055	BH15-055 (0.	BH15-055 (1.	BH15-056 (0.	BH15-056 (0.
				15-0.3)	3-0.6)	0-1.5)	(0-0.15)	6-1.0)	0-1.5)	3-0.6)	6-1.0)
				SAMPLE DESCRIPTION:	Soil	Soil	Soil	Soil	Soil	Soil	Soil
				SAMPLE TYPE:	8/17/2015	8/17/2015	8/17/2015	8/17/2015	8/17/2015	8/17/2015	8/17/2015
DATE SAMPLED:	6896314	6896402	6896408	6896419	6896420	6896422	6896424	6896425			
Antimony	mg/kg	20	0.5	10.1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Arsenic	mg/kg	17	0.5	4.9	4.2	6.4	5.0	6.5	5.3	3.8	4.9
Barium	mg/kg	750	0.5	617	239	100	218	113	92.9	273	270
Beryllium	mg/kg	5	0.5	0.7	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Cadmium	mg/kg	1.4	0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Chromium	mg/kg	64	0.5	17.4	9.6	7.5	10.2	8.7	6.3	9.6	10.6
Cobalt	mg/kg	20	0.5	2.1	3.1	3.6	2.1	4.6	3.3	3.4	3.2
Copper	mg/kg	63	0.5	5.9	6.9	4.4	4.1	4.2	3.2	7.9	6.3
Lead	mg/kg	70	0.5	6.1	3.9	3.5	5.5	3.5	3.6	3.6	4.0
Molybdenum	mg/kg	4	0.5	0.7	0.9	0.7	0.8	0.6	0.5	1.0	0.8
Nickel	mg/kg	50	0.5	10.9	11.5	10.2	7.1	11.7	8.8	10.4	10.9
Selenium	mg/kg	1	0.5	<0.5	0.5	<0.5	<0.5	<0.5	<0.5	0.6	0.8
Silver	mg/kg	20	0.5	1.0	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Thallium	mg/kg	1	0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Tin	mg/kg	5	0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Uranium	mg/kg	23	0.5	1.3	0.6	<0.5	<0.5	<0.5	<0.5	0.6	0.7
Vanadium	mg/kg	130	0.5	14.5	17.2	12.9	13.6	14.4	12.4	15.5	19.3
Zinc	mg/kg	200	1	13	30	23	14	27	21	34	16

Certified By:



Certificate of Analysis

AGAT WORK ORDER: 15E011146

PROJECT: A04012A07

6310 ROPER ROAD
EDMONTON, ALBERTA
CANADA T6B 3P9
TEL (780)395-2525
FAX (780)462-2490
<http://www.agatlabs.com>

CLIENT NAME: KLOHN CRIPPEN

ATTENTION TO: Nicole Wills

SAMPLING SITE:

SAMPLED BY:

CCME / Tier 1 Metals

DATE RECEIVED: 2015-08-24

DATE REPORTED: 2015-09-04

Parameter	Unit	G / S	RDL	BH15-056 (1.	BH15-057 (0.	BH15-057 (0.	BH15-057 (1.	BH15-058 (0.	BH15-058 (0.	BH15-058 (1.	BH15-059 (0.
				0-1.5)	15-0.3)	6-1.0)	0-1.5)	3-0.6)	6-1.0)	0-1.5)	0-0.15)
				SAMPLE DESCRIPTION:	Soil	Soil	Soil	Soil	Soil	Soil	Soil
				SAMPLE TYPE:	8/17/2015	8/17/2015	8/17/2015	8/17/2015	8/17/2015	8/17/2015	8/17/2015
DATE SAMPLED:	6896427	6896429	6896434	6896437	6896448	6896458	6896464	6896465			
Antimony	mg/kg	20	0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Arsenic	mg/kg	17	0.5	6.3	5.7	4.5	7.0	5.5	3.0	6.1	10.3
Barium	mg/kg	750	0.5	128	238	202	240	238	132	103	820
Beryllium	mg/kg	5	0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Cadmium	mg/kg	1.4	0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Chromium	mg/kg	64	0.5	8.4	14.8	15.6	11.4	15.6	9.2	6.3	11.6
Cobalt	mg/kg	20	0.5	4.5	2.4	2.3	7.2	4.4	2.9	3.7	3.6
Copper	mg/kg	63	0.5	4.6	4.8	4.4	6.2	6.4	3.0	3.2	9.7
Lead	mg/kg	70	0.5	4.3	6.4	5.6	5.3	4.7	3.6	3.9	10.7
Molybdenum	mg/kg	4	0.5	0.5	1.3	1.4	1.0	1.5	<0.5	<0.5	0.9
Nickel	mg/kg	50	0.5	12.4	10.5	11.0	10.3	12.1	7.8	9.5	9.2
Selenium	mg/kg	1	0.5	<0.5	<0.5	<0.5	0.6	<0.5	<0.5	<0.5	<0.5
Silver	mg/kg	20	0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Thallium	mg/kg	1	0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Tin	mg/kg	5	0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Uranium	mg/kg	23	0.5	<0.5	<0.5	<0.5	0.6	<0.5	<0.5	<0.5	0.5
Vanadium	mg/kg	130	0.5	16.6	14.7	11.7	23.2	18.5	16.8	13.9	22.0
Zinc	mg/kg	200	1	27	14	18	21	40	22	28	23

Certified By:



Certificate of Analysis

AGAT WORK ORDER: 15E011146

PROJECT: A04012A07

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EDMONTON, ALBERTA
CANADA T6B 3P9
TEL (780)395-2525
FAX (780)462-2490
<http://www.agatlabs.com>

CLIENT NAME: KLOHN CRIPPEN

ATTENTION TO: Nicole Wills

SAMPLING SITE:

SAMPLED BY:

CCME / Tier 1 Metals

DATE RECEIVED: 2015-08-24

DATE REPORTED: 2015-09-04

Parameter	Unit	G / S	RDL	BH15-059 (0.	BH15-059 (1.	BH15-060 (0.	BH15-060 (0.	BH15-060 (1.	BH15-061	BH15-061 (0.	BH15-061 (1.
				15-0.3)	0-1.5)	15-0.3)	3-0.6)	0-1.5)	(0-0.15)	3-0.6)	0-1.5)
				SAMPLE DESCRIPTION:	Soil	Soil	Soil	Soil	Soil	Soil	Soil
				SAMPLE TYPE:	8/17/2015	8/17/2015	8/17/2015	8/17/2015	8/17/2015	8/17/2015	8/17/2015
				6896468	6896469	6896472	6896476	6896479	6896482	6896492	6896509
Antimony	mg/kg	20	0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Arsenic	mg/kg	17	0.5	4.7	5.6	5.5	4.1	5.1	6.9	4.2	5.7
Barium	mg/kg	750	0.5	276	87.4	270	256	93.6	269	262	108
Beryllium	mg/kg	5	0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Cadmium	mg/kg	1.4	0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Chromium	mg/kg	64	0.5	8.3	6.9	6.1	9.7	5.8	8.0	9.5	6.4
Cobalt	mg/kg	20	0.5	3.6	3.9	2.5	2.7	3.4	3.2	4.2	4.0
Copper	mg/kg	63	0.5	6.4	3.5	5.3	6.1	3.6	5.0	7.9	4.2
Lead	mg/kg	70	0.5	6.3	3.2	7.2	4.6	4.5	8.3	4.4	3.7
Molybdenum	mg/kg	4	0.5	0.8	<0.5	0.5	0.8	<0.5	0.8	1.3	<0.5
Nickel	mg/kg	50	0.5	8.7	11.1	6.4	8.5	8.8	6.8	10.7	10.2
Selenium	mg/kg	1	0.5	<0.5	<0.5	<0.5	0.6	<0.5	<0.5	0.7	<0.5
Silver	mg/kg	20	0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Thallium	mg/kg	1	0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Tin	mg/kg	5	0.5	<0.5	<0.5	0.6	<0.5	<0.5	<0.5	<0.5	<0.5
Uranium	mg/kg	23	0.5	0.5	<0.5	<0.5	0.5	<0.5	0.5	0.5	<0.5
Vanadium	mg/kg	130	0.5	14.9	14.3	12.9	14.7	13.0	16.6	14.1	13.5
Zinc	mg/kg	200	1	26	25	14	18	21	14	44	23

Certified By:



Certificate of Analysis

AGAT WORK ORDER: 15E011146

PROJECT: A04012A07

6310 ROPER ROAD
EDMONTON, ALBERTA
CANADA T6B 3P9
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<http://www.agatlabs.com>

CLIENT NAME: KLOHN CRIPPEN

ATTENTION TO: Nicole Wills

SAMPLING SITE:

SAMPLED BY:

CCME / Tier 1 Metals

DATE RECEIVED: 2015-08-24

DATE REPORTED: 2015-09-04

Parameter	Unit	G / S	RDL	BH15-062 (0.	BH15-062 (0.	BH15-062 (1.	BH15-066 (0.	BH15-066 (0.	BH15-066 (1.	BH15-067 (0.	BH15-067 (0.
				15-0.3)	3-0.6)	0-1.5)	15-0.3)	3-0.6)	0-1.5)	3-0.6)	6-1.0)
				SAMPLE DESCRIPTION:	Soil	Soil	Soil	Soil	Soil	Soil	Soil
				SAMPLE TYPE:	8/17/2015	8/17/2015	8/17/2015	8/17/2015	8/17/2015	8/17/2015	8/17/2015
				6896514	6896527	6896529	6896560	6896564	6896567	6896572	6896574
Antimony	mg/kg	20	0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Arsenic	mg/kg	17	0.5	6.8	7.4	9.0	4.7	5.6	6.8	6.6	4.7
Barium	mg/kg	750	0.5	266	251	130	244	180	94.5	299	78.3
Beryllium	mg/kg	5	0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Cadmium	mg/kg	1.4	0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Chromium	mg/kg	64	0.5	8.3	7.5	7.3	9.0	12.2	6.6	7.0	6.5
Cobalt	mg/kg	20	0.5	3.9	3.6	4.6	5.3	2.7	4.4	3.1	3.4
Copper	mg/kg	63	0.5	6.1	6.2	4.6	7.1	3.4	4.9	5.1	3.2
Lead	mg/kg	70	0.5	7.1	6.6	4.1	4.4	5.8	4.2	7.8	3.3
Molybdenum	mg/kg	4	0.5	<0.5	0.7	0.9	0.7	<0.5	0.6	0.7	<0.5
Nickel	mg/kg	50	0.5	8.1	8.2	13.7	11.1	7.4	11.2	7.3	9.1
Selenium	mg/kg	1	0.5	<0.5	<0.5	<0.5	0.6	<0.5	<0.5	<0.5	<0.5
Silver	mg/kg	20	0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Thallium	mg/kg	1	0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Tin	mg/kg	5	0.5	<0.5	<0.5	<0.5	2.7	<0.5	<0.5	<0.5	<0.5
Uranium	mg/kg	23	0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.5	<0.5
Vanadium	mg/kg	130	0.5	17.9	16.3	15.9	17.2	22.8	16.1	15.2	12.7
Zinc	mg/kg	200	1	19	18	29	33	17	27	20	23

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AGAT WORK ORDER: 15E011146

PROJECT: A04012A07

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CLIENT NAME: KLOHN CRIPPEN

ATTENTION TO: Nicole Wills

SAMPLING SITE:

SAMPLED BY:

CCME / Tier 1 Metals

DATE RECEIVED: 2015-08-24

DATE REPORTED: 2015-09-04

Parameter	Unit	G / S	RDL	BH15-067 (1.	BH15-068 (0.	BH15-068 (0.	BH15-068 (0.	BH15-069 (0.	BH15-069 (0.	BH15-069 (1.	DUP F
				0-1.5)	15-0.3)	3-0.6)	6-1.0)	3-0.6)	6-1.0)	0-1.5)	
				SAMPLE DESCRIPTION:	Soil	Soil	Soil	Soil	Soil	Soil	
				SAMPLE TYPE:	8/17/2015	8/17/2015	8/17/2015	8/17/2015	8/17/2015	8/17/2015	
DATE SAMPLED:	6896578	6896583	6896599	6896600	6896601	6896604	6896609	6896609	6896777		
Antimony	mg/kg	20	0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Arsenic	mg/kg	17	0.5	6.5	5.9	6.8	7.1	4.1	5.9	6.7	6.4
Barium	mg/kg	750	0.5	137	269	225	169	145	127	107	100
Beryllium	mg/kg	5	0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Cadmium	mg/kg	1.4	0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Chromium	mg/kg	64	0.5	5.8	13.2	12.6	11.2	10.2	7.7	6.8	6.3
Cobalt	mg/kg	20	0.5	3.5	4.2	4.4	5.2	3.3	4.5	4.0	4.0
Copper	mg/kg	63	0.5	3.8	6.0	6.3	6.4	6.9	5.4	4.4	3.7
Lead	mg/kg	70	0.5	3.9	8.1	6.4	5.4	4.5	4.7	3.9	3.5
Molybdenum	mg/kg	4	0.5	<0.5	1.1	0.9	0.7	0.85	0.7	0.7	<0.5
Nickel	mg/kg	50	0.5	9.9	9.2	17.6	12.6	10.9	11.9	1.1	9.8
Selenium	mg/kg	1	0.5	<0.5	<0.5	0.5	<0.5	0.7	<0.5	<0.5	<0.5
Silver	mg/kg	20	0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Thallium	mg/kg	1	0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Tin	mg/kg	5	0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Uranium	mg/kg	23	0.5	<0.5	<0.5	<0.5	<0.5	1.1	<0.5	<0.5	<0.5
Vanadium	mg/kg	130	0.5	13.0	14.0	16.4	18.3	16.9	17.8	15.1	12.9
Zinc	mg/kg	200	1	22	21	24	30	20	19	24	25

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PROJECT: A04012A07

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CLIENT NAME: KLOHN CRIPPEN

ATTENTION TO: Nicole Wills

SAMPLING SITE:

SAMPLED BY:

CCME / Tier 1 Metals

DATE RECEIVED: 2015-08-24

DATE REPORTED: 2015-09-04

Parameter	Unit	SAMPLE DESCRIPTION:		DUP G	DUP H	DUP J	BH15-101 (0.	BH15-107 (0.	BH15-108 (0.	BH15-113 (0.	BH15-113 (0.
		SAMPLE TYPE:		Soil	Soil	Soil	6-1.0)	15-0.3)	15-0.3)	3-0.6)	6-1.0)
		DATE SAMPLED:		8/17/2015	8/17/2015	8/18/2015	8/19/2015	8/19/2015	8/19/2015	8/20/2015	8/20/2015
		G / S	RDL	6896778	6896779	6897018	6897293	6897468	6897514	6897567	6897569
Antimony	mg/kg	20	0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Arsenic	mg/kg	17	0.5	4.0	3.9	5.1	4.9	3.9	4.4	3.8	4.8
Barium	mg/kg	750	0.5	318	209	138	357	330	229	113	196
Beryllium	mg/kg	5	0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Cadmium	mg/kg	1.4	0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Chromium	mg/kg	64	0.5	10.8	10.7	6.7	7.9	6.8	12.4	7.4	8.5
Cobalt	mg/kg	20	0.5	3.9	2.8	5.7	2.6	1.7	5.2	2.7	3.2
Copper	mg/kg	63	0.5	6.4	4.4	5.3	5.7	4.1	6.1	2.2	6.5
Lead	mg/kg	70	0.5	4.8	4.3	5.3	16.0	11.1	4.4	4.2	4.6
Molybdenum	mg/kg	4	0.5	0.6	0.5	0.9	0.8	0.6	1.3	<0.5	<0.5
Nickel	mg/kg	50	0.5	12.2	8.9	16.5	6.6	4.3	11.0	7.0	10.6
Selenium	mg/kg	1	0.5	0.7	1.0	<0.5	<0.5	<0.5	0.7	<0.5	0.8
Silver	mg/kg	20	0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Thallium	mg/kg	1	0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Tin	mg/kg	5	0.5	0.5	0.6	<0.5	0.6	1.5	<0.5	<0.5	<0.5
Uranium	mg/kg	23	0.5	0.7	0.7	1.4	<0.5	<0.5	0.7	<0.5	<0.5
Vanadium	mg/kg	130	0.5	21.7	13.3	13.9	16.6	12.9	17.1	17.4	20.2
Zinc	mg/kg	200	1	31	10	24	25	20	30	17	19

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PROJECT: A04012A07

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CLIENT NAME: KLOHN CRIPPEN

ATTENTION TO: Nicole Wills

SAMPLING SITE:

SAMPLED BY:

CCME / Tier 1 Metals

DATE RECEIVED: 2015-08-24

DATE REPORTED: 2015-09-04

Parameter	Unit	G / S	RDL	BH15-113 (1.	BH15-114 (0.	BH15-116 (0.	BH15-117 (0.	BH15-118 (0.	BH15-119 (0.	BH15-120 (0.	BH15-121 (0.		
				SAMPLE DESCRIPTION:	0-1.5)	3-0.6)	0-0.15)	0-0.15)	0-0.15)	0-0.15)	0-0.15)	0-0.15)	0-0.15)
				SAMPLE TYPE:	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil
				DATE SAMPLED:	8/20/2015	8/20/2015	8/20/2015	8/20/2015	8/20/2015	8/20/2015	8/20/2015	8/20/2015	8/20/2015
				6897574	6897578	6897588	6897607	6897609	6897610	6897627	6897645		
Antimony	mg/kg	20	0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5		
Arsenic	mg/kg	17	0.5	5.4	4.6	4.7	4.0	4.8	3.6	5.0	3.5		
Barium	mg/kg	750	0.5	78.5	347	220	257	246	318	181	219		
Beryllium	mg/kg	5	0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5		
Cadmium	mg/kg	1.4	0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5		
Chromium	mg/kg	64	0.5	6.6	10.1	9.3	8.2	10.3	8.9	8.2	9.6		
Cobalt	mg/kg	20	0.5	3.5	5.1	3.3	4.5	3.2	4.5	3.8	3.0		
Copper	mg/kg	63	0.5	3.7	7.4	4.4	6.6	4.9	9.1	5.8	7.8		
Lead	mg/kg	70	0.5	3.3	4.5	5.0	4.5	4.5	4.1	3.8	5.3		
Molybdenum	mg/kg	4	0.5	<0.5	0.8	0.5	0.6	0.7	0.7	0.6	<0.5		
Nickel	mg/kg	50	0.5	9.8	14.2	8.0	11.5	10.3	12.7	10.8	10.3		
Selenium	mg/kg	1	0.5	<0.5	0.6	0.6	<0.5	0.5	0.7	0.5	<0.5		
Silver	mg/kg	20	0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5		
Thallium	mg/kg	1	0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5		
Tin	mg/kg	5	0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5		
Uranium	mg/kg	23	0.5	<0.5	0.6	<0.5	<0.5	0.5	0.7	<0.5	1.3		
Vanadium	mg/kg	130	0.5	14.1	19.7	17.6	15.5	20.7	17.3	16.1	17.9		
Zinc	mg/kg	200	1	23	28	30	33	25	41	23	9		

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AGAT WORK ORDER: 15E011146

PROJECT: A04012A07

6310 ROPER ROAD
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CLIENT NAME: KLOHN CRIPPEN

ATTENTION TO: Nicole Wills

SAMPLING SITE:

SAMPLED BY:

CCME / Tier 1 Metals

DATE RECEIVED: 2015-08-24

DATE REPORTED: 2015-09-04

Parameter	Unit	SAMPLE DESCRIPTION:		BH15-122 (0.	BH15-116 (0.	BH15-123 (0.		BH15-124 (0.	
		G / S		3-0.6)	15-0.3)	0-0.15)		0-0.15)	
		RDL		Soil	Soil	Soil		Soil	
		DATE SAMPLED:		8/20/2015	8/20/2015	8/21/2015		8/21/2015	
		G / S	RDL	6897651	6897706	RDL	6901950	RDL	6901985
Antimony	mg/kg	20	0.5	<0.5	<0.5	0.5	0.7	0.5	0.8
Arsenic	mg/kg	17	0.5	3.9	2.1	0.5	7.4	0.5	5.8
Barium	mg/kg	750	0.5	281	43.6	0.5	937	0.5	1610
Beryllium	mg/kg	5	0.5	<0.5	<0.5	0.5	<0.5	0.5	<0.5
Cadmium	mg/kg	1.4	0.5	<0.5	<0.5	0.5	<0.5	0.5	<0.5
Chromium	mg/kg	64	0.5	9.0	5.3	0.5	22.6	0.5	15.1
Cobalt	mg/kg	20	0.5	4.7	2.6	0.5	3.4	0.5	3.2
Copper	mg/kg	63	0.5	6.6	4.6	5	48.9	0.5	11.6
Lead	mg/kg	70	0.5	4.1	2.6	0.5	43.1	0.5	49.8
Molybdenum	mg/kg	4	0.5	0.5	<0.5	0.5	2.5	0.5	1.8
Nickel	mg/kg	50	0.5	11.9	5.8	0.5	13.6	0.5	9.4
Selenium	mg/kg	1	0.5	0.5	<0.5	0.5	0.5	0.5	<0.5
Silver	mg/kg	20	0.5	<0.5	<0.5	0.5	<0.5	0.5	<0.5
Thallium	mg/kg	1	0.5	<0.5	<0.5	0.5	<0.5	0.5	<0.5
Tin	mg/kg	5	0.5	<0.5	<0.5	0.5	1.1	0.5	0.5
Uranium	mg/kg	23	0.5	0.5	<0.5	0.5	<0.5	0.5	<0.5
Vanadium	mg/kg	130	0.5	17.2	9.9	0.5	13.5	0.5	11.7
Zinc	mg/kg	200	1	35	15	1	57	1	85

Comments: RDL - Reported Detection Limit; G / S - Guideline / Standard: Refers to ABTier1 Soil (Ag, F)

6896314-6896464 Results are based on the dry weight of the sample.

6896465 Results are based on the dry weight of the sample.
Values verified with repeat analysis

6896468-6897706 Results are based on the dry weight of the sample.

6901950-6901985 Results are based on the dry weight of the sample.
Values verified with repeat analysis

Certified By:



Certificate of Analysis

AGAT WORK ORDER: 15E011146

PROJECT: A04012A07

6310 ROPER ROAD
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CLIENT NAME: KLOHN CRIPPEN

ATTENTION TO: Nicole Wills

SAMPLING SITE:

SAMPLED BY:

Particle Size by Sieve

DATE RECEIVED: 2015-08-24

DATE REPORTED: 2015-09-04

Parameter	Unit	BH15-066 (0.15-0.3)		BH15-068 (0.3-0.6)		DUP F		DUP G		DUP H		BH15-081 (0.6-1.0)	BH15-101 (0.6-1.0)	BH15-107 (0.15-0.3)
		G / S	RDL	G / S	RDL	G / S	RDL	G / S	RDL	G / S	RDL	G / S	RDL	G / S
Sieve Analysis	%	N/A	44	55	94	48	33	36	39	90				
Sieve Texture			Fine	Coarse	Coarse	Fine	Fine	Fine	Fine	Fine	Fine	Fine	Fine	Coarse

Parameter	Unit	BH15-116 (0.0-0.15)		BH15-120 (0.0-0.15)	BH15-122 (0.3-0.6)	BH15-116 (0.15-0.3)
		G / S	RDL	G / S	RDL	G / S
Sieve Analysis	%	N/A	32	55	29	29
Sieve Texture			Fine	Coarse	Fine	Fine

Comments: RDL - Reported Detection Limit; G / S - Guideline / Standard

6896560-6897706 Value reported is amount of sample retained on a 75 micron sieve after wash with water and represents proportion by weight particles larger than indicated sieve size.

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CLIENT NAME: KLOHN CRIPPEN

ATTENTION TO: Nicole Wills

SAMPLING SITE:

SAMPLED BY:

Soil Analysis - Barium by Fusion ICP (CA)

DATE RECEIVED: 2015-08-24

DATE REPORTED: 2015-09-04

Parameter	Unit	G / S		BH15-054 (0.15-0.3)		BH15-054 (0.3-0.6)		BH15-054 (1.0-1.5)		BH15-055 (0.0-0.15)		BH15-055 (0.15-0.6)		BH15-055 (1.0-1.5)		BH15-056 (0.0-1.0)		BH15-057 (0.15-0.3)	
		RDL	6896314	6896402	6896408	6896419	6896420	6896422	6896425	6896429									
True Barium by Fusion ICP	mg/kg	50	816	715	776	703	824	666	803	814									
Parameter	Unit	G / S		BH15-057 (0.6-1.0)		BH15-057 (1.0-1.5)		BH15-058 (0.3-0.6)		BH15-058 (0.6-1.0)		BH15-058 (1.0-1.5)		BH15-059 (0.0-0.15)		BH15-059 (0.15-0.3)		BH15-059 (1.0-1.5)	
		RDL	6896434	6896437	6896448	6896458	6896464	6896465	6896468	6896469									
True Barium by Fusion ICP	mg/kg	50	382	853	785	841	763	2450	992	737									
Parameter	Unit	G / S		BH15-060 (0.15-0.3)		BH15-060 (0.3-0.6)		BH15-060 (1.0-1.5)		BH15-061 (0.0-0.15)		BH15-061 (0.15-0.6)		BH15-061 (1.0-1.5)		BH15-066 (0.0-1.0)		BH15-066 (1.0-3.0)	
		RDL	6896472	6896476	6896479	6896482	6896492	6896509	6896560	6896564									
True Barium by Fusion ICP	mg/kg	50	755	641	578	809	768	763	740	572									
Parameter	Unit	G / S		BH15-066 (1.0-1.5)		BH15-067 (0.3-0.6)		BH15-067 (1.0-1.5)		BH15-068 (0.15-0.3)		BH15-068 (0.3-0.6)		BH15-068 (1.0-1.5)		BH15-069 (0.6-1.0)		BH15-069 (1.0-3.0)	
		RDL	6896567	6896572	6896574	6896578	6896583	6896599	6896600	6896601									
True Barium by Fusion ICP	mg/kg	50	696	779	822	879	795	729	790	836									
Parameter	Unit	G / S		BH15-069 (0.6-1.0)		BH15-069 (1.0-1.5)		DUP F		DUP G		DUP H		BH15-081 (0.6-1.0)		BH15-101 (0.6-1.0)		BH15-107 (0.15-0.3)	
		RDL	6896604	6896609	6896777	6896778	6896779	6896839	6897293	6897468									
True Barium by Fusion ICP	mg/kg	50	696	629	568	525	631	630	597	828									

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AGAT WORK ORDER: 15E011146

PROJECT: A04012A07

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CLIENT NAME: KLOHN CRIPPEN

ATTENTION TO: Nicole Wills

SAMPLING SITE:

SAMPLED BY:

Soil Analysis - Barium by Fusion ICP (CA)

DATE RECEIVED: 2015-08-24

DATE REPORTED: 2015-09-04

Parameter	Unit	G / S	RDL	BH15-116 (0.	BH15-117 (0.	BH15-118 (0.	BH15-119 (0.	BH15-120 (0.	BH15-121 (0.	BH15-122 (0.	BH15-116 (0.
				0-0.15)	0-0.15)	0-0.15)	0-0.15)	0-0.15)	0-0.15)	3-0.6)	15-0.3)
SAMPLE DESCRIPTION:				0-0.15)	0-0.15)	0-0.15)	0-0.15)	0-0.15)	0-0.15)	3-0.6)	15-0.3)
SAMPLE TYPE:				Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil
DATE SAMPLED:				8/20/2015	8/20/2015	8/20/2015	8/20/2015	8/20/2015	8/20/2015	8/20/2015	8/20/2015
True Barium by Fusion ICP	mg/kg	50	802	802	674	617	655	759	784	650	703

Comments: RDL - Reported Detection Limit; G / S - Guideline / Standard
6896314-6897706 Result is based on the dry weight of the sample.

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CLIENT NAME: KLOHN CRIPPEN

ATTENTION TO: Nicole Wills

SAMPLING SITE:

SAMPLED BY:

Soil Analysis - Salinity (AB Tier 1 - pH Calcium Chloride)

DATE RECEIVED: 2015-08-24

DATE REPORTED: 2015-09-04

Parameter	Unit	SAMPLE DESCRIPTION:		BH15-054 (0.	BH15-054 (0.	BH15-054 (1.	BH15-055	BH15-055 (0.	BH15-055 (1.	BH15-056 (0.	BH15-056 (0.
		15-0.3)		3-0.6)	0-1.5)	(0-0.15)	6-1.0)	0-1.5)	3-0.6)	6-1.0)	
		Soil		Soil	Soil	Soil	Soil	Soil	Soil	Soil	
		DATE SAMPLED:		8/17/2015	8/17/2015	8/17/2015	8/17/2015	8/17/2015	8/17/2015	8/17/2015	8/17/2015
		G / S	RDL	6896314	6896402	6896408	6896419	6896420	6896422	6896424	6896425
pH (CaCl ₂ Extraction)	pH Units		0.02	6.01	5.67	6.66	6.09	6.72	6.48	5.38	5.56
Electrical Conductivity (Sat. Paste)	dS/m	0.01	0.20	0.37	0.44	0.30	0.26	0.33	0.38	0.38	0.26
Sodium Adsorption Ratio	N/A		0.28	0.19	0.19	0.21	0.19	0.21	0.18	0.17	
Saturation Percentage	%	1	37	133	39	57	38	40	154	125	
Chloride, Soluble	mg/L	5	8	8	5	8	<5	<5	8	13	
Calcium, Soluble	mg/L	1	24	56	50	42	39	42	50	38	
Potassium, Soluble	mg/L	2	3	<2	3	2	2	2	<2	<2	
Magnesium, Soluble	mg/L	2	6	14	18	11	9	13	20	18	
Sodium, Soluble	mg/L	2	6	6	6	6	5	6	6	5	
Sulfate, Soluble	mg/L	2	25	69	20	48	23	28	72	32	
Theoretical Gypsum Requirement	tonnes/ha	N/A	0	0	0	0	0	0	0	0	
Calcium, Soluble (meq/L)	meq/L	0.05	1.20	2.79	2.50	2.10	1.95	2.10	2.50	1.90	
Calcium, Soluble (mg/kg)	mg/kg	1	9	74	20	24	15	17	77	48	
Chloride, Soluble (meq/L)	meq/L	0.06	0.23	0.23	0.14	0.23	<0.06	<0.06	0.23	0.37	
Chloride, Soluble (mg/kg)	mg/kg	2	3	11	2	5	<2	<2	12	16	
Magnesium, Soluble (meq/L)	meq/L	0.08	0.49	1.15	1.48	0.91	0.74	1.07	1.65	1.48	
Magnesium, Soluble (mg/kg)	mg/kg	1	2	19	7	6	3	5	31	23	
Potassium, Soluble (meq/L)	meq/L	0.05	0.08	<0.05	0.08	0.05	0.05	0.05	<0.05	<0.05	
Potassium, Soluble (mg/kg)	mg/kg	2	<2	<2	<2	<2	<2	<2	<2	<2	
Sodium, Soluble (meq/L)	meq/L	0.09	0.26	0.26	0.26	0.26	0.22	0.26	0.26	0.22	
Sodium, Soluble (mg/kg)	mg/kg	2	2	8	2	3	<2	2	9	6	
Sulfur (as Sulfate), Soluble (meq/L)	meq/L	0.04	0.52	1.44	0.42	1.00	0.48	0.58	1.50	0.67	
Sulfur (as Sulfate), Soluble (mg/kg)	mg/kg	2	9	92	8	27	9	11	111	40	

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CLIENT NAME: KLOHN CRIPPEN

ATTENTION TO: Nicole Wills

SAMPLING SITE:

SAMPLED BY:

Soil Analysis - Salinity (AB Tier 1 - pH Calcium Chloride)

DATE RECEIVED: 2015-08-24

DATE REPORTED: 2015-09-04

Parameter	Unit	SAMPLE DESCRIPTION:		BH15-056 (1.	BH15-057 (0.	BH15-057 (0.	BH15-057 (1.	BH15-058 (0.	BH15-058 (0.	BH15-058 (1.	BH15-059 (0.
		Soil		0-1.5)	15-0.3)	6-1.0)	0-1.5)	3-0.6)	6-1.0)	0-1.5)	0-0.15)
		Soil		8/17/2015	8/17/2015	8/17/2015	8/17/2015	8/17/2015	8/17/2015	8/17/2015	8/17/2015
		G / S	RDL	6896427	6896429	6896434	6896437	6896448	6896458	6896464	6896465
pH (CaCl2 Extraction)	pH Units	0.02	5.93	5.83	5.84	5.61	5.47	5.77	6.48	6.08	
Electrical Conductivity (Sat. Paste)	dS/m	0.01	0.32	0.21	0.32	0.44	0.35	0.20	0.21	0.23	
Sodium Adsorption Ratio	N/A		0.24	0.27	0.43	0.51	0.20	0.27	0.28	0.22	
Saturation Percentage	%	1	49	42	45	95	111	42	54	43	
Chloride, Soluble	mg/L	5	7	8	12	63	8	7	<5	5	
Calcium, Soluble	mg/L	1	38	25	40	51	45	26	27	30	
Potassium, Soluble	mg/L	2	2	3	4	<2	3	2	3	5	
Magnesium, Soluble	mg/L	2	16	7	11	15	14	7	5	5	
Sodium, Soluble	mg/L	2	7	6	12	16	6	6	6	5	
Sulfate, Soluble	mg/L	2	31	25	34	40	92	34	18	37	
Theoretical Gypsum Requirement	tonnes/ha	N/A	0	0	0	0	0	0	0	0	
Calcium, Soluble (meq/L)	meq/L	0.05	1.90	1.25	2.00	2.54	2.25	1.30	1.35	1.50	
Calcium, Soluble (mg/kg)	mg/kg	1	19	11	18	48	50	11	15	13	
Chloride, Soluble (meq/L)	meq/L	0.06	0.20	0.23	0.34	1.78	0.23	0.20	<0.06	0.14	
Chloride, Soluble (mg/kg)	mg/kg	2	3	3	5	60	9	3	<2	2	
Magnesium, Soluble (meq/L)	meq/L	0.08	1.32	0.58	0.91	1.23	1.15	0.58	0.41	0.41	
Magnesium, Soluble (mg/kg)	mg/kg	1	8	3	5	14	16	3	3	2	
Potassium, Soluble (meq/L)	meq/L	0.05	0.05	0.08	0.10	<0.05	0.08	0.05	0.08	0.13	
Potassium, Soluble (mg/kg)	mg/kg	2	<2	<2	<2	<2	3	<2	<2	2	
Sodium, Soluble (meq/L)	meq/L	0.09	0.30	0.26	0.52	0.70	0.26	0.26	0.26	0.22	
Sodium, Soluble (mg/kg)	mg/kg	2	3	3	5	15	7	3	3	2	
Sulfur (as Sulfate), Soluble (meq/L)	meq/L	0.04	0.65	0.52	0.71	0.83	1.92	0.71	0.37	0.77	
Sulfur (as Sulfate), Soluble (mg/kg)	mg/kg	2	15	11	15	38	102	14	10	16	

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CLIENT NAME: KLOHN CRIPPEN

ATTENTION TO: Nicole Wills

SAMPLING SITE:

SAMPLED BY:

Soil Analysis - Salinity (AB Tier 1 - pH Calcium Chloride)

DATE RECEIVED: 2015-08-24

DATE REPORTED: 2015-09-04

Parameter	Unit	Soil Analysis - Salinity (AB Tier 1 - pH Calcium Chloride)									
		SAMPLE DESCRIPTION:		BH15-059 (0.	BH15-059 (1.	BH15-060 (0.	BH15-060 (0.	BH15-060 (1.	BH15-061	BH15-061 (0.	BH15-061 (1.
		Soil		15-0.3)	0-1.5)	15-0.3)	3-0.6)	0-1.5)	(0-0.15)	3-0.6)	0-1.5)
		Soil		8/17/2015	8/17/2015	8/17/2015	8/17/2015	8/17/2015	8/17/2015	8/17/2015	8/17/2015
DATE SAMPLED:		G / S	RDL	6896468	6896469	6896472	6896476	6896479	6896482	6896492	6896509
pH (CaCl ₂ Extraction)	pH Units		0.02	5.64	6.66	5.94	5.16	6.75	6.53	5.75	6.77
Electrical Conductivity (Sat. Paste)	dS/m	0.01	0.65	0.27	0.29	0.42	0.31	0.44	0.75	0.67	
Sodium Adsorption Ratio	N/A		0.22	0.32	0.56	0.55	0.63	0.80	2.31	2.19	
Saturation Percentage	%	1	86	40	43	152	39	40	131	42	
Chloride, Soluble	mg/L	5	10	8	9	12	10	7	50	66	
Calcium, Soluble	mg/L	1	88	36	29	50	32	52	53	36	
Potassium, Soluble	mg/L	2	11	7	10	8	14	4	26	56	
Magnesium, Soluble	mg/L	2	23	7	7	13	7	10	15	7	
Sodium, Soluble	mg/L	2	9	8	13	17	15	24	74	55	
Sulfate, Soluble	mg/L	2	249	28	56	131	29	49	212	83	
Theoretical Gypsum Requirement	tonnes/ha	N/A	0	0	0	0	0	0	0	0	
Calcium, Soluble (meq/L)	meq/L	0.05	4.39	1.80	1.45	2.50	1.60	2.59	2.64	1.80	
Calcium, Soluble (mg/kg)	mg/kg	1	76	14	12	76	12	21	69	15	
Chloride, Soluble (meq/L)	meq/L	0.06	0.28	0.23	0.25	0.34	0.28	0.20	1.41	1.86	
Chloride, Soluble (mg/kg)	mg/kg	2	9	3	4	18	4	3	66	28	
Magnesium, Soluble (meq/L)	meq/L	0.08	1.89	0.58	0.58	1.07	0.58	0.82	1.23	0.58	
Magnesium, Soluble (mg/kg)	mg/kg	1	20	3	3	20	3	4	20	3	
Potassium, Soluble (meq/L)	meq/L	0.05	0.28	0.18	0.26	0.20	0.36	0.10	0.66	1.43	
Potassium, Soluble (mg/kg)	mg/kg	2	9	3	4	12	5	<2	34	24	
Sodium, Soluble (meq/L)	meq/L	0.09	0.39	0.35	0.57	0.74	0.65	1.04	3.22	2.39	
Sodium, Soluble (mg/kg)	mg/kg	2	8	3	6	26	6	10	97	23	
Sulfur (as Sulfate), Soluble (meq/L)	meq/L	0.04	5.18	0.58	1.17	2.73	0.60	1.02	4.41	1.73	
Sulfur (as Sulfate), Soluble (mg/kg)	mg/kg	2	214	11	24	199	11	20	278	35	

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CLIENT NAME: KLOHN CRIPPEN

ATTENTION TO: Nicole Wills

SAMPLING SITE:

SAMPLED BY:

Soil Analysis - Salinity (AB Tier 1 - pH Calcium Chloride)

DATE RECEIVED: 2015-08-24

DATE REPORTED: 2015-09-04

Parameter	Unit	Soil Analysis - Salinity (AB Tier 1 - pH Calcium Chloride)									
		SAMPLE DESCRIPTION:		BH15-062 (0.	BH15-062 (0.	BH15-062 (1.	BH15-063 (0.	BH15-063 (0.	BH15-063 (1.	BH15-064 (0.	BH15-064 (0.
		Soil		15-0.3)	3-0.6)	0-1.5)	15-0.3)	3-0.6)	0-1.5)	15-0.3)	6-1.0)
		Soil		8/17/2015	8/17/2015	8/17/2015	8/17/2015	8/17/2015	8/17/2015	8/17/2015	8/17/2015
DATE SAMPLED:		G / S	RDL	6896514	6896527	6896529	6896530	6896531	6896532	6896535	6896537
pH (CaCl2 Extraction)	pH Units		0.02	6.68	6.29	6.80	5.61	5.80	6.79	5.33	6.69
Electrical Conductivity (Sat. Paste)	dS/m	0.01	0.63	0.56	0.25	0.45	0.29	0.35	0.21	0.31	
Sodium Adsorption Ratio	N/A		0.75	0.24	0.39	0.30	0.33	0.40	0.30	0.31	
Saturation Percentage	%		1	38	54	40	119	72	38	137	39
Chloride, Soluble	mg/L		5	18	9	5	15	11	11	12	7
Calcium, Soluble	mg/L		1	66	69	33	56	41	41	28	35
Potassium, Soluble	mg/L		2	23	13	3	3	3	7	<2	6
Magnesium, Soluble	mg/L		2	20	22	5	17	10	10	8	10
Sodium, Soluble	mg/L		2	27	9	9	10	9	11	7	8
Sulfate, Soluble	mg/L		2	72	103	22	118	25	28	29	35
Theoretical Gypsum Requirement	tonnes/ha		N/A	0	0	0	0	0	0	0	0
Calcium, Soluble (meq/L)	meq/L		0.05	3.29	3.44	1.65	2.79	2.05	2.05	1.40	1.75
Calcium, Soluble (mg/kg)	mg/kg		1	25	37	13	67	30	16	38	14
Chloride, Soluble (meq/L)	meq/L		0.06	0.51	0.25	0.14	0.42	0.31	0.31	0.34	0.20
Chloride, Soluble (mg/kg)	mg/kg		2	7	5	2	18	8	4	16	3
Magnesium, Soluble (meq/L)	meq/L		0.08	1.65	1.81	0.41	1.40	0.82	0.82	0.66	0.82
Magnesium, Soluble (mg/kg)	mg/kg		1	8	12	2	20	7	4	11	4
Potassium, Soluble (meq/L)	meq/L		0.05	0.59	0.33	0.08	0.08	0.08	0.18	<0.05	0.15
Potassium, Soluble (mg/kg)	mg/kg		2	9	7	<2	4	2	3	<2	2
Sodium, Soluble (meq/L)	meq/L		0.09	1.17	0.39	0.39	0.43	0.39	0.48	0.30	0.35
Sodium, Soluble (mg/kg)	mg/kg		2	10	5	4	12	6	4	10	3
Sulfur (as Sulfate), Soluble (meq/L)	meq/L		0.04	1.50	2.14	0.46	2.46	0.52	0.58	0.60	0.73
Sulfur (as Sulfate), Soluble (mg/kg)	mg/kg		2	27	56	9	140	18	11	40	14

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AGAT WORK ORDER: 15E011146

PROJECT: A04012A07

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CLIENT NAME: KLOHN CRIPPEN

ATTENTION TO: Nicole Wills

SAMPLING SITE:

SAMPLED BY:

Soil Analysis - Salinity (AB Tier 1 - pH Calcium Chloride)

DATE RECEIVED: 2015-08-24

DATE REPORTED: 2015-09-04

Parameter	Unit	G / S	RDL	BH15-064 (1.	BH15-065 (0.	BH15-065 (0.	BH15-065 (1.	BH15-066 (0.	BH15-066 (0.	BH15-066 (1.	BH15-067 (0.
				0-1.5)	15-0.3)	3-0.6)	0-1.5)	15-0.3)	3-0.6)	0-1.5)	3-0.6)
				SAMPLE DESCRIPTION:	Soil	Soil	Soil	Soil	Soil	Soil	Soil
				SAMPLE TYPE:	8/17/2015	8/17/2015	8/17/2015	8/17/2015	8/17/2015	8/17/2015	8/17/2015
				6896540	6896551	6896556	6896558	6896560	6896564	6896567	6896572
pH (CaCl ₂ Extraction)	pH Units		0.02	6.33	6.24	5.72	6.87	5.76	5.74	6.34	5.78
Electrical Conductivity (Sat. Paste)	dS/m	0.01	0.49	0.46	0.37	0.31	0.50	0.36	0.53	0.69	
Sodium Adsorption Ratio	N/A		0.37	0.36	0.28	0.39	0.25	0.26	0.29	0.21	
Saturation Percentage	%	1	44	57	114	36	76	61	47	79	
Chloride, Soluble	mg/L	5	15	10	14	7	12	9	11	10	
Calcium, Soluble	mg/L	1	60	54	47	34	63	48	70	98	
Potassium, Soluble	mg/L	2	5	4	2	5	2	3	4	4	
Magnesium, Soluble	mg/L	2	19	17	18	9	21	13	22	23	
Sodium, Soluble	mg/L	2	13	12	9	10	9	8	11	9	
Sulfate, Soluble	mg/L	2	26	48	59	28	134	67	61	285	
Theoretical Gypsum Requirement	tonnes/ha	N/A	0	0	0	0	0	0	0	0	
Calcium, Soluble (meq/L)	meq/L	0.05	2.99	2.69	2.35	1.70	3.14	2.40	3.49	4.89	
Calcium, Soluble (mg/kg)	mg/kg	1	26	31	54	12	48	29	33	77	
Chloride, Soluble (meq/L)	meq/L	0.06	0.42	0.28	0.39	0.20	0.34	0.25	0.31	0.28	
Chloride, Soluble (mg/kg)	mg/kg	2	7	6	16	3	9	5	5	8	
Magnesium, Soluble (meq/L)	meq/L	0.08	1.56	1.40	1.48	0.74	1.73	1.07	1.81	1.89	
Magnesium, Soluble (mg/kg)	mg/kg	1	8	10	21	3	16	8	10	18	
Potassium, Soluble (meq/L)	meq/L	0.05	0.13	0.10	0.05	0.13	0.05	0.08	0.10	0.10	
Potassium, Soluble (mg/kg)	mg/kg	2	2	2	2	<2	<2	<2	<2	3	
Sodium, Soluble (meq/L)	meq/L	0.09	0.57	0.52	0.39	0.43	0.39	0.35	0.48	0.39	
Sodium, Soluble (mg/kg)	mg/kg	2	6	7	10	4	7	5	5	7	
Sulfur (as Sulfate), Soluble (meq/L)	meq/L	0.04	0.54	1.00	1.23	0.58	2.79	1.40	1.27	5.93	
Sulfur (as Sulfate), Soluble (mg/kg)	mg/kg	2	11	27	67	10	102	41	29	225	

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PROJECT: A04012A07

6310 ROPER ROAD
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CLIENT NAME: KLOHN CRIPPEN

ATTENTION TO: Nicole Wills

SAMPLING SITE:

SAMPLED BY:

Soil Analysis - Salinity (AB Tier 1 - pH Calcium Chloride)

DATE RECEIVED: 2015-08-24

DATE REPORTED: 2015-09-04

Parameter	Unit	SAMPLE DESCRIPTION:		BH15-067 (0.	BH15-067 (1.	BH15-068 (0.	BH15-068 (0.	BH15-068 (0.	BH15-069 (0.	BH15-069 (0.	BH15-069 (1.
		Soil		6-1.0)	0-1.5)	15-0.3)	3-0.6)	6-1.0)	3-0.6)	6-1.0)	0-1.5)
		Soil		Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil
		Soil		8/17/2015	8/17/2015	8/17/2015	8/17/2015	8/17/2015	8/17/2015	8/17/2015	8/17/2015
G / S		RDL	6896574	6896578	6896583	6896599	6896600	6896601	6896604	6896609	
pH (CaCl2 Extraction)	pH Units	0.02	5.60	6.18	6.33	5.90	5.96	5.18	5.42	6.42	
Electrical Conductivity (Sat. Paste)	dS/m	0.01	0.27	0.25	0.38	0.98	0.42	0.27	0.36	0.31	
Sodium Adsorption Ratio	N/A		0.30	0.27	0.31	0.15	0.28	0.18	0.37	0.46	
Saturation Percentage	%	1	116	33	46	88	48	139	42	50	
Chloride, Soluble	mg/L	5	10	7	6	12	11	10	16	14	
Calcium, Soluble	mg/L	1	32	37	59	149	65	39	51	39	
Potassium, Soluble	mg/L	2	2	3	4	4	5	4	4	4	
Magnesium, Soluble	mg/L	2	13	8	4	40	19	12	10	7	
Sodium, Soluble	mg/L	2	8	7	9	8	10	5	11	12	
Sulfate, Soluble	mg/L	2	57	22	81	384	43	49	34	19	
Theoretical Gypsum Requirement	tonnes/ha	N/A	0	0	0	0	0	0	0	0	
Calcium, Soluble (meq/L)	meq/L	0.05	1.60	1.85	2.94	7.44	3.24	1.95	2.54	1.95	
Calcium, Soluble (mg/kg)	mg/kg	1	37	12	27	131	31	54	21	20	
Chloride, Soluble (meq/L)	meq/L	0.06	0.28	0.20	0.17	0.34	0.31	0.28	0.45	0.39	
Chloride, Soluble (mg/kg)	mg/kg	2	12	2	3	11	5	14	7	7	
Magnesium, Soluble (meq/L)	meq/L	0.08	1.07	0.66	0.33	3.29	1.56	0.99	0.82	0.58	
Magnesium, Soluble (mg/kg)	mg/kg	1	15	3	2	35	9	17	4	4	
Potassium, Soluble (meq/L)	meq/L	0.05	0.05	0.08	0.10	0.10	0.13	0.10	0.10	0.10	
Potassium, Soluble (mg/kg)	mg/kg	2	2	<2	<2	4	2	6	<2	2	
Sodium, Soluble (meq/L)	meq/L	0.09	0.35	0.30	0.39	0.35	0.43	0.22	0.48	0.52	
Sodium, Soluble (mg/kg)	mg/kg	2	9	2	4	7	5	7	5	6	
Sulfur (as Sulfate), Soluble (meq/L)	meq/L	0.04	1.19	0.46	1.69	8.00	0.90	1.02	0.71	0.40	
Sulfur (as Sulfate), Soluble (mg/kg)	mg/kg	2	66	7	37	338	21	68	14	10	

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PROJECT: A04012A07

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CLIENT NAME: KLOHN CRIPPEN

ATTENTION TO: Nicole Wills

SAMPLING SITE:

SAMPLED BY:

Soil Analysis - Salinity (AB Tier 1 - pH Calcium Chloride)

DATE RECEIVED: 2015-08-24

DATE REPORTED: 2015-09-04

Parameter	Unit	SAMPLE DESCRIPTION:		DUP F	DUP G	DUP H	BH15-081 (0.	DUP J	BH15-101 (0.	BH15-107 (0.	BH15-108 (0.
		SAMPLE TYPE:		Soil	Soil	Soil	6-1.0)	Soil	6-1.0)	15-0.3)	15-0.3)
		DATE SAMPLED:		8/17/2015	8/17/2015	8/17/2015	8/18/2015	8/18/2015	8/19/2015	8/19/2015	8/19/2015
		G / S	RDL	6896777	6896778	6896779	6896839	6897018	6897293	6897468	6897514
pH (CaCl2 Extraction)	pH Units		0.02	6.69	5.59	5.32	5.71	5.86	5.70	6.47	5.69
Electrical Conductivity (Sat. Paste)	dS/m	0.01	0.37	0.33	0.33	0.77	1.64	0.63	1.31	0.76	
Sodium Adsorption Ratio	N/A		0.25	0.30	0.14	0.70	5.89	0.56	0.53	0.53	
Saturation Percentage	%	1	38	106	152	120	85	103	47	100	
Chloride, Soluble	mg/L	5	6	15	8	22	40	25	235	51	
Calcium, Soluble	mg/L	1	55	41	42	109	84	88	150	99	
Potassium, Soluble	mg/L	2	3	2	3	5	8	2	75	9	
Magnesium, Soluble	mg/L	2	12	17	14	24	26	18	30	27	
Sodium, Soluble	mg/L	2	8	9	4	31	241	22	27	23	
Sulfate, Soluble	mg/L	2	24	39	100	39	640	50	374	141	
Theoretical Gypsum Requirement	tonnes/ha	N/A	0	0	0	0	0	0	0	0	
Calcium, Soluble (meq/L)	meq/L	0.05	2.74	2.05	2.10	5.44	4.19	4.39	7.49	4.94	
Calcium, Soluble (mg/kg)	mg/kg	1	21	43	64	131	71	91	71	99	
Chloride, Soluble (meq/L)	meq/L	0.06	0.17	0.42	0.23	0.62	1.13	0.71	6.63	1.44	
Chloride, Soluble (mg/kg)	mg/kg	2	2	16	12	26	34	26	110	51	
Magnesium, Soluble (meq/L)	meq/L	0.08	0.99	1.40	1.15	1.97	2.14	1.48	2.47	2.22	
Magnesium, Soluble (mg/kg)	mg/kg	1	5	18	21	29	22	19	14	27	
Potassium, Soluble (meq/L)	meq/L	0.05	0.08	0.05	0.08	0.13	0.20	0.05	1.92	0.23	
Potassium, Soluble (mg/kg)	mg/kg	2	<2	2	5	6	7	2	35	9	
Sodium, Soluble (meq/L)	meq/L	0.09	0.35	0.39	0.17	1.35	10.5	0.96	1.17	1.00	
Sodium, Soluble (mg/kg)	mg/kg	2	3	10	6	37	205	23	13	23	
Sulfur (as Sulfate), Soluble (meq/L)	meq/L	0.04	0.50	0.81	2.08	0.81	13.3	1.04	7.79	2.94	
Sulfur (as Sulfate), Soluble (mg/kg)	mg/kg	2	9	41	152	47	544	52	176	141	

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CLIENT NAME: KLOHN CRIPPEN

ATTENTION TO: Nicole Wills

SAMPLING SITE:

SAMPLED BY:

Soil Analysis - Salinity (AB Tier 1 - pH Calcium Chloride)

DATE RECEIVED: 2015-08-24

DATE REPORTED: 2015-09-04

Parameter	Unit	SAMPLE DESCRIPTION:		BH15-113 (0.	BH15-113 (0.	BH15-113 (1.	BH15-114 (0.	BH15-116 (0.	BH15-117 (0.	BH15-118 (0.	BH15-119 (0.
		3-0.6)		6-1.0)	0-1.5)	3-0.6)	0-0.15)	0-0.15)	0-0.15)	0-0.15)	0-0.15)
		Soil		Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil
		DATE SAMPLED:		8/20/2015	8/20/2015	8/20/2015	8/20/2015	8/20/2015	8/20/2015	8/20/2015	8/20/2015
		G / S	RDL	6897567	6897569	6897574	6897578	6897588	6897607	6897609	6897610
pH (CaCl2 Extraction)	pH Units		0.02	5.21	5.69	6.26	6.16	6.03	5.80	5.93	5.83
Electrical Conductivity (Sat. Paste)	dS/m		0.01	1.33	0.23	0.25	0.28	0.55	0.27	0.29	0.31
Sodium Adsorption Ratio	N/A			0.30	0.29	0.26	0.27	0.32	0.35	0.24	0.30
Saturation Percentage	%		1	143	46	40	44	155	122	129	107
Chloride, Soluble	mg/L		5	15	13	9	20	23	18	21	20
Calcium, Soluble	mg/L		1	178	29	29	27	86	42	53	52
Potassium, Soluble	mg/L		2	23	5	16	20	2	<2	<2	<2
Magnesium, Soluble	mg/L		2	59	9	6	6	36	19	19	19
Sodium, Soluble	mg/L		2	18	7	6	6	14	11	8	10
Sulfate, Soluble	mg/L		2	702	46	28	39	36	19	20	31
Theoretical Gypsum Requirement	tonnes/ha		N/A	0	0	0	0	0	0	0	0
Calcium, Soluble (meq/L)	meq/L		0.05	8.88	1.45	1.45	1.35	4.29	2.10	2.64	2.59
Calcium, Soluble (mg/kg)	mg/kg		1	255	13	12	12	133	51	68	56
Chloride, Soluble (meq/L)	meq/L		0.06	0.42	0.37	0.25	0.56	0.65	0.51	0.59	0.56
Chloride, Soluble (mg/kg)	mg/kg		2	21	6	4	9	36	22	27	21
Magnesium, Soluble (meq/L)	meq/L		0.08	4.85	0.74	0.49	0.49	2.96	1.56	1.56	1.56
Magnesium, Soluble (mg/kg)	mg/kg		1	84	4	2	3	56	23	25	20
Potassium, Soluble (meq/L)	meq/L		0.05	0.59	0.13	0.41	0.51	0.05	<0.05	<0.05	<0.05
Potassium, Soluble (mg/kg)	mg/kg		2	33	2	6	9	3	<2	<2	<2
Sodium, Soluble (meq/L)	meq/L		0.09	0.78	0.30	0.26	0.26	0.61	0.48	0.35	0.43
Sodium, Soluble (mg/kg)	mg/kg		2	26	3	2	3	22	13	10	11
Sulfur (as Sulfate), Soluble (meq/L)	meq/L		0.04	14.6	0.96	0.58	0.81	0.75	0.40	0.42	0.65
Sulfur (as Sulfate), Soluble (mg/kg)	mg/kg		2	1000	21	11	17	56	23	26	33

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CLIENT NAME: KLOHN CRIPPEN

ATTENTION TO: Nicole Wills

SAMPLING SITE:

SAMPLED BY:

Soil Analysis - Salinity (AB Tier 1 - pH Calcium Chloride)

DATE RECEIVED: 2015-08-24

DATE REPORTED: 2015-09-04

Parameter	Unit	SAMPLE DESCRIPTION:		BH15-120 (0.	BH15-121 (0.	BH15-122 (0.	BH15-116 (0.	BH15-123 (0.	BH15-124 (0.
		Soil		0-0.15)	0-0.15)	3-0.6)	15-0.3)	0-0.15)	0-0.15)
		Soil		0-0.15)	0-0.15)	3-0.6)	15-0.3)	0-0.15)	0-0.15)
		Soil		0-0.15)	0-0.15)	3-0.6)	15-0.3)	0-0.15)	0-0.15)
DATE SAMPLED:		8/20/2015	8/20/2015	8/20/2015	8/20/2015	8/21/2015	8/21/2015	8/21/2015	
G / S		RDL	6897627	6897645	6897651	6897706	6901950	6901985	
pH (CaCl2 Extraction)	pH Units	0.02	6.01	5.95	5.36	5.84	6.37	5.99	
Electrical Conductivity (Sat. Paste)	dS/m	0.01	0.36	0.33	0.35	0.35	1.59	1.04	
Sodium Adsorption Ratio	N/A		0.36	0.40	0.48	0.34	2.45	0.54	
Saturation Percentage	%	1	160	91	157	118	29	68	
Chloride, Soluble	mg/L	5	25	19	26	17	122	61	
Calcium, Soluble	mg/L	1	62	57	59	58	174	128	
Potassium, Soluble	mg/L	2	<2	<2	4	2	18	20	
Magnesium, Soluble	mg/L	2	23	22	22	23	34	48	
Sodium, Soluble	mg/L	2	13	14	17	12	135	28	
Sulfate, Soluble	mg/L	2	31	24	30	28	497	302	
Theoretical Gypsum Requirement	tonnes/ha	N/A	0	0	0	0	0	0	
Calcium, Soluble (meq/L)	meq/L	0.05	3.09	2.84	2.94	2.89	8.68	6.39	
Calcium, Soluble (mg/kg)	mg/kg	1	99	52	93	68	50	87	
Chloride, Soluble (meq/L)	meq/L	0.06	0.71	0.54	0.73	0.48	3.44	1.72	
Chloride, Soluble (mg/kg)	mg/kg	2	40	17	41	20	35	41	
Magnesium, Soluble (meq/L)	meq/L	0.08	1.89	1.81	1.81	1.89	2.80	3.95	
Magnesium, Soluble (mg/kg)	mg/kg	1	37	20	35	27	10	33	
Potassium, Soluble (meq/L)	meq/L	0.05	<0.05	<0.05	0.10	0.05	0.46	0.51	
Potassium, Soluble (mg/kg)	mg/kg	2	<2	<2	6	2	5	14	
Sodium, Soluble (meq/L)	meq/L	0.09	0.57	0.61	0.74	0.52	5.87	1.22	
Sodium, Soluble (mg/kg)	mg/kg	2	21	13	27	14	39	19	
Sulfur (as Sulfate), Soluble (meq/L)	meq/L	0.04	0.65	0.50	0.62	0.58	10.3	6.29	
Sulfur (as Sulfate), Soluble (mg/kg)	mg/kg	2	50	22	47	33	144	205	

Comments: RDL - Reported Detection Limit; G / S - Guideline / Standard

6896314-6901985 If sodium results in mg/L are less than detection, SAR is non-calculable and is reported as 0.

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CLIENT NAME: KLOHN CRIPPEN

ATTENTION TO: Nicole Wills

SAMPLING SITE:

SAMPLED BY:

Petroleum Hydrocarbons (BTEX/F1-F4) in Soil (CWS)

DATE RECEIVED: 2015-08-24

DATE REPORTED: 2015-09-04

Parameter	Unit	SAMPLE DESCRIPTION:									
		G / S		BH15-054 (0.	BH15-054 (0.	BH15-054 (1.	BH15-055	BH15-055 (0.	BH15-055 (1.	BH15-056 (0.	BH15-056 (0.
		RDL		15-0.3)	3-0.6)	0-1.5)	(0-0.15)	6-1.0)	0-1.5)	3-0.6)	6-1.0)
		DATE SAMPLED:		8/17/2015	8/17/2015	8/17/2015	8/17/2015	8/17/2015	8/17/2015	8/17/2015	8/17/2015
Benzene	mg/kg	0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	
Toluene	mg/kg	0.05	<0.05	0.11	<0.05	<0.05	<0.05	<0.05	<0.05	1.01	
Ethylbenzene	mg/kg	0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	
Xylenes	mg/kg	0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	0.08	
C6 - C10 (F1)	mg/kg	10	<10	<10	<10	<10	<10	<10	<10	<10	
C6 - C10 (F1 minus BTEX)	mg/kg	10	<10	<10	<10	<10	<10	<10	<10	<10	
C10 - C16 (F2)	mg/kg	10	<10	<10	<10	<10	<10	<10	<10	<10	
C16 - C34 (F3)	mg/kg	10	17	244	<10	105	<10	<10	112	434	
C34 - C50 (F4)	mg/kg	10	13	174	<10	83	<10	<10	98	320	
Gravimetric Heavy Hydrocarbons	mg/kg	1000	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	
Moisture Content	%	1	6	50	5	15	5	9	50	43	
Surrogate	Unit	Acceptable Limits									
Toluene-d8 (BTEX)	%	50-150	95	100	100	98	100	100	99	89	
Ethylbenzene-d10 (BTEX)	%	50-150	97	123	111	101	112	100	112	83	
o-Terphenyl (F2-F4)	%	50-150	93	89	105	93	115	97	112	90	

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CLIENT NAME: KLOHN CRIPPEN

ATTENTION TO: Nicole Wills

SAMPLING SITE:

SAMPLED BY:

Petroleum Hydrocarbons (BTEX/F1-F4) in Soil (CWS)

DATE RECEIVED: 2015-08-24

DATE REPORTED: 2015-09-04

Parameter	Unit	SAMPLE DESCRIPTION:									
		G / S		BH15-056 (1.0-1.5)	BH15-057 (0.15-0.3)	BH15-057 (0.6-1.0)	BH15-057 (1.0-1.5)	BH15-058 (0.3-0.6)	BH15-058 (0.6-1.0)	BH15-058 (1.0-1.5)	BH15-059 (0.0-0.15)
		RDL		0-1.5	15-0.3	6-1.0	0-1.5	3-0.6	6-1.0	0-1.5	0-0.15
		DATE SAMPLED:		8/17/2015	8/17/2015	8/17/2015	8/17/2015	8/17/2015	8/17/2015	8/17/2015	8/17/2015
Benzene	mg/kg	0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	
Toluene	mg/kg	0.05	<0.05	<0.05	<0.05	<0.05	0.08	<0.05	<0.05	<0.05	
Ethylbenzene	mg/kg	0.01	<0.01	<0.01	<0.01	0.08	0.02	<0.01	<0.01	<0.01	
Xylenes	mg/kg	0.05	<0.05	<0.05	<0.05	0.48	0.11	<0.05	<0.05	<0.05	
C6 - C10 (F1)	mg/kg	10	<10	<10	<10	<10	<10	<10	<10	<10	
C6 - C10 (F1 minus BTEX)	mg/kg	10	<10	<10	<10	<10	<10	<10	<10	<10	
C10 - C16 (F2)	mg/kg	10	<10	20	294	113	<10	<10	<10	<10	
C16 - C34 (F3)	mg/kg	10	<10	14	100	162	350	27	<10	35	
C34 - C50 (F4)	mg/kg	10	<10	10	14	108	235	22	<10	21	
Gravimetric Heavy Hydrocarbons	mg/kg	1000	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	
Moisture Content	%	1	9	5	12	45	36	15	10	6	
Surrogate	Unit	Acceptable Limits									
Toluene-d8 (BTEX)	%	50-150	94	101	98	98	100	95	101	100	
Ethylbenzene-d10 (BTEX)	%	50-150	89	104	100	113	120	104	105	99	
o-Terphenyl (F2-F4)	%	50-150	111	97	97	92	85	94	113	94	

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CLIENT NAME: KLOHN CRIPPEN

ATTENTION TO: Nicole Wills

SAMPLING SITE:

SAMPLED BY:

Petroleum Hydrocarbons (BTEX/F1-F4) in Soil (CWS)

DATE RECEIVED: 2015-08-24

DATE REPORTED: 2015-09-04

Parameter	Unit	SAMPLE DESCRIPTION:									
		G / S		BH15-059 (0.	BH15-059 (1.	BH15-060 (0.	BH15-060 (0.	BH15-060 (1.	BH15-061	BH15-061 (0.	BH15-061 (1.
		RDL		15-0.3)	0-1.5)	15-0.3)	3-0.6)	0-1.5)	(0-0.15)	3-0.6)	0-1.5)
		DATE SAMPLED:		8/17/2015	8/17/2015	8/17/2015	8/17/2015	8/17/2015	8/17/2015	8/17/2015	8/17/2015
Benzene	mg/kg	0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Toluene	mg/kg	0.05	<0.05	<0.05	<0.05	6.14	<0.05	<0.05	0.08	<0.05	
Ethylbenzene	mg/kg	0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	
Xylenes	mg/kg	0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	
C6 - C10 (F1)	mg/kg	10	<10	<10	<10	<10	<10	<10	<10	<10	
C6 - C10 (F1 minus BTEX)	mg/kg	10	<10	<10	<10	<10	<10	<10	<10	<10	
C10 - C16 (F2)	mg/kg	10	<10	<10	17	83	<10	<10	<10	<10	
C16 - C34 (F3)	mg/kg	10	203	<10	24	1690	<10	<10	354	<10	
C34 - C50 (F4)	mg/kg	10	161	<10	15	<10	<10	<10	268	<10	
Gravimetric Heavy Hydrocarbons	mg/kg	1000	N/A	N/A	N/A	N/A	N/A	N/A	NA	N/A	
Moisture Content	%	1	33	9	6	34	10	5	29	10	
Surrogate	Unit	Acceptable Limits									
Toluene-d8 (BTEX)	%	50-150	100	85	94	100	102	100	97	98	
Ethylbenzene-d10 (BTEX)	%	50-150	109	73	82	110	95	85	100	101	
o-Terphenyl (F2-F4)	%	50-150	90	92	93	109	125	104	108	100	

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AGAT WORK ORDER: 15E011146

PROJECT: A04012A07

6310 ROPER ROAD
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CLIENT NAME: KLOHN CRIPPEN

ATTENTION TO: Nicole Wills

SAMPLING SITE:

SAMPLED BY:

Petroleum Hydrocarbons (BTEX/F1-F4) in Soil (CWS)

DATE RECEIVED: 2015-08-24

DATE REPORTED: 2015-09-04

Parameter	Unit	G / S	RDL	BH15-062 (0.	BH15-062 (0.	BH15-062 (1.	BH15-063 (0.	BH15-063 (0.	BH15-063 (1.	BH15-064 (0.	BH15-064 (0.
				15-0.3)	3-0.6)	0-1.5)	15-0.3)	3-0.6)	0-1.5)	15-0.3)	6-1.0)
				SAMPLE DESCRIPTION:	Soil	Soil	Soil	Soil	Soil	Soil	Soil
				SAMPLE TYPE:	8/17/2015	8/17/2015	8/17/2015	8/17/2015	8/17/2015	8/17/2015	8/17/2015
				6896514	6896527	6896529	6896530	6896531	6896532	6896535	6896537
				DATE SAMPLED:							
Benzene	mg/kg		0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Toluene	mg/kg		0.05	<0.05	<0.05	<0.05	2.34	12.1	0.08	11.9	<0.05
Ethylbenzene	mg/kg		0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Xylenes	mg/kg		0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
C6 - C10 (F1)	mg/kg		10	<10	<10	<10	<10	12	<10	12	<10
C6 - C10 (F1 minus BTEX)	mg/kg		10	<10	<10	<10	<10	<10	<10	<10	<10
C10 - C16 (F2)	mg/kg		10	<10	690	<10	<10	37	<10	47	<10
C16 - C34 (F3)	mg/kg		10	25	307	<10	155	467	<10	865	<10
C34 - C50 (F4)	mg/kg		10	15	168	<10	117	340	<10	616	13
Gravimetric Heavy Hydrocarbons	mg/kg		1000	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Moisture Content	%		1	7	17	11	30	34	15	51	18
Surrogate	Unit	Acceptable Limits									
Toluene-d8 (BTEX)	%	50-150	95	98	97	98	96	99	98	98	99
Ethylbenzene-d10 (BTEX)	%	50-150	84	94	82	89	91	93	103	95	95
o-Terphenyl (F2-F4)	%	50-150	105	101	127	117	107	133	110	99	99

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PROJECT: A04012A07

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CLIENT NAME: KLOHN CRIPPEN

ATTENTION TO: Nicole Wills

SAMPLING SITE:

SAMPLED BY:

Petroleum Hydrocarbons (BTEX/F1-F4) in Soil (CWS)

DATE RECEIVED: 2015-08-24

DATE REPORTED: 2015-09-04

Parameter	Unit	G / S	RDL	BH15-064 (1.	BH15-065 (0.	BH15-065 (0.	BH15-065 (1.	BH15-066 (0.	BH15-066 (0.	BH15-066 (1.	BH15-067 (0.
				0-1.5)	15-0.3)	3-0.6)	0-1.5)	15-0.3)	3-0.6)	0-1.5)	3-0.6)
				Soil	Soil	Soil	Soil	Soil	Soil	Soil	
				DATE SAMPLED:	8/17/2015	8/17/2015	8/17/2015	8/17/2015	8/17/2015	8/17/2015	8/17/2015
Benzene	mg/kg		0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Toluene	mg/kg		0.05	<0.05	<0.05	5.63	<0.05	1.09	0.70	<0.05	0.063
Ethylbenzene	mg/kg		0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Xylenes	mg/kg		0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
C6 - C10 (F1)	mg/kg		10	<10	<10	<10	<10	<10	<10	<10	<10
C6 - C10 (F1 minus BTEX)	mg/kg		10	<10	<10	<10	<10	<10	<10	<10	<10
C10 - C16 (F2)	mg/kg		10	<10	<10	<10	<10	<10	14	<10	<10
C16 - C34 (F3)	mg/kg		10	<10	77	261	<10	159	669	40	219
C34 - C50 (F4)	mg/kg		10	<10	90	197	<10	112	492	36	165
Gravimetric Heavy Hydrocarbons	mg/kg		1000	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Moisture Content	%		1	14	26	24	11	24	21	17	46
Surrogate	Unit	Acceptable Limits									
Toluene-d8 (BTEX)	%	50-150		99	98	98	99	99	98	99	95
Ethylbenzene-d10 (BTEX)	%	50-150		90	93	93	90	95	88	95	113
o-Terphenyl (F2-F4)	%	50-150		132	96	103	103	108	119	105	97

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PROJECT: A04012A07

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CLIENT NAME: KLOHN CRIPPEN

ATTENTION TO: Nicole Wills

SAMPLING SITE:

SAMPLED BY:

Petroleum Hydrocarbons (BTEX/F1-F4) in Soil (CWS)

DATE RECEIVED: 2015-08-24

DATE REPORTED: 2015-09-04

Parameter	Unit	SAMPLE DESCRIPTION:		BH15-067 (0.)	BH15-067 (1.)	BH15-068 (0.)	BH15-068 (0.)	BH15-068 (0.)	BH15-069 (0.)	BH15-069 (0.)	BH15-069 (1.)
		SAMPLE TYPE:		6-1.0)	0-1.5)	15-0.3)	3-0.6)	6-1.0)	3-0.6)	6-1.0)	0-1.5)
		DATE SAMPLED:		Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil
		G / S	RDL	8/17/2015	8/17/2015	8/17/2015	8/17/2015	8/17/2015	8/17/2015	8/17/2015	8/17/2015
Benzene	mg/kg	0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Toluene	mg/kg	0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	0.25	0.13	<0.05
Ethylbenzene	mg/kg	0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Xylenes	mg/kg	0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
C6 - C10 (F1)	mg/kg	10	<10	<10	<10	<10	<10	<10	<10	<10	<10
C6 - C10 (F1 minus BTEX)	mg/kg	10	<10	<10	<10	<10	<10	<10	<10	<10	<10
C10 - C16 (F2)	mg/kg	10	<10	<10	<10	<10	<10	<10	15	<10	<10
C16 - C34 (F3)	mg/kg	10	368	<10	92	297	40	670	93	<10	<10
C34 - C50 (F4)	mg/kg	10	164	<10	29	118	<10	321	35	<10	<10
Gravimetric Heavy Hydrocarbons	mg/kg	1000	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Moisture Content	%	1	29	12	7	33	19	32	24	24	24
Surrogate	Unit	Acceptable Limits									
Toluene-d8 (BTEX)	%	50-150	97	99	102	100	100	100	100	100	102
Ethylbenzene-d10 (BTEX)	%	50-150	112	97	93	108	88	106	97	101	101
o-Terphenyl (F2-F4)	%	50-150	130	142	137	131	139	137	129	134	134

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PROJECT: A04012A07

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CLIENT NAME: KLOHN CRIPPEN

ATTENTION TO: Nicole Wills

SAMPLING SITE:

SAMPLED BY:

Petroleum Hydrocarbons (BTEX/F1-F4) in Soil (CWS)

DATE RECEIVED: 2015-08-24

DATE REPORTED: 2015-09-04

Parameter	Unit	SAMPLE DESCRIPTION:									
		G / S		BH15-070 (0.	BH15-070 (0.	BH15-070 (1.	BH15-071 (0.	BH15-071 (0.	BH15-071 (1.	BH15-072 (0.	BH15-072 (1.
		RDL		3-0.6)	6-1.0)	0-1.5)	3-0.6)	6-1.0)	0-1.5)	6-1.0)	0-1.5)
		DATE SAMPLED:		8/17/2015	8/17/2015	8/17/2015	8/17/2015	8/17/2015	8/17/2015	8/17/2015	8/17/2015
Benzene	mg/kg	0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	
Toluene	mg/kg	0.05	<0.05	2.02	<0.05	2.58	<0.05	<0.05	0.18	<0.05	
Ethylbenzene	mg/kg	0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	
Xylenes	mg/kg	0.05	<0.05	0.06	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	
C6 - C10 (F1)	mg/kg	10	<10	<10	<10	<10	<10	<10	<10	<10	
C6 - C10 (F1 minus BTEX)	mg/kg	10	<10	<10	<10	<10	<10	<10	<10	<10	
C10 - C16 (F2)	mg/kg	10	<10	<10	<10	<10	<10	<10	<10	<10	
C16 - C34 (F3)	mg/kg	10	<10	279	190	538	31	<10	55	<10	
C34 - C50 (F4)	mg/kg	10	<10	54	139	184	13	<10	14	<10	
Gravimetric Heavy Hydrocarbons	mg/kg	1000	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	
Moisture Content	%	1	7	55	18	36	20	14	17	18	
Surrogate	Unit	Acceptable Limits									
Toluene-d8 (BTEX)	%	50-150	102	102	106	101	104	101	98	102	
Ethylbenzene-d10 (BTEX)	%	50-150	109	97	101	107	109	100	95	97	
o-Terphenyl (F2-F4)	%	50-150	141	121	136	133	137	138	130	127	

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PROJECT: A04012A07

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CLIENT NAME: KLOHN CRIPPEN

ATTENTION TO: Nicole Wills

SAMPLING SITE:

SAMPLED BY:

Petroleum Hydrocarbons (BTEX/F1-F4) in Soil (CWS)

DATE RECEIVED: 2015-08-24

DATE REPORTED: 2015-09-04

Parameter	Unit	SAMPLE DESCRIPTION:		BH15-072 (2.)	BH15-073 (0.)	BH15-073 (1.)	BH15-073 (2.)	BH15-074 (0.)	BH15-074 (1.)	BH15-074 (4.)	DUP F
		Soil		5-3.0)	3-0.6)	0-1.5)	5-3.0)	3-0.6)	0-1.5)	0-4.5)	Soil
		Soil		Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil
		DATE SAMPLED:		8/17/2015	8/17/2015	8/17/2015	8/17/2015	8/17/2015	8/17/2015	8/17/2015	8/17/2015
G / S	RDL	6896641	6896686	6896721	6896728	6896750	6896758	6896768	6896777		
Benzene	mg/kg	0.005	<0.005	0.018	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Toluene	mg/kg	0.05	<0.05	0.70	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Ethylbenzene	mg/kg	0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Xylenes	mg/kg	0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
C6 - C10 (F1)	mg/kg	10	<10	<10	<10	<10	<10	<10	<10	<10	<10
C6 - C10 (F1 minus BTEX)	mg/kg	10	<10	<10	<10	<10	<10	<10	<10	<10	<10
C10 - C16 (F2)	mg/kg	10	<10	<10	<10	<10	87	<10	<10	<10	<10
C16 - C34 (F3)	mg/kg	10	<10	517	<10	71	2510	13	<10	<10	<10
C34 - C50 (F4)	mg/kg	10	<10	168	<10	21	1370	14	50	<10	<10
Gravimetric Heavy Hydrocarbons	mg/kg	1000	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Moisture Content	%	1	27	31	17	36	50	16	24	6	
Surrogate	Unit	Acceptable Limits									
Toluene-d8 (BTEX)	%	50-150	101	101	101	101	99	100	101	101	101
Ethylbenzene-d10 (BTEX)	%	50-150	115	99	101	117	98	102	113	109	109
o-Terphenyl (F2-F4)	%	50-150	129	131	140	133	98	96	94	121	121

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ATTENTION TO: Nicole Wills

SAMPLING SITE:

SAMPLED BY:

Petroleum Hydrocarbons (BTEX/F1-F4) in Soil (CWS)

DATE RECEIVED: 2015-08-24

DATE REPORTED: 2015-09-04

Parameter	Unit	SAMPLE DESCRIPTION:			BH15-075 (0.	BH15-075 (0.	BH15-075 (1.	BH15-076 (0.	BH15-076 (3.	
		DUP G	DUP H	DUP I	3-0.6)	6-1.0)	0-1.5)	3-0.6)	5-4.0)	
		Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	
		DATE SAMPLED:	8/17/2015	8/17/2015	8/17/2015	8/18/2015	8/18/2015	8/18/2015	8/18/2015	8/18/2015
G / S	RDL	6896778	6896779	6896784	6896792	6896801	6896802	6896807	6896810	
Benzene	mg/kg	0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Toluene	mg/kg	0.05	4.89	<0.05	0.52	4.61	15.2	0.10	4.42	<0.05
Ethylbenzene	mg/kg	0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Xylenes	mg/kg	0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
C6 - C10 (F1)	mg/kg	10	<10	<10	<10	<10	30	<10	<10	<10
C6 - C10 (F1 minus BTEX)	mg/kg	10	<10	<10	<10	<10	10	<10	<10	<10
C10 - C16 (F2)	mg/kg	10	12	28	15	<10	51	<10	53	<10
C16 - C34 (F3)	mg/kg	10	386	851	661	145	1610	19	1280	<10
C34 - C50 (F4)	mg/kg	10	225	449	319	74	761	13	716	<10
Gravimetric Heavy Hydrocarbons	mg/kg	1000	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Moisture Content	%	1	24	50	33	43	48	13	45	23
Surrogate	Unit	Acceptable Limits								
Toluene-d8 (BTEX)	%	50-150	99	100	102	106	99	96	95	97
Ethylbenzene-d10 (BTEX)	%	50-150	105	102	113	92	76	95	75	92
o-Terphenyl (F2-F4)	%	50-150	94	94	97	100	110	105	110	109

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CLIENT NAME: KLOHN CRIPPEN

ATTENTION TO: Nicole Wills

SAMPLING SITE:

SAMPLED BY:

Petroleum Hydrocarbons (BTEX/F1-F4) in Soil (CWS)

DATE RECEIVED: 2015-08-24

DATE REPORTED: 2015-09-04

Parameter	Unit	SAMPLE DESCRIPTION:		BH15-076 (4.	BH15-077 (0.	BH15-077 (1.	BH15-077 (2.	BH15-078 (0.	BH15-078 (0.	BH15-078 (2.	BH15-079 (0.
		Soil		0-4.5)	3-0.6)	0-1.5)	5-3.0)	3-0.6)	6-1.0)	5-3.0)	15-0.3)
		Soil		Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil
		DATE SAMPLED:		8/18/2015	8/18/2015	8/18/2015	8/18/2015	8/18/2015	8/18/2015	8/18/2015	8/18/2015
G / S	RDL	6896814	6896816	6896818	6896819	6896820	6896821	6896823	6896825		
Benzene	mg/kg	0.005	<0.005	<0.005	<0.005	<0.005	0.029	<0.005	<0.005	<0.005	
Toluene	mg/kg	0.05	<0.05	29.5	<0.05	0.10	6.97	1.93	<0.05	27.6	
Ethylbenzene	mg/kg	0.01	<0.01	<0.01	<0.01	<0.01	0.08	<0.01	<0.01	<0.01	
Xylenes	mg/kg	0.05	<0.05	<0.05	<0.05	<0.05	0.20	<0.05	<0.05	<0.05	
C6 - C10 (F1)	mg/kg	10	<10	30	<10	<10	20	<10	<10	40	
C6 - C10 (F1 minus BTEX)	mg/kg	10	<10	<10	<10	<10	10	<10	<10	<10	
C10 - C16 (F2)	mg/kg	10	<10	20	<10	<10	103	<10	<10	99	
C16 - C34 (F3)	mg/kg	10	<10	1560	<10	<10	353	276	<10	2630	
C34 - C50 (F4)	mg/kg	10	<10	712	<10	<10	164	137	13	1180	
Gravimetric Heavy Hydrocarbons	mg/kg	1000	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	
Moisture Content	%	1	22	55	19	25	52	30	21	49	
Surrogate	Unit	Acceptable Limits									
Toluene-d8 (BTEX)	%	50-150	104	93	98	110	98	97	102	95	
Ethylbenzene-d10 (BTEX)	%	50-150	104	68	86	88	77	75	97	74	
o-Terphenyl (F2-F4)	%	50-150	110	112	122	111	107	111	109	107	

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FAX (780)462-2490
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CLIENT NAME: KLOHN CRIPPEN

ATTENTION TO: Nicole Wills

SAMPLING SITE:

SAMPLED BY:

Petroleum Hydrocarbons (BTEX/F1-F4) in Soil (CWS)

DATE RECEIVED: 2015-08-24

DATE REPORTED: 2015-09-04

Parameter	Unit	SAMPLE DESCRIPTION:		BH15-079 (0.	BH15-079 (1.	BH15-080 (0.	BH15-080 (1.	BH15-080 (2.	BH15-081 (0.	BH15-081 (0.	BH15-081 (2.
		Soil		6-1.0)	0-1.5)	3-0.6)	0-1.5)	5-3.0)	15-0.3)	6-1.0)	5-3.0)
		Soil		Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil
		DATE SAMPLED:		8/18/2015	8/18/2015	8/18/2015	8/18/2015	8/18/2015	8/18/2015	8/18/2015	8/18/2015
G / S	RDL	6896830	6896832	6896833	6896834	6896836	6896838	6896839	6896846		
Benzene	mg/kg	0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Toluene	mg/kg	0.05	0.33	0.13	9.17	<0.05	<0.05	<0.05	<0.05	4.09	<0.05
Ethylbenzene	mg/kg	0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	0.06	<0.01
Xylenes	mg/kg	0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	0.39	<0.05
C6 - C10 (F1)	mg/kg	10	<10	<10	<10	<10	<10	<10	<10	20	<10
C6 - C10 (F1 minus BTEX)	mg/kg	10	<10	<10	<10	<10	<10	<10	<10	10	<10
C10 - C16 (F2)	mg/kg	10	<10	<10	<10	<10	<10	<10	695	326	<10
C16 - C34 (F3)	mg/kg	10	<10	<10	599	<10	<10	<10	1010	850	<10
C34 - C50 (F4)	mg/kg	10	10	15	272	14	10	37	267	<10	
Gravimetric Heavy Hydrocarbons	mg/kg	1000	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	NA
Moisture Content	%	1	17	17	33	19	24	14	37	22	
Surrogate	Unit	Acceptable Limits									
Toluene-d8 (BTEX)	%	50-150	101	95	96	96	100	98	93	99	
Ethylbenzene-d10 (BTEX)	%	50-150	98	81	70	77	94	94	98	101	
o-Terphenyl (F2-F4)	%	50-150	104	106	127	110	122	129	118	137	

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AGAT WORK ORDER: 15E011146

PROJECT: A04012A07

6310 ROPER ROAD
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CLIENT NAME: KLOHN CRIPPEN

ATTENTION TO: Nicole Wills

SAMPLING SITE:

SAMPLED BY:

Petroleum Hydrocarbons (BTEX/F1-F4) in Soil (CWS)

DATE RECEIVED: 2015-08-24

DATE REPORTED: 2015-09-04

Parameter	Unit	SAMPLE DESCRIPTION:		BH15-082 (0.	BH15-082 (0.	BH15-082 (1.	BH15-083 (0.	BH15-083 (0.	BH15-083 (2.	DUP J	BH15-084 (0.
		Soil		0-0.15)	6-1.0)	0-1.5)	3-0.6)	6-1.0)	5-3.0)		3-0.6)
		Soil		Soil	Soil	Soil	Soil	Soil	Soil		Soil
		DATE SAMPLED:		8/18/2015	8/18/2015	8/18/2015	8/18/2015	8/18/2015	8/18/2015		8/18/2015
G / S	RDL	6896854	6896861	6896998	6897004	6897015	6897016	6897018	6897025		
Benzene	mg/kg	0.005	0.017	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	0.764
Toluene	mg/kg	0.05	10.2	<0.05	<0.05	<0.05	0.09	0.49	<0.05	10.0	0.11
Ethylbenzene	mg/kg	0.01	3.09	<0.01	<0.01	<0.01	0.15	0.01	<0.01	2.88	<0.01
Xylenes	mg/kg	0.05	22.6	<0.05	<0.05	<0.05	0.52	<0.05	<0.05	24.3	<0.05
C6 - C10 (F1)	mg/kg	10	610	<10	<10	<10	<10	<10	<10	450	<10
C6 - C10 (F1 minus BTEX)	mg/kg	10	580	<10	<10	<10	<10	<10	<10	420	<10
C10 - C16 (F2)	mg/kg	10	24700	<10	<10	<10	126	49	43	8910	20
C16 - C34 (F3)	mg/kg	10	13700	<10	<10	<10	943	161	41	6260	310
C34 - C50 (F4)	mg/kg	10	189	<10	<10	<10	362	51	<10	159	101
Gravimetric Heavy Hydrocarbons	mg/kg	1000	NA	NA	NA	NA	NA	NA	NA	NA	NA
Moisture Content	%	1	50	15	15	19	44	23	23	55	39
Surrogate	Unit	Acceptable Limits									
Toluene-d8 (BTEX)	%	50-150	90	98	97	98	99	99	98	98	99
Ethylbenzene-d10 (BTEX)	%	50-150	75	101	103	112	107	107	108	97	102
o-Terphenyl (F2-F4)	%	50-150	149	131	132	102	130	130	133	107	127

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PROJECT: A04012A07

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CLIENT NAME: KLOHN CRIPPEN

ATTENTION TO: Nicole Wills

SAMPLING SITE:

SAMPLED BY:

Petroleum Hydrocarbons (BTEX/F1-F4) in Soil (CWS)

DATE RECEIVED: 2015-08-24

DATE REPORTED: 2015-09-04

Parameter	Unit	SAMPLE DESCRIPTION:									
		G / S		BH15-084 (1.)	BH15-084 (2.)	BH15-085 (0.)	BH15-085 (1.)	BH15-085 (4.)	BH15-086 (0.)	BH15-086 (1.)	BH15-086 (2.)
		RDL		0-1.5)	5-3.0)	6-1.0)	5-2.0)	0-4.5)	6-1.0)	0-1.5)	5-3.0)
		DATE SAMPLED:		8/18/2015	8/18/2015	8/18/2015	8/18/2015	8/18/2015	8/18/2015	8/18/2015	8/18/2015
Benzene	mg/kg	0.005	<0.005	<0.005	0.083	2.68	0.017	1.22	0.055	<0.005	
Toluene	mg/kg	0.05	<0.05	<0.05	1.38	12.8	<0.05	0.58	<0.05	<0.05	
Ethylbenzene	mg/kg	0.01	0.02	<0.01	0.53	6.99	0.02	10.2	0.09	<0.01	
Xylenes	mg/kg	0.05	<0.05	<0.05	1.64	31.5	0.08	20.3	0.12	<0.05	
C6 - C10 (F1)	mg/kg	10	<10	<10	10	480	<10	150	<10	<10	
C6 - C10 (F1 minus BTEX)	mg/kg	10	<10	<10	10	420	<10	120	<10	<10	
C10 - C16 (F2)	mg/kg	10	20	<10	1120	3690	<10	6320	<10	<10	
C16 - C34 (F3)	mg/kg	10	11	<10	<10	284	<10	1560	<10	<10	
C34 - C50 (F4)	mg/kg	10	<10	<10	<10	39	<10	113	<10	<10	
Gravimetric Heavy Hydrocarbons	mg/kg	1000	NA	NA	NA	NA	NA	NA	NA	NA	
Moisture Content	%	1	19	23	16	35	25	55	15	23	
Surrogate	Unit	Acceptable Limits									
Toluene-d8 (BTEX)	%	50-150	98	97	100	96	98	100	99	99	
Ethylbenzene-d10 (BTEX)	%	50-150	108	110	113	91	93	98	118	110	
o-Terphenyl (F2-F4)	%	50-150	128	128	124	119	127	69	125	122	

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PROJECT: A04012A07

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CLIENT NAME: KLOHN CRIPPEN

ATTENTION TO: Nicole Wills

SAMPLING SITE:

SAMPLED BY:

Petroleum Hydrocarbons (BTEX/F1-F4) in Soil (CWS)

DATE RECEIVED: 2015-08-24

DATE REPORTED: 2015-09-04

Parameter	Unit	SAMPLE DESCRIPTION:									
		DATE SAMPLED:		BH15-087 (0.	BH15-087 (2.	BH15-087 (5.	BH15-087 (7.	BH15-088 (0.	BH15-088 (1.	BH15-088 (2.	BH15-089 (0.
		G / S	RDL	3-0.6)	5-3.0)	5-6.0)	0-7.5)	3-0.6)	0-1.5)	5-3.0)	0-0.15)
				Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil
			8/18/2015	8/18/2015	8/18/2015	8/18/2015	8/18/2015	8/18/2015	8/18/2015	8/18/2015	8/18/2015
			6897059	6897061	6897070	6897073	6897075	6897078	6897083	6897086	
Benzene	mg/kg	0.005	1.72	0.012	0.010	0.029	1.76	0.078	0.015	<0.005	
Toluene	mg/kg	0.05	0.10	<0.05	<0.05	<0.05	4.55	<0.05	<0.05	<0.05	
Ethylbenzene	mg/kg	0.01	0.29	<0.01	<0.01	<0.01	10.8	0.22	0.07	0.05	
Xylenes	mg/kg	0.05	1.28	<0.05	<0.05	<0.05	55.9	0.59	0.21	2.84	
C6 - C10 (F1)	mg/kg	10	10	<10	<10	<10	1410	<10	<10	690	
C6 - C10 (F1 minus BTEX)	mg/kg	10	<10	<10	<10	<10	1340	<10	<10	690	
C10 - C16 (F2)	mg/kg	10	85	<10	<10	<10	2470	11	48	10100	
C16 - C34 (F3)	mg/kg	10	1720	<10	<10	<10	1440	17	11	1820	
C34 - C50 (F4)	mg/kg	10	788	<10	<10	<10	612	<10	12	29	
Gravimetric Heavy Hydrocarbons	mg/kg	1000	NA	NA	NA	N/A	N/A	N/A	N/A	N/A	
Moisture Content	%	1	47	26	25	25	29	20	24	8	
Surrogate	Unit	Acceptable Limits									
Toluene-d8 (BTEX)	%	50-150	99	100	97	99	97	107	99	91	
Ethylbenzene-d10 (BTEX)	%	50-150	97	106	105	89	60	92	86	77	
o-Terphenyl (F2-F4)	%	50-150	132	129	125	117	116	116	117	116	

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CLIENT NAME: KLOHN CRIPPEN

ATTENTION TO: Nicole Wills

SAMPLING SITE:

SAMPLED BY:

Petroleum Hydrocarbons (BTEX/F1-F4) in Soil (CWS)

DATE RECEIVED: 2015-08-24

DATE REPORTED: 2015-09-04

Parameter	Unit	SAMPLE DESCRIPTION:									
		G / S		BH15-089 (0.)	BH15-089 (1.)	BH15-090 (0.)	BH15-090 (1.)	BH15-090 (2.)	BH15-091 (0.)	BH15-091 (0.)	BH15-091 (1.)
		RDL		6-1.0)	0-1.5)	3-0.6)	0-1.5)	5-3.0)	3-0.6)	6-1.0)	0-1.5)
		DATE SAMPLED:		8/18/2015	8/18/2015	8/18/2015	8/18/2015	8/18/2015	8/19/2015	8/19/2015	8/19/2015
Benzene	mg/kg	0.005	0.022	3.26	0.035	0.075	<0.005	0.046	0.083	0.036	
Toluene	mg/kg	0.05	<0.05	7.16	4.91	0.24	<0.05	6.85	0.45	<0.05	
Ethylbenzene	mg/kg	0.01	0.16	14.5	0.04	0.32	<0.01	<0.01	0.10	0.06	
Xylenes	mg/kg	0.05	1.86	61.7	0.12	1.04	<0.05	<0.05	0.36	0.18	
C6 - C10 (F1)	mg/kg	10	420	2610	<10	<10	<10	<10	<10	<10	
C6 - C10 (F1 minus BTEX)	mg/kg	10	420	2530	<10	<10	<10	<10	<10	<10	
C10 - C16 (F2)	mg/kg	10	5410	10900	515	18	<10	449	19	<10	
C16 - C34 (F3)	mg/kg	10	1300	2000	577	10	11	815	41	<10	
C34 - C50 (F4)	mg/kg	10	14	109	240	<10	<10	316	15	<10	
Gravimetric Heavy Hydrocarbons	mg/kg	1000	N/A	N/A	N/A	N/A	N/A	NA	NA	NA	
Moisture Content	%	1	8	28	28	16	17	40	17	19	
Surrogate	Unit	Acceptable Limits									
Toluene-d8 (BTEX)	%	50-150	98	63	106	103	100	102	97	102	
Ethylbenzene-d10 (BTEX)	%	50-150	91	55	99	96	110	97	98	105	
o-Terphenyl (F2-F4)	%	50-150	116	115	112	122	113	95	101	101	

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PROJECT: A04012A07

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ATTENTION TO: Nicole Wills

SAMPLING SITE:

SAMPLED BY:

Petroleum Hydrocarbons (BTEX/F1-F4) in Soil (CWS)

DATE RECEIVED: 2015-08-24

DATE REPORTED: 2015-09-04

Parameter	Unit	SAMPLE DESCRIPTION:									
		G / S		BH15-092 (0.	BH15-092 (0.	BH15-092 (1.	BH15-093 (0.	BH15-093 (0.	BH15-093 (1.	BH15-094 (0.	BH15-094 (0.
		RDL		3-0.6)	6-1.0)	0-1.5)	3-0.6)	6-1.0)	0-1.5)	3-0.6)	6-1.0)
		DATE SAMPLED:		Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil
			8/19/2015	8/19/2015	8/19/2015	8/19/2015	8/19/2015	8/19/2015	8/19/2015	8/19/2015	8/19/2015
			6897211	6897215	6897217	6897218	6897222	6897224	6897225	6897228	6897228
Benzene	mg/kg	0.005	0.021	0.009	0.006	0.013	<0.005	<0.005	0.035	<0.005	
Toluene	mg/kg	0.05	1.58	0.06	<0.05	5.44	<0.05	<0.05	6.14	<0.05	
Ethylbenzene	mg/kg	0.01	<0.01	<0.01	0.01	<0.01	<0.01	<0.01	0.01	<0.01	
Xylenes	mg/kg	0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	
C6 - C10 (F1)	mg/kg	10	<10	<10	<10	<10	<10	<10	<10	<10	
C6 - C10 (F1 minus BTEX)	mg/kg	10	<10	<10	<10	<10	<10	<10	<10	<10	
C10 - C16 (F2)	mg/kg	10	<10	<10	<10	20	<10	<10	12	<10	
C16 - C34 (F3)	mg/kg	10	281	63	22	1090	<10	15	513	<10	
C34 - C50 (F4)	mg/kg	10	127	31	<10	474	<10	<10	230	<10	
Gravimetric Heavy Hydrocarbons	mg/kg	1000	NA	NA	NA	NA	NA	NA	NA	NA	
Moisture Content	%	1	20	15	18	53	17	9	35	15	
Surrogate	Unit	Acceptable Limits									
Toluene-d8 (BTEX)	%	50-150	105	94	99	100	105	101	102	97	
Ethylbenzene-d10 (BTEX)	%	50-150	102	89	93	92	118	98	104	89	
o-Terphenyl (F2-F4)	%	50-150	99	106	105	103	103	103	102	102	

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PROJECT: A04012A07

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CLIENT NAME: KLOHN CRIPPEN

ATTENTION TO: Nicole Wills

SAMPLING SITE:

SAMPLED BY:

Petroleum Hydrocarbons (BTEX/F1-F4) in Soil (CWS)

DATE RECEIVED: 2015-08-24

DATE REPORTED: 2015-09-04

Parameter	Unit	SAMPLE DESCRIPTION:		BH15-094 (1.	BH15-095 (0.	BH15-095 (1.	BH15-095 (2.	BH15-096 (0.	BH15-096 (0.	BH15-096 (1.	BH15-097 (0.	
		G / S	RDL	0-1.5)	6-1.0)	5-2.0)	5-3.0)	3-0.6)	6-1.0)	0-1.5)	3-0.6)	
		DATE SAMPLED:		8/19/2015	8/19/2015	8/19/2015	8/19/2015	8/19/2015	8/19/2015	8/19/2015	8/19/2015	8/19/2015
				6897229	6897230	6897235	6897238	6897241	6897243	6897244	6897246	
Benzene	mg/kg	0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	
Toluene	mg/kg	0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	0.88	
Ethylbenzene	mg/kg	0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	
Xylenes	mg/kg	0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	
C6 - C10 (F1)	mg/kg	10	<10	<10	<10	<10	<10	<10	<10	<10	<10	
C6 - C10 (F1 minus BTEX)	mg/kg	10	<10	<10	<10	<10	<10	<10	<10	<10	<10	
C10 - C16 (F2)	mg/kg	10	<10	<10	<10	<10	<10	<10	<10	28	11	
C16 - C34 (F3)	mg/kg	10	<10	<10	<10	29	51	35	110	188		
C34 - C50 (F4)	mg/kg	10	<10	<10	<10	<10	<10	<10	31	73		
Gravimetric Heavy Hydrocarbons	mg/kg	1000	NA	NA	NA	NA	NA	NA	NA	NA	N/A	
Moisture Content	%	1	18	15	22	21	7	9	23	24		
Surrogate	Unit	Acceptable Limits										
Toluene-d8 (BTEX)	%	50-150	99	98	99	99	98	98	98	98	98	
Ethylbenzene-d10 (BTEX)	%	50-150	92	102	89	86	90	87	91	93		
o-Terphenyl (F2-F4)	%	50-150	103	103	105	101	104	104	100	101		

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CLIENT NAME: KLOHN CRIPPEN

ATTENTION TO: Nicole Wills

SAMPLING SITE:

SAMPLED BY:

Petroleum Hydrocarbons (BTEX/F1-F4) in Soil (CWS)

DATE RECEIVED: 2015-08-24

DATE REPORTED: 2015-09-04

Parameter	Unit	SAMPLE DESCRIPTION:									
		G / S		BH15-097 (0.	BH15-097 (1.	BH15-098 (0.	BH15-098 (1.	BH15-098 (2.	BH15-099 (0.	BH15-099 (1.	BH15-099 (2.
		RDL		6-1.0)	0-1.5)	6-1.0)	5-2.0)	5-3.0)	3-0.6)	0-1.5)	5-3.0)
		DATE SAMPLED:		8/19/2015	8/19/2015	8/19/2015	8/19/2015	8/19/2015	8/19/2015	8/19/2015	8/19/2015
Benzene	mg/kg	0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	
Toluene	mg/kg	0.05	<0.05	<0.05	0.50	<0.05	<0.05	6.94	0.08	<0.05	
Ethylbenzene	mg/kg	0.01	<0.01	<0.01	0.03	<0.01	<0.01	0.23	<0.01	<0.01	
Xylenes	mg/kg	0.05	<0.05	<0.05	0.25	<0.05	<0.05	1.48	<0.05	<0.05	
C6 - C10 (F1)	mg/kg	10	<10	<10	10	<10	<10	<10	<10	<10	
C6 - C10 (F1 minus BTEX)	mg/kg	10	<10	<10	<10	<10	<10	<10	<10	<10	
C10 - C16 (F2)	mg/kg	10	<10	<10	648	<10	18	611	27	13	
C16 - C34 (F3)	mg/kg	10	11	<10	555	<10	32	1500	30	38	
C34 - C50 (F4)	mg/kg	10	<10	<10	<10	<10	17	181	<10	<10	
Gravimetric Heavy Hydrocarbons	mg/kg	1000	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	
Moisture Content	%	1	15	15	16	26	22	55	15	18	
Surrogate	Unit	Acceptable Limits									
Toluene-d8 (BTEX)	%	50-150	101	99	98	92	102	98	100	105	
Ethylbenzene-d10 (BTEX)	%	50-150	91	92	97	90	76	93	95	90	
o-Terphenyl (F2-F4)	%	50-150	99	103	92	98	104	92	103	101	

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AGAT WORK ORDER: 15E011146

PROJECT: A04012A07

6310 ROPER ROAD
EDMONTON, ALBERTA
CANADA T6B 3P9
TEL (780)395-2525
FAX (780)462-2490
<http://www.agatlabs.com>

CLIENT NAME: KLOHN CRIPPEN

ATTENTION TO: Nicole Wills

SAMPLING SITE:

SAMPLED BY:

Petroleum Hydrocarbons (BTEX/F1-F4) in Soil (CWS)

DATE RECEIVED: 2015-08-24

DATE REPORTED: 2015-09-04

Parameter	Unit	SAMPLE DESCRIPTION:		BH15-100 (0.	BH15-100 (0.	BH15-100 (2.	BH15-101 (0.	BH15-101 (1.	BH15-101 (2.	BH15-102 (1.	BH15-102 (1.	
		Soil		3-0.6)	6-1.0)	5-3.0)	6-1.0)	0-1.5)	5-3.0)	0-1.5)	5-2.0)	
		Soil		8/19/2015	8/19/2015	8/19/2015	8/19/2015	8/19/2015	8/19/2015	8/19/2015	8/19/2015	8/19/2015
		Soil		6897288	6897290	6897292	6897293	6897295	6897297	6897298	6897299	
Benzene	mg/kg	0.005	<0.005	0.011	<0.005	0.006	<0.005	<0.005	<0.005	<0.005	<0.005	
Toluene	mg/kg	0.05	6.75	6.55	<0.05	4.49	0.09	<0.05	<0.05	<0.05		
Ethylbenzene	mg/kg	0.01	0.04	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	0.02	<0.01	
Xylenes	mg/kg	0.05	0.30	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	
C6 - C10 (F1)	mg/kg	10	<10	<10	<10	<10	<10	<10	<10	<10	<10	
C6 - C10 (F1 minus BTEX)	mg/kg	10	<10	<10	<10	<10	<10	<10	<10	<10	<10	
C10 - C16 (F2)	mg/kg	10	162	95	15	30	17	<10	28	10		
C16 - C34 (F3)	mg/kg	10	1440	1400	42	1240	67	36	28	10		
C34 - C50 (F4)	mg/kg	10	497	626	<10	520	98	<10	36	18		
Gravimetric Heavy Hydrocarbons	mg/kg	1000	N/A	NA	NA	NA	NA	NA	NA	NA		
Moisture Content	%	1	47	45	22	46	24	23	15	18		
Surrogate	Unit	Acceptable Limits										
Toluene-d8 (BTEX)	%	50-150	97	97	97	104	101	102	99	103		
Ethylbenzene-d10 (BTEX)	%	50-150	114	82	87	91	100	102	92	106		
o-Terphenyl (F2-F4)	%	50-150	87	84	94	104	111	94	95	93		

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SAMPLING SITE:

SAMPLED BY:

Petroleum Hydrocarbons (BTEX/F1-F4) in Soil (CWS)

DATE RECEIVED: 2015-08-24

DATE REPORTED: 2015-09-04

Parameter	Unit	SAMPLE DESCRIPTION:		BH15-102 (2.	BH15-103 (0.	BH15-103 (0.	BH15-103 (1.	BH15-104 (0.	BH15-104 (0.	BH15-104 (1.	BH15-105 (0.	
		G / S	RDL	5-3.0)	3-0.6)	6-1.0)	0-1.5)	15-0.3)	3-0.6)	0-1.5)	15-0.3)	
		DATE SAMPLED:		8/19/2015	8/19/2015	8/19/2015	8/19/2015	8/19/2015	8/19/2015	8/19/2015	8/19/2015	8/19/2015
				6897300	6897308	6897310	6897324	6897326	6897327	6897328	6897333	
Benzene	mg/kg	0.005	<0.005	<0.005	<0.005	<0.005	<0.005	0.020	<0.005	<0.005	0.018	
Toluene	mg/kg	0.05	<0.05	9.73	0.30	<0.05	<0.05	1.98	1.17	<0.05	6.30	
Ethylbenzene	mg/kg	0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	0.26	
Xylenes	mg/kg	0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	1.93	
C6 - C10 (F1)	mg/kg	10	<10	10	<10	<10	<10	<10	10	<10	20	
C6 - C10 (F1 minus BTEX)	mg/kg	10	<10	<10	<10	<10	<10	<10	10	<10	<10	
C10 - C16 (F2)	mg/kg	10	<10	20	<10	<10	<10	16	<10	<10	123	
C16 - C34 (F3)	mg/kg	10	<10	906	36	<10	<10	913	1190	12	511	
C34 - C50 (F4)	mg/kg	10	<10	515	34	<10	<10	518	685	14	305	
Gravimetric Heavy Hydrocarbons	mg/kg	1000	NA	NA	NA	NA	NA	NA	NA	NA	NA	
Moisture Content	%	1	24	46	18	16	16	31	68	18	42	
Surrogate	Unit	Acceptable Limits										
Toluene-d8 (BTEX)	%	50-150	100	104	104	104	104	100	100	100	102	
Ethylbenzene-d10 (BTEX)	%	50-150	104	100	108	107	107	92	85	103	96	
o-Terphenyl (F2-F4)	%	50-150	92	88	95	92	92	92	88	89	86	

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SAMPLING SITE:

SAMPLED BY:

Petroleum Hydrocarbons (BTEX/F1-F4) in Soil (CWS)

DATE RECEIVED: 2015-08-24

DATE REPORTED: 2015-09-04

Parameter	Unit	SAMPLE DESCRIPTION:		BH15-105 (0.	BH15-105 (1.	BH15-106 (0.	BH15-106 (0.	BH15-106 (1.	BH15-107 (0.	BH15-107 (0.	BH15-107 (2.	
		G / S	RDL	3-0.6)	0-1.5)	3-0.6)	6-1.0)	0-1.5)	15-0.3)	3-0.6)	5-3.0)	
		DATE SAMPLED:		8/19/2015	8/19/2015	8/19/2015	8/19/2015	8/19/2015	8/19/2015	8/19/2015	8/19/2015	8/19/2015
		G / S		6897336	6897340	6897342	6897344	6897448	6897468	6897472	6897498	
Benzene	mg/kg	0.005	0.009	<0.005	0.005	<0.005	0.011	<0.005	0.776	<0.005		
Toluene	mg/kg	0.05	2.30	<0.05	6.43	0.46	<0.05	0.17	25.5	<0.05		
Ethylbenzene	mg/kg	0.01	0.04	<0.01	0.06	<0.01	<0.01	0.15	0.64	<0.01		
Xylenes	mg/kg	0.05	0.18	<0.05	0.39	<0.05	<0.05	1.29	4.40	<0.05		
C6 - C10 (F1)	mg/kg	10	<10	<10	10	<10	<10	10	70	<10		
C6 - C10 (F1 minus BTEX)	mg/kg	10	<10	<10	<10	<10	<10	10	40	<10		
C10 - C16 (F2)	mg/kg	10	37	<10	118	<10	<10	204	59	<10		
C16 - C34 (F3)	mg/kg	10	1410	<10	627	60	<10	122	2450	<10		
C34 - C50 (F4)	mg/kg	10	747	18	327	57	<10	51	1120	37		
Gravimetric Heavy Hydrocarbons	mg/kg	1000	NA	NA	NA	NA	NA	NA	NA	NA		
Moisture Content	%	1	52	18	30	17	16	6	60	17		
Surrogate	Unit	Acceptable Limits										
Toluene-d8 (BTEX)	%	50-150	100	104	97	102	101	101	99	98		
Ethylbenzene-d10 (BTEX)	%	50-150	102	85	86	100	110	110	81	92		
o-Terphenyl (F2-F4)	%	50-150	87	93	82	104	105	96	91	88		

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Petroleum Hydrocarbons (BTEX/F1-F4) in Soil (CWS)

DATE RECEIVED: 2015-08-24

DATE REPORTED: 2015-09-04

Parameter	Unit	SAMPLE DESCRIPTION:		BH15-108 (0.	BH15-108 (1.	BH15-108 (2.	BH15-109 (1.	BH15-109 (2.	BH15-109 (9.	BH15-110 (0.	BH15-110 (0.
		Soil		15-0.3)	0-1.5)	5-3.0)	0-1.5)	0-2.5)	0-9.5)	15-0.3)	3-0.6)
		Soil		Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil
		DATE SAMPLED:		8/19/2015	8/19/2015	8/19/2015	8/19/2015	8/19/2015	8/19/2015	8/19/2015	8/19/2015
G / S	RDL	6897514	6897541	6897543	6897545	6897546	6897548	6897550	6897551		
Benzene	mg/kg	0.005	0.103	0.527	<0.005	0.012	<0.005	0.029	0.073	0.421	
Toluene	mg/kg	0.05	2.09	0.44	<0.05	<0.05	<0.05	0.09	0.65	3.71	
Ethylbenzene	mg/kg	0.01	0.57	3.38	<0.01	0.01	<0.01	0.02	0.72	0.78	
Xylenes	mg/kg	0.05	9.61	18.4	<0.05	0.10	<0.05	<0.05	3.56	4.48	
C6 - C10 (F1)	mg/kg	10	330	130	<10	<10	<10	<10	140	70	
C6 - C10 (F1 minus BTEX)	mg/kg	10	320	110	<10	<10	<10	<10	140	60	
C10 - C16 (F2)	mg/kg	10	9420	652	<10	226	<10	<10	3280	718	
C16 - C34 (F3)	mg/kg	10	167	<10	<10	36	<10	14	115	1930	
C34 - C50 (F4)	mg/kg	10	67	13	11	<10	<10	36	44	989	
Gravimetric Heavy Hydrocarbons	mg/kg	1000	NA	NA	NA	NA	NA	NA	NA	N/A	
Moisture Content	%	1	17	20	18	17	21	24	8	53	
Surrogate	Unit	Acceptable Limits									
Toluene-d8 (BTEX)	%	50-150	90	96	97	98	98	93	99	98	
Ethylbenzene-d10 (BTEX)	%	50-150	80	102	99	97	90	84	93	84	
o-Terphenyl (F2-F4)	%	50-150	84	101	90	88	105	87	88	84	

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Petroleum Hydrocarbons (BTEX/F1-F4) in Soil (CWS)

DATE RECEIVED: 2015-08-24

DATE REPORTED: 2015-09-04

Parameter	Unit	SAMPLE DESCRIPTION:									
		G / S		BH15-110 (1. 0-1.5)	BH15-111 (0. 0-0.15)	BH15-111 (0. 3-0.6)	BH15-111 (1. 0-1.5)	BH15-112 (0. 6-1.0)	BH15-112 (1. 0-1.5)	BH15-112 (2. 5-3.0)	BH15-113 (0. 3-0.6)
		RDL		Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil
		DATE SAMPLED:		8/19/2015	8/19/2015	8/19/2015	8/19/2015	8/19/2015	8/19/2015	8/19/2015	8/20/2015
Benzene	mg/kg	0.005	<0.005	0.034	0.055	<0.005	0.026	0.021	<0.005	0.006	
Toluene	mg/kg	0.05	<0.05	0.94	1.32	<0.05	0.05	<0.05	<0.05	<0.05	
Ethylbenzene	mg/kg	0.01	<0.01	0.38	0.01	<0.01	0.06	<0.01	<0.01	<0.01	
Xylenes	mg/kg	0.05	<0.05	2.88	<0.05	<0.05	0.34	<0.05	<0.05	0.16	
C6 - C10 (F1)	mg/kg	10	<10	160	<10	<10	<10	<10	<10	<10	
C6 - C10 (F1 minus BTEX)	mg/kg	10	<10	150	<10	<10	<10	<10	<10	<10	
C10 - C16 (F2)	mg/kg	10	<10	1540	44	<10	<10	<10	<10	16	
C16 - C34 (F3)	mg/kg	10	<10	239	1160	<10	<10	<10	<10	540	
C34 - C50 (F4)	mg/kg	10	<10	51	544	<10	<10	<10	<10	328	
Gravimetric Heavy Hydrocarbons	mg/kg	1000	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	
Moisture Content	%	1	16	26	39	18	17	21	23	48	
Surrogate	Unit	Acceptable Limits									
Toluene-d8 (BTEX)	%	50-150	98	97	97	95	96	100	97	98	
Ethylbenzene-d10 (BTEX)	%	50-150	100	104	86	96	97	106	96	86	
o-Terphenyl (F2-F4)	%	50-150	93	89	87	91	92	88	91	99	

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Petroleum Hydrocarbons (BTEX/F1-F4) in Soil (CWS)

DATE RECEIVED: 2015-08-24

DATE REPORTED: 2015-09-04

Parameter	Unit	SAMPLE DESCRIPTION:									
		G / S		BH15-113 (0.)	BH15-113 (1.)	BH15-114 (0.)	BH15-114 (0.)	BH15-114 (1.)	BH15-115	BH15-116 (0.)	BH15-117 (0.)
		RDL		6-1.0)	0-1.5)	3-0.6)	6-1.0)	0-1.5)	(0-0.15)	0-0.15)	0-0.15)
		DATE SAMPLED:		Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil
		8/20/2015		8/20/2015	8/20/2015	8/20/2015	8/20/2015	8/20/2015	8/20/2015	8/20/2015	
Benzene	mg/kg	0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	
Toluene	mg/kg	0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	
Ethylbenzene	mg/kg	0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	
Xylenes	mg/kg	0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	
C6 - C10 (F1)	mg/kg	10	<10	<10	<10	<10	<10	<10	<10	<10	
C6 - C10 (F1 minus BTEX)	mg/kg	10	<10	<10	<10	<10	<10	<10	<10	<10	
C10 - C16 (F2)	mg/kg	10	<10	<10	232	71	<10	<10	<10	<10	
C16 - C34 (F3)	mg/kg	10	69	18	73	32	22	243	133	282	
C34 - C50 (F4)	mg/kg	10	44	18	64	27	<10	201	111	228	
Gravimetric Heavy Hydrocarbons	mg/kg	1000	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	
Moisture Content	%	1	20	17	16	18	18	49	39	52	
Surrogate	Unit	Acceptable Limits									
Toluene-d8 (BTEX)	%	50-150	100	100	102	101	98	98	101	99	
Ethylbenzene-d10 (BTEX)	%	50-150	102	104	108	104	97	89	93	82	
o-Terphenyl (F2-F4)	%	50-150	92	113	93	109	108	95	95	97	

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Petroleum Hydrocarbons (BTEX/F1-F4) in Soil (CWS)

DATE RECEIVED: 2015-08-24

DATE REPORTED: 2015-09-04

Parameter	Unit	SAMPLE DESCRIPTION:									
		G / S		BH15-118 (0.	BH15-119 (0.	BH15-120 (0.	BH15-121 (0.	BH15-122 (0.	BH15-122 (0.	BH15-122 (1.	BH15-116 (0.
		RDL		0-0.15)	0-0.15)	0-0.15)	0-0.15)	3-0.6)	6-1.0)	0-1.5)	15-0.3)
		DATE SAMPLED:		Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil
			8/20/2015	8/20/2015	8/20/2015	8/20/2015	8/20/2015	8/20/2015	8/20/2015	8/20/2015	8/20/2015
			6897609	6897610	6897627	6897645	6897651	6897696	6897704	6897706	
Benzene	mg/kg	0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	
Toluene	mg/kg	0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	
Ethylbenzene	mg/kg	0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	
Xylenes	mg/kg	0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	
C6 - C10 (F1)	mg/kg	10	<10	<10	<10	<10	<10	<10	<10	<10	
C6 - C10 (F1 minus BTEX)	mg/kg	10	<10	<10	<10	<10	<10	<10	<10	<10	
C10 - C16 (F2)	mg/kg	10	<10	<10	76	<10	44	<10	<10	35	
C16 - C34 (F3)	mg/kg	10	152	244	215	160	2090	22	20	771	
C34 - C50 (F4)	mg/kg	10	114	226	174	123	1770	31	19	613	
Gravimetric Heavy Hydrocarbons	mg/kg	1000	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	
Moisture Content	%	1	50	64	49	44	62	17	18	50	
Surrogate	Unit	Acceptable Limits									
Toluene-d8 (BTEX)	%	50-150	101	100	99	103	99	98	103	104	
Ethylbenzene-d10 (BTEX)	%	50-150	97	86	88	98	78	98	106	93	
o-Terphenyl (F2-F4)	%	50-150	92	93	94	91	107	92	93	113	

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SAMPLING SITE:

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Petroleum Hydrocarbons (BTEX/F1-F4) in Soil (CWS)

DATE RECEIVED: 2015-08-24

DATE REPORTED: 2015-09-04

Parameter	Unit	SAMPLE DESCRIPTION:		DUP M	DUP K	DUP L	BH15-123 (0.0-0.15)	BH15-124 (0.0-0.15)
		G / S	RDL	8/20/2015	8/19/2015	8/19/2015	8/21/2015	8/21/2015
Benzene	mg/kg		0.005	<0.005	<0.005	0.033	<0.005	<0.005
Toluene	mg/kg		0.05	<0.05	0.16	0.30	<0.05	<0.05
Ethylbenzene	mg/kg		0.01	<0.01	<0.01	0.04	<0.01	<0.01
Xylenes	mg/kg		0.05	<0.05	<0.05	0.27	<0.05	<0.05
C6 - C10 (F1)	mg/kg		10	<10	<10	<10	<10	<10
C6 - C10 (F1 minus BTEX)	mg/kg		10	<10	<10	<10	<10	<10
C10 - C16 (F2)	mg/kg		10	<10	<10	<10	651	217
C16 - C34 (F3)	mg/kg		10	150	46	<10	3430	1440
C34 - C50 (F4)	mg/kg		10	140	<10	<10	1030	348
Gravimetric Heavy Hydrocarbons	mg/kg		1000	N/A	NA	NA	N/A	N/A
Moisture Content	%		1	44	33	20	2	2
Surrogate	Unit	Acceptable Limits						
Toluene-d8 (BTEX)	%	50-150		97	95	97	95	100
Ethylbenzene-d10 (BTEX)	%	50-150		76	78	95	92	110
o-Terphenyl (F2-F4)	%	50-150		109	105	106	109	104

Comments: RDL - Reported Detection Limit; G / S - Guideline / Standard

6896314-6901985 Results are based on the dry weight of the sample.

The C6-C10 (F1) fraction is calculated using toluene response factor.

The C10 - C16 (F2), C16 - C34 (F3), and C34 - C50 (F4) fractions are calculated using the average response factor for n-C10, n-C16, and n-C34.

Gravimetric Heavy Hydrocarbons (F4g) are not included in and cannot be added to the Total C6-C50 and are only determined if the chromatogram of the C34 - C50 hydrocarbons indicates that hydrocarbons >C50 are present.

Total C6 - C50 results are corrected for BTEX and PAH contributions (if requested).

Quality control data is available upon request.

Assistance in the interpretation of data is available upon request.

This method complies with the Reference Method for the CWS PHC and is validated for use in the laboratory.

nC6 and nC10 response factors are within 30% of Toluene response factor.

nC10, nC16 and nC34 response factors are within 10% of their average.

C50 response factor is within 70% of nC10 + nC16 + nC34 average.

Linearity is within 15%.

The chromatogram returned to baseline by the retention time of nC50.

Extraction and holding times were met for this sample.

Certified By:



Certificate of Analysis

AGAT WORK ORDER: 15E011146

PROJECT: A04012A07

6310 ROPER ROAD
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CLIENT NAME: KLOHN CRIPPEN

ATTENTION TO: Nicole Wills

SAMPLING SITE:

SAMPLED BY:

Polyaromatic Hydrocarbon Analysis - Soil

DATE RECEIVED: 2015-08-24

DATE REPORTED: 2015-09-04

Parameter	Unit	SAMPLE DESCRIPTION:		BH15-054 (0.	BH15-056 (0.	BH15-060 (1.	BH15-070 (0.	BH15-072 (2.	DUP F	DUP G	BH15-081 (0.
		Soil		3-0.6)	6-1.0)	0-1.5)	6-1.0)	5-3.0)	Soil	Soil	6-1.0)
		Soil		Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil
		DATE SAMPLED:		8/17/2015	8/17/2015	8/17/2015	8/17/2015	8/17/2015	8/17/2015	8/17/2015	8/17/2015
G / S	RDL	6896402	6896425	6896479	6896622	6896641	6896777	6896778	6896839		
Naphthalene	mg/kg	0.005	<0.005	<0.005	<0.005	0.024	<0.005	<0.005	<0.005	<0.005	0.069
2-Methylnaphthalene	mg/kg	0.005	0.007	<0.005	<0.005	0.010	<0.005	<0.005	<0.005	0.007	0.293
Acenaphthylene	mg/kg	0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Acenaphthene	mg/kg	0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Fluorene	mg/kg	0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	0.10
Phenanthrene	mg/kg	0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	0.11
Anthracene	mg/kg	0.004	<0.004	<0.004	<0.004	<0.004	<0.004	<0.004	<0.004	<0.004	<0.004
Fluoranthene	mg/kg	0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Pyrene	mg/kg	0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Benzo[a]anthracene	mg/kg	0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03
Chrysene	mg/kg	0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Benzo[b+ j]fluoranthene	mg/kg	0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Benzo[k]fluoranthene	mg/kg	0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Benzo[a]pyrene	mg/kg	0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03
Indeno[1,2,3-cd]pyrene	mg/kg	0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Dibenzo[ah]anthracene	mg/kg	0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Benzo[ghi]perylene	mg/kg	0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
B[a]P TPE	mg/kg	0.027	0.027	0.027	0.027	0.027	0.027	0.027	0.027	0.027	0.027
IACR (coarse)		0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11
IACR (fine)		0.22	0.22	0.22	0.22	0.22	0.22	0.22	0.22	0.22	0.22
Surrogate	Unit	Acceptable Limits									
2-Fluorobiphenyl (PAH)	%	50-150	79	77	83	83	83	83	89	80	85
p-Terphenyl-d14 (PAH)	%	50-150	88	85	92	92	91	97	85	92	

Certified By:



Certificate of Analysis

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CLIENT NAME: KLOHN CRIPPEN

ATTENTION TO: Nicole Wills

SAMPLING SITE:

SAMPLED BY:

Polyaromatic Hydrocarbon Analysis - Soil

DATE RECEIVED: 2015-08-24

DATE REPORTED: 2015-09-04

Parameter	Unit	G / S	RDL	BH15-113 (0.	BH15-113 (0.	BH15-113 (1.	BH15-114 (0.	BH15-114 (0.	BH15-114 (1.	BH15-116 (0.	BH15-120 (0.
				3-0.6)	6-1.0)	0-1.5)	3-0.6)	6-1.0)	0-1.5)	0-0.15)	0-0.15)
				SAMPLE DESCRIPTION:	Soil	Soil	Soil	Soil	Soil	Soil	Soil
				SAMPLE TYPE:	8/20/2015	8/20/2015	8/20/2015	8/20/2015	8/20/2015	8/20/2015	8/20/2015
				6897567	6897569	6897574	6897578	6897580	6897583	6897588	6897627
				DATE SAMPLED:							
Naphthalene	mg/kg		0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
2-Methylnaphthalene	mg/kg		0.005	<0.005	<0.005	0.012	<0.005	<0.005	<0.005	0.008	0.007
Acenaphthylene	mg/kg		0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Acenaphthene	mg/kg		0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Fluorene	mg/kg		0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02
Phenanthrene	mg/kg		0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02
Anthracene	mg/kg		0.004	<0.004	<0.004	<0.004	<0.004	<0.004	<0.004	<0.004	<0.004
Fluoranthene	mg/kg		0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Pyrene	mg/kg		0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Benzo[a]anthracene	mg/kg		0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03
Chrysene	mg/kg		0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Benzo[b+j]fluoranthene	mg/kg		0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Benzo[k]fluoranthene	mg/kg		0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Benzo[a]pyrene	mg/kg		0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03
Indeno[1,2,3-cd]pyrene	mg/kg		0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Dibenzo[ah]anthracene	mg/kg		0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Benzo[ghi]perylene	mg/kg		0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
B[a]P TPE	mg/kg		0.027	0.027	0.027	0.027	0.027	0.027	0.027	0.027	0.027
IACR (coarse)			0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11
IACR (fine)			0.22	0.22	0.22	0.22	0.22	0.22	0.22	0.22	0.22
Surrogate	Unit	Acceptable Limits									
2-Fluorobiphenyl (PAH)	%	50-150	85	86	84	87	91	87	85	81	
p-Terphenyl-d14 (PAH)	%	50-150	89	92	93	95	98	93	93	90	

Certified By:



Certificate of Analysis

AGAT WORK ORDER: 15E011146

PROJECT: A04012A07

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CLIENT NAME: KLOHN CRIPPEN

ATTENTION TO: Nicole Wills

SAMPLING SITE:

SAMPLED BY:

Polyaromatic Hydrocarbon Analysis - Soil

DATE RECEIVED: 2015-08-24

DATE REPORTED: 2015-09-04

Parameter	Unit	SAMPLE DESCRIPTION:		BH15-122 (0.	BH15-116 (0.
		G / S	RDL	6897651	6897706
Naphthalene	mg/kg		0.005	<0.005	<0.005
2-Methylnaphthalene	mg/kg		0.005	<0.005	<0.005
Acenaphthylene	mg/kg		0.005	<0.005	<0.005
Acenaphthene	mg/kg		0.005	<0.005	<0.005
Fluorene	mg/kg		0.02	<0.02	<0.02
Phenanthrene	mg/kg		0.02	<0.02	<0.02
Anthracene	mg/kg		0.004	<0.004	<0.004
Fluoranthene	mg/kg		0.01	<0.01	<0.01
Pyrene	mg/kg		0.01	<0.01	<0.01
Benzo[a]anthracene	mg/kg		0.03	<0.03	<0.03
Chrysene	mg/kg		0.05	<0.05	<0.05
Benzo[b+j]fluoranthene	mg/kg		0.05	<0.05	<0.05
Benzo[k]fluoranthene	mg/kg		0.05	<0.05	<0.05
Benzo[a]pyrene	mg/kg		0.03	<0.03	<0.03
Indeno[1,2,3-cd]pyrene	mg/kg		0.05	<0.05	<0.05
Dibenzo[ah]anthracene	mg/kg		0.005	<0.005	<0.005
Benzo[ghi]perylene	mg/kg		0.05	<0.05	<0.05
B[a]P TPE	mg/kg		0.027	0.027	0.027
IACR (coarse)			0.11	0.11	0.11
IACR (fine)			0.22	0.22	0.22
Surrogate	Unit	Acceptable Limits			
2-Fluorobiphenyl (PAH)	%	50-150	81	85	
p-Terphenyl-d14 (PAH)	%	50-150	88	93	

Comments: RDL - Reported Detection Limit; G / S - Guideline / Standard

6896402-6897706 Results are based on the dry weight of the sample.

Based on GC/MS target ion analysis.

Isomers Benzo(b)fluoranthene and Benzo(j)fluoranthene have the same GC retention time and are reported as the sum of the two.

Certified By:

Quality Assurance

CLIENT NAME: KLOHN CRIPPEN

AGAT WORK ORDER: 15E011146

PROJECT: A04012A07

ATTENTION TO: Nicole Wills

SAMPLING SITE:

SAMPLED BY:

Soil Analysis															
RPT Date: Sep 04, 2015			DUPLICATE				Method Blank	REFERENCE MATERIAL			METHOD BLANK SPIKE		MATRIX SPIKE		
PARAMETER	Batch	Sample Id	Dup #1	Dup #2	RPD	Measured Value		Acceptable Limits		Recovery	Acceptable Limits		Recovery	Acceptable Limits	
								Lower	Upper		Lower	Upper		Lower	Upper

Soil Analysis - Salinity (AB Tier 1 - pH Calcium Chloride)

pH (CaCl ₂ Extraction)	243	6896427	5.93	5.96	0.5%	< 0.02	97%	90%	110%	NA			NA		
Electrical Conductivity (Sat. Paste)	243	6896427	0.32	0.32	1.3%	< 0.01	110%	90%	110%	NA			NA		
Saturation Percentage	243	6896427	49	49	0.0%	< 1	112%	80%	120%	NA			NA		
Chloride, Soluble	1330	6896427	7	7	0.0%	< 5	94%	80%	120%	98%	80%	120%	103%	80%	120%
Calcium, Soluble	243	6896427	38	39	2.6%	< 1	108%	80%	120%				101%	80%	120%
Potassium, Soluble	243	6896427	2	2	0.0%	< 2	99%	80%	120%				95%	80%	120%
Magnesium, Soluble	243	6896427	16	16	0.0%	< 2	102%	80%	120%				97%	80%	120%
Sodium, Soluble	243	6896427	7	7	0.0%	< 2	96%	80%	120%				98%	80%	120%
Sulfate, Soluble	243	6896427	31	32	3.2%	< 2	94%	80%	120%				99%	80%	120%

Comments: If the RPD value is NA, the results of the duplicates are under 5X the RDL and will not be calculated
 If Matrix spike value is NA, the spiked analyte concentration was lower than that of the matrix contribution.

Soil Analysis - Salinity (AB Tier 1 - pH Calcium Chloride)

pH (CaCl ₂ Extraction)	243	6896532	6.79	6.84	0.7%	< 0.02	98%	90%	110%	NA			NA		
Electrical Conductivity (Sat. Paste)	243	6896532	0.35	0.38	7.4%	< 0.01	108%	90%	110%	NA			NA		
Saturation Percentage	243	6896532	38	37	2.7%	< 1	115%	80%	120%	NA			NA		
Calcium, Soluble	243	6896532	41	42	2.4%	< 1	107%	80%	120%				101%	80%	120%
Potassium, Soluble	243	6896532	7	7	0.0%	< 2	98%	80%	120%				92%	80%	120%
Magnesium, Soluble	243	6896532	10	10	0.0%	< 2	101%	80%	120%				97%	80%	120%
Sodium, Soluble	243	6896532	11	12	8.7%	< 2	96%	80%	120%				91%	80%	120%
Sulfate, Soluble	243	6896532	28	32	13.3%	< 2	91%	80%	120%				103%	80%	120%

Comments: If the RPD value is NA, the results of the duplicates are under 5X the RDL and will not be calculated
 If Matrix spike value is NA, the spiked analyte concentration was lower than that of the matrix contribution.

Soil Analysis - Salinity (AB Tier 1 - pH Calcium Chloride)

pH (CaCl ₂ Extraction)	243	6896777	6.69	6.53	2.4%	< 0.02	97%	90%	110%	NA			NA		
Electrical Conductivity (Sat. Paste)	243	6896777	0.37	0.40	8.0%	< 0.01	103%	90%	110%	NA			NA		
Saturation Percentage	243	6896777	38	37	2.7%	< 1	100%	80%	120%	NA			NA		
Calcium, Soluble	243	6896777	55	58	5.3%	< 1	105%	80%	120%				99%	80%	120%
Potassium, Soluble	243	6896777	3	4	28.6%	< 2	96%	80%	120%				102%	80%	120%
Magnesium, Soluble	243	6896777	12	13	8.0%	< 2	101%	80%	120%				105%	80%	120%
Sodium, Soluble	243	6896777	8	8	0.0%	< 2	95%	80%	120%				97%	80%	120%
Sulfate, Soluble	243	6896777	24	31	NA	< 2	94%	80%	120%				98%	80%	120%

Comments: If the RPD value is NA, the results of the duplicates are under 5X the RDL and will not be calculated
 If Matrix spike value is NA, the spiked analyte concentration was lower than that of the matrix contribution.

Soil Analysis - Salinity (AB Tier 1 - pH Calcium Chloride)

Calcium, Soluble	243	6914083	293	293	0.0%	< 1	103%	80%	120%				106%	80%	120%
Potassium, Soluble	243	6914083	9	10	10.5%	< 2	99%	80%	120%				102%	80%	120%
Magnesium, Soluble	243	6914083	134	131	2.3%	< 2	100%	80%	120%				110%	80%	120%
Sodium, Soluble	243	6914083	359	358	0.3%	< 2	99%	80%	120%				88%	80%	120%

Quality Assurance

CLIENT NAME: KLOHN CRIPPEN

AGAT WORK ORDER: 15E011146

PROJECT: A04012A07

ATTENTION TO: Nicole Wills

SAMPLING SITE:

SAMPLED BY:

Soil Analysis (Continued)															
RPT Date: Sep 04, 2015			DUPLICATE				Method Blank	REFERENCE MATERIAL			METHOD BLANK SPIKE		MATRIX SPIKE		
PARAMETER	Batch	Sample Id	Dup #1	Dup #2	RPD	Measured Value		Acceptable Limits		Recovery	Acceptable Limits		Recovery	Acceptable Limits	
								Lower	Upper		Lower	Upper		Lower	Upper
Sulfate, Soluble	243	6914083	1830	1890	3.2%	< 2	92%	80%	120%			96%	80%	120%	

Comments: If the RPD value is NA, the results of the duplicates are under 5X the RDL and will not be calculated
 If Matrix spike value is NA, the spiked analyte concentration was lower than that of the matrix contribution.

CCME / Tier 1 Metals

Antimony	243	6897018	<0.5	<0.5	NA	< 0.5	110%	80%	120%			105%	80%	120%
Arsenic	243	6897018	5.1	5.2	1.9%	< 0.5	99%	80%	120%			115%	80%	120%
Barium	243	6897018	139	134	3.7%	< 0.5	104%	80%	120%			109%	80%	120%
Beryllium	243	6897018	0.7	<0.5	NA	< 0.5	100%	80%	120%			111%	80%	120%
Cadmium	243	6897018	<0.5	<0.5	NA	< 0.5	95%	80%	120%			104%	80%	120%
Chromium	243	6897018	6.7	6.9	2.9%	< 0.5	90%	80%	120%			111%	80%	120%
Cobalt	243	6897018	5.6	5.2	7.4%	< 0.5	96%	80%	120%			110%	80%	120%
Copper	243	6897018	5.3	5.4	1.9%	< 0.5	92%	80%	120%			106%	80%	120%
Lead	243	6897018	7.5	7.8	3.9%	< 0.5	96%	80%	120%			110%	80%	120%
Molybdenum	243	6897018	0.9	0.9	0.0%	< 0.5	101%	80%	120%			110%	80%	120%
Nickel	243	6897018	13.1	12.1	7.9%	< 0.5	103%	80%	120%			109%	80%	120%
Selenium	243	6897018	<0.5	<0.5	NA	< 0.5	105%	80%	120%			102%	80%	120%
Silver	243	6897018	<0.5	<0.5	NA	< 0.5	94%	80%	120%			108%	80%	120%
Thallium	243	6897018	<0.5	<0.5	NA	< 0.5	96%	80%	120%			108%	80%	120%
Tin	243	6897018	0.7	0.5	NA	< 0.5	99%	80%	120%			102%	80%	120%
Uranium	243	6897018	1.4	1.4	0.0%	< 0.5	98%	80%	120%			111%	80%	120%
Vanadium	243	6897018	13.9	13.7	1.4%	< 0.5	96%	80%	120%			118%	80%	120%
Zinc	243	6897018	24	23	4.3%	< 1	98%	80%	120%			117%	80%	120%

Comments: If Matrix spike value is NA, the spiked analyte concentration was lower than that of the matrix contribution.
 If the RPD value is NA, the results of the duplicates are under 5X the RDL and will not be calculated.

CCME / Tier 1 Metals

Antimony	244	6896314	<0.5	<0.5	NA	< 0.5	110%	80%	120%			100%	80%	120%
Arsenic	244	6896314	4.9	5.1	3.4%	< 0.5	97%	80%	120%			93%	80%	120%
Barium	244	6896314	233	245	5.0%	< 0.5	94%	80%	120%			109%	80%	120%
Beryllium	244	6896314	<0.5	<0.5	NA	< 0.5	94%	80%	120%			108%	80%	120%
Cadmium	244	6896314	<0.5	<0.5	NA	< 0.5	120%	80%	120%			94%	80%	120%
Chromium	244	6896314	17.4	14.3	19.6%	< 0.5	98%	80%	120%			102%	80%	120%
Cobalt	244	6896314	2.1	2.1	0.0%	< 0.5	102%	80%	120%			100%	80%	120%
Copper	244	6896314	4.8	4.4	8.7%	< 0.5	100%	80%	120%			96%	80%	120%
Lead	244	6896314	6.1	6.2	1.6%	< 0.5	97%	80%	120%			103%	80%	120%
Molybdenum	244	6896314	1.5	1.1	NA	< 0.5	104%	80%	120%			104%	80%	120%
Nickel	244	6896314	10.9	9.2	16.9%	< 0.5	111%	80%	120%			96%	80%	120%
Selenium	244	6896314	<0.5	<0.5	NA	< 0.5	91%	80%	120%			90%	80%	120%
Silver	244	6896314	<0.5	<0.5	NA	< 0.5	103%	80%	120%			101%	80%	120%

Quality Assurance

CLIENT NAME: KLOHN CRIPPEN
PROJECT: A04012A07
SAMPLING SITE:

AGAT WORK ORDER: 15E011146
ATTENTION TO: Nicole Wills
SAMPLED BY:

Soil Analysis (Continued)															
RPT Date: Sep 04, 2015			DUPLICATE				Method Blank	REFERENCE MATERIAL			METHOD BLANK SPIKE		MATRIX SPIKE		
PARAMETER	Batch	Sample Id	Dup #1	Dup #2	RPD	Measured Value		Acceptable Limits		Recovery	Acceptable Limits		Recovery	Acceptable Limits	
								Lower	Upper		Lower	Upper		Lower	Upper
Thallium	244	6896314	<0.5	<0.5	NA	< 0.5	96%	80%	120%			101%	80%	120%	
Tin	244	6896314	<0.5	<0.5	NA	< 0.5	97%	80%	120%			97%	80%	120%	
Uranium	244	6896314	<0.5	<0.5	NA	< 0.5	102%	80%	120%			103%	80%	120%	
Vanadium	244	6896314	14.5	13.6	6.4%	< 0.5	110%	80%	120%			108%	80%	120%	
Zinc	244	6896314	13	11	16.7%	< 1	101%	80%	120%			93%	80%	120%	

Comments: If Matrix spike value is NA, the spiked analyte concentration was lower than that of the matrix contribution.
If the RPD value is NA, the results of the duplicates are under 5X the RDL and will not be calculated.

CCME / Tier 1 Metals

Antimony	244	6896479	< 0.5	< 0.5	NA	< 0.5	108%	80%	120%			105%	80%	120%
Arsenic	244	6896479	5.2	5.1	1.9%	< 0.5	94%	80%	120%			93%	80%	120%
Barium	244	6896479	93.6	89.1	4.9%	< 0.5	96%	80%	120%			104%	80%	120%
Beryllium	244	6896479	< 0.5	< 0.5	NA	< 0.5	87%	80%	120%			101%	80%	120%
Cadmium	244	6896479	< 0.5	< 0.5	NA	< 0.5	92%	80%	120%			93%	80%	120%
Chromium	244	6896479	5.8	5.9	1.7%	< 0.5	88%	80%	120%			94%	80%	120%
Cobalt	244	6896479	3.4	3.8	11.1%	< 0.5	92%	80%	120%			95%	80%	120%
Copper	244	6896479	3.6	3.4	5.7%	< 0.5	92%	80%	120%			93%	80%	120%
Lead	244	6896479	3.5	3.6	2.8%	< 0.5	91%	80%	120%			103%	80%	120%
Molybdenum	244	6896479	< 0.5	< 0.5	NA	< 0.5	96%	80%	120%			105%	80%	120%
Nickel	244	6896479	8.8	8.9	1.1%	< 0.5	94%	80%	120%			94%	80%	120%
Selenium	244	6896479	< 0.5	< 0.5	NA	< 0.5	95%	80%	120%			90%	80%	120%
Silver	244	6896479	< 0.5	< 0.5	NA	< 0.5	88%	80%	120%			99%	80%	120%
Thallium	244	6896479	< 0.5	< 0.5	NA	< 0.5	90%	80%	120%			103%	80%	120%
Tin	244	6896479	< 0.5	< 0.5	NA	< 0.5	94%	80%	120%			95%	80%	120%
Uranium	244	6896479	< 0.5	< 0.5	NA	< 0.5	92%	80%	120%			106%	80%	120%
Vanadium	244	6896479	13.0	12.3	5.5%	< 0.5	90%	80%	120%			102%	80%	120%
Zinc	244	6896479	21	21	0.0%	< 1	96%	80%	120%			89%	80%	120%

Comments: If Matrix spike value is NA, the spiked analyte concentration was lower than that of the matrix contribution.
If the RPD value is NA, the results of the duplicates are under 5X the RDL and will not be calculated.

CCME / Tier 1 Metals

Antimony	244	6896778	<0.5	<0.5	NA	< 0.5	111%	80%	120%			105%	80%	120%
Arsenic	244	6896778	4.0	4.0	0.8%	< 0.5	104%	80%	120%			100%	80%	120%
Barium	244	6896778	318	289	9.6%	< 0.5	89%	80%	120%			93%	80%	120%
Beryllium	244	6896778	<0.5	<0.5	NA	< 0.5	119%	80%	120%			93%	80%	120%
Cadmium	244	6896778	<0.5	<0.5	NA	< 0.5	119%	80%	120%			91%	80%	120%
Chromium	244	6896778	10.8	10.4	4.1%	< 0.5	97%	80%	120%			99%	80%	120%
Cobalt	244	6896778	3.9	3.7	4.8%	< 0.5	97%	80%	120%			99%	80%	120%

Quality Assurance

CLIENT NAME: KLOHN CRIPPEN

AGAT WORK ORDER: 15E011146

PROJECT: A04012A07

ATTENTION TO: Nicole Wills

SAMPLING SITE:

SAMPLED BY:

Soil Analysis (Continued)

RPT Date: Sep 04, 2015			DUPLICATE				Method Blank	REFERENCE MATERIAL			METHOD BLANK SPIKE		MATRIX SPIKE		
PARAMETER	Batch	Sample Id	Dup #1	Dup #2	RPD	Measured Value		Acceptable Limits		Recovery	Acceptable Limits		Recovery	Acceptable Limits	
								Lower	Upper		Lower	Upper		Lower	Upper
Copper	244	6896778	6.4	6.6	2.5%	< 0.5	95%	80%	120%			96%	80%	120%	
Lead	244	6896778	4.8	4.8	0.9%	< 0.5	92%	80%	120%			99%	80%	120%	
Molybdenum	244	6896778	0.6	0.6	0.0%	< 0.5	102%	80%	120%			105%	80%	120%	
Nickel	244	6896778	12.2	12.0	1.6%	< 0.5	97%	80%	120%			94%	80%	120%	
Selenium	244	6896778	0.7	0.7	0.0%	< 0.5	99%	80%	120%			97%	80%	120%	
Silver	244	6896778	<0.5	<0.5	NA	< 0.5	104%	80%	120%			100%	80%	120%	
Thallium	244	6896778	<0.5	<0.5	NA	< 0.5	91%	80%	120%			99%	80%	120%	
Tin	244	6896778	0.5	0.5	0.0%	< 0.5	98%	80%	120%			94%	80%	120%	
Uranium	244	6896778	0.7	0.7	0.0%	< 0.5	103%	80%	120%			103%	80%	120%	
Vanadium	244	6896778	21.7	20.9	3.5%	< 0.5	105%	80%	120%			98%	80%	120%	
Zinc	244	6896778	31	30	4.7%	< 1	95%	80%	120%			91%	80%	120%	

Comments: If Matrix spike value is NA, the spiked analyte concentration was lower than that of the matrix contribution.
 If the RPD value is NA, the results of the duplicates are under 5X the RDL and will not be calculated.

Particle Size by Sieve

Sieve Analysis	243	6896777	94	93	1.1%	N/A	104%	80%	120%					
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Soil Analysis - Salinity (AB Tier 1 - pH Calcium Chloride)

pH (CaCl ₂ Extraction)	243	6914562	5.28	5.14	2.7%	< 0.02	97%	90%	110%	NA		NA		
Electrical Conductivity (Sat. Paste)	243	6914562	0.77	0.76	1.3%	< 0.01	103%	90%	110%	NA		NA		
Saturation Percentage	243	6914562	71	71	0.0%	< 1	112%	80%	120%	NA		NA		

Comments: If the RPD value is NA, the results of the duplicates are under 5X the RDL and will not be calculated.
 If Matrix spike value is NA, the spiked analyte concentration was lower than that of the matrix contribution.

CCME / Tier 1 Metals

Antimony	243	6897018	< 0.5	< 0.5	NA	< 0.5	110%	80%	120%			105%	80%	120%
Arsenic	243	6897018	5.1	5.2	1.9%	< 0.5	99%	80%	120%			115%	80%	120%
Barium	243	6897018	139	134	3.7%	< 0.5	104%	80%	120%			109%	80%	120%
Beryllium	243	6897018	<0.5	<0.5	NA	< 0.5	100%	80%	120%			111%	80%	120%
Cadmium	243	6897018	<0.5	<0.5	NA	< 0.5	95%	80%	120%			104%	80%	120%
Chromium	243	6897018	6.7	6.9	2.7%	< 0.5	90%	80%	120%			111%	80%	120%
Cobalt	243	6897018	5.6	5.2	6.4%	< 0.5	96%	80%	120%			110%	80%	120%
Copper	243	6897018	5.3	5.4	1.4%	< 0.5	92%	80%	120%			106%	80%	120%
Lead	243	6897018	7.8	7.5	3.9%	< 0.5	96%	80%	120%			111%	80%	120%
Molybdenum	243	6897018	0.9	0.9	0.0%	< 0.5	101%	80%	120%			110%	80%	120%
Nickel	243	6897018	13.1	12.1	8.3%	< 0.5	103%	80%	120%			109%	80%	120%
Selenium	243	6897018	< 0.5	< 0.5	NA	< 0.5	105%	80%	120%			102%	80%	120%
Silver	243	6897018	<0.5	<0.5	NA	< 0.5	94%	80%	120%			108%	80%	120%
Thallium	243	6897018	< 0.5	< 0.5	NA	< 0.5	96%	80%	120%			108%	80%	120%
Tin	243	6897018	0.6	0.5	18.2%	< 0.5	99%	80%	120%			102%	80%	120%



Quality Assurance

CLIENT NAME: KLOHN CRIPPEN
PROJECT: A04012A07
SAMPLING SITE:

AGAT WORK ORDER: 15E011146
ATTENTION TO: Nicole Wills
SAMPLED BY:

Soil Analysis (Continued)

RPT Date: Sep 04, 2015			DUPLICATE				Method Blank	REFERENCE MATERIAL			METHOD BLANK SPIKE		MATRIX SPIKE		
PARAMETER	Batch	Sample Id	Dup #1	Dup #2	RPD	Measured Value		Acceptable Limits		Recovery	Acceptable Limits		Recovery	Acceptable Limits	
								Lower	Upper		Lower	Upper		Lower	Upper
Uranium	243	6897018	2.3	1.4	0.0%	< 0.5	98%	80%	120%			111%	80%	120%	
Vanadium	243	6897018	13.9	13.7	1.2%	< 0.5	96%	80%	120%			99%	80%	120%	
Zinc	243	6897018	24	23	0.3%	< 1	98%	80%	120%			105%	80%	120%	

Comments: If Matrix spike value is NA, the spiked analyte concentration was lower than that of the matrix contribution.
If the RPD value is NA, the results of the duplicates are under 5X the RDL and will not be calculated.

Soil Analysis - Barium by Fusion ICP (CA)

Barium by Fusion ICP-OES	6896458	6896458	885	862	2.6%	< 40	103%	80%	120%			NA	80%	120%
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Comments: If Matrix spike value is NA, the spiked analyte concentration was lower than that of the matrix contribution.
If the RPD value is NA, the results of the duplicates are under 5X the RDL and will not be calculated.

Soil Analysis - Barium by Fusion ICP (CA)

Barium by Fusion ICP-OES	6896564	6896564	629	748	17.2%	< 40	99%	80%	120%			NA	80%	120%
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Comments: If Matrix spike value is NA, the spiked analyte concentration was lower than that of the matrix contribution.
If the RPD value is NA, the results of the duplicates are under 5X the RDL and will not be calculated.

Soil Analysis - Barium by Fusion ICP (CA)

Barium by Fusion ICP-OES	6897609	6897609	623	694	10.8%	< 40	100%	80%	120%			NA	80%	120%
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Comments: If Matrix spike value is NA, the spiked analyte concentration was lower than that of the matrix contribution.
If the RPD value is NA, the results of the duplicates are under 5X the RDL and will not be calculated.

Certified By: _____

Quality Assurance

CLIENT NAME: KLOHN CRIPPEN

AGAT WORK ORDER: 15E011146

PROJECT: A04012A07

ATTENTION TO: Nicole Wills

SAMPLING SITE:

SAMPLED BY:

Trace Organics Analysis															
RPT Date: Sep 04, 2015			DUPLICATE				Method Blank	REFERENCE MATERIAL			METHOD BLANK SPIKE		MATRIX SPIKE		
PARAMETER	Batch	Sample Id	Dup #1	Dup #2	RPD	Measured Value		Acceptable Limits		Recovery	Acceptable Limits		Recovery	Acceptable Limits	
							Lower	Upper	Lower		Upper	Lower		Upper	

Petroleum Hydrocarbons (BTEX/F1-F4) in Soil (CWS)

Benzene	911	6896448	< 0.005	< 0.005	NA	< 0.005	83%	80%	120%	84%	80%	120%	84%	60%	140%
Toluene	911	6896448	0.08	0.07	13.3%	< 0.05	92%	80%	120%	81%	80%	120%	82%	60%	140%
Ethylbenzene	911	6896448	0.02	0.02	0.0%	< 0.01	99%	80%	120%	99%	80%	120%	100%	60%	140%
Xylenes	911	6896448	0.11	0.09	20.0%	< 0.05	110%	80%	120%	83%	80%	120%	79%	60%	140%
C6 - C10 (F1)	911	6896448	< 10	< 10	NA	< 10	87%	80%	120%	107%	80%	120%	104%	60%	140%
C10 - C16 (F2)	587	6896448	<10	<10	NA	< 10	89%	80%	120%	91%	80%	120%	93%	60%	140%
C16 - C34 (F3)	587	6896448	350	356	1.7%	< 10	91%	80%	120%	89%	80%	120%	92%	60%	140%
C34 - C50 (F4)	587	6896448	235	253	7.4%	< 10	89%	80%	120%	81%	80%	120%	80%	60%	140%
Moisture Content	587	6896448	36	36	NA	< 1									

Comments: If the RPD value is NA, the results of the duplicates are under 5X the RDL and will not be calculated.

Petroleum Hydrocarbons (BTEX/F1-F4) in Soil (CWS)

Benzene	2141	6896814	<0.005	<0.005	NA	< 0.005	110%	80%	120%	111%	80%	120%	106%	60%	140%
Toluene	2141	6896814	<0.05	<0.05	NA	< 0.05	107%	80%	120%	88%	80%	120%	98%	60%	140%
Ethylbenzene	2141	6896814	<0.01	<0.01	NA	< 0.01	92%	80%	120%	87%	80%	120%	92%	60%	140%
Xylenes	2141	6896814	<0.05	<0.05	NA	< 0.05	108%	80%	120%	81%	80%	120%	96%	60%	140%
C6 - C10 (F1)	2141	6896814	<10	<10	NA	< 10	83%	80%	120%	112%	80%	120%	71%	60%	140%

Comments: If the RPD value is NA, the results of the duplicates are under 5X the RDL and will not be calculated.

Petroleum Hydrocarbons (BTEX/F1-F4) in Soil (CWS)

Benzene	3065	6897034	0.083	0.086	3.6%	< 0.005	95%	80%	120%	90%	80%	120%	89%	60%	140%
Toluene	3065	6897034	1.38	1.16	17.0%	< 0.05	97%	80%	120%	92%	80%	120%	95%	60%	140%
Ethylbenzene	3065	6897034	0.53	0.38	33.0%	< 0.01	86%	80%	120%	90%	80%	120%	88%	60%	140%
Xylenes	3065	6897034	1.64	1.32	22.0%	< 0.05	96%	80%	120%	92%	80%	120%	97%	60%	140%
C6 - C10 (F1)	3065	6897034	10	<10	NA	< 10	92%	80%	120%	88%	80%	120%	98%	60%	140%

Comments: If the RPD value is NA, the results of the duplicates are under 5X the RDL and will not be calculated.

Petroleum Hydrocarbons (BTEX/F1-F4) in Soil (CWS)

Benzene	3853	6897152	0.046	0.049	6.3%	< 0.005	102%	80%	120%	95%	80%	120%	99%	60%	140%
Toluene	3853	6897152	6.85	6.44	6.0%	< 0.05	106%	80%	120%	108%	80%	120%	108%	60%	140%
Ethylbenzene	3853	6897152	<0.01	<0.01	NA	< 0.01	107%	80%	120%	117%	80%	120%	113%	60%	140%
Xylenes	3853	6897152	<0.05	<0.05	NA	< 0.05	112%	80%	120%	120%	80%	120%	123%	60%	140%
C6 - C10 (F1)	3853	6897152	<10	<10	NA	< 10	84%	80%	120%	87%	80%	120%	88%	60%	140%

Comments: If the RPD value is NA, the results of the duplicates are under 5X the RDL and will not be calculated.

Petroleum Hydrocarbons (BTEX/F1-F4) in Soil (CWS)

Benzene	3067	6897246	<0.005	<0.005	NA	< 0.005	95%	80%	120%	84%	80%	120%	86%	60%	140%
Toluene	3067	6897246	0.88	0.85	3.0%	< 0.05	97%	80%	120%	87%	80%	120%	91%	60%	140%
Ethylbenzene	3067	6897246	<0.01	<0.01	NA	< 0.01	97%	80%	120%	85%	80%	120%	87%	60%	140%
Xylenes	3067	6897246	<0.05	<0.05	NA	< 0.05	97%	80%	120%	86%	80%	120%	90%	60%	140%
C6 - C10 (F1)	3067	6897246	<10	<10	NA	< 10	90%	80%	120%	96%	80%	120%	92%	60%	140%

Quality Assurance

CLIENT NAME: KLOHN CRIPPEN

AGAT WORK ORDER: 15E011146

PROJECT: A04012A07

ATTENTION TO: Nicole Wills

SAMPLING SITE:

SAMPLED BY:

Trace Organics Analysis (Continued)

RPT Date: Sep 04, 2015			DUPLICATE			Method Blank	REFERENCE MATERIAL			METHOD BLANK SPIKE			MATRIX SPIKE		
PARAMETER	Batch	Sample Id	Dup #1	Dup #2	RPD		Measured Value	Acceptable Limits		Recovery	Acceptable Limits		Recovery	Acceptable Limits	
								Lower	Upper		Lower	Upper		Lower	Upper

Comments: If the RPD value is NA, the results of the duplicates are under 5X the RDL and will not be calculated.

Petroleum Hydrocarbons (BTEX/F1-F4) in Soil (CWS)

Benzene	3854	6897328	<0.005	<0.005	NA	< 0.005	100%	80%	120%	93%	80%	120%	95%	60%	140%
Toluene	3854	6897328	<0.05	<0.05	NA	< 0.05	106%	80%	120%	104%	80%	120%	104%	60%	140%
Ethylbenzene	3854	6897328	<0.01	<0.01	NA	< 0.01	100%	80%	120%	103%	80%	120%	109%	60%	140%
Xylenes	3854	6897328	<0.05	<0.05	NA	< 0.05	109%	80%	120%	118%	80%	120%	119%	60%	140%
C6 - C10 (F1)	3854	6897328	<10	<10	NA	< 10	82%	80%	120%	82%	80%	120%	80%	60%	140%

Comments: If the RPD value is NA, the results of the duplicates are under 5X the RDL and will not be calculated.

Petroleum Hydrocarbons (BTEX/F1-F4) in Soil (CWS)

Benzene	1115	6897583	<0.005	<0.005	NA	< 0.005	94%	80%	120%	88%	80%	120%	88%	60%	140%
Toluene	1115	6897583	<0.05	<0.05	NA	< 0.05	92%	80%	120%	87%	80%	120%	90%	60%	140%
Ethylbenzene	1115	6897583	<0.01	<0.01	NA	< 0.01	87%	80%	120%	82%	80%	120%	88%	60%	140%
Xylenes	1115	6897583	<0.05	<0.05	NA	< 0.05	84%	80%	120%	81%	80%	120%	87%	60%	140%
C6 - C10 (F1)	1115	6897583	<10	<10	NA	< 10	96%	80%	120%	81%	80%	120%	120%	60%	140%

Comments: If the RPD value is NA, the results of the duplicates are under 5X the RDL and will not be calculated.

Petroleum Hydrocarbons (BTEX/F1-F4) in Soil (CWS)

Benzene	3066	6897556	0.034	0.031	9.2%	< 0.005	91%	80%	120%	81%	80%	120%	87%	60%	140%
Toluene	3066	6897556	0.94	0.67	34.0%	< 0.05	96%	80%	120%	84%	80%	120%	91%	60%	140%
Ethylbenzene	3066	6897556	0.38	0.30	24.0%	< 0.01	92%	80%	120%	83%	80%	120%	90%	60%	140%
Xylenes	3066	6897556	2.88	2.27	24.0%	< 0.05	97%	80%	120%	85%	80%	120%	93%	60%	140%
C6 - C10 (F1)	3066	6897556	160	150	6.0%	< 10	90%	80%	120%	97%	80%	120%	88%	60%	140%

Comments: If the RPD value is NA, the results of the duplicates are under 5X the RDL and will not be calculated.

Polyaromatic Hydrocarbon Analysis - Soil

Naphthalene	26	6897583	<0.005	<0.005	NA	< 0.005	91%	70%	130%	93%	70%	130%	89%	70%	130%
2-Methylnaphthalene	26	6897583	<0.005	<0.005	NA	< 0.005				96%	70%	130%	91%	70%	130%
Acenaphthylene	26	6897583	<0.005	<0.005	NA	< 0.005	108%	70%	130%	101%	70%	130%	89%	70%	130%
Acenaphthene	26	6897583	<0.005	<0.005	NA	< 0.005	90%	70%	130%	89%	70%	130%	85%	70%	130%
Fluorene	26	6897583	<0.02	<0.02	NA	< 0.02	95%	70%	130%	93%	70%	130%	87%	70%	130%
Phenanthrene	26	6897583	<0.02	<0.02	NA	< 0.02	83%	70%	130%	89%	70%	130%	86%	70%	130%
Anthracene	26	6897583	<0.004	<0.004	NA	< 0.004	103%	70%	130%	101%	70%	130%	83%	70%	130%
Fluoranthene	26	6897583	<0.01	<0.01	NA	< 0.01	97%	70%	130%	102%	70%	130%	95%	70%	130%
Pyrene	26	6897583	<0.01	<0.01	NA	< 0.01	88%	70%	130%	95%	70%	130%	91%	70%	130%
Benzo[a]anthracene	26	6897583	<0.03	<0.03	NA	< 0.03	120%	70%	130%	121%	70%	130%	115%	70%	130%
Chrysene	26	6897583	<0.05	<0.05	NA	< 0.05	91%	70%	130%	92%	70%	130%	86%	70%	130%
Benzo[b+j]fluoranthene	26	6897583	<0.05	<0.05	NA	< 0.05	81%	70%	130%	82%	70%	130%	100%	70%	130%
Benzo[k]fluoranthene	26	6897583	<0.05	<0.05	NA	< 0.05	77%	70%	130%	83%	70%	130%	71%	70%	130%
Benzo[a]pyrene	26	6897583	<0.03	<0.03	NA	< 0.03	104%	70%	130%	103%	70%	130%	94%	70%	130%
Indeno[1,2,3-cd]pyrene	26	6897583	<0.05	<0.05	NA	< 0.05	91%	70%	130%	90%	70%	130%	90%	70%	130%



Quality Assurance

CLIENT NAME: KLOHN CRIPPEN
 PROJECT: A04012A07
 SAMPLING SITE:

AGAT WORK ORDER: 15E011146
 ATTENTION TO: Nicole Wills
 SAMPLED BY:

Trace Organics Analysis (Continued)

RPT Date: Sep 04, 2015			DUPLICATE				Method Blank	REFERENCE MATERIAL			METHOD BLANK SPIKE			MATRIX SPIKE		
PARAMETER	Batch	Sample Id	Dup #1	Dup #2	RPD	Measured Value		Acceptable Limits		Recovery	Acceptable Limits		Recovery	Acceptable Limits		
								Lower	Upper		Lower	Upper		Lower	Upper	
Dibenzo[ah]anthracene	26	6897583	<0.005	<0.005	NA	< 0.005	81%	70%	130%	83%	70%	130%	83%	70%	130%	
Benzo[ghi]perylene	26	6897583	<0.05	<0.05	NA	< 0.05	86%	70%	130%	82%	70%	130%	84%	70%	130%	

Comments: If the RPD value is NA, the results of the duplicates are under 5X the RDL and will not be calculated.

Certified By: _____



Method Summary

CLIENT NAME: KLOHN CRIPPEN
PROJECT: A04012A07
SAMPLING SITE:

AGAT WORK ORDER: 15E011146
ATTENTION TO: Nicole Wills
SAMPLED BY:

PARAMETER	AGAT S.O.P	LITERATURE REFERENCE	ANALYTICAL TECHNIQUE
Soil Analysis			
Antimony	INOR-171-6006, INOR-171-6202	EPA SW 846-3050/6010; SHEPPARD	ICP-MS
Arsenic	INOR-171-6006, INOR-171-6202	EPA SW 846-3050/6010; SHEPPARD S	ICP-MS
Barium	INOR-171-6006, INOR-171-6202	EPA SW 846-3050/6010; SHEPPARD	ICP-MS
Beryllium	INOR-171-6006, INOR-171-6202	EPA SW 846-3050/6010; SHEPPARD	ICP-MS
Cadmium	INOR-171-6006, INOR-171-6202	EPA SW 846-3050/6010; SHEPPARD	ICP-MS
Chromium	INOR-171-6006, INOR-171-6202	EPA SW 846-3050/6010; SHEPPARD	ICP/MS
Cobalt	INOR-171-6006, INOR-171-6202	EPA SW 846-3050/6010; SHEPPARD	ICP-MS
Copper	INOR-171-6006, INOR-171-6202	EPA SW 846-3050/6010; SHEPPARD	ICP-MS
Lead	INOR-171-6006, INOR-171-6202	EPA SW 846-3050/6010; SHEPPARD	ICP-MS
Molybdenum	INOR-171-6006, INOR-171-6202	EPA SW 846-3050/6010; SHEPPARD	ICP-MS
Nickel	INOR-171-6006, INOR-171-6202	EPA SW 846-3050/6010; SHEPPARD	ICP-MS
Selenium	INORG-171-6006, INOR-171-6202	EPA SW 846-3050/6010; SHEPPARD S	ICP-MS
Silver	INOR-171-6006, INOR-171-6202	EPA SW 846-3050/6010; SHEPPARD	ICP-MS
Thallium	INOR-171-6006, INOR-171-6202	EPA SW 846-3050/6010; SHEPPARD	ICP-MS
Tin	INOR-171-6006, INOR-171-6202	EPA SW 846-3050/6010; SHEPPARD	ICP-MS
Uranium	INOR-171-6006, INOR-171-6202	EPA SW 846-3050/6010; SHEPPARD	ICP-MS
Vanadium	INOR-171-6006, INOR-171-6202	EPA SW 846-3050/6010; SHEPPARD	ICP-MS
Zinc	INOR-171-6006, INOR-171-6202	EPA SW 846-3050/6010; SHEPPARD	ICP-MS
Sieve Analysis	INOR-171-6009	KROETSCH 2007; SHEPPARD 2007	SIEVE
True Barium by Fusion ICP	SOIL- 0620, INST- 0140	ASTM D4503.08 S	ICP/OES
pH (CaCl ₂ Extraction)	INOR-171-6207	SHEPPARD 2007; HENDERSHOT 2008	PH METER
Electrical Conductivity (Sat. Paste)	INO-171-6208	SHEPPARD 2007; MILLER 2007	CONDUCTIVITY METER
Sodium Adsorption Ratio	INOR-171-6201 & INOR-171-6002	McKeague 3.26	CALCULATION
Saturation Percentage	SOIL 0140; SOIL 0110; SOIL 0120	MILLER 2007; SHEPPARD 2007	GRAVIMETRIC
Chloride, Soluble	INOR-171-6200 & INOR-171-6002	SHEPPARD 2007, EATON 2005	COLORIMETER
Calcium, Soluble	SOIL 0110; SOIL 0120; INST 0140	CARTER & GREGORICH 2007, SM 3120B	ICP/OES
Potassium, Soluble	SOIL 0110; SOIL 0120; INST 0140	CARTER & GREGORICH 2007, SM 3120B	ICP/OES
Magnesium, Soluble	SOIL 0110; SOIL 0120; INST 0140	CARTER & GREGORICH 2007, SM 3120B	ICP/OES
Sodium, Soluble	SOIL 0110; SOIL 0120; INST 0140	CARTER & GREGORICH 2007, SM 3120B	ICP/OES

Method Summary

CLIENT NAME: KLOHN CRIPPEN

AGAT WORK ORDER: 15E011146

PROJECT: A04012A07

ATTENTION TO: Nicole Wills

SAMPLING SITE:

SAMPLED BY:

PARAMETER	AGAT S.O.P	LITERATURE REFERENCE	ANALYTICAL TECHNIQUE
Sulfate, Soluble	INOR-171-6201 & INOR-171-6002	SHEPPARD 2007; EATON 2005; MILLER 2007, SM 3120B	ICP/OES
Theoretical Gypsum Requirement	SOIL 0260	USDA HDBK 60, 22D	N/A
Trace Organics Analysis			
Benzene	ORG-170- 5110/5140/5430/5440	EPA SW-846 8260-S	GC/MS
Toluene	ORG-170- 5110/5140/5430/5440	EPA SW-846 8260-S	GC/MS
Ethylbenzene	ORG-170- 5110/5140/5430/5440	EPA SW-846 8260-S	GC/MS
Xylenes	ORG-170- 5110/5140/5430/5440	EPA SW-846 8260-S	GC/MS
C6 - C10 (F1)	ORG-170- 5110/5140/5430/5440	CCME Tier 1 Method-S L	GC/FID
C6 - C10 (F1 minus BTEX)	ORG-170- 5110/5140/5430/5440	CCME Tier 1 Method-S L	GC/FID
C10 - C16 (F2)	ORG-170-5120/5300	CCME Tier 1 Method-S H	GC/FID
C16 - C34 (F3)	ORG-170-5120/5300	CCME Tier 1 Method-S H	GC/FID
C34 - C50 (F4)	ORG-170-5120/5300	CCME Tier 1 Method-S H	GC/FID
Gravimetric Heavy Hydrocarbons	ORG-170-5120/5300	CCME Tier 1 Method-S H	GC/FID
Moisture Content	LAB-175-4002	CCME Tier 1 Method-S %	GRAVIMETRIC
Toluene-d8 (BTEX)	ORG-170- 5110/5140/5430/5440	EPA SW-846 8260-S	GC/MS
Ethylbenzene-d10 (BTEX)	ORG-170- 5110/5140/5430/5440	EPA SW-846 8260-S	GC/MS
o-Terphenyl (F2-F4)	ORG-170-5120/5300	CCME Tier 1 Method-S H	GC/FID
Naphthalene	ORG-170-5420	EPA SW846 8270 D/3540 C/3570	GC/MS
2-Methylnaphthalene	ORG-170-5420	EPA SW846 8270 D/3540 C/3570	GC/MS
Acenaphthylene	ORG-170-5420	EPA SW846 8270 D/3540 C/3570	GC/MS
Acenaphthene	ORG-170-5420	EPA SW846 8270 D/3540 C/3570	GC/MS
Fluorene	ORG-170-5420	EPA SW846 8270 D/3540 C/3570	GC/MS
Phenanthrene	ORG-170-5420	EPA SW846 8270 D/3540 C/3570	GC/MS
Anthracene	ORG-170-5420	EPA SW846 8270 D/3540 C/3570	GC/MS
Fluoranthene	ORG-170-5420	EPA SW846 8270 D/3540 C/3570	GC/MS
Pyrene	ORG-170-5420	EPA SW846 8270 D/3540 C/3570	GC/MS
Benzo[a]anthracene	ORG-170-5420	EPA SW846 8270 D/3540 C/3570	GC/MS
Chrysene	ORG-170-5420	EPA SW846 8270 D/3540 C/3570	GC/MS
Benzo[b+j]fluoranthene	ORG-170-5420	EPA SW846 8270 D/3540 C/3570	GC/MS
Benzo[k]fluoranthene	ORG-170-5420	EPA SW846 8270 D/3540 C/3570	GC/MS
Benzo[a]pyrene	ORG-170-5420	EPA SW846 8270 D/3540 C/3570	GC/MS
Indeno[1,2,3-cd]pyrene	ORG-170-5420	EPA SW846 8270 D/3540 C/3570	GC/MS
Dibenzo[ah]anthracene	ORG-170-5420	EPA SW846 8270 D/3540 C/3570	GC/MS
Benzo[ghi]perylene	ORG-170-5420	EPA SW846 8270 D/3540 C/3570	GC/MS
2-Fluorobiphenyl (PAH)	TO 0500	EPA SW846 8270 D/3540 C/3570	GC/MS
p-Terphenyl-d14 (PAH)	TO 0500	EPA SW846 8270 D/3540 C/3570	GC/MS
B[a]P TPE	ORG-170-5420		CALCULATION
IACR (coarse)			GC/MS
IACR (fine)			GC/MS



Laboratory Use Only

Arrival Temperature: _____
AGAT Job Number: **ISE011146**
Date and Time: **15 AUG 24 16:43**

Chain of Custody Record

Report Information

Company: **KCB**
Contact: **Nicole Wills**
Address: **2618 Hopewell place
Calgary Alberta**
Phone: **403-730-6809** Fax: _____
LSD: _____
Client Project #: **A04012A07**

Report Information

1. Name: **Nicole Wills**
Email: **Nwills@klohn.com**
2. Name: **Kenned Ross**
Email: **Kross@klohn.com**
3. Name: **Ken Smart**
Email: **Ksmart@klohn.com**

Report Format

Single Sample per Page
 Multiple Samples per Page

Requirements (Selection may impact detection limits)

CCME AB Tier 1 BC CSR
 Agricultural Agricultural AW
 Industrial Industrial IW
 Residential/Park Residential/Park LW
 Commercial Commercial DW
 Drinking Water Natural Area
 FWAL AB Surface Water
 Other
 D50 (Drilling) SPIGEC

Invoice To

Same Yes No

Company: _____
Contact: _____
Address: _____
Phone: _____ Fax: _____
PO/AFE#: _____

Turnaround Time Required (TAT)

Regular TAT 5 to 7 business days
Rush TAT Less than 24 hours
 24 to 48 hours
 48 to 72 hours

RUSH TAT REQUESTS
UPON SELECTING A RUSH TAT, THE CLIENT ACCEPTS THAT A RUSH SURCHARGE WILL BE ADDED TO THE INVOICE. SEE BACK FOR SURCHARGE.

Date Required: _____

LABORATORY USE (LAB ID #)	SAMPLE IDENTIFICATION	SAMPLE MATRIX	DATE/TIME SAMPLED	COMMENTS - SITE SAMPLE INFO. SAMPLE CONTAINMENT	# OF CONTAINERS	Detailed Soil Salinity (Saturated Paste)	CCME BTEX/F1-F4	Soil Metals <input type="checkbox"/> HWS-B <input type="checkbox"/> Cr ⁶ <input type="checkbox"/> Hg	Water Metals <input type="checkbox"/> Dissolved <input type="checkbox"/> Total <input type="checkbox"/> Hg <input type="checkbox"/> Cr ⁶	Routine Water Potability	AB Class 2 Landfill	BC Landfill	D50 Detailed Soil Salinity (As Received)	Microtox	BTEXs/VPH/EPH <input type="checkbox"/> LEPH/HEPH <input type="checkbox"/>	Barium (Fusion) Particle Size PAH	HOLD FOR 60 DAYS	PRESERVED (Y/N)	CONTAMINATED/HAZARDOUS (Y/N)	
6896314	BH15-054 (0.15-0.3)	SOIL	Aug 17/15	Samples below 1.0m are frozen, Head space / water possible.	3	X	X	X												
402	BH15-054 (0.3-0.6)				3	X	X	X												
408	BH15-054 (1.0-1.5)				3	X	X	X												
419	BH15-055 (0.-0.15)				3	X	X	X												
420	BH15-055 (0.6-1.0)				3	X	X	X												
422	BH15-055 (1.0-1.5)				3	X	X	X												
424	BH15-056 (0.3-0.6)				3	X	X	X												
425	BH15-056 (0.6-1.0)				3	X	X	X								X	X			
427	BH15-056 (1.0-1.5)			3	X	X	X													

Samples Relinquished By (Print Name and Sign): **Ken Smart** [Signature] Date/Time: _____
 Samples Relinquished By (Print Name and Sign): _____ Date/Time: _____
 Samples Relinquished By (Print Name and Sign): _____ Date/Time: _____
 Samples Received By (Print Name and Sign): **A. [Signature]** Date/Time: **29 AUG 15 @ 16:43**
 Samples Received By (Print Name and Sign): _____ Date/Time: _____
 Samples Received By (Print Name and Sign): _____ Date/Time: _____

Pink Copy - Client
Yellow Copy - AGAT
White Copy - AGAT

Page **1** of _____
N^o: AB **000863**



Chain of Custody Record

Report to:

Company: _____ Same as COC#: _____

LABORATORY USE (LAB ID #)	SAMPLE IDENTIFICATION	SAMPLE MATRIX	DATE/TIME SAMPLED	COMMENTS - SITE SAMPLE INFO. SAMPLE CONTAINMENT	# OF CONTAINERS	Detailed Soil Salinity (Saturated Paste)	CCME BTEX/F1-F4	Soil Metals <input type="checkbox"/> HWS-B <input type="checkbox"/> Cr ⁶ <input type="checkbox"/> Hg	Water Metals <input type="checkbox"/> Dissolved <input type="checkbox"/> Total <input type="checkbox"/> Hg <input type="checkbox"/> Cr ⁶	Routine Water Potability	AB Class 2 Landfill	BC Landfill	D50 Detailed Soil Salinity (As Received)	Microtox	BTEX/VPH/EPH <input type="checkbox"/> LEPH/HEPH <input type="checkbox"/>	Barium (Fusion)	Particle Size	PAH	HOLD FOR 60 DAYS	PRESERVED (Y/N)	CONTAMINATED/HAZARDOUS (Y/N)
6896429	BH15-057 (0.15-0.3)	SOIL	Aug 17/15		3	X	X	X								X					
434	BH15-057 (0.6-1.0)				3	X	X	X								X					
437	BH15-057 (1.0-1.5)				3	X	X	X								X					
448	BH15-058 (0.3-0.6)				3	X	X	X								X					
458	BH15-058 (0.6-1.0)				3	X	X	X								X					
464	BH15-058 (1.0-1.5)				3	X	X	X								X					
465	BH15-059 (0.0-0.15)				3	X	X	X								X					
468	BH15-059 (0.15-0.3)				3	X	X	X								X					
469	BH15-059 (1.0-1.5)				3	X	X	X								X					
472	BH15-060 (0.15-0.3)				3	X	X	X								X					
476	BH15-060 (0.3-0.6)				3	X	X	X								X					
479	BH15-060 (1.0-1.5)				3	X	X	X								X					
482	BH15-061 (0.0-0.15)				3	X	X	X								X					
492	BH15-061 (0.3-0.6)				3	X	X	X								X					
509	BH15-061 (1.0-1.5)				3	X	X	X								X					
514	BH15-062 (0.15-0.3)				3	X	X	X								X					
527	BH15-062 (0.3-0.6)				3	X	X	X								X					
529	BH15-062 (1.0-1.5)				3	X	X	X								X					
530	BH15-063 (0.15-0.3)				3	X	X	X								X					
531	BH15-063 (0.3-0.6)				3	X	X	X								X					
532	BH15-063 (1.0-1.5)				3	X	X	X								X					
535	BH15-064 (0.15-0.3)				3	X	X	X								X					
537	BH15-064 (0.6-1.0)				3	X	X	X								X					
540	BH15-064 (1.0-1.5)				3	X	X	X								X					

Samples Relinquished By (Print Name and Sign):	Date/Time	Samples Received By (Print Name and Sign):	Date/Time	Pink Copy - Client Yellow Copy - AGAT White Copy - AGAT	Page <u>2</u> of _____
Samples Relinquished By (Print Name and Sign):	Date/Time	Samples Received By (Print Name and Sign):	Date/Time		No: AB 000863 A
Samples Relinquished By (Print Name and Sign):	Date/Time	Samples Received By (Print Name and Sign):	Date/Time		



Chain of Custody Record

Report to:

Company: _____

Same as COC#: _____

LABORATORY USE (LAB ID #)	SAMPLE IDENTIFICATION	SAMPLE MATRIX	DATE/TIME SAMPLED	COMMENTS - SITE SAMPLE INFO. SAMPLE CONTAINMENT	# OF CONTAINERS	Detailed Soil Salinity (Saturated Paste)	CCME BTEX/F1-F4	Soil Metals <input type="checkbox"/> HWS-B <input type="checkbox"/> Cr ⁶ <input type="checkbox"/> Hg	Water Metals <input type="checkbox"/> Dissolved <input type="checkbox"/> Total <input type="checkbox"/> Hg <input type="checkbox"/> Cr ⁶	Routine Water Potability	AB Class 2 Landfill	BC Landfill	D50 Detailed Soil Salinity (As Received)	Microtox	BTEX/VPH/EPH <input type="checkbox"/> LEPH/HEPH <input type="checkbox"/>	Barium (Fusion)	Particle Size	PAH	HOLD FOR 60 DAYS	PRESERVED (Y/N)	CONTAMINATED/HAZARDOUS (Y/N)
6896551	BH15-065 (0.15-0.3)	SOIL	Aug 17/15		3	X	X														
558	BH15-065 (0.3-0.6)				3	X	X														
558	BH15-065 (1.0-1.5)				3	X	X														
560	BH15-066 (0.15-0.3)				3	X	X	X													
564	BH15-066 (0.3-0.6)				3	X	X	X								X	X				
567	BH15-066 (1.0-1.5)				3	X	X	X								X	X				
572	BH15-067 (0.3-0.6)				3	X	X	X								X	X				
574	BH15-067 (0.6-1.0)				3	X	X	X								X	X				
578	BH15-067 (1.0-1.5)				3	X	X	X								X	X				
583	BH15-068 (0.15-0.3)				3	X	X	X								X	X				
599	BH15-068 (0.3-0.6)				3	X	X	X								X	X				
600	BH15-068 (0.6-1.0)				3	X	X	X								X	X				
601	BH15-069 (0.3-0.6)				3	X	X	X								X	X				
604	BH15-069 (0.6-1.0)				3	X	X	X								X	X				
609	BH15-069 (1.0-1.5)				3	X	X	X								X	X				
619	BH15-070 (0.3-0.6)				3	X	X	X								X	X				
622	BH15-070 (0.6-1.0)				3	X	X	X								X	X				
628	BH15-070 (1.0-1.5)				3	X	X	X								X	X				
631	BH15-071 (0.3-0.6)				3	X	X	X								X	X				
634	BH15-071 (0.6-1.0)				3	X	X	X								X	X				
636	BH15-071 (1.0-1.5)				3	X	X	X								X	X				
639	BH15-072 (0.6-1.0)				3	X	X	X								X	X				
640	BH15-072 (1.0-1.5)				3	X	X	X								X	X				
641	BH15-072 (2.5-3.0)				3	X	X	X								X	X				

Samples Relinquished By (Print Name and Sign):	Date/Time	Samples Received By (Print Name and Sign): <i>AGAT B. [Signature]</i>	Date/Time: 29 AUG 15	Pink Copy - Client Yellow Copy - AGAT White Copy - AGAT	Page <u>3</u> of _____
Samples Relinquished By (Print Name and Sign):	Date/Time	Samples Received By (Print Name and Sign):	Date/Time: 21:43		N ^o : AB 000864 A
Samples Relinquished By (Print Name and Sign):	Date/Time	Samples Received By (Print Name and Sign):	Date/Time:		



Chain of Custody Record

Report to:

Company: _____ Same as COC#: _____

LABORATORY USE (LAB ID #)	SAMPLE IDENTIFICATION	SAMPLE MATRIX	DATE/TIME SAMPLED	COMMENTS - SITE SAMPLE INFO. SAMPLE CONTAINMENT	# OF CONTAINERS	Detailed Soil Salinity (Saturated Paste)	CCME BTEX/F1-F4	Soil Metals <input type="checkbox"/> HWS-B <input type="checkbox"/> Cr ⁶ <input type="checkbox"/> Hg	Water Metals <input type="checkbox"/> Dissolved <input type="checkbox"/> Total <input type="checkbox"/> Hg <input type="checkbox"/> Cr ⁶	Routine Water Potability	AB Class 2 Landfill	BC Landfill	D50 Detailed Soil Salinity (As Received)	Microtox	BTEXS/VPH/EPH <input type="checkbox"/> LEPH/HEPH <input type="checkbox"/>	Barium (Fusion) Particle Size PAH	HOLD FOR 60 DAYS	PRESERVED (Y/N)	CONTAMINATED/HAZARDOUS (Y/N)		
6896686	BH15-073 (0.3-0.6)	SOIL	Aug 17/15		2		X														
721	BH15-073 (1.0-1.5)	↓	↓		2		X														
728	BH15-073 (2.5-3.0)								X												
750	BH15-074 (0.3-0.6)						2		X												
758	BH15-074 (1.0-1.5)						2		X												
768	BH15-074 (4.0-4.5)						2		X												
777	DUP F						3	X	X	X								X	X	X	
778	DUP G						3	X	X	X								X	X	X	
779	DUP H						3	X	X	X								X	X	X	
784	DUP I						3	X	X	X											
792	BH15-075 (0.3-0.6)				Aug 18/15		2		X												
801	BH15-075 (0.6-1.0)				↓		2		X												
802	BH15-075 (1.0-1.5)				↓		2		X												

15 AUG 24 16:43

Samples Relinquished By (Print Name and Sign):	Date/Time	Samples Received By (Print Name and Sign):	Date/Time	Pink Copy - Client Yellow Copy - AGAT White Copy - AGAT	Page <u>4</u> of _____ N ^o : AB 000865 A
Samples Relinquished By (Print Name and Sign):	Date/Time	Samples Received By (Print Name and Sign):	Date/Time		
Samples Relinquished By (Print Name and Sign):	Date/Time	Samples Received By (Print Name and Sign):	Date/Time		



Chain of Custody Record

Report to:

Company: _____

Same as COC#: _____

LABORATORY USE (LAB ID #)	SAMPLE IDENTIFICATION	SAMPLE MATRIX	DATE/TIME SAMPLED	COMMENTS - SITE SAMPLE INFO. SAMPLE CONTAINMENT	# OF CONTAINERS	Detailed Soil Salinity (Saturated Paste)	CCME BTEX/F1-F4	Soil Metals <input type="checkbox"/> HWS-B <input type="checkbox"/> Cr ⁶ <input type="checkbox"/> Hg	Water Metals <input type="checkbox"/> Dissolved <input type="checkbox"/> Total <input type="checkbox"/> Hg <input type="checkbox"/> Cr ⁶	Routine Water Potability	AB Class 2 Landfill	BC Landfill	D50 Detailed Soil Salinity (As Received)	Microtox	BTEXS/VPH/EPH <input type="checkbox"/> LEPH/HEPH <input type="checkbox"/>	Barium (Fusion)	Particle size	PAH	HOLD FOR 60 DAYS	PRESERVED (Y/N)	CONTAMINATED/HAZARDOUS (Y/N)
6896807	BH15-076 (0.3-0.6)	SOIL	Aug 18/15		2		X														
810	BH15-076 (3.5-4.0)	↓	↓		2		X														
814	BH15-076 (4.0-4.5)			2		X															
816	BH15-077 (0.3-0.6)			2		X															
818	BH15-077 (1.0-1.5)			2		X															
819	BH15-077 (2.5-3.0)			2		X															
820	BH15-078 (0.3-0.6)			2		X															
821	BH15-078 (0.6-1.0)			2		X															
823	BH15-078 (2.5-3.0)			2		X															
825	BH15-079 (0.15-0.3)			2		X															
830	BH15-079 (0.6-1.0)			2		X															
832	BH15-079 (1.0-1.5)			2		X															
833	BH15-080 (0.3-0.6)			2		X															
834	BH15-080 (1.0-1.5)			2		X															
836	BH15-080 (2.5-3.0)			2		X															
838	BH15-081 (0.15-0.3)			2		X															
839	BH15-081 (0.6-1.0)			2		X															
846	BH15-081 (2.5-3.0)			2		X															
854	BH15-082 (0.0-0.15)			2		X															
861	BH15-082 (0.6-1.0)			2		X															
998	BH15-082 (1.0-1.5)			2		X															
7064	BH15-083 (0.3-0.6)	2		X																	
015	BH15-083 (0.6-1.0)	2		X																	
016	BH15-083 (2.5-3.0)	2		X																	
018	DUP J																				

Samples Relinquished By (Print Name and Sign):	Date/Time	Samples Received By (Print Name and Sign):	Date/Time	Pink Copy - Client Yellow Copy - AGAT White Copy - AGAT	Page <u>6</u> of _____ N ^o : AB 000867 A
Samples Relinquished By (Print Name and Sign):	Date/Time	Samples Received By (Print Name and Sign):	Date/Time		
Samples Relinquished By (Print Name and Sign):	Date/Time	Samples Received By (Print Name and Sign):	Date/Time		



Chain of Custody Record

Report to:

Company: _____ Same as COC#: _____

LABORATORY USE (LAB ID #)	SAMPLE IDENTIFICATION	SAMPLE MATRIX	DATE/TIME SAMPLED	COMMENTS - SITE SAMPLE INFO. SAMPLE CONTAINMENT	# OF CONTAINERS	Detailed Soil Salinity (Saturated Paste)	CCME BTEX/F1-F4	Soil Metals <input type="checkbox"/> HWS-B <input type="checkbox"/> Cr ⁶ <input type="checkbox"/> Hg	Water Metals <input type="checkbox"/> Dissolved <input type="checkbox"/> Total <input type="checkbox"/> Hg <input type="checkbox"/> Cr ⁶	Routine Water Potability	AB Class 2 Landfill	BC Landfill	D50 Detailed Soil Salinity (As Received)	Microtox	BTEXS/VP/EPH <input type="checkbox"/> LEPH/HEPH <input type="checkbox"/>	Barium (Fusion) Particle size. PAH	HOLD FOR 60 DAYS	PRESERVED (Y/N)	CONTAMINATED/HAZARDOUS (Y/N)			
6897025	BH15-084 (0.3-0.6)	SOIL	Aug 18/15		2	X	X															
026	BH15-084 (1.0-1.5)	↓	↓		2	X	X															
029	BH15-084 (2.5-3.0)				2	X	X															
034	BH15-085 (0.6-1.0)				2	X	X															
037	BH15-085 (1.5-2.0)				2	X	X															
042	BH15-085 (4.0-4.5)				2	X	X															
043	BH15-086 (0.6-1.0)				2	X	X															
046	BH15-086 (1.0-1.5)				2	X	X															
057	BH15-086 (2.5-3.0)				2	X	X															
059	BH15-087 (0.3-0.6)				2	X	X															
061	BH15-087 (2.5-3.0)				2	X	X															
070	BH15-087 (5.5-6.6)				2	X	X															
073	BH15-087 (7.0-7.5)				2	X	X															
075	BH15-088 (0.3-0.6)				2	X	X															
078	BH15-088 (1.0-1.5)				2	X	X															
083	BH15-088 (2.5-3.0)				2	X	X															
086	BH15-089 (0.0-0.15)				2	X	X															
093	BH15-089 (0.6-1.0)				2	X	X															
103	BH15-089 (1.0-1.5)				2	X	X															
113	BH15-090 (0.3-0.6)				2	X	X															
117	BH15-090 (1.0-1.5)				2	X	X															
143	BH15-090 (2.5-3.0)	2	X	X																		
152	BH15-091 (0.3-0.6)	2	X	X																		
167	BH15-091 (0.6-1.0)	2	X	X																		
191	BH15-091 (1.0-1.5)	2	X	X																		

Samples Relinquished By (Print Name and Sign):	Date/Time	Samples Received By (Print Name and Sign):	Date/Time	Pink Copy - Client Yellow Copy - AGAT White Copy - AGAT	Page <u>7</u> of _____ N ^o : AB 000866 A
Samples Relinquished By (Print Name and Sign):	Date/Time	Samples Received By (Print Name and Sign):	Date/Time		
Samples Relinquished By (Print Name and Sign):	Date/Time	Samples Received By (Print Name and Sign):	Date/Time		



Chain of Custody Record

Report to:

Company: _____ Same as COC#: _____

LABORATORY USE (LAB ID #)	SAMPLE IDENTIFICATION	SAMPLE MATRIX	DATE/TIME SAMPLED	COMMENTS - SITE SAMPLE INFO. SAMPLE CONTAINMENT	# OF CONTAINERS	Detailed Soil Salinity (Saturated Paste)	CCME BTEX/F1-F4	Soil Metals <input type="checkbox"/> HWS-B <input type="checkbox"/> Cr ⁶ <input type="checkbox"/> Hg	Water Metals <input type="checkbox"/> Dissolved <input type="checkbox"/> Total <input type="checkbox"/> Hg <input type="checkbox"/> Cr ⁶	Routine Water Potability	AB Class 2 Landfill	BC Landfill	D50 Detailed Soil Salinity (As Received)	Microtox	BTEXS/VPH/EPH <input type="checkbox"/> LEPH/HEPH <input type="checkbox"/>	Barium (Fusion) Particle Size PAH	HOLD FOR 60 DAYS	PRESERVED (Y/N)	CONTAMINATED/HAZARDOUS (Y/N)
6897211	BH15-092 (0.3-0.6)	SOIL	Aug 19/15		2	X													
215	BH15-092 (0.6-1.0)				2	X													
217	BH15-092 (1.0-1.5)				2	X													
218	BH15-093 (0.3-0.6)				2	X													
222	BH15-093 (0.6-1.0)				2	X													
224	BH15-093 (1.0-1.5)				2	X													
225	BH15-094 (0.3-0.6)				2	X													
228	BH15-094 (0.6-1.0)				2	X													
229	BH15-094 (1.0-1.5)				2	X													
230	BH15-095 (0.6-1.0)				2	X													
235	BH15-095 (1.5-2.0)				2	X													
238	BH15-095 (2.5-3.0)				2	X													
241	BH15-096 (0.3-0.6)				2	X													
243	BH15-096 (0.6-1.0)				2	X													
244	BH15-096 (1.0-1.5)				2	X													
246	BH15-097 (0.3-0.6)				2	X													
248	BH15-097 (0.6-1.0)				2	X													
250	BH15-097 (1.0-1.5)				2	X													
254	BH15-098 (0.6-1.0)				2	X													
256	BH15-098 (1.5-2.0)				2	X													
258	BH15-098 (2.5-3.0)				2	X													
271	BH15-098 (0.3-0.6)				2	X													
273	BH15-099 (1.0-1.5)				2	X													
275	BH15-099 (2.5-3.0)				2	X													

Samples Relinquished By (Print Name and Sign):	Date/Time	Samples Received By (Print Name and Sign):	Date/Time	Pink Copy - Client Yellow Copy - AGAT White Copy - AGAT	Page <u>8</u> of _____ N ^o : AB 000869 A
Samples Relinquished By (Print Name and Sign):	Date/Time	Samples Received By (Print Name and Sign):	Date/Time		
Samples Relinquished By (Print Name and Sign):	Date/Time	Samples Received By (Print Name and Sign):	Date/Time		



Chain of Custody Record

Report to:

Company: _____ Same as COC#: _____

LABORATORY USE (LAB ID #)	SAMPLE IDENTIFICATION	SAMPLE MATRIX	DATE/TIME SAMPLED	COMMENTS - SITE SAMPLE INFO. SAMPLE CONTAINMENT	# OF CONTAINERS	Detailed Soil Salinity (Saturated Paste)	CCME BTEX/F1-F4	Soil Metals <input type="checkbox"/> HWS-B <input type="checkbox"/> Cr ⁶ <input type="checkbox"/> Hg	Water Metals <input type="checkbox"/> Dissolved <input type="checkbox"/> Total <input type="checkbox"/> Hg <input type="checkbox"/> Cr ⁶	Routine Water Potability	AB Class 2 Landfill	BC Landfill	D50 Detailed Soil Salinity (As Received)	Microtox	BTEXS/VPH/EPH <input type="checkbox"/> LEPH/HEPH <input type="checkbox"/>	Barium (Fusion)	Particle Size	PAH	HOLD FOR 60 DAYS	PRESERVED (Y/N)	CONTAMINATED/HAZARDOUS (Y/N)
6897288	BH15-100 (0.3-0.6)	SOIL	Aug 17/15		2		X														
290	BH15-100 (0.6-1.0)	↓	↓		2		X														
292	BH15-100 (2.5-3.0)			2		X															
293	BH15-101 (0.6-1.0)			2		X	X										X	X			
295	BH15-101 (1.0-1.5)			2		X	X														
297	BH15-101 (2.5-3.0)			2		X	X														
298	BH15-102 (1.0-1.5)			2		X	X														
299	BH15-102 (1.5-2.0)			2		X	X														
300	BH15-102 (2.5-3.0)			2		X	X														
308	BH15-103 (0.3-0.6)			2		X	X														
310	BH15-103 (0.6-1.0)			2		X	X														
324	BH15-103 (1.0-1.5)			2		X	X														
326	BH15-104 (0.15-0.3)			2		X	X														
327	BH15-104 (0.3-0.6)			2		X	X														
328	BH15-104 (1.0-1.5)			2		X	X														
333	BH15-105 (0.15-0.3)			2		X	X														
336	BH15-105 (0.3-0.6)			2		X	X														
340	BH15-105 (1.0-1.5)			2		X	X														
342	BH15-106 (0.3-0.6)			2		X	X														
344	BH15-106 (0.6-1.0)			2		X	X														
448	BH15-106 (1.0-1.5)			2		X	X														
468	BH15-107 (0.15-0.3)	2		X	X	X		X								X	X				
472	BH15-107 (0.3-0.6)	2		X	X																
498	BH15-107 (2.5-3.0)	2		X	X																

Samples Relinquished By (Print Name and Sign):	Date/Time	Samples Received By (Print Name and Sign):	Date/Time	Pink Copy - Client Yellow Copy - AGAT White Copy - AGAT	Page <u>9</u> of _____
Samples Relinquished By (Print Name and Sign):	Date/Time	Samples Received By (Print Name and Sign):	Date/Time		Nº: AB 000870 A
Samples Relinquished By (Print Name and Sign):	Date/Time	Samples Received By (Print Name and Sign):	Date/Time		



Chain of Custody Record

Report to:

Company: _____

Same as COC#: _____

LABORATORY USE (LAB ID #)	SAMPLE IDENTIFICATION	SAMPLE MATRIX	DATE/TIME SAMPLED	COMMENTS - SITE SAMPLE INFO. SAMPLE CONTAINMENT	# OF CONTAINERS	Detailed Soil Salinity (Saturated Paste)	CCME BTEX/F1-F4	Soil Metals <input type="checkbox"/> HWS-B <input type="checkbox"/> Cr ⁶ <input type="checkbox"/> Hg	Water Metals <input type="checkbox"/> Dissolved <input type="checkbox"/> Total <input type="checkbox"/> Hg <input type="checkbox"/> Cr ⁶	Routine Water Potability	AB Class 2 Landfill	BC Landfill	D50 Detailed Soil Salinity (As Received)	Microtox	BTEXS/VPH/EPH <input type="checkbox"/> LEPH/HEPH <input type="checkbox"/>	Barium (fusion) Particle Size PAH	HOLD FOR 60 DAYS	PRESERVED (Y/N)	CONTAMINATED/HAZARDOUS (Y/N)		
6897514	BH15-108 (0.15-0.3)	SOIL	Aug 19 / 15		3	X	X	X													
541	BH15-108 (1.0-1.5)	↓	↓		2	X	X														
543	BH15-108 (2.5-3.0)				1	X	X														
545	BH15-109 (1.0-1.5)				2	X	X														
546	BH15-109 (2.0-2.5)				2	X	X														
548	BH15-109 (9.0-9.5)				2	X															
550	BH15-110 (0.15-0.3)				2	X	X														
551	BH15-110 (0.3-0.6)				2	X	X														
555	BH15-110 (1.0-1.5)				2	X	X														
556	BH15-111 (0.0-0.15)				2	X	X														
557	BH15-111 (0.3-0.6)				2	X	X														
559	BH15-111 (1.0-1.5)				2	X	X														
560	BH15-112 (0.6-1.0)				2	X	X														
561	BH15-112 (1.0-1.5)				2	X	X														
564	BH15-112 (2.5-3.0)				2	X	X														
567	BH15-113 (0.3-0.6)				2	X	X				X										
569	BH15-113 (0.6-1.0)	2	X	X				X													
574	BH15-113 (1.0-1.5)	2	X	X				X													
578	BH15-114 (0.3-0.6)	2	X	X				X													
580	BH15-114 (0.6-1.0)	2	X	X				X													
583	BH15-114 (1.0-1.5)	2	X	X				X													
586	BH15-115 (0-0.15)	2	X	X				X													
	BH15-115																				
	BH15-115																				

Samples Relinquished By (Print Name and Sign):	Date/Time	Samples Received By (Print Name and Sign):	Date/Time	Pink Copy - Client Yellow Copy - AGAT White Copy - AGAT	Page 10 of _____
Samples Relinquished By (Print Name and Sign):	Date/Time	Samples Received By (Print Name and Sign):	Date/Time		Nº: AB 000871 A
Samples Relinquished By (Print Name and Sign):	Date/Time	Samples Received By (Print Name and Sign):	Date/Time		



Chain of Custody Record

Report to:

Company: _____

Same as COC#: _____

LABORATORY USE (LAB ID #)	SAMPLE IDENTIFICATION	SAMPLE MATRIX	DATE/TIME SAMPLED	COMMENTS - SITE SAMPLE INFO. SAMPLE CONTAINMENT	# OF CONTAINERS	Detailed Soil Salinity (Saturated Paste)	CGME BTEX/F1-F4	Soil Metals <input type="checkbox"/> HWS-B <input type="checkbox"/> Cr <input type="checkbox"/> Hg	Water Metals <input type="checkbox"/> Dissolved <input type="checkbox"/> Total <input type="checkbox"/> Hg <input type="checkbox"/> Cr ⁶	Routine Water Potability	AB Class 2 Landfill	BC Landfill	D50 Detailed Soil Salinity (As Received)	Microtox	BTEX/VPH/EPH <input type="checkbox"/> LEPH/HEPH <input type="checkbox"/>	Barium (Fusion)	Particle Size	PAH	HOLD FOR 60 DAYS	PRESERVED (Y/N)	CONTAMINATED/HAZARDOUS (Y/N)	
6897588	BH15-116 (0.0-0.15)	SOIL	Aug 20/15		3	X	X	X								X	X	X				
607	BH15-117 (0.0-0.15)	↓	↓		3	X	X	X								X	X	X				
609	BH15-118 (0.0-0.15)			3	X	X	X										X	X	X			
610	BH15-119 (0.0-0.15)			3	X	X	X										X	X	X			
627	BH15-120 (0.0-0.15)			3	X	X	X										X	X	X			
645	BH15-121 (0.0-0.15)			3	X	X	X										X	X	X			
651	BH15-122 (0.3-0.6)			3	X	X	X										X	X	X			
696	BH15-122 (0.6-1.0)			2	X	X																
704	BH15-122 (1.0-1.5)			2	X	X																
706	BH15-116 (0.15-0.3)			4	X	X											X	X	X			
710	DUP m			2	X	X																

15 AUG 24 16:44

Samples Relinquished By (Print Name and Sign):	Date/Time	Samples Received By (Print Name and Sign):	Date/Time	Pink Copy - Client Yellow Copy - AGAT White Copy - AGAT	Page <u>11</u> of <u> </u>
Samples Relinquished By (Print Name and Sign):	Date/Time	Samples Received By (Print Name and Sign):	Date/Time		N ^o : AB 000872 A
Samples Relinquished By (Print Name and Sign):	Date/Time	Samples Received By (Print Name and Sign):	Date/Time		



AGAT Laboratories

SAMPLE INTEGRITY RECEIPT FORM

RECEIVING BASICS - Shipping

Company/Consultant: KCB
 Courier: CANADIAN NORTH Prepaid Collect
 Waybill #: 28-YEN-7060-2722
 Branch: EDM GP FN FM RD VAN LYD FSJ EST Other: _____
 Custody Seal Intact: Yes No NA
 TAT: <24hr 24-48hr 48-72hr Reg Other _____
 Cooler Quantity: 11

TIME SENSITIVE ISSUES - Shipping

Earliest Date Sampled: 17 AUG 14 ALREADY EXCEEDED? Yes No
 MIBI/Time Sensitive Test*: _____ Expiry: _____
 Hydrocarbon Test: OK Expiry: 24 AUG 15
 Are samples received more than 5 days after sampling: Yes No
 *Residual Chlorine, DO, Turbidity, BOD, Nitrate/Nitrite, Microtox

Temperature (to be recorded from bottles/jars only)

N/A - Only Soil Bags Received

(1) (Bottle/Jar) 6.0 + 5.5 + 5.7 = 5.7 °C (2) (Bottle/Jar) 6.5 + 5.6 + 5.6 = 5.9 °C
 (3) (Bottle/Jar) 5.5 + 5.4 + 5.4 = 5.6 °C (4) (Bottle/Jar) 2.9 + 2.7 + 2.8 = 2.8 °C
 (5) (Bottle/Jar) 2.9 + 2.8 + 2.6 = 2.8 °C (6) (Bottle/Jar) 2.6 + 2.6 + 2.7 = 2.6 °C

(If more than 6 coolers are received use another sheet of paper and attach)

SAMPLE INTEGRITY - Shipping

Hazardous Samples: Why Hazardous: _____
 Precaution taken: _____
 Legal Samples: Yes No
 International Samples: Yes No Tape Sealed: Yes No
 Coolant used: Icepack Bagged Ice Free Ice Free Water None

LOGISTICS USE ONLY

Workorder No: 15E011146
 Samples Damaged: Yes No If YES why?
 No Bubble Wrap Frozen Courier
 Other: _____
 Correct Sample Requirements for Testing
 Correct Bottles: Yes No Correct Amount: Yes No
 Correct Labels: Yes No
 If NO to any of the above, explain why:
 Visible Sediment in Waters : Yes No

Additional Integrity Issues or concerns:
Broken sample: BH15-061 0-0.15 (482B) rec'd broken.
Extra and contaminated sample: BH15-072 0.6-1.0 (639C)
Extra sample: 640C, 641C, 686C, 750C, 758C, 784C, 018C, 950C
 Account Project Manager: Alueyn Pasco have they been notified of the above issues: Yes No
 Whom spoken to: _____ Date/Time: _____
 CPM Initial _____



AGAT Laboratories

SAMPLE INTEGRITY RECEIPT FORM

RECEIVING BASICS - Shipping

Company/Consultant: KCB

Courier: CANADIAN NORTH Prepaid Collect

Waybill #: 518-YEV-7060-2722

Branch: EDM GP FN FM RD VAN LYD FSJ EST Other: _____

Custody Seal Intact: Yes No NA

TAT: <24hr 24-48hr 48-72hr Reg Other _____

Cooler Quantity: _____

TIME SENSITIVE ISSUES - Shipping

Earliest Date Sampled: 17 AUG 15 ALREADY EXCEEDED? Yes No

MIBI/Time Sensitive Test*: _____ Expiry: _____

Hydrocarbon Test: PHC Expiry: 24 AUG 15

Are samples received more than 5 days after sampling: Yes No

**Residual Chlorine, DO, Turbidity, BOD, Nitrate/Nitrite, Microtox*

Temperature (to be recorded from bottles/jars only)

N/A - Only Soil Bags Received

(1) (Bottle/Jar) 2.8 + 2.7 + 1.7 = 2.4 °C (2) (Bottle/Jar) 3.2 + 4.4 + 3.3 = 3.6 °C

(3) (Bottle/Jar) _____ + _____ + _____ = _____ °C (4) (Bottle/Jar) _____ + _____ + _____ = _____ °C

(5) (Bottle/Jar) _____ + _____ + _____ = _____ °C (6) (Bottle/Jar) _____ + _____ + _____ = _____ °C

(If more than 6 coolers are received use another sheet of paper and attach)

SAMPLE INTEGRITY - Shipping

Hazardous Samples: Why Hazardous: _____

Precaution taken: _____

Legal Samples: Yes No

International Samples: Yes No Tape Sealed: Yes No

Coolant used: Icepack Bagged Ice Free Ice Free Water None

LOGISTICS USE ONLY

Workorder No: _____

Samples Damaged: Yes No If YES why? _____

No Bubble Wrap Frozen Courier

Other: _____

Correct Sample Requirements for Testing

Correct Bottles: Yes No Correct Amount: Yes No

Correct Labels: Yes No

If NO to any of the above, explain why: _____

Visible Sediment in Waters : Yes No

Additional Integrity Issues or concerns:
Extra samples: 985C, 463A, 464A, 465A, 466A, 477A, 468A, 469A,
470A, 471A, 472A, 473A, 474A, 475A, 476A, 477A, 478A, 479A,
480A, 481A, 511A

Account Project Manager: Alvyn Pasco have they been notified of the above issues: Yes No

Whom spoken to: _____ Date/Time: _____

CPM Initial _____

518 YEV 7060-2722

518-YEV-7060-2722

SHIPPER'S NAME AND ADDRESS
 IEG Consultants
 Northwind Ind
 Project # A04012A07.02.02
 Inuvik, NT
 867 777 2426
 Registered

SHIPPER'S ACCOUNT NUMBER

NOT NEGOTIABLE Canadian North
AIR WAYBILL 101 3731 52 Ave E
 (AIR CONSIGNMENT NOTE) Edmonton Int Arpt, AB T9E 0V4
 Canada

GST # R 892440629

Copies 1, 2 and 3 of this Air Waybill are originals and have the same validity.

It is agreed that the goods described herein are accepted in apparent good order and condition (except as noted) for carriage by air. The shipper warrants that the goods are properly packed, secured, labeled, and stowed in accordance with the instructions on the reverse hereof. ALL GOODS MAY BE CARRIED BY ANY OTHER CARRIER INCLUDING AIR, SEA, ROAD OR RAIL. THE SHIPPER'S EXPRESS SPECIFIC CONTRACT INSTRUCTIONS ARE GIVEN HEREON BY THE SHIPPER, AND THE CARRIER DEEMS APPROPRIATE. THE SHIPPER'S LIABILITY SHALL BE CARRIED VIA INTERMEDIATE STOPPING PLACES WHICH THE CARRIER DEEMS APPROPRIATE. THE SHIPPER'S ATTENTION IS DRAWN TO THE NOTICE CONCERNING CARRIER'S LIMITATION OF LIABILITY. Shipper may increase such limitation of liability by declaring a higher value for carriage and paying a supplemental charge if required.

CONSIGNEE'S NAME AND ADDRESS
 AGAT Laboratories Ltd
 6310 Roper Road
 Alveyn Pasco
 Edmonton, AB T6B 3P9
 Canada
 780 243 8889 403-735-2745

CONSIGNEE'S ACCOUNT NUMBER
 AGA10000

PRINTED NAME
 ALSO NOTIFY NAME AND ADDRESS (OPTIONAL ACCOUNTING INFORMATION)
 Acc. #: KL0100CW
 Kloth Crippen Berger Ltd
 500 - 2618 Hopewell Place NE
 Calgary, AB T1Y 7J7
 Marty Mack, 403-291-0777
 TO BE DECLARED AND ENTERED TO AVOID OR OTHER CARRIER UNLESS SHIPPER SPECIES OTHER INSTRUCTIONS HERE
 DOMESTIC LIABILITY:

SIGNATURE RECEIVED IN GOOD ORDER PLACE DATETIME

ISSUING CARRIER'S AGENT NAME AND CITY
 AGENTS' DATA CODE
 ACCOUNT NO.

ARRPORT OF DEPARTURE (ADDR OF FIRST CARRIER AND REQUESTED ROUTING)
 Inuvik

ROUTING AND DESTINATION
 TO BY TO BY
 YEG Canadian North
 AIRPORT OF DESTINATION
 Edmonton
 FOR CARRIER USE ONLY
 FLIGHTDATE FLIGHTDATE
 445/22 AU

CHS WTTVAL OTHER DECLARED VALUE FOR CARRIAGE DECLARED VALUE FOR CUSTOMS
 CAD 3RD X
 AMOUNT OF INSURANCE INSURANCE - If carrier offers insurance, and such insurance is requested in accordance with the conditions thereof, indicate amount to be insured in figures in box marked "Amount of Insurance".

HANDLING INFORMATION These commodities licensed by US for ultimate destination
 HFPU KDDP COOL Project # A04012A07.02.02

DUPLICATE COPY

NO OF PIECES RCP	GROSS WEIGHT kg lb	RATE CLASS COMMODITY ITEM NO.	CHARGEABLE WEIGHT	RATE / CHARGE	TOTAL	NATURE AND QUANTITY OF GOODS (INCL DIMENSIONS OR VOLUME)	P-UP ZONE	PICKUP CHARGES	ORIGIN ADVANCE CHARGES	DESCRIPTION OF ORIGIN ADVANCE	DEL ZONE	DELIVERY CHARGES	DEST. ADVANCE CHARGES	DESCRIPTION OF DEST. ADVANCE	ITEMS PREPAID	ITEMS COLLECT	
																	PREPAID
12	328 K		328	\$7.20	2,361.60	Soil Samples DIMS 48x40x28IN (bulk)		0.00	0.00			0.00	0.00				
					2,361.60												
TOTAL PREPAID		3,223.58		TOTAL COLLECT		0.00		TOTAL OTHER CHARGES DUE CARRIER		708.48		0.00					

OTHER CHARGES AND DESCRIPTION
 708.48 Nav Canada Charge, Fuel S

COD

TOTAL PREPAID 3,223.58
 TOTAL COLLECT 0.00

PRINTED NAME
 SIGNATURE OF SHIPPER ABOVE AND INITIAL APPLICABLE TO BOX BELOW
 THIS SHIPMENT DOES NOT CONTAIN DANGEROUS GOODS
 REGULATED IN AIR TRANSPORT.

RE-WEIGHT/DIMENSIONAL WEIGHT AND SHIPPER GUARANTEES ALL CHARGES
 SUBJECT TO RATE AUDIT

FOR CARRIER USE ONLY AT DESTINATION
 CHARGES AT DESTINATION
 EXEMPTED ON 8/21/2015 15:13
 at (place) 995107
 SIGNATURE OF ISSUING CARRIER OR ITS AGENT

518-YEV-7060-2722



CLIENT NAME: IEG CONSULTANTS LTD
500-2618 HOPEWELL PLACE NE
CALGARY, AB T1Y7J7
(403) 262-5505

ATTENTION TO: Nicole Wills

PROJECT: A04012A07

AGAT WORK ORDER: 15E011146

SOIL ANALYSIS REVIEWED BY: Ngoc (Ruby) Vu, Lab Technician

TRACE ORGANICS REVIEWED BY: Jarrod Roberts, Operations Manager

DATE REPORTED: Oct 10, 2015

PAGES (INCLUDING COVER): 74

VERSION*: 2

Should you require any information regarding this analysis please contact your client services representative at (780) 395-2525

***NOTES**

VERSION 2: Addition: Barium Fusion to samples 950 and 985. -PF(10-Oct-15)

All samples will be disposed of within 30 days following analysis. Please contact the lab if you require additional sample storage time.



Certificate of Analysis

AGAT WORK ORDER: 15E011146

PROJECT: A04012A07

6310 ROPER ROAD
EDMONTON, ALBERTA
CANADA T6B 3P9
TEL (780)395-2525
FAX (780)462-2490
<http://www.agatlabs.com>

CLIENT NAME: IEG CONSULTANTS LTD

ATTENTION TO: Nicole Wills

SAMPLING SITE:

SAMPLED BY:

CCME / Tier 1 Metals

DATE RECEIVED: 2015-08-24

DATE REPORTED: 2015-10-10

Parameter	Unit	G / S	RDL	BH15-054 (0.	BH15-054 (0.	BH15-054 (1.	BH15-055	BH15-055 (0.	BH15-055 (1.	BH15-056 (0.	BH15-056 (0.
				15-0.3)	3-0.6)	0-1.5)	(0-0.15)	6-1.0)	0-1.5)	3-0.6)	6-1.0)
				SAMPLE DESCRIPTION:	Soil	Soil	Soil	Soil	Soil	Soil	Soil
				SAMPLE TYPE:	8/17/2015	8/17/2015	8/17/2015	8/17/2015	8/17/2015	8/17/2015	8/17/2015
				6896314	6896402	6896408	6896419	6896420	6896422	6896424	6896425
Antimony	mg/kg	20	0.5	10.1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Arsenic	mg/kg	17	0.5	4.9	4.2	6.4	5.0	6.5	5.3	3.8	4.9
Barium	mg/kg	750	0.5	617	239	100	218	113	92.9	273	270
Beryllium	mg/kg	5	0.5	0.7	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Cadmium	mg/kg	1.4	0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Chromium	mg/kg	64	0.5	17.4	9.6	7.5	10.2	8.7	6.3	9.6	10.6
Cobalt	mg/kg	20	0.5	2.1	3.1	3.6	2.1	4.6	3.3	3.4	3.2
Copper	mg/kg	63	0.5	5.9	6.9	4.4	4.1	4.2	3.2	7.9	6.3
Lead	mg/kg	70	0.5	6.1	3.9	3.5	5.5	3.5	3.6	3.6	4.0
Molybdenum	mg/kg	4	0.5	0.7	0.9	0.7	0.8	0.6	0.5	1.0	0.8
Nickel	mg/kg	50	0.5	10.9	11.5	10.2	7.1	11.7	8.8	10.4	10.9
Selenium	mg/kg	1	0.5	<0.5	0.5	<0.5	<0.5	<0.5	<0.5	0.6	0.8
Silver	mg/kg	20	0.5	1.0	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Thallium	mg/kg	1	0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Tin	mg/kg	5	0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Uranium	mg/kg	23	0.5	1.3	0.6	<0.5	<0.5	<0.5	<0.5	0.6	0.7
Vanadium	mg/kg	130	0.5	14.5	17.2	12.9	13.6	14.4	12.4	15.5	19.3
Zinc	mg/kg	200	1	13	30	23	14	27	21	34	16

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ATTENTION TO: Nicole Wills

SAMPLING SITE:

SAMPLED BY:

CCME / Tier 1 Metals											
DATE RECEIVED: 2015-08-24				DATE REPORTED: 2015-10-10							
		SAMPLE DESCRIPTION:		BH15-056 (1.	BH15-057 (0.	BH15-057 (0.	BH15-057 (1.	BH15-058 (0.	BH15-058 (0.	BH15-058 (1.	BH15-059 (0.
		SAMPLE TYPE:		0-1.5)	15-0.3)	6-1.0)	0-1.5)	3-0.6)	6-1.0)	0-1.5)	0-0.15)
		DATE SAMPLED:		Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil
		G / S		8/17/2015	8/17/2015	8/17/2015	8/17/2015	8/17/2015	8/17/2015	8/17/2015	8/17/2015
Parameter	Unit	RDL		6896427	6896429	6896434	6896437	6896448	6896458	6896464	6896465
Antimony	mg/kg	20	0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Arsenic	mg/kg	17	0.5	6.3	5.7	4.5	7.0	5.5	3.0	6.1	10.3
Barium	mg/kg	750	0.5	128	238	202	240	238	132	103	820
Beryllium	mg/kg	5	0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Cadmium	mg/kg	1.4	0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Chromium	mg/kg	64	0.5	8.4	14.8	15.6	11.4	15.6	9.2	6.3	11.6
Cobalt	mg/kg	20	0.5	4.5	2.4	2.3	7.2	4.4	2.9	3.7	3.6
Copper	mg/kg	63	0.5	4.6	4.8	4.4	6.2	6.4	3.0	3.2	9.7
Lead	mg/kg	70	0.5	4.3	6.4	5.6	5.3	4.7	3.6	3.9	10.7
Molybdenum	mg/kg	4	0.5	0.5	1.3	1.4	1.0	1.5	<0.5	<0.5	0.9
Nickel	mg/kg	50	0.5	12.4	10.5	11.0	10.3	12.1	7.8	9.5	9.2
Selenium	mg/kg	1	0.5	<0.5	<0.5	<0.5	0.6	<0.5	<0.5	<0.5	<0.5
Silver	mg/kg	20	0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Thallium	mg/kg	1	0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Tin	mg/kg	5	0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Uranium	mg/kg	23	0.5	<0.5	<0.5	<0.5	0.6	<0.5	<0.5	<0.5	0.5
Vanadium	mg/kg	130	0.5	16.6	14.7	11.7	23.2	18.5	16.8	13.9	22.0
Zinc	mg/kg	200	1	27	14	18	21	40	22	28	23

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PROJECT: A04012A07

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ATTENTION TO: Nicole Wills

SAMPLING SITE:

SAMPLED BY:

CCME / Tier 1 Metals

DATE RECEIVED: 2015-08-24

DATE REPORTED: 2015-10-10

Parameter	Unit	G / S	RDL	BH15-059 (0.	BH15-059 (1.	BH15-060 (0.	BH15-060 (0.	BH15-060 (1.	BH15-061	BH15-061 (0.	BH15-061 (1.
				15-0.3)	0-1.5)	15-0.3)	3-0.6)	0-1.5)	(0-0.15)	3-0.6)	0-1.5)
				SAMPLE DESCRIPTION:	Soil	Soil	Soil	Soil	Soil	Soil	Soil
				SAMPLE TYPE:	8/17/2015	8/17/2015	8/17/2015	8/17/2015	8/17/2015	8/17/2015	8/17/2015
				6896468	6896469	6896472	6896476	6896479	6896482	6896492	6896509
Antimony	mg/kg	20	0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Arsenic	mg/kg	17	0.5	4.7	5.6	5.5	4.1	5.1	6.9	4.2	5.7
Barium	mg/kg	750	0.5	276	87.4	270	256	93.6	269	262	108
Beryllium	mg/kg	5	0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Cadmium	mg/kg	1.4	0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Chromium	mg/kg	64	0.5	8.3	6.9	6.1	9.7	5.8	8.0	9.5	6.4
Cobalt	mg/kg	20	0.5	3.6	3.9	2.5	2.7	3.4	3.2	4.2	4.0
Copper	mg/kg	63	0.5	6.4	3.5	5.3	6.1	3.6	5.0	7.9	4.2
Lead	mg/kg	70	0.5	6.3	3.2	7.2	4.6	4.5	8.3	4.4	3.7
Molybdenum	mg/kg	4	0.5	0.8	<0.5	0.5	0.8	<0.5	0.8	1.3	<0.5
Nickel	mg/kg	50	0.5	8.7	11.1	6.4	8.5	8.8	6.8	10.7	10.2
Selenium	mg/kg	1	0.5	<0.5	<0.5	<0.5	0.6	<0.5	<0.5	0.7	<0.5
Silver	mg/kg	20	0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Thallium	mg/kg	1	0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Tin	mg/kg	5	0.5	<0.5	<0.5	0.6	<0.5	<0.5	<0.5	<0.5	<0.5
Uranium	mg/kg	23	0.5	0.5	<0.5	<0.5	0.5	<0.5	0.5	0.5	<0.5
Vanadium	mg/kg	130	0.5	14.9	14.3	12.9	14.7	13.0	16.6	14.1	13.5
Zinc	mg/kg	200	1	26	25	14	18	21	14	44	23

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PROJECT: A04012A07

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CCME / Tier 1 Metals

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DATE REPORTED: 2015-10-10

Parameter	Unit	G / S	RDL	BH15-062 (0.	BH15-062 (0.	BH15-062 (1.	BH15-066 (0.	BH15-066 (0.	BH15-066 (1.	BH15-067 (0.	BH15-067 (0.
				15-0.3)	3-0.6)	0-1.5)	15-0.3)	3-0.6)	0-1.5)	3-0.6)	6-1.0)
				SAMPLE DESCRIPTION:	Soil	Soil	Soil	Soil	Soil	Soil	Soil
				SAMPLE TYPE:	8/17/2015	8/17/2015	8/17/2015	8/17/2015	8/17/2015	8/17/2015	8/17/2015
				6896514	6896527	6896529	6896560	6896564	6896567	6896572	6896574
Antimony	mg/kg	20	0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Arsenic	mg/kg	17	0.5	6.8	7.4	9.0	4.7	5.6	6.8	6.6	4.7
Barium	mg/kg	750	0.5	266	251	130	244	180	94.5	299	78.3
Beryllium	mg/kg	5	0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Cadmium	mg/kg	1.4	0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Chromium	mg/kg	64	0.5	8.3	7.5	7.3	9.0	12.2	6.6	7.0	6.5
Cobalt	mg/kg	20	0.5	3.9	3.6	4.6	5.3	2.7	4.4	3.1	3.4
Copper	mg/kg	63	0.5	6.1	6.2	4.6	7.1	3.4	4.9	5.1	3.2
Lead	mg/kg	70	0.5	7.1	6.6	4.1	4.4	5.8	4.2	7.8	3.3
Molybdenum	mg/kg	4	0.5	<0.5	0.7	0.9	0.7	<0.5	0.6	0.7	<0.5
Nickel	mg/kg	50	0.5	8.1	8.2	13.7	11.1	7.4	11.2	7.3	9.1
Selenium	mg/kg	1	0.5	<0.5	<0.5	<0.5	0.6	<0.5	<0.5	<0.5	<0.5
Silver	mg/kg	20	0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Thallium	mg/kg	1	0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Tin	mg/kg	5	0.5	<0.5	<0.5	<0.5	2.7	<0.5	<0.5	<0.5	<0.5
Uranium	mg/kg	23	0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.5	<0.5
Vanadium	mg/kg	130	0.5	17.9	16.3	15.9	17.2	22.8	16.1	15.2	12.7
Zinc	mg/kg	200	1	19	18	29	33	17	27	20	23

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Certificate of Analysis

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PROJECT: A04012A07

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SAMPLING SITE:

SAMPLED BY:

CCME / Tier 1 Metals

DATE RECEIVED: 2015-08-24

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Parameter	Unit	G / S	RDL	BH15-067 (1.	BH15-068 (0.	BH15-068 (0.	BH15-068 (0.	BH15-069 (0.	BH15-069 (0.	BH15-069 (1.	DUP F
				0-1.5)	15-0.3)	3-0.6)	6-1.0)	3-0.6)	6-1.0)	0-1.5)	
				SAMPLE DESCRIPTION:	Soil	Soil	Soil	Soil	Soil	Soil	
				SAMPLE TYPE:	8/17/2015	8/17/2015	8/17/2015	8/17/2015	8/17/2015	8/17/2015	
				6896578	6896583	6896599	6896600	6896601	6896604	6896609	6896777
Antimony	mg/kg	20	0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Arsenic	mg/kg	17	0.5	6.5	5.9	6.8	7.1	4.1	5.9	6.7	6.4
Barium	mg/kg	750	0.5	137	269	225	169	145	127	107	100
Beryllium	mg/kg	5	0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Cadmium	mg/kg	1.4	0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Chromium	mg/kg	64	0.5	5.8	13.2	12.6	11.2	10.2	7.7	6.8	6.3
Cobalt	mg/kg	20	0.5	3.5	4.2	4.4	5.2	3.3	4.5	4.0	4.0
Copper	mg/kg	63	0.5	3.8	6.0	6.3	6.4	6.9	5.4	4.4	3.7
Lead	mg/kg	70	0.5	3.9	8.1	6.4	5.4	4.5	4.7	3.9	3.5
Molybdenum	mg/kg	4	0.5	<0.5	1.1	0.9	0.7	0.85	0.7	0.7	<0.5
Nickel	mg/kg	50	0.5	9.9	9.2	17.6	12.6	10.9	11.9	1.1	9.8
Selenium	mg/kg	1	0.5	<0.5	<0.5	0.5	<0.5	0.7	<0.5	<0.5	<0.5
Silver	mg/kg	20	0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Thallium	mg/kg	1	0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Tin	mg/kg	5	0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Uranium	mg/kg	23	0.5	<0.5	<0.5	<0.5	<0.5	1.1	<0.5	<0.5	<0.5
Vanadium	mg/kg	130	0.5	13.0	14.0	16.4	18.3	16.9	17.8	15.1	12.9
Zinc	mg/kg	200	1	22	21	24	30	20	19	24	25

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SAMPLING SITE:

SAMPLED BY:

CCME / Tier 1 Metals

DATE RECEIVED: 2015-08-24

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Parameter	Unit	SAMPLE DESCRIPTION:		DUP G	DUP H	DUP J	BH15-101 (0.	BH15-107 (0.	BH15-108 (0.	BH15-113 (0.	BH15-113 (0.	
		SAMPLE TYPE:		Soil	Soil	Soil	6-1.0)	15-0.3)	15-0.3)	3-0.6)	6-1.0)	
		DATE SAMPLED:		8/17/2015	8/17/2015	8/18/2015	8/19/2015	8/19/2015	8/19/2015	8/19/2015	8/20/2015	8/20/2015
		G / S	RDL	6896778	6896779	6897018	6897293	6897468	6897514	6897567	6897569	
Antimony	mg/kg	20	0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	
Arsenic	mg/kg	17	0.5	4.0	3.9	5.1	4.9	3.9	4.4	3.8	4.8	
Barium	mg/kg	750	0.5	318	209	138	357	330	229	113	196	
Beryllium	mg/kg	5	0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	
Cadmium	mg/kg	1.4	0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	
Chromium	mg/kg	64	0.5	10.8	10.7	6.7	7.9	6.8	12.4	7.4	8.5	
Cobalt	mg/kg	20	0.5	3.9	2.8	5.7	2.6	1.7	5.2	2.7	3.2	
Copper	mg/kg	63	0.5	6.4	4.4	5.3	5.7	4.1	6.1	2.2	6.5	
Lead	mg/kg	70	0.5	4.8	4.3	5.3	16.0	11.1	4.4	4.2	4.6	
Molybdenum	mg/kg	4	0.5	0.6	0.5	0.9	0.8	0.6	1.3	<0.5	<0.5	
Nickel	mg/kg	50	0.5	12.2	8.9	16.5	6.6	4.3	11.0	7.0	10.6	
Selenium	mg/kg	1	0.5	0.7	1.0	<0.5	<0.5	<0.5	0.7	<0.5	0.8	
Silver	mg/kg	20	0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	
Thallium	mg/kg	1	0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	
Tin	mg/kg	5	0.5	0.5	0.6	<0.5	0.6	1.5	<0.5	<0.5	<0.5	
Uranium	mg/kg	23	0.5	0.7	0.7	1.4	<0.5	<0.5	0.7	<0.5	<0.5	
Vanadium	mg/kg	130	0.5	21.7	13.3	13.9	16.6	12.9	17.1	17.4	20.2	
Zinc	mg/kg	200	1	31	10	24	25	20	30	17	19	

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SAMPLING SITE:

SAMPLED BY:

CCME / Tier 1 Metals

DATE RECEIVED: 2015-08-24

DATE REPORTED: 2015-10-10

Parameter	Unit	G / S	RDL	BH15-113 (1.	BH15-114 (0.	BH15-116 (0.	BH15-117 (0.	BH15-118 (0.	BH15-119 (0.	BH15-120 (0.	BH15-121 (0.		
				SAMPLE DESCRIPTION:	0-1.5)	3-0.6)	0-0.15)	0-0.15)	0-0.15)	0-0.15)	0-0.15)	0-0.15)	0-0.15)
				SAMPLE TYPE:	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil
				DATE SAMPLED:	8/20/2015	8/20/2015	8/20/2015	8/20/2015	8/20/2015	8/20/2015	8/20/2015	8/20/2015	8/20/2015
				6897574	6897578	6897588	6897607	6897609	6897610	6897627	6897645		
Antimony	mg/kg	20	0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5		
Arsenic	mg/kg	17	0.5	5.4	4.6	4.7	4.0	4.8	3.6	5.0	3.5		
Barium	mg/kg	750	0.5	78.5	347	220	257	246	318	181	219		
Beryllium	mg/kg	5	0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5		
Cadmium	mg/kg	1.4	0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5		
Chromium	mg/kg	64	0.5	6.6	10.1	9.3	8.2	10.3	8.9	8.2	9.6		
Cobalt	mg/kg	20	0.5	3.5	5.1	3.3	4.5	3.2	4.5	3.8	3.0		
Copper	mg/kg	63	0.5	3.7	7.4	4.4	6.6	4.9	9.1	5.8	7.8		
Lead	mg/kg	70	0.5	3.3	4.5	5.0	4.5	4.5	4.1	3.8	5.3		
Molybdenum	mg/kg	4	0.5	<0.5	0.8	0.5	0.6	0.7	0.7	0.6	<0.5		
Nickel	mg/kg	50	0.5	9.8	14.2	8.0	11.5	10.3	12.7	10.8	10.3		
Selenium	mg/kg	1	0.5	<0.5	0.6	0.6	<0.5	0.5	0.7	0.5	<0.5		
Silver	mg/kg	20	0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5		
Thallium	mg/kg	1	0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5		
Tin	mg/kg	5	0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5		
Uranium	mg/kg	23	0.5	<0.5	0.6	<0.5	<0.5	0.5	0.7	<0.5	1.3		
Vanadium	mg/kg	130	0.5	14.1	19.7	17.6	15.5	20.7	17.3	16.1	17.9		
Zinc	mg/kg	200	1	23	28	30	33	25	41	23	9		

Certified By:



Certificate of Analysis

AGAT WORK ORDER: 15E011146

PROJECT: A04012A07

6310 ROPER ROAD
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CLIENT NAME: IEG CONSULTANTS LTD

ATTENTION TO: Nicole Wills

SAMPLING SITE:

SAMPLED BY:

CCME / Tier 1 Metals

DATE RECEIVED: 2015-08-24

DATE REPORTED: 2015-10-10

Parameter	Unit	SAMPLE DESCRIPTION:		BH15-122 (0.	BH15-116 (0.	BH15-123 (0.		BH15-124 (0.	
		G / S		3-0.6)	15-0.3)	0-0.15)		0-0.15)	
		RDL		Soil	Soil	Soil		Soil	
		DATE SAMPLED:		8/20/2015	8/20/2015	8/21/2015		8/21/2015	
		G / S	RDL	6897651	6897706	RDL	6901950	RDL	6901985
Antimony	mg/kg	20	0.5	<0.5	<0.5	0.5	0.7	0.5	0.8
Arsenic	mg/kg	17	0.5	3.9	2.1	0.5	7.4	0.5	5.8
Barium	mg/kg	750	0.5	281	43.6	0.5	937	0.5	1610
Beryllium	mg/kg	5	0.5	<0.5	<0.5	0.5	<0.5	0.5	<0.5
Cadmium	mg/kg	1.4	0.5	<0.5	<0.5	0.5	<0.5	0.5	<0.5
Chromium	mg/kg	64	0.5	9.0	5.3	0.5	22.6	0.5	15.1
Cobalt	mg/kg	20	0.5	4.7	2.6	0.5	3.4	0.5	3.2
Copper	mg/kg	63	0.5	6.6	4.6	5	48.9	0.5	11.6
Lead	mg/kg	70	0.5	4.1	2.6	0.5	43.1	0.5	49.8
Molybdenum	mg/kg	4	0.5	0.5	<0.5	0.5	2.5	0.5	1.8
Nickel	mg/kg	50	0.5	11.9	5.8	0.5	13.6	0.5	9.4
Selenium	mg/kg	1	0.5	0.5	<0.5	0.5	0.5	0.5	<0.5
Silver	mg/kg	20	0.5	<0.5	<0.5	0.5	<0.5	0.5	<0.5
Thallium	mg/kg	1	0.5	<0.5	<0.5	0.5	<0.5	0.5	<0.5
Tin	mg/kg	5	0.5	<0.5	<0.5	0.5	1.1	0.5	0.5
Uranium	mg/kg	23	0.5	0.5	<0.5	0.5	<0.5	0.5	<0.5
Vanadium	mg/kg	130	0.5	17.2	9.9	0.5	13.5	0.5	11.7
Zinc	mg/kg	200	1	35	15	1	57	1	85

Comments: RDL - Reported Detection Limit; G / S - Guideline / Standard: Refers to ABTier1 Soil (Ag, F)

6896314-6896464 Results are based on the dry weight of the sample.

6896465 Results are based on the dry weight of the sample.
Values verified with repeat analysis

6896468-6897706 Results are based on the dry weight of the sample.

6901950-6901985 Results are based on the dry weight of the sample.
Values verified with repeat analysis

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AGAT WORK ORDER: 15E011146

PROJECT: A04012A07

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CLIENT NAME: IEG CONSULTANTS LTD

ATTENTION TO: Nicole Wills

SAMPLING SITE:

SAMPLED BY:

Particle Size by Sieve											
DATE RECEIVED: 2015-08-24					DATE REPORTED: 2015-10-10						
				BH15-066 (0.15-0.3)	BH15-068 (0.3-0.6)	DUP F	DUP G	DUP H	BH15-081 (0.6-1.0)	BH15-101 (0.6-1.0)	BH15-107 (0.15-0.3)
				Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil
				8/17/2015	8/17/2015	8/17/2015	8/17/2015	8/17/2015	8/18/2015	8/19/2015	8/19/2015
Parameter	Unit	G / S	RDL	6896560	6896599	6896777	6896778	6896779	6896839	6897293	6897468
Sieve Analysis	%		N/A	44	55	94	48	33	36	39	90
Sieve Texture				Fine	Coarse	Coarse	Fine	Fine	Fine	Fine	Coarse
				BH15-116 (0.075-0.15)	BH15-120 (0.075-0.15)	BH15-122 (0.3-0.6)	BH15-116 (0.15-0.3)				
				Soil	Soil	Soil	Soil				
				8/20/2015	8/20/2015	8/20/2015	8/20/2015				
Parameter	Unit	G / S	RDL	6897588	6897627	6897651	6897706				
Sieve Analysis	%		N/A	32	55	29	29				
Sieve Texture				Fine	Coarse	Fine	Fine				

Comments: RDL - Reported Detection Limit; G / S - Guideline / Standard

6896560-6897706 Value reported is amount of sample retained on a 75 micron sieve after wash with water and represents proportion by weight particles larger than indicated sieve size.

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PROJECT: A04012A07

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CLIENT NAME: IEG CONSULTANTS LTD

ATTENTION TO: Nicole Wills

SAMPLING SITE:

SAMPLED BY:

Soil Analysis - Barium by Fusion ICP

DATE RECEIVED: 2015-08-24

DATE REPORTED: 2015-10-10

Parameter	Unit	SAMPLE DESCRIPTION:		DATE SAMPLED:	
		BH15-123 (0.0-0.15)	BH15-124 (0.0-0.15)	8/21/2015	8/21/2015
True Barium by Fusion ICP	mg/kg	G / S	RDL	6901950	6901985
		50	3690	18100	

Comments: RDL - Reported Detection Limit; G / S - Guideline / Standard
6901950-6901985 Result is based on the dry weight of the sample.

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AGAT WORK ORDER: 15E011146

PROJECT: A04012A07

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CLIENT NAME: IEG CONSULTANTS LTD

ATTENTION TO: Nicole Wills

SAMPLING SITE:

SAMPLED BY:

Soil Analysis - Barium by Fusion ICP (CA)

DATE RECEIVED: 2015-08-24

DATE REPORTED: 2015-10-10

Parameter	Unit	BH15-054 (0.15-0.3)		BH15-054 (0.3-0.6)		BH15-054 (1.0-1.5)		BH15-055 (0.0-0.15)		BH15-055 (0.15-0.6)		BH15-055 (1.0-1.5)		BH15-056 (0.0-0.15)		BH15-057 (0.15-0.3)	
		G / S	RDL	G / S	RDL	G / S	RDL	G / S	RDL	G / S	RDL	G / S	RDL	G / S	RDL	G / S	RDL
True Barium by Fusion ICP	mg/kg	50	816	715	776	703	824	666	803	814							
		BH15-057 (0.6-1.0)		BH15-057 (1.0-1.5)		BH15-058 (0.0-0.6)		BH15-058 (0.6-1.0)		BH15-058 (1.0-1.5)		BH15-059 (0.0-0.15)		BH15-059 (0.15-0.3)		BH15-059 (1.0-1.5)	
True Barium by Fusion ICP	mg/kg	50	382	853	785	841	763	2450	992	737							
		BH15-060 (0.15-0.3)		BH15-060 (0.3-0.6)		BH15-060 (1.0-1.5)		BH15-061 (0.0-0.15)		BH15-061 (0.15-0.6)		BH15-061 (1.0-1.5)		BH15-066 (0.0-0.15)		BH15-066 (0.15-0.3)	
True Barium by Fusion ICP	mg/kg	50	755	641	578	809	768	763	740	572							
		BH15-066 (1.0-1.5)		BH15-067 (0.3-0.6)		BH15-067 (0.6-1.0)		BH15-067 (1.0-1.5)		BH15-068 (0.15-0.3)		BH15-068 (0.3-0.6)		BH15-068 (0.6-1.0)		BH15-069 (0.3-0.6)	
True Barium by Fusion ICP	mg/kg	50	696	779	822	879	795	729	790	836							
		BH15-069 (0.6-1.0)		BH15-069 (1.0-1.5)		DUP F		DUP G		DUP H		BH15-081 (0.6-1.0)		BH15-101 (0.6-1.0)		BH15-107 (0.15-0.3)	
True Barium by Fusion ICP	mg/kg	50	696	629	568	525	631	630	597	828							

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AGAT WORK ORDER: 15E011146

PROJECT: A04012A07

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CLIENT NAME: IEG CONSULTANTS LTD

ATTENTION TO: Nicole Wills

SAMPLING SITE:

SAMPLED BY:

Soil Analysis - Barium by Fusion ICP (CA)

DATE RECEIVED: 2015-08-24

DATE REPORTED: 2015-10-10

Parameter	Unit	G / S	RDL	BH15-116 (0.	BH15-117 (0.	BH15-118 (0.	BH15-119 (0.	BH15-120 (0.	BH15-121 (0.	BH15-122 (0.	BH15-116 (0.
				0-0.15)	0-0.15)	0-0.15)	0-0.15)	0-0.15)	0-0.15)	3-0.6)	15-0.3)
SAMPLE DESCRIPTION:				0-0.15)	0-0.15)	0-0.15)	0-0.15)	0-0.15)	0-0.15)	3-0.6)	15-0.3)
SAMPLE TYPE:				Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil
DATE SAMPLED:				8/20/2015	8/20/2015	8/20/2015	8/20/2015	8/20/2015	8/20/2015	8/20/2015	8/20/2015
True Barium by Fusion ICP	mg/kg	50	802	802	674	617	655	759	784	650	703

Comments: RDL - Reported Detection Limit; G / S - Guideline / Standard
6896314-6897706 Result is based on the dry weight of the sample.

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PROJECT: A04012A07

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CLIENT NAME: IEG CONSULTANTS LTD

ATTENTION TO: Nicole Wills

SAMPLING SITE:

SAMPLED BY:

Soil Analysis - Salinity (AB Tier 1 - pH Calcium Chloride)

DATE RECEIVED: 2015-08-24

DATE REPORTED: 2015-10-10

Parameter	Unit	SAMPLE DESCRIPTION:		BH15-054 (0.	BH15-054 (0.	BH15-054 (1.	BH15-055	BH15-055 (0.	BH15-055 (1.	BH15-056 (0.	BH15-056 (0.
		15-0.3)		3-0.6)	0-1.5)	(0-0.15)	6-1.0)	0-1.5)	3-0.6)	6-1.0)	
		Soil		Soil	Soil	Soil	Soil	Soil	Soil	Soil	
		DATE SAMPLED:		8/17/2015	8/17/2015	8/17/2015	8/17/2015	8/17/2015	8/17/2015	8/17/2015	8/17/2015
		G / S	RDL	6896314	6896402	6896408	6896419	6896420	6896422	6896424	6896425
pH (CaCl2 Extraction)	pH Units		0.02	6.01	5.67	6.66	6.09	6.72	6.48	5.38	5.56
Electrical Conductivity (Sat. Paste)	dS/m		0.01	0.20	0.37	0.44	0.30	0.26	0.33	0.38	0.26
Sodium Adsorption Ratio	N/A			0.28	0.19	0.19	0.21	0.19	0.21	0.18	0.17
Saturation Percentage	%		1	37	133	39	57	38	40	154	125
Chloride, Soluble	mg/L		5	8	8	5	8	<5	<5	8	13
Calcium, Soluble	mg/L		1	24	56	50	42	39	42	50	38
Potassium, Soluble	mg/L		2	3	<2	3	2	2	2	<2	<2
Magnesium, Soluble	mg/L		2	6	14	18	11	9	13	20	18
Sodium, Soluble	mg/L		2	6	6	6	6	5	6	6	5
Sulfate, Soluble	mg/L		2	25	69	20	48	23	28	72	32
Theoretical Gypsum Requirement	tonnes/ha		N/A	0	0	0	0	0	0	0	0
Calcium, Soluble (meq/L)	meq/L		0.05	1.20	2.79	2.50	2.10	1.95	2.10	2.50	1.90
Calcium, Soluble (mg/kg)	mg/kg		1	9	74	20	24	15	17	77	48
Chloride, Soluble (meq/L)	meq/L		0.06	0.23	0.23	0.14	0.23	<0.06	<0.06	0.23	0.37
Chloride, Soluble (mg/kg)	mg/kg		2	3	11	2	5	<2	<2	12	16
Magnesium, Soluble (meq/L)	meq/L		0.08	0.49	1.15	1.48	0.91	0.74	1.07	1.65	1.48
Magnesium, Soluble (mg/kg)	mg/kg		1	2	19	7	6	3	5	31	23
Potassium, Soluble (meq/L)	meq/L		0.05	0.08	<0.05	0.08	0.05	0.05	0.05	<0.05	<0.05
Potassium, Soluble (mg/kg)	mg/kg		2	<2	<2	<2	<2	<2	<2	<2	<2
Sodium, Soluble (meq/L)	meq/L		0.09	0.26	0.26	0.26	0.26	0.22	0.26	0.26	0.22
Sodium, Soluble (mg/kg)	mg/kg		2	2	8	2	3	<2	2	9	6
Sulfur (as Sulfate), Soluble (meq/L)	meq/L		0.04	0.52	1.44	0.42	1.00	0.48	0.58	1.50	0.67
Sulfur (as Sulfate), Soluble (mg/kg)	mg/kg		2	9	92	8	27	9	11	111	40

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PROJECT: A04012A07

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CLIENT NAME: IEG CONSULTANTS LTD

ATTENTION TO: Nicole Wills

SAMPLING SITE:

SAMPLED BY:

Soil Analysis - Salinity (AB Tier 1 - pH Calcium Chloride)

DATE RECEIVED: 2015-08-24

DATE REPORTED: 2015-10-10

Parameter	Unit	BH15-056 (1.		BH15-057 (0.		BH15-057 (0.		BH15-057 (1.		BH15-058 (0.		BH15-058 (0.		BH15-058 (1.		BH15-059 (0.	
		SAMPLE DESCRIPTION:		0-1.5)	15-0.3)	6-1.0)	0-1.5)	3-0.6)	6-1.0)	0-1.5)	0-0.15)						
		SAMPLE TYPE:		Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil						
		DATE SAMPLED:		8/17/2015	8/17/2015	8/17/2015	8/17/2015	8/17/2015	8/17/2015	8/17/2015	8/17/2015						
		G / S	RDL	6896427	6896429	6896434	6896437	6896448	6896458	6896464	6896465						
pH (CaCl2 Extraction)	pH Units		0.02	5.93	5.83	5.84	5.61	5.47	5.77	6.48	6.08						
Electrical Conductivity (Sat. Paste)	dS/m		0.01	0.32	0.21	0.32	0.44	0.35	0.20	0.21	0.23						
Sodium Adsorption Ratio	N/A			0.24	0.27	0.43	0.51	0.20	0.27	0.28	0.22						
Saturation Percentage	%		1	49	42	45	95	111	42	54	43						
Chloride, Soluble	mg/L		5	7	8	12	63	8	7	<5	5						
Calcium, Soluble	mg/L		1	38	25	40	51	45	26	27	30						
Potassium, Soluble	mg/L		2	2	3	4	<2	3	2	3	5						
Magnesium, Soluble	mg/L		2	16	7	11	15	14	7	5	5						
Sodium, Soluble	mg/L		2	7	6	12	16	6	6	6	5						
Sulfate, Soluble	mg/L		2	31	25	34	40	92	34	18	37						
Theoretical Gypsum Requirement	tonnes/ha		N/A	0	0	0	0	0	0	0	0						
Calcium, Soluble (meq/L)	meq/L		0.05	1.90	1.25	2.00	2.54	2.25	1.30	1.35	1.50						
Calcium, Soluble (mg/kg)	mg/kg		1	19	11	18	48	50	11	15	13						
Chloride, Soluble (meq/L)	meq/L		0.06	0.20	0.23	0.34	1.78	0.23	0.20	<0.06	0.14						
Chloride, Soluble (mg/kg)	mg/kg		2	3	3	5	60	9	3	<2	2						
Magnesium, Soluble (meq/L)	meq/L		0.08	1.32	0.58	0.91	1.23	1.15	0.58	0.41	0.41						
Magnesium, Soluble (mg/kg)	mg/kg		1	8	3	5	14	16	3	3	2						
Potassium, Soluble (meq/L)	meq/L		0.05	0.05	0.08	0.10	<0.05	0.08	0.05	0.08	0.13						
Potassium, Soluble (mg/kg)	mg/kg		2	<2	<2	<2	<2	3	<2	<2	2						
Sodium, Soluble (meq/L)	meq/L		0.09	0.30	0.26	0.52	0.70	0.26	0.26	0.26	0.22						
Sodium, Soluble (mg/kg)	mg/kg		2	3	3	5	15	7	3	3	2						
Sulfur (as Sulfate), Soluble (meq/L)	meq/L		0.04	0.65	0.52	0.71	0.83	1.92	0.71	0.37	0.77						
Sulfur (as Sulfate), Soluble (mg/kg)	mg/kg		2	15	11	15	38	102	14	10	16						

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PROJECT: A04012A07

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CLIENT NAME: IEG CONSULTANTS LTD

ATTENTION TO: Nicole Wills

SAMPLING SITE:

SAMPLED BY:

Soil Analysis - Salinity (AB Tier 1 - pH Calcium Chloride)

DATE RECEIVED: 2015-08-24

DATE REPORTED: 2015-10-10

Parameter	Unit	SAMPLE DESCRIPTION:		BH15-059 (0.	BH15-059 (1.	BH15-060 (0.	BH15-060 (0.	BH15-060 (1.	BH15-061	BH15-061 (0.	BH15-061 (1.
		15-0.3)		15-0.3)	0-1.5)	15-0.3)	3-0.6)	0-1.5)	(0-0.15)	3-0.6)	0-1.5)
		Soil		Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil
		DATE SAMPLED:		8/17/2015	8/17/2015	8/17/2015	8/17/2015	8/17/2015	8/17/2015	8/17/2015	8/17/2015
G / S		RDL	6896468	6896469	6896472	6896476	6896479	6896482	6896482	6896492	6896509
pH (CaCl2 Extraction)	pH Units	0.02	5.64	6.66	5.94	5.16	6.75	6.53	5.75	6.77	
Electrical Conductivity (Sat. Paste)	dS/m	0.01	0.65	0.27	0.29	0.42	0.31	0.44	0.75	0.67	
Sodium Adsorption Ratio	N/A		0.22	0.32	0.56	0.55	0.63	0.80	2.31	2.19	
Saturation Percentage	%	1	86	40	43	152	39	40	131	42	
Chloride, Soluble	mg/L	5	10	8	9	12	10	7	50	66	
Calcium, Soluble	mg/L	1	88	36	29	50	32	52	53	36	
Potassium, Soluble	mg/L	2	11	7	10	8	14	4	26	56	
Magnesium, Soluble	mg/L	2	23	7	7	13	7	10	15	7	
Sodium, Soluble	mg/L	2	9	8	13	17	15	24	74	55	
Sulfate, Soluble	mg/L	2	249	28	56	131	29	49	212	83	
Theoretical Gypsum Requirement	tonnes/ha	N/A	0	0	0	0	0	0	0	0	
Calcium, Soluble (meq/L)	meq/L	0.05	4.39	1.80	1.45	2.50	1.60	2.59	2.64	1.80	
Calcium, Soluble (mg/kg)	mg/kg	1	76	14	12	76	12	21	69	15	
Chloride, Soluble (meq/L)	meq/L	0.06	0.28	0.23	0.25	0.34	0.28	0.20	1.41	1.86	
Chloride, Soluble (mg/kg)	mg/kg	2	9	3	4	18	4	3	66	28	
Magnesium, Soluble (meq/L)	meq/L	0.08	1.89	0.58	0.58	1.07	0.58	0.82	1.23	0.58	
Magnesium, Soluble (mg/kg)	mg/kg	1	20	3	3	20	3	4	20	3	
Potassium, Soluble (meq/L)	meq/L	0.05	0.28	0.18	0.26	0.20	0.36	0.10	0.66	1.43	
Potassium, Soluble (mg/kg)	mg/kg	2	9	3	4	12	5	<2	34	24	
Sodium, Soluble (meq/L)	meq/L	0.09	0.39	0.35	0.57	0.74	0.65	1.04	3.22	2.39	
Sodium, Soluble (mg/kg)	mg/kg	2	8	3	6	26	6	10	97	23	
Sulfur (as Sulfate), Soluble (meq/L)	meq/L	0.04	5.18	0.58	1.17	2.73	0.60	1.02	4.41	1.73	
Sulfur (as Sulfate), Soluble (mg/kg)	mg/kg	2	214	11	24	199	11	20	278	35	

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CLIENT NAME: IEG CONSULTANTS LTD

ATTENTION TO: Nicole Wills

SAMPLING SITE:

SAMPLED BY:

Soil Analysis - Salinity (AB Tier 1 - pH Calcium Chloride)

DATE RECEIVED: 2015-08-24

DATE REPORTED: 2015-10-10

Parameter	Unit	SAMPLE DESCRIPTION:		BH15-064 (1.	BH15-065 (0.	BH15-065 (0.	BH15-065 (1.	BH15-066 (0.	BH15-066 (0.	BH15-066 (1.	BH15-067 (0.	
		Soil		0-1.5)	15-0.3)	3-0.6)	0-1.5)	15-0.3)	3-0.6)	0-1.5)	3-0.6)	
		Soil		8/17/2015	8/17/2015	8/17/2015	8/17/2015	8/17/2015	8/17/2015	8/17/2015	8/17/2015	8/17/2015
		Soil		6896540	6896551	6896556	6896558	6896560	6896564	6896567	6896572	
pH (CaCl2 Extraction)	pH Units	0.02	6.33	6.24	5.72	6.87	5.76	5.74	6.34	5.78		
Electrical Conductivity (Sat. Paste)	dS/m	0.01	0.49	0.46	0.37	0.31	0.50	0.36	0.53	0.69		
Sodium Adsorption Ratio	N/A		0.37	0.36	0.28	0.39	0.25	0.26	0.29	0.21		
Saturation Percentage	%	1	44	57	114	36	76	61	47	79		
Chloride, Soluble	mg/L	5	15	10	14	7	12	9	11	10		
Calcium, Soluble	mg/L	1	60	54	47	34	63	48	70	98		
Potassium, Soluble	mg/L	2	5	4	2	5	2	3	4	4		
Magnesium, Soluble	mg/L	2	19	17	18	9	21	13	22	23		
Sodium, Soluble	mg/L	2	13	12	9	10	9	8	11	9		
Sulfate, Soluble	mg/L	2	26	48	59	28	134	67	61	285		
Theoretical Gypsum Requirement	tonnes/ha	N/A	0	0	0	0	0	0	0	0		
Calcium, Soluble (meq/L)	meq/L	0.05	2.99	2.69	2.35	1.70	3.14	2.40	3.49	4.89		
Calcium, Soluble (mg/kg)	mg/kg	1	26	31	54	12	48	29	33	77		
Chloride, Soluble (meq/L)	meq/L	0.06	0.42	0.28	0.39	0.20	0.34	0.25	0.31	0.28		
Chloride, Soluble (mg/kg)	mg/kg	2	7	6	16	3	9	5	5	8		
Magnesium, Soluble (meq/L)	meq/L	0.08	1.56	1.40	1.48	0.74	1.73	1.07	1.81	1.89		
Magnesium, Soluble (mg/kg)	mg/kg	1	8	10	21	3	16	8	10	18		
Potassium, Soluble (meq/L)	meq/L	0.05	0.13	0.10	0.05	0.13	0.05	0.08	0.10	0.10		
Potassium, Soluble (mg/kg)	mg/kg	2	2	2	2	<2	<2	<2	<2	3		
Sodium, Soluble (meq/L)	meq/L	0.09	0.57	0.52	0.39	0.43	0.39	0.35	0.48	0.39		
Sodium, Soluble (mg/kg)	mg/kg	2	6	7	10	4	7	5	5	7		
Sulfur (as Sulfate), Soluble (meq/L)	meq/L	0.04	0.54	1.00	1.23	0.58	2.79	1.40	1.27	5.93		
Sulfur (as Sulfate), Soluble (mg/kg)	mg/kg	2	11	27	67	10	102	41	29	225		

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PROJECT: A04012A07

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CLIENT NAME: IEG CONSULTANTS LTD

ATTENTION TO: Nicole Wills

SAMPLING SITE:

SAMPLED BY:

Soil Analysis - Salinity (AB Tier 1 - pH Calcium Chloride)

DATE RECEIVED: 2015-08-24

DATE REPORTED: 2015-10-10

Parameter	Unit	SAMPLE DESCRIPTION:		BH15-067 (0.	BH15-067 (1.	BH15-068 (0.	BH15-068 (0.	BH15-068 (0.	BH15-069 (0.	BH15-069 (0.	BH15-069 (1.	
		G / S		RDL	6896574	6896578	6896583	6896599	6896600	6896601	6896604	6896609
		RDL		0.02	5.60	6.18	6.33	5.90	5.96	5.18	5.42	6.42
		0.01		0.27	0.25	0.38	0.98	0.42	0.27	0.36	0.31	
Electrical Conductivity (Sat. Paste)	dS/m	0.01	0.27	0.25	0.38	0.98	0.42	0.27	0.36	0.31		
Sodium Adsorption Ratio	N/A		0.30	0.27	0.31	0.15	0.28	0.18	0.37	0.46		
Saturation Percentage	%	1	116	33	46	88	48	139	42	50		
Chloride, Soluble	mg/L	5	10	7	6	12	11	10	16	14		
Calcium, Soluble	mg/L	1	32	37	59	149	65	39	51	39		
Potassium, Soluble	mg/L	2	2	3	4	4	5	4	4	4		
Magnesium, Soluble	mg/L	2	13	8	4	40	19	12	10	7		
Sodium, Soluble	mg/L	2	8	7	9	8	10	5	11	12		
Sulfate, Soluble	mg/L	2	57	22	81	384	43	49	34	19		
Theoretical Gypsum Requirement	tonnes/ha	N/A	0	0	0	0	0	0	0	0		
Calcium, Soluble (meq/L)	meq/L	0.05	1.60	1.85	2.94	7.44	3.24	1.95	2.54	1.95		
Calcium, Soluble (mg/kg)	mg/kg	1	37	12	27	131	31	54	21	20		
Chloride, Soluble (meq/L)	meq/L	0.06	0.28	0.20	0.17	0.34	0.31	0.28	0.45	0.39		
Chloride, Soluble (mg/kg)	mg/kg	2	12	2	3	11	5	14	7	7		
Magnesium, Soluble (meq/L)	meq/L	0.08	1.07	0.66	0.33	3.29	1.56	0.99	0.82	0.58		
Magnesium, Soluble (mg/kg)	mg/kg	1	15	3	2	35	9	17	4	4		
Potassium, Soluble (meq/L)	meq/L	0.05	0.05	0.08	0.10	0.10	0.13	0.10	0.10	0.10		
Potassium, Soluble (mg/kg)	mg/kg	2	2	<2	<2	4	2	6	<2	2		
Sodium, Soluble (meq/L)	meq/L	0.09	0.35	0.30	0.39	0.35	0.43	0.22	0.48	0.52		
Sodium, Soluble (mg/kg)	mg/kg	2	9	2	4	7	5	7	5	6		
Sulfur (as Sulfate), Soluble (meq/L)	meq/L	0.04	1.19	0.46	1.69	8.00	0.90	1.02	0.71	0.40		
Sulfur (as Sulfate), Soluble (mg/kg)	mg/kg	2	66	7	37	338	21	68	14	10		

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SAMPLING SITE:

SAMPLED BY:

Soil Analysis - Salinity (AB Tier 1 - pH Calcium Chloride)

DATE RECEIVED: 2015-08-24

DATE REPORTED: 2015-10-10

Parameter	Unit	SAMPLE DESCRIPTION:		DUP F	DUP G	DUP H	BH15-081 (0.	DUP J	BH15-101 (0.	BH15-107 (0.	BH15-108 (0.
		SAMPLE TYPE:		Soil	Soil	Soil	6-1.0)	Soil	6-1.0)	15-0.3)	15-0.3)
		DATE SAMPLED:		8/17/2015	8/17/2015	8/17/2015	8/18/2015	8/18/2015	8/19/2015	8/19/2015	8/19/2015
		G / S	RDL	6896777	6896778	6896779	6896839	6897018	6897293	6897468	6897514
pH (CaCl2 Extraction)	pH Units		0.02	6.69	5.59	5.32	5.71	5.86	5.70	6.47	5.69
Electrical Conductivity (Sat. Paste)	dS/m		0.01	0.37	0.33	0.33	0.77	1.64	0.63	1.31	0.76
Sodium Adsorption Ratio	N/A			0.25	0.30	0.14	0.70	5.89	0.56	0.53	0.53
Saturation Percentage	%		1	38	106	152	120	85	103	47	100
Chloride, Soluble	mg/L		5	6	15	8	22	40	25	235	51
Calcium, Soluble	mg/L		1	55	41	42	109	84	88	150	99
Potassium, Soluble	mg/L		2	3	2	3	5	8	2	75	9
Magnesium, Soluble	mg/L		2	12	17	14	24	26	18	30	27
Sodium, Soluble	mg/L		2	8	9	4	31	241	22	27	23
Sulfate, Soluble	mg/L		2	24	39	100	39	640	50	374	141
Theoretical Gypsum Requirement	tonnes/ha		N/A	0	0	0	0	0	0	0	0
Calcium, Soluble (meq/L)	meq/L		0.05	2.74	2.05	2.10	5.44	4.19	4.39	7.49	4.94
Calcium, Soluble (mg/kg)	mg/kg		1	21	43	64	131	71	91	71	99
Chloride, Soluble (meq/L)	meq/L		0.06	0.17	0.42	0.23	0.62	1.13	0.71	6.63	1.44
Chloride, Soluble (mg/kg)	mg/kg		2	2	16	12	26	34	26	110	51
Magnesium, Soluble (meq/L)	meq/L		0.08	0.99	1.40	1.15	1.97	2.14	1.48	2.47	2.22
Magnesium, Soluble (mg/kg)	mg/kg		1	5	18	21	29	22	19	14	27
Potassium, Soluble (meq/L)	meq/L		0.05	0.08	0.05	0.08	0.13	0.20	0.05	1.92	0.23
Potassium, Soluble (mg/kg)	mg/kg		2	<2	2	5	6	7	2	35	9
Sodium, Soluble (meq/L)	meq/L		0.09	0.35	0.39	0.17	1.35	10.5	0.96	1.17	1.00
Sodium, Soluble (mg/kg)	mg/kg		2	3	10	6	37	205	23	13	23
Sulfur (as Sulfate), Soluble (meq/L)	meq/L		0.04	0.50	0.81	2.08	0.81	13.3	1.04	7.79	2.94
Sulfur (as Sulfate), Soluble (mg/kg)	mg/kg		2	9	41	152	47	544	52	176	141

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PROJECT: A04012A07

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CLIENT NAME: IEG CONSULTANTS LTD

ATTENTION TO: Nicole Wills

SAMPLING SITE:

SAMPLED BY:

Soil Analysis - Salinity (AB Tier 1 - pH Calcium Chloride)

DATE RECEIVED: 2015-08-24

DATE REPORTED: 2015-10-10

Parameter	Unit	G / S	RDL	BH15-113 (0.	BH15-113 (0.	BH15-113 (1.	BH15-114 (0.	BH15-116 (0.	BH15-117 (0.	BH15-118 (0.	BH15-119 (0.
				3-0.6)	6-1.0)	0-1.5)	3-0.6)	0-0.15)	0-0.15)	0-0.15)	0-0.15)
				SAMPLE DESCRIPTION:	Soil	Soil	Soil	Soil	Soil	Soil	Soil
				SAMPLE TYPE:	Soil	Soil	Soil	Soil	Soil	Soil	Soil
DATE SAMPLED:	8/20/2015	8/20/2015	8/20/2015	8/20/2015	8/20/2015	8/20/2015	8/20/2015	8/20/2015	8/20/2015		
				6897567	6897569	6897574	6897578	6897588	6897607	6897609	6897610
pH (CaCl ₂ Extraction)	pH Units		0.02	5.21	5.69	6.26	6.16	6.03	5.80	5.93	5.83
Electrical Conductivity (Sat. Paste)	dS/m	0.01	1.33	0.23	0.25	0.28	0.55	0.27	0.29	0.31	
Sodium Adsorption Ratio	N/A		0.30	0.29	0.26	0.27	0.32	0.35	0.24	0.30	
Saturation Percentage	%	1	143	46	40	44	155	122	129	107	
Chloride, Soluble	mg/L	5	15	13	9	20	23	18	21	20	
Calcium, Soluble	mg/L	1	178	29	29	27	86	42	53	52	
Potassium, Soluble	mg/L	2	23	5	16	20	2	<2	<2	<2	
Magnesium, Soluble	mg/L	2	59	9	6	6	36	19	19	19	
Sodium, Soluble	mg/L	2	18	7	6	6	14	11	8	10	
Sulfate, Soluble	mg/L	2	702	46	28	39	36	19	20	31	
Theoretical Gypsum Requirement	tonnes/ha	N/A	0	0	0	0	0	0	0	0	
Calcium, Soluble (meq/L)	meq/L	0.05	8.88	1.45	1.45	1.35	4.29	2.10	2.64	2.59	
Calcium, Soluble (mg/kg)	mg/kg	1	255	13	12	12	133	51	68	56	
Chloride, Soluble (meq/L)	meq/L	0.06	0.42	0.37	0.25	0.56	0.65	0.51	0.59	0.56	
Chloride, Soluble (mg/kg)	mg/kg	2	21	6	4	9	36	22	27	21	
Magnesium, Soluble (meq/L)	meq/L	0.08	4.85	0.74	0.49	0.49	2.96	1.56	1.56	1.56	
Magnesium, Soluble (mg/kg)	mg/kg	1	84	4	2	3	56	23	25	20	
Potassium, Soluble (meq/L)	meq/L	0.05	0.59	0.13	0.41	0.51	0.05	<0.05	<0.05	<0.05	
Potassium, Soluble (mg/kg)	mg/kg	2	33	2	6	9	3	<2	<2	<2	
Sodium, Soluble (meq/L)	meq/L	0.09	0.78	0.30	0.26	0.26	0.61	0.48	0.35	0.43	
Sodium, Soluble (mg/kg)	mg/kg	2	26	3	2	3	22	13	10	11	
Sulfur (as Sulfate), Soluble (meq/L)	meq/L	0.04	14.6	0.96	0.58	0.81	0.75	0.40	0.42	0.65	
Sulfur (as Sulfate), Soluble (mg/kg)	mg/kg	2	1000	21	11	17	56	23	26	33	

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PROJECT: A04012A07

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CLIENT NAME: IEG CONSULTANTS LTD

ATTENTION TO: Nicole Wills

SAMPLING SITE:

SAMPLED BY:

Soil Analysis - Salinity (AB Tier 1 - pH Calcium Chloride)

DATE RECEIVED: 2015-08-24

DATE REPORTED: 2015-10-10

Parameter	Unit	SAMPLE DESCRIPTION:		BH15-120 (0.	BH15-121 (0.	BH15-122 (0.	BH15-116 (0.	BH15-123 (0.	BH15-124 (0.
		Soil		0-0.15)	0-0.15)	3-0.6)	15-0.3)	0-0.15)	0-0.15)
		Soil		0-0.15)	0-0.15)	3-0.6)	15-0.3)	0-0.15)	0-0.15)
		Soil		0-0.15)	0-0.15)	3-0.6)	15-0.3)	0-0.15)	0-0.15)
DATE SAMPLED:		8/20/2015	8/20/2015	8/20/2015	8/20/2015	8/21/2015	8/21/2015	8/21/2015	
G / S	RDL	6897627	6897645	6897651	6897706	6901950	6901985		
pH (CaCl2 Extraction)	pH Units	0.02	6.01	5.95	5.36	5.84	6.37	5.99	
Electrical Conductivity (Sat. Paste)	dS/m	0.01	0.36	0.33	0.35	0.35	1.59	1.04	
Sodium Adsorption Ratio	N/A		0.36	0.40	0.48	0.34	2.45	0.54	
Saturation Percentage	%	1	160	91	157	118	29	68	
Chloride, Soluble	mg/L	5	25	19	26	17	122	61	
Calcium, Soluble	mg/L	1	62	57	59	58	174	128	
Potassium, Soluble	mg/L	2	<2	<2	4	2	18	20	
Magnesium, Soluble	mg/L	2	23	22	22	23	34	48	
Sodium, Soluble	mg/L	2	13	14	17	12	135	28	
Sulfate, Soluble	mg/L	2	31	24	30	28	497	302	
Theoretical Gypsum Requirement	tonnes/ha	N/A	0	0	0	0	0	0	
Calcium, Soluble (meq/L)	meq/L	0.05	3.09	2.84	2.94	2.89	8.68	6.39	
Calcium, Soluble (mg/kg)	mg/kg	1	99	52	93	68	50	87	
Chloride, Soluble (meq/L)	meq/L	0.06	0.71	0.54	0.73	0.48	3.44	1.72	
Chloride, Soluble (mg/kg)	mg/kg	2	40	17	41	20	35	41	
Magnesium, Soluble (meq/L)	meq/L	0.08	1.89	1.81	1.81	1.89	2.80	3.95	
Magnesium, Soluble (mg/kg)	mg/kg	1	37	20	35	27	10	33	
Potassium, Soluble (meq/L)	meq/L	0.05	<0.05	<0.05	0.10	0.05	0.46	0.51	
Potassium, Soluble (mg/kg)	mg/kg	2	<2	<2	6	2	5	14	
Sodium, Soluble (meq/L)	meq/L	0.09	0.57	0.61	0.74	0.52	5.87	1.22	
Sodium, Soluble (mg/kg)	mg/kg	2	21	13	27	14	39	19	
Sulfur (as Sulfate), Soluble (meq/L)	meq/L	0.04	0.65	0.50	0.62	0.58	10.3	6.29	
Sulfur (as Sulfate), Soluble (mg/kg)	mg/kg	2	50	22	47	33	144	205	

Comments: RDL - Reported Detection Limit; G / S - Guideline / Standard

6896314-6901985 If sodium results in mg/L are less than detection, SAR is non-calculable and is reported as 0.

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CLIENT NAME: IEG CONSULTANTS LTD

ATTENTION TO: Nicole Wills

SAMPLING SITE:

SAMPLED BY:

Petroleum Hydrocarbons (BTEX/F1-F4) in Soil (CWS)

DATE RECEIVED: 2015-08-24

DATE REPORTED: 2015-10-10

Parameter	Unit	SAMPLE DESCRIPTION:		BH15-054 (0.	BH15-054 (0.	BH15-054 (1.	BH15-055	BH15-055 (0.	BH15-055 (1.	BH15-056 (0.	BH15-056 (0.
		Soil		15-0.3)	3-0.6)	0-1.5)	(0-0.15)	6-1.0)	0-1.5)	3-0.6)	6-1.0)
		Soil		Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil
		DATE SAMPLED:		8/17/2015	8/17/2015	8/17/2015	8/17/2015	8/17/2015	8/17/2015	8/17/2015	8/17/2015
G / S	RDL	6896314	6896402	6896408	6896419	6896420	6896422	6896424	6896425		
Benzene	mg/kg	0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Toluene	mg/kg	0.05	<0.05	0.11	<0.05	<0.05	<0.05	<0.05	<0.05	1.01	<0.05
Ethylbenzene	mg/kg	0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Xylenes	mg/kg	0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	0.08	<0.05
C6 - C10 (F1)	mg/kg	10	<10	<10	<10	<10	<10	<10	<10	<10	<10
C6 - C10 (F1 minus BTEX)	mg/kg	10	<10	<10	<10	<10	<10	<10	<10	<10	<10
C10 - C16 (F2)	mg/kg	10	<10	<10	<10	<10	<10	<10	<10	<10	<10
C16 - C34 (F3)	mg/kg	10	17	244	<10	105	<10	<10	<10	112	434
C34 - C50 (F4)	mg/kg	10	13	174	<10	83	<10	<10	<10	98	320
Gravimetric Heavy Hydrocarbons	mg/kg	1000	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Moisture Content	%	1	6	50	5	15	5	9	50	43	
Surrogate	Unit	Acceptable Limits									
Toluene-d8 (BTEX)	%	50-150	95	100	100	98	100	100	100	99	89
Ethylbenzene-d10 (BTEX)	%	50-150	97	123	111	101	112	100	112	112	83
o-Terphenyl (F2-F4)	%	50-150	93	89	105	93	115	97	112	112	90

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AGAT WORK ORDER: 15E011146

PROJECT: A04012A07

6310 ROPER ROAD
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CLIENT NAME: IEG CONSULTANTS LTD

ATTENTION TO: Nicole Wills

SAMPLING SITE:

SAMPLED BY:

Petroleum Hydrocarbons (BTEX/F1-F4) in Soil (CWS)

DATE RECEIVED: 2015-08-24

DATE REPORTED: 2015-10-10

Parameter	Unit	SAMPLE DESCRIPTION:		BH15-056 (1.	BH15-057 (0.	BH15-057 (0.	BH15-057 (1.	BH15-058 (0.	BH15-058 (0.	BH15-058 (1.	BH15-059 (0.
		Soil		0-1.5)	15-0.3)	6-1.0)	0-1.5)	3-0.6)	6-1.0)	0-1.5)	0-0.15)
		Soil		Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil
		DATE SAMPLED:		8/17/2015	8/17/2015	8/17/2015	8/17/2015	8/17/2015	8/17/2015	8/17/2015	8/17/2015
G / S	RDL	6896427	6896429	6896434	6896437	6896448	6896458	6896464	6896465		
Benzene	mg/kg	0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Toluene	mg/kg	0.05	<0.05	<0.05	<0.05	<0.05	<0.05	0.08	<0.05	<0.05	<0.05
Ethylbenzene	mg/kg	0.01	<0.01	<0.01	<0.01	0.08	0.02	<0.01	<0.01	<0.01	<0.01
Xylenes	mg/kg	0.05	<0.05	<0.05	<0.05	0.48	0.11	<0.05	<0.05	<0.05	<0.05
C6 - C10 (F1)	mg/kg	10	<10	<10	<10	<10	<10	<10	<10	<10	<10
C6 - C10 (F1 minus BTEX)	mg/kg	10	<10	<10	<10	<10	<10	<10	<10	<10	<10
C10 - C16 (F2)	mg/kg	10	<10	20	294	113	<10	<10	<10	<10	<10
C16 - C34 (F3)	mg/kg	10	<10	14	100	162	350	27	<10	35	35
C34 - C50 (F4)	mg/kg	10	<10	10	14	108	235	22	<10	21	21
Gravimetric Heavy Hydrocarbons	mg/kg	1000	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Moisture Content	%	1	9	5	12	45	36	15	10	6	6
Surrogate	Unit	Acceptable Limits									
Toluene-d8 (BTEX)	%	50-150	94	101	98	98	100	95	101	100	100
Ethylbenzene-d10 (BTEX)	%	50-150	89	104	100	113	120	104	105	99	99
o-Terphenyl (F2-F4)	%	50-150	111	97	97	92	85	94	113	94	94

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PROJECT: A04012A07

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CLIENT NAME: IEG CONSULTANTS LTD

ATTENTION TO: Nicole Wills

SAMPLING SITE:

SAMPLED BY:

Petroleum Hydrocarbons (BTEX/F1-F4) in Soil (CWS)

DATE RECEIVED: 2015-08-24

DATE REPORTED: 2015-10-10

Parameter	Unit	SAMPLE DESCRIPTION:									
		G / S		BH15-059 (0.	BH15-059 (1.	BH15-060 (0.	BH15-060 (0.	BH15-060 (1.	BH15-061	BH15-061 (0.	BH15-061 (1.
		RDL		15-0.3)	0-1.5)	15-0.3)	3-0.6)	0-1.5)	(0-0.15)	3-0.6)	0-1.5)
		DATE SAMPLED:		8/17/2015	8/17/2015	8/17/2015	8/17/2015	8/17/2015	8/17/2015	8/17/2015	8/17/2015
Benzene	mg/kg	0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Toluene	mg/kg	0.05	<0.05	<0.05	<0.05	6.14	<0.05	<0.05	0.08	<0.05	
Ethylbenzene	mg/kg	0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	
Xylenes	mg/kg	0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	
C6 - C10 (F1)	mg/kg	10	<10	<10	<10	<10	<10	<10	<10	<10	
C6 - C10 (F1 minus BTEX)	mg/kg	10	<10	<10	<10	<10	<10	<10	<10	<10	
C10 - C16 (F2)	mg/kg	10	<10	<10	17	83	<10	<10	<10	<10	
C16 - C34 (F3)	mg/kg	10	203	<10	24	1690	<10	<10	354	<10	
C34 - C50 (F4)	mg/kg	10	161	<10	15	<10	<10	<10	268	<10	
Gravimetric Heavy Hydrocarbons	mg/kg	1000	N/A	N/A	N/A	N/A	N/A	N/A	NA	N/A	
Moisture Content	%	1	33	9	6	34	10	5	29	10	
Surrogate	Unit	Acceptable Limits									
Toluene-d8 (BTEX)	%	50-150	100	85	94	100	102	100	97	98	
Ethylbenzene-d10 (BTEX)	%	50-150	109	73	82	110	95	85	100	101	
o-Terphenyl (F2-F4)	%	50-150	90	92	93	109	125	104	108	100	

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PROJECT: A04012A07

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ATTENTION TO: Nicole Wills

SAMPLING SITE:

SAMPLED BY:

Petroleum Hydrocarbons (BTEX/F1-F4) in Soil (CWS)

DATE RECEIVED: 2015-08-24

DATE REPORTED: 2015-10-10

Parameter	Unit	SAMPLE DESCRIPTION:									
		G / S		BH15-062 (0.	BH15-062 (0.	BH15-062 (1.	BH15-063 (0.	BH15-063 (0.	BH15-063 (1.	BH15-064 (0.	BH15-064 (0.
		RDL		15-0.3)	3-0.6)	0-1.5)	15-0.3)	3-0.6)	0-1.5)	15-0.3)	6-1.0)
		DATE SAMPLED:		Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil
		8/17/2015	8/17/2015	8/17/2015	8/17/2015	8/17/2015	8/17/2015	8/17/2015	8/17/2015	8/17/2015	
Benzene	mg/kg	0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	
Toluene	mg/kg	0.05	<0.05	<0.05	<0.05	2.34	12.1	0.08	11.9	<0.05	
Ethylbenzene	mg/kg	0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	
Xylenes	mg/kg	0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	
C6 - C10 (F1)	mg/kg	10	<10	<10	<10	<10	12	<10	12	<10	
C6 - C10 (F1 minus BTEX)	mg/kg	10	<10	<10	<10	<10	<10	<10	<10	<10	
C10 - C16 (F2)	mg/kg	10	<10	690	<10	<10	37	<10	47	<10	
C16 - C34 (F3)	mg/kg	10	25	307	<10	155	467	<10	865	<10	
C34 - C50 (F4)	mg/kg	10	15	168	<10	117	340	<10	616	13	
Gravimetric Heavy Hydrocarbons	mg/kg	1000	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	
Moisture Content	%	1	7	17	11	30	34	15	51	18	
Surrogate	Unit	Acceptable Limits									
Toluene-d8 (BTEX)	%	50-150	95	98	97	98	96	99	98	99	
Ethylbenzene-d10 (BTEX)	%	50-150	84	94	82	89	91	93	103	95	
o-Terphenyl (F2-F4)	%	50-150	105	101	127	117	107	133	110	99	

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PROJECT: A04012A07

6310 ROPER ROAD
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CLIENT NAME: IEG CONSULTANTS LTD

ATTENTION TO: Nicole Wills

SAMPLING SITE:

SAMPLED BY:

Petroleum Hydrocarbons (BTEX/F1-F4) in Soil (CWS)

DATE RECEIVED: 2015-08-24

DATE REPORTED: 2015-10-10

Parameter	Unit	SAMPLE DESCRIPTION:									
		DATE SAMPLED:		BH15-064 (1.	BH15-065 (0.	BH15-065 (0.	BH15-065 (1.	BH15-066 (0.	BH15-066 (0.	BH15-066 (1.	BH15-067 (0.
		G / S	RDL	0-1.5)	15-0.3)	3-0.6)	0-1.5)	15-0.3)	3-0.6)	0-1.5)	3-0.6)
				Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil
			8/17/2015	8/17/2015	8/17/2015	8/17/2015	8/17/2015	8/17/2015	8/17/2015	8/17/2015	8/17/2015
			6896540	6896551	6896556	6896558	6896560	6896564	6896567	6896572	
Benzene	mg/kg	0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Toluene	mg/kg	0.05	<0.05	<0.05	5.63	<0.05	1.09	0.70	<0.05	0.063	
Ethylbenzene	mg/kg	0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Xylenes	mg/kg	0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
C6 - C10 (F1)	mg/kg	10	<10	<10	<10	<10	<10	<10	<10	<10	<10
C6 - C10 (F1 minus BTEX)	mg/kg	10	<10	<10	<10	<10	<10	<10	<10	<10	<10
C10 - C16 (F2)	mg/kg	10	<10	<10	<10	<10	<10	14	<10	<10	<10
C16 - C34 (F3)	mg/kg	10	<10	77	261	<10	159	669	40	219	
C34 - C50 (F4)	mg/kg	10	<10	90	197	<10	112	492	36	165	
Gravimetric Heavy Hydrocarbons	mg/kg	1000	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Moisture Content	%	1	14	26	24	11	24	21	17	46	
Surrogate	Unit	Acceptable Limits									
Toluene-d8 (BTEX)	%	50-150	99	98	98	99	99	98	99	95	
Ethylbenzene-d10 (BTEX)	%	50-150	90	93	93	90	95	88	95	113	
o-Terphenyl (F2-F4)	%	50-150	132	96	103	103	108	119	105	97	

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PROJECT: A04012A07

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CLIENT NAME: IEG CONSULTANTS LTD

ATTENTION TO: Nicole Wills

SAMPLING SITE:

SAMPLED BY:

Petroleum Hydrocarbons (BTEX/F1-F4) in Soil (CWS)

DATE RECEIVED: 2015-08-24

DATE REPORTED: 2015-10-10

Parameter	Unit	SAMPLE DESCRIPTION:									
		G / S		BH15-067 (0.)	BH15-067 (1.)	BH15-068 (0.)	BH15-068 (0.)	BH15-068 (0.)	BH15-069 (0.)	BH15-069 (0.)	BH15-069 (1.)
		RDL		6-1.0)	0-1.5)	15-0.3)	3-0.6)	6-1.0)	3-0.6)	6-1.0)	0-1.5)
		DATE SAMPLED:		8/17/2015	8/17/2015	8/17/2015	8/17/2015	8/17/2015	8/17/2015	8/17/2015	8/17/2015
Benzene	mg/kg	0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	
Toluene	mg/kg	0.05	<0.05	<0.05	<0.05	<0.05	<0.05	0.25	0.13	<0.05	
Ethylbenzene	mg/kg	0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	
Xylenes	mg/kg	0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	
C6 - C10 (F1)	mg/kg	10	<10	<10	<10	<10	<10	<10	<10	<10	
C6 - C10 (F1 minus BTEX)	mg/kg	10	<10	<10	<10	<10	<10	<10	<10	<10	
C10 - C16 (F2)	mg/kg	10	<10	<10	<10	<10	<10	15	<10	<10	
C16 - C34 (F3)	mg/kg	10	368	<10	92	297	40	670	93	<10	
C34 - C50 (F4)	mg/kg	10	164	<10	29	118	<10	321	35	<10	
Gravimetric Heavy Hydrocarbons	mg/kg	1000	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	
Moisture Content	%	1	29	12	7	33	19	32	24	24	
Surrogate	Unit	Acceptable Limits									
Toluene-d8 (BTEX)	%	50-150	97	99	102	100	100	100	100	100	
Ethylbenzene-d10 (BTEX)	%	50-150	112	97	93	108	88	106	97	101	
o-Terphenyl (F2-F4)	%	50-150	130	142	137	131	139	137	129	134	

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ATTENTION TO: Nicole Wills

SAMPLING SITE:

SAMPLED BY:

Petroleum Hydrocarbons (BTEX/F1-F4) in Soil (CWS)

DATE RECEIVED: 2015-08-24

DATE REPORTED: 2015-10-10

Parameter	Unit	SAMPLE DESCRIPTION:		BH15-070 (0.	BH15-070 (0.	BH15-070 (1.	BH15-071 (0.	BH15-071 (0.	BH15-071 (1.	BH15-072 (0.	BH15-072 (1.
		G / S	RDL	6896619	6896622	6896628	6896631	6896634	6896636	6896639	6896640
		3-0.6)	6-1.0)	0-1.5)	3-0.6)	6-1.0)	0-1.5)	6-1.0)	0-1.5)	6-1.0)	0-1.5)
		Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil
		DATE SAMPLED:	8/17/2015	8/17/2015	8/17/2015	8/17/2015	8/17/2015	8/17/2015	8/17/2015	8/17/2015	8/17/2015
Benzene	mg/kg	0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Toluene	mg/kg	0.05	<0.05	2.02	<0.05	2.58	<0.05	<0.05	<0.05	0.18	<0.05
Ethylbenzene	mg/kg	0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Xylenes	mg/kg	0.05	<0.05	0.06	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
C6 - C10 (F1)	mg/kg	10	<10	<10	<10	<10	<10	<10	<10	<10	<10
C6 - C10 (F1 minus BTEX)	mg/kg	10	<10	<10	<10	<10	<10	<10	<10	<10	<10
C10 - C16 (F2)	mg/kg	10	<10	<10	<10	<10	<10	<10	<10	<10	<10
C16 - C34 (F3)	mg/kg	10	<10	279	190	538	31	<10	55	<10	
C34 - C50 (F4)	mg/kg	10	<10	54	139	184	13	<10	14	<10	
Gravimetric Heavy Hydrocarbons	mg/kg	1000	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	
Moisture Content	%	1	7	55	18	36	20	14	17	18	
Surrogate	Unit	Acceptable Limits									
Toluene-d8 (BTEX)	%	50-150	102	102	106	101	104	101	98	102	
Ethylbenzene-d10 (BTEX)	%	50-150	109	97	101	107	109	100	95	97	
o-Terphenyl (F2-F4)	%	50-150	141	121	136	133	137	138	130	127	

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PROJECT: A04012A07

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CLIENT NAME: IEG CONSULTANTS LTD

ATTENTION TO: Nicole Wills

SAMPLING SITE:

SAMPLED BY:

Petroleum Hydrocarbons (BTEX/F1-F4) in Soil (CWS)

DATE RECEIVED: 2015-08-24

DATE REPORTED: 2015-10-10

Parameter	Unit	SAMPLE DESCRIPTION:		BH15-072 (2.)	BH15-073 (0.)	BH15-073 (1.)	BH15-073 (2.)	BH15-074 (0.)	BH15-074 (1.)	BH15-074 (4.)	DUP F	
		Soil		5-3.0)	3-0.6)	0-1.5)	5-3.0)	3-0.6)	0-1.5)	0-4.5)	Soil	
		Soil		Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil
		DATE SAMPLED:		8/17/2015	8/17/2015	8/17/2015	8/17/2015	8/17/2015	8/17/2015	8/17/2015	8/17/2015	8/17/2015
G / S	RDL	6896641	6896686	6896721	6896728	6896750	6896758	6896768	6896777			
Benzene	mg/kg	0.005	<0.005	0.018	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	
Toluene	mg/kg	0.05	<0.05	0.70	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	
Ethylbenzene	mg/kg	0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	
Xylenes	mg/kg	0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	
C6 - C10 (F1)	mg/kg	10	<10	<10	<10	<10	<10	<10	<10	<10	<10	
C6 - C10 (F1 minus BTEX)	mg/kg	10	<10	<10	<10	<10	<10	<10	<10	<10	<10	
C10 - C16 (F2)	mg/kg	10	<10	<10	<10	<10	87	<10	<10	<10	<10	
C16 - C34 (F3)	mg/kg	10	<10	517	<10	71	2510	13	<10	<10	<10	
C34 - C50 (F4)	mg/kg	10	<10	168	<10	21	1370	14	50	<10	<10	
Gravimetric Heavy Hydrocarbons	mg/kg	1000	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	
Moisture Content	%	1	27	31	17	36	50	16	24	6	6	
Surrogate	Unit	Acceptable Limits										
Toluene-d8 (BTEX)	%	50-150	101	101	101	101	99	100	101	101	101	
Ethylbenzene-d10 (BTEX)	%	50-150	115	99	101	117	98	102	113	109	109	
o-Terphenyl (F2-F4)	%	50-150	129	131	140	133	98	96	94	121	121	

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AGAT WORK ORDER: 15E011146

PROJECT: A04012A07

6310 ROPER ROAD
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CLIENT NAME: IEG CONSULTANTS LTD

ATTENTION TO: Nicole Wills

SAMPLING SITE:

SAMPLED BY:

Petroleum Hydrocarbons (BTEX/F1-F4) in Soil (CWS)

DATE RECEIVED: 2015-08-24

DATE REPORTED: 2015-10-10

Parameter	Unit	SAMPLE DESCRIPTION:		DUP G	DUP H	DUP I	BH15-075 (0.3-0.6)	BH15-075 (0.6-1.0)	BH15-075 (1.0-1.5)	BH15-076 (0.3-0.6)	BH15-076 (3.0-4.0)	
		SAMPLE TYPE:		Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil
		DATE SAMPLED:		8/17/2015	8/17/2015	8/17/2015	8/18/2015	8/18/2015	8/18/2015	8/18/2015	8/18/2015	8/18/2015
		G / S	RDL	6896778	6896779	6896784	6896792	6896801	6896802	6896807	6896810	
Benzene	mg/kg	0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	
Toluene	mg/kg	0.05	4.89	<0.05	0.52	4.61	15.2	0.10	4.42	<0.05		
Ethylbenzene	mg/kg	0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01		
Xylenes	mg/kg	0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05		
C6 - C10 (F1)	mg/kg	10	<10	<10	<10	<10	30	<10	<10	<10		
C6 - C10 (F1 minus BTEX)	mg/kg	10	<10	<10	<10	<10	10	<10	<10	<10		
C10 - C16 (F2)	mg/kg	10	12	28	15	<10	51	<10	53	<10		
C16 - C34 (F3)	mg/kg	10	386	851	661	145	1610	19	1280	<10		
C34 - C50 (F4)	mg/kg	10	225	449	319	74	761	13	716	<10		
Gravimetric Heavy Hydrocarbons	mg/kg	1000	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A		
Moisture Content	%	1	24	50	33	43	48	13	45	23		
Surrogate	Unit	Acceptable Limits										
Toluene-d8 (BTEX)	%	50-150	99	100	102	106	99	96	95	97		
Ethylbenzene-d10 (BTEX)	%	50-150	105	102	113	92	76	95	75	92		
o-Terphenyl (F2-F4)	%	50-150	94	94	97	100	110	105	110	109		

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PROJECT: A04012A07

6310 ROPER ROAD
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CLIENT NAME: IEG CONSULTANTS LTD

ATTENTION TO: Nicole Wills

SAMPLING SITE:

SAMPLED BY:

Petroleum Hydrocarbons (BTEX/F1-F4) in Soil (CWS)

DATE RECEIVED: 2015-08-24

DATE REPORTED: 2015-10-10

Parameter	Unit	SAMPLE DESCRIPTION:		BH15-076 (4.	BH15-077 (0.	BH15-077 (1.	BH15-077 (2.	BH15-078 (0.	BH15-078 (0.	BH15-078 (2.	BH15-079 (0.
		Soil		0-4.5)	3-0.6)	0-1.5)	5-3.0)	3-0.6)	6-1.0)	5-3.0)	15-0.3)
		Soil		Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil
		DATE SAMPLED:		8/18/2015	8/18/2015	8/18/2015	8/18/2015	8/18/2015	8/18/2015	8/18/2015	8/18/2015
G / S	RDL	6896814	6896816	6896818	6896819	6896820	6896821	6896823	6896825	6896825	
Benzene	mg/kg	0.005	<0.005	<0.005	<0.005	<0.005	0.029	<0.005	<0.005	<0.005	<0.005
Toluene	mg/kg	0.05	<0.05	29.5	<0.05	0.10	6.97	1.93	<0.05	<0.05	27.6
Ethylbenzene	mg/kg	0.01	<0.01	<0.01	<0.01	<0.01	0.08	<0.01	<0.01	<0.01	<0.01
Xylenes	mg/kg	0.05	<0.05	<0.05	<0.05	<0.05	0.20	<0.05	<0.05	<0.05	<0.05
C6 - C10 (F1)	mg/kg	10	<10	30	<10	<10	20	<10	<10	<10	40
C6 - C10 (F1 minus BTEX)	mg/kg	10	<10	<10	<10	<10	10	<10	<10	<10	<10
C10 - C16 (F2)	mg/kg	10	<10	20	<10	<10	103	<10	<10	<10	99
C16 - C34 (F3)	mg/kg	10	<10	1560	<10	<10	353	276	<10	<10	2630
C34 - C50 (F4)	mg/kg	10	<10	712	<10	<10	164	137	13	13	1180
Gravimetric Heavy Hydrocarbons	mg/kg	1000	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Moisture Content	%	1	22	55	19	25	52	30	21	21	49
Surrogate	Unit	Acceptable Limits									
Toluene-d8 (BTEX)	%	50-150	104	93	98	110	98	97	102	102	95
Ethylbenzene-d10 (BTEX)	%	50-150	104	68	86	88	77	75	97	97	74
o-Terphenyl (F2-F4)	%	50-150	110	112	122	111	107	111	109	109	107

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PROJECT: A04012A07

6310 ROPER ROAD
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CLIENT NAME: IEG CONSULTANTS LTD

ATTENTION TO: Nicole Wills

SAMPLING SITE:

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Petroleum Hydrocarbons (BTEX/F1-F4) in Soil (CWS)

DATE RECEIVED: 2015-08-24

DATE REPORTED: 2015-10-10

Parameter	Unit	SAMPLE DESCRIPTION:		BH15-079 (0.	BH15-079 (1.	BH15-080 (0.	BH15-080 (1.	BH15-080 (2.	BH15-081 (0.	BH15-081 (0.	BH15-081 (2.	
		G / S	RDL	6-1.0)	0-1.5)	3-0.6)	0-1.5)	5-3.0)	15-0.3)	6-1.0)	5-3.0)	
		SAMPLE TYPE:		Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil
		DATE SAMPLED:		8/18/2015	8/18/2015	8/18/2015	8/18/2015	8/18/2015	8/18/2015	8/18/2015	8/18/2015	8/18/2015
Benzene	mg/kg	0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	
Toluene	mg/kg	0.05	0.33	0.13	9.17	<0.05	<0.05	<0.05	<0.05	4.09	<0.05	
Ethylbenzene	mg/kg	0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	0.06	<0.01	
Xylenes	mg/kg	0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	0.39	<0.05	
C6 - C10 (F1)	mg/kg	10	<10	<10	<10	<10	<10	<10	<10	20	<10	
C6 - C10 (F1 minus BTEX)	mg/kg	10	<10	<10	<10	<10	<10	<10	<10	10	<10	
C10 - C16 (F2)	mg/kg	10	<10	<10	<10	<10	<10	<10	695	326	<10	
C16 - C34 (F3)	mg/kg	10	<10	<10	599	<10	<10	<10	1010	850	<10	
C34 - C50 (F4)	mg/kg	10	10	15	272	14	10	37	267	<10	<10	
Gravimetric Heavy Hydrocarbons	mg/kg	1000	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	NA	
Moisture Content	%	1	17	17	33	19	24	14	37	22	22	
Surrogate	Unit	Acceptable Limits										
Toluene-d8 (BTEX)	%	50-150	101	95	96	96	100	98	93	99	99	
Ethylbenzene-d10 (BTEX)	%	50-150	98	81	70	77	94	94	98	101	101	
o-Terphenyl (F2-F4)	%	50-150	104	106	127	110	122	129	118	137	137	

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PROJECT: A04012A07

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CLIENT NAME: IEG CONSULTANTS LTD

ATTENTION TO: Nicole Wills

SAMPLING SITE:

SAMPLED BY:

Petroleum Hydrocarbons (BTEX/F1-F4) in Soil (CWS)

DATE RECEIVED: 2015-08-24

DATE REPORTED: 2015-10-10

Parameter	Unit	SAMPLE DESCRIPTION:		BH15-082 (0.	BH15-082 (0.	BH15-082 (1.	BH15-083 (0.	BH15-083 (0.	BH15-083 (2.	DUP J	BH15-084 (0.
		Soil		0-0.15)	6-1.0)	0-1.5)	3-0.6)	6-1.0)	5-3.0)		3-0.6)
		Soil		Soil	Soil	Soil	Soil	Soil	Soil		Soil
		Soil		Soil	Soil	Soil	Soil	Soil	Soil		Soil
DATE SAMPLED:		8/18/2015	8/18/2015	8/18/2015	8/18/2015	8/18/2015	8/18/2015	8/18/2015	8/18/2015	8/18/2015	8/18/2015
G / S	RDL	6896854	6896861	6896998	6897004	6897015	6897016	6897018	6897025		
Benzene	mg/kg	0.005	0.017	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	0.764
Toluene	mg/kg	0.05	10.2	<0.05	<0.05	0.09	0.49	<0.05	10.0	0.11	
Ethylbenzene	mg/kg	0.01	3.09	<0.01	<0.01	0.15	0.01	<0.01	2.88	<0.01	
Xylenes	mg/kg	0.05	22.6	<0.05	<0.05	0.52	<0.05	<0.05	24.3	<0.05	
C6 - C10 (F1)	mg/kg	10	610	<10	<10	<10	<10	<10	450	<10	
C6 - C10 (F1 minus BTEX)	mg/kg	10	580	<10	<10	<10	<10	<10	420	<10	
C10 - C16 (F2)	mg/kg	10	24700	<10	<10	126	49	43	8910	20	
C16 - C34 (F3)	mg/kg	10	13700	<10	<10	943	161	41	6260	310	
C34 - C50 (F4)	mg/kg	10	189	<10	<10	362	51	<10	159	101	
Gravimetric Heavy Hydrocarbons	mg/kg	1000	NA	NA	NA	NA	NA	NA	NA	NA	
Moisture Content	%	1	50	15	19	44	23	23	55	39	
Surrogate	Unit	Acceptable Limits									
Toluene-d8 (BTEX)	%	50-150	90	98	97	98	99	98	98	98	99
Ethylbenzene-d10 (BTEX)	%	50-150	75	101	103	112	107	108	97	102	
o-Terphenyl (F2-F4)	%	50-150	149	131	132	102	130	133	107	127	

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6310 ROPER ROAD
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CLIENT NAME: IEG CONSULTANTS LTD

ATTENTION TO: Nicole Wills

SAMPLING SITE:

SAMPLED BY:

Petroleum Hydrocarbons (BTEX/F1-F4) in Soil (CWS)

DATE RECEIVED: 2015-08-24

DATE REPORTED: 2015-10-10

Parameter	Unit	SAMPLE DESCRIPTION:									
		G / S		BH15-084 (1.)	BH15-084 (2.)	BH15-085 (0.)	BH15-085 (1.)	BH15-085 (4.)	BH15-086 (0.)	BH15-086 (1.)	BH15-086 (2.)
		RDL		0-1.5)	5-3.0)	6-1.0)	5-2.0)	0-4.5)	6-1.0)	0-1.5)	5-3.0)
		DATE SAMPLED:		8/18/2015	8/18/2015	8/18/2015	8/18/2015	8/18/2015	8/18/2015	8/18/2015	8/18/2015
Benzene	mg/kg	0.005	<0.005	<0.005	0.083	2.68	0.017	1.22	0.055	<0.005	
Toluene	mg/kg	0.05	<0.05	<0.05	1.38	12.8	<0.05	0.58	<0.05	<0.05	
Ethylbenzene	mg/kg	0.01	0.02	<0.01	0.53	6.99	0.02	10.2	0.09	<0.01	
Xylenes	mg/kg	0.05	<0.05	<0.05	1.64	31.5	0.08	20.3	0.12	<0.05	
C6 - C10 (F1)	mg/kg	10	<10	<10	10	480	<10	150	<10	<10	
C6 - C10 (F1 minus BTEX)	mg/kg	10	<10	<10	10	420	<10	120	<10	<10	
C10 - C16 (F2)	mg/kg	10	20	<10	1120	3690	<10	6320	<10	<10	
C16 - C34 (F3)	mg/kg	10	11	<10	<10	284	<10	1560	<10	<10	
C34 - C50 (F4)	mg/kg	10	<10	<10	<10	39	<10	113	<10	<10	
Gravimetric Heavy Hydrocarbons	mg/kg	1000	NA	NA	NA	NA	NA	NA	NA	NA	
Moisture Content	%	1	19	23	16	35	25	55	15	23	
Surrogate	Unit	Acceptable Limits									
Toluene-d8 (BTEX)	%	50-150	98	97	100	96	98	100	99	99	
Ethylbenzene-d10 (BTEX)	%	50-150	108	110	113	91	93	98	118	110	
o-Terphenyl (F2-F4)	%	50-150	128	128	124	119	127	69	125	122	

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PROJECT: A04012A07

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CLIENT NAME: IEG CONSULTANTS LTD

ATTENTION TO: Nicole Wills

SAMPLING SITE:

SAMPLED BY:

Petroleum Hydrocarbons (BTEX/F1-F4) in Soil (CWS)

DATE RECEIVED: 2015-08-24

DATE REPORTED: 2015-10-10

Parameter	Unit	G / S	RDL	BH15-087 (0.	BH15-087 (2.	BH15-087 (5.	BH15-087 (7.	BH15-088 (0.	BH15-088 (1.	BH15-088 (2.	BH15-089 (0.
				3-0.6)	5-3.0)	5-6.0)	0-7.5)	3-0.6)	0-1.5)	5-3.0)	0-0.15)
				Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil
				DATE SAMPLED:	8/18/2015	8/18/2015	8/18/2015	8/18/2015	8/18/2015	8/18/2015	8/18/2015
Benzene	mg/kg		0.005	1.72	0.012	0.010	0.029	1.76	0.078	0.015	<0.005
Toluene	mg/kg		0.05	0.10	<0.05	<0.05	<0.05	4.55	<0.05	<0.05	<0.05
Ethylbenzene	mg/kg		0.01	0.29	<0.01	<0.01	<0.01	10.8	0.22	0.07	0.05
Xylenes	mg/kg		0.05	1.28	<0.05	<0.05	<0.05	55.9	0.59	0.21	2.84
C6 - C10 (F1)	mg/kg		10	10	<10	<10	<10	1410	<10	<10	690
C6 - C10 (F1 minus BTEX)	mg/kg		10	<10	<10	<10	<10	1340	<10	<10	690
C10 - C16 (F2)	mg/kg		10	85	<10	<10	<10	2470	11	48	10100
C16 - C34 (F3)	mg/kg		10	1720	<10	<10	<10	1440	17	11	1820
C34 - C50 (F4)	mg/kg		10	788	<10	<10	<10	612	<10	12	29
Gravimetric Heavy Hydrocarbons	mg/kg		1000	NA	NA	NA	N/A	N/A	N/A	N/A	N/A
Moisture Content	%		1	47	26	25	25	29	20	24	8
Surrogate	Unit	Acceptable Limits									
Toluene-d8 (BTEX)	%	50-150	99	100	97	99	97	97	107	99	91
Ethylbenzene-d10 (BTEX)	%	50-150	97	106	105	89	60	92	86	77	
o-Terphenyl (F2-F4)	%	50-150	132	129	125	117	116	116	117	116	

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PROJECT: A04012A07

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ATTENTION TO: Nicole Wills

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Petroleum Hydrocarbons (BTEX/F1-F4) in Soil (CWS)

DATE RECEIVED: 2015-08-24

DATE REPORTED: 2015-10-10

Parameter	Unit	SAMPLE DESCRIPTION:									
		G / S		BH15-089 (0.	BH15-089 (1.	BH15-090 (0.	BH15-090 (1.	BH15-090 (2.	BH15-091 (0.	BH15-091 (0.	BH15-091 (1.
		RDL		6-1.0)	0-1.5)	3-0.6)	0-1.5)	5-3.0)	3-0.6)	6-1.0)	0-1.5)
		DATE SAMPLED:		8/18/2015	8/18/2015	8/18/2015	8/18/2015	8/18/2015	8/19/2015	8/19/2015	8/19/2015
Benzene	mg/kg	0.005	0.022	3.26	0.035	0.075	<0.005	0.046	0.083	0.036	
Toluene	mg/kg	0.05	<0.05	7.16	4.91	0.24	<0.05	6.85	0.45	<0.05	
Ethylbenzene	mg/kg	0.01	0.16	14.5	0.04	0.32	<0.01	<0.01	0.10	0.06	
Xylenes	mg/kg	0.05	1.86	61.7	0.12	1.04	<0.05	<0.05	0.36	0.18	
C6 - C10 (F1)	mg/kg	10	420	2610	<10	<10	<10	<10	<10	<10	
C6 - C10 (F1 minus BTEX)	mg/kg	10	420	2530	<10	<10	<10	<10	<10	<10	
C10 - C16 (F2)	mg/kg	10	5410	10900	515	18	<10	449	19	<10	
C16 - C34 (F3)	mg/kg	10	1300	2000	577	10	11	815	41	<10	
C34 - C50 (F4)	mg/kg	10	14	109	240	<10	<10	316	15	<10	
Gravimetric Heavy Hydrocarbons	mg/kg	1000	N/A	N/A	N/A	N/A	N/A	NA	NA	NA	
Moisture Content	%	1	8	28	28	16	17	40	17	19	
Surrogate	Unit	Acceptable Limits									
Toluene-d8 (BTEX)	%	50-150	98	63	106	103	100	102	97	102	
Ethylbenzene-d10 (BTEX)	%	50-150	91	55	99	96	110	97	98	105	
o-Terphenyl (F2-F4)	%	50-150	116	115	112	122	113	95	101	101	

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PROJECT: A04012A07

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SAMPLING SITE:

SAMPLED BY:

Petroleum Hydrocarbons (BTEX/F1-F4) in Soil (CWS)

DATE RECEIVED: 2015-08-24

DATE REPORTED: 2015-10-10

Parameter	Unit	SAMPLE DESCRIPTION:		BH15-092 (0.	BH15-092 (0.	BH15-092 (1.	BH15-093 (0.	BH15-093 (0.	BH15-093 (1.	BH15-094 (0.	BH15-094 (0.
		Soil		3-0.6)	6-1.0)	0-1.5)	3-0.6)	6-1.0)	0-1.5)	3-0.6)	6-1.0)
		Soil		Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil
		DATE SAMPLED:		8/19/2015	8/19/2015	8/19/2015	8/19/2015	8/19/2015	8/19/2015	8/19/2015	8/19/2015
G / S	RDL	6897211	6897215	6897217	6897218	6897222	6897224	6897225	6897228		
Benzene	mg/kg	0.005	0.021	0.009	0.006	0.013	<0.005	<0.005	0.035	<0.005	
Toluene	mg/kg	0.05	1.58	0.06	<0.05	5.44	<0.05	<0.05	6.14	<0.05	
Ethylbenzene	mg/kg	0.01	<0.01	<0.01	0.01	<0.01	<0.01	<0.01	0.01	<0.01	
Xylenes	mg/kg	0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	
C6 - C10 (F1)	mg/kg	10	<10	<10	<10	<10	<10	<10	<10	<10	
C6 - C10 (F1 minus BTEX)	mg/kg	10	<10	<10	<10	<10	<10	<10	<10	<10	
C10 - C16 (F2)	mg/kg	10	<10	<10	<10	20	<10	<10	12	<10	
C16 - C34 (F3)	mg/kg	10	281	63	22	1090	<10	15	513	<10	
C34 - C50 (F4)	mg/kg	10	127	31	<10	474	<10	<10	230	<10	
Gravimetric Heavy Hydrocarbons	mg/kg	1000	NA	NA	NA	NA	NA	NA	NA	NA	
Moisture Content	%	1	20	15	18	53	17	9	35	15	
Surrogate	Unit	Acceptable Limits									
Toluene-d8 (BTEX)	%	50-150	105	94	99	100	105	101	102	97	
Ethylbenzene-d10 (BTEX)	%	50-150	102	89	93	92	118	98	104	89	
o-Terphenyl (F2-F4)	%	50-150	99	106	105	103	103	103	102	102	

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AGAT WORK ORDER: 15E011146

PROJECT: A04012A07

6310 ROPER ROAD
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CLIENT NAME: IEG CONSULTANTS LTD

ATTENTION TO: Nicole Wills

SAMPLING SITE:

SAMPLED BY:

Petroleum Hydrocarbons (BTEX/F1-F4) in Soil (CWS)

DATE RECEIVED: 2015-08-24

DATE REPORTED: 2015-10-10

Parameter	Unit	SAMPLE DESCRIPTION:									
		G / S		BH15-094 (1.	BH15-095 (0.	BH15-095 (1.	BH15-095 (2.	BH15-096 (0.	BH15-096 (0.	BH15-096 (1.	BH15-097 (0.
		RDL		0-1.5)	6-1.0)	5-2.0)	5-3.0)	3-0.6)	6-1.0)	0-1.5)	3-0.6)
		DATE SAMPLED:		8/19/2015	8/19/2015	8/19/2015	8/19/2015	8/19/2015	8/19/2015	8/19/2015	8/19/2015
Benzene	mg/kg	0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	
Toluene	mg/kg	0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	0.88	
Ethylbenzene	mg/kg	0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	
Xylenes	mg/kg	0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	
C6 - C10 (F1)	mg/kg	10	<10	<10	<10	<10	<10	<10	<10	<10	
C6 - C10 (F1 minus BTEX)	mg/kg	10	<10	<10	<10	<10	<10	<10	<10	<10	
C10 - C16 (F2)	mg/kg	10	<10	<10	<10	<10	<10	<10	28	11	
C16 - C34 (F3)	mg/kg	10	<10	<10	<10	29	51	35	110	188	
C34 - C50 (F4)	mg/kg	10	<10	<10	<10	<10	<10	<10	31	73	
Gravimetric Heavy Hydrocarbons	mg/kg	1000	NA	NA	NA	NA	NA	NA	NA	N/A	
Moisture Content	%	1	18	15	22	21	7	9	23	24	
Surrogate	Unit	Acceptable Limits									
Toluene-d8 (BTEX)	%	50-150	99	98	99	99	98	98	98	98	
Ethylbenzene-d10 (BTEX)	%	50-150	92	102	89	86	90	87	91	93	
o-Terphenyl (F2-F4)	%	50-150	103	103	105	101	104	104	100	101	

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PROJECT: A04012A07

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CLIENT NAME: IEG CONSULTANTS LTD

ATTENTION TO: Nicole Wills

SAMPLING SITE:

SAMPLED BY:

Petroleum Hydrocarbons (BTEX/F1-F4) in Soil (CWS)

DATE RECEIVED: 2015-08-24

DATE REPORTED: 2015-10-10

Parameter	Unit	SAMPLE DESCRIPTION:									
		G / S		BH15-097 (0.	BH15-097 (1.	BH15-098 (0.	BH15-098 (1.	BH15-098 (2.	BH15-099 (0.	BH15-099 (1.	BH15-099 (2.
		RDL		6-1.0)	0-1.5)	6-1.0)	5-2.0)	5-3.0)	3-0.6)	0-1.5)	5-3.0)
		DATE SAMPLED:		8/19/2015	8/19/2015	8/19/2015	8/19/2015	8/19/2015	8/19/2015	8/19/2015	8/19/2015
Benzene	mg/kg	0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	
Toluene	mg/kg	0.05	<0.05	<0.05	0.50	<0.05	<0.05	6.94	0.08	<0.05	
Ethylbenzene	mg/kg	0.01	<0.01	<0.01	0.03	<0.01	<0.01	0.23	<0.01	<0.01	
Xylenes	mg/kg	0.05	<0.05	<0.05	0.25	<0.05	<0.05	1.48	<0.05	<0.05	
C6 - C10 (F1)	mg/kg	10	<10	<10	10	<10	<10	<10	<10	<10	
C6 - C10 (F1 minus BTEX)	mg/kg	10	<10	<10	<10	<10	<10	<10	<10	<10	
C10 - C16 (F2)	mg/kg	10	<10	<10	648	<10	18	611	27	13	
C16 - C34 (F3)	mg/kg	10	11	<10	555	<10	32	1500	30	38	
C34 - C50 (F4)	mg/kg	10	<10	<10	<10	<10	17	181	<10	<10	
Gravimetric Heavy Hydrocarbons	mg/kg	1000	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	
Moisture Content	%	1	15	15	16	26	22	55	15	18	
Surrogate	Unit	Acceptable Limits									
Toluene-d8 (BTEX)	%	50-150	101	99	98	92	102	98	100	105	
Ethylbenzene-d10 (BTEX)	%	50-150	91	92	97	90	76	93	95	90	
o-Terphenyl (F2-F4)	%	50-150	99	103	92	98	104	92	103	101	

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PROJECT: A04012A07

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CLIENT NAME: IEG CONSULTANTS LTD

ATTENTION TO: Nicole Wills

SAMPLING SITE:

SAMPLED BY:

Petroleum Hydrocarbons (BTEX/F1-F4) in Soil (CWS)

DATE RECEIVED: 2015-08-24

DATE REPORTED: 2015-10-10

Parameter	Unit	SAMPLE DESCRIPTION:		BH15-100 (0.	BH15-100 (0.	BH15-100 (2.	BH15-101 (0.	BH15-101 (1.	BH15-101 (2.	BH15-102 (1.	BH15-102 (1.	
		Soil		3-0.6)	6-1.0)	5-3.0)	6-1.0)	0-1.5)	5-3.0)	0-1.5)	5-2.0)	
		Soil		8/19/2015	8/19/2015	8/19/2015	8/19/2015	8/19/2015	8/19/2015	8/19/2015	8/19/2015	8/19/2015
		Soil		G / S	RDL	6897288	6897290	6897292	6897293	6897295	6897297	6897298
Benzene	mg/kg		0.005	<0.005	0.011	<0.005	0.006	<0.005	<0.005	<0.005	<0.005	
Toluene	mg/kg		0.05	6.75	6.55	<0.05	4.49	0.09	<0.05	<0.05	<0.05	
Ethylbenzene	mg/kg		0.01	0.04	<0.01	<0.01	<0.01	<0.01	<0.01	0.02	<0.01	
Xylenes	mg/kg		0.05	0.30	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	
C6 - C10 (F1)	mg/kg		10	<10	<10	<10	<10	<10	<10	<10	<10	
C6 - C10 (F1 minus BTEX)	mg/kg		10	<10	<10	<10	<10	<10	<10	<10	<10	
C10 - C16 (F2)	mg/kg		10	162	95	15	30	17	<10	28	10	
C16 - C34 (F3)	mg/kg		10	1440	1400	42	1240	67	36	28	10	
C34 - C50 (F4)	mg/kg		10	497	626	<10	520	98	<10	36	18	
Gravimetric Heavy Hydrocarbons	mg/kg		1000	N/A	NA	NA	NA	NA	NA	NA	NA	
Moisture Content	%		1	47	45	22	46	24	23	15	18	
Surrogate	Unit	Acceptable Limits										
Toluene-d8 (BTEX)	%	50-150	97	97	97	104	101	102	102	99	103	
Ethylbenzene-d10 (BTEX)	%	50-150	114	82	87	91	100	102	102	92	106	
o-Terphenyl (F2-F4)	%	50-150	87	84	94	104	111	94	94	95	93	

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ATTENTION TO: Nicole Wills

SAMPLING SITE:

SAMPLED BY:

Petroleum Hydrocarbons (BTEX/F1-F4) in Soil (CWS)

DATE RECEIVED: 2015-08-24

DATE REPORTED: 2015-10-10

Parameter	Unit	SAMPLE DESCRIPTION:		BH15-102 (2.	BH15-103 (0.	BH15-103 (0.	BH15-103 (1.	BH15-104 (0.	BH15-104 (0.	BH15-104 (1.	BH15-105 (0.	
		G / S	RDL	5-3.0)	3-0.6)	6-1.0)	0-1.5)	15-0.3)	3-0.6)	0-1.5)	15-0.3)	
		DATE SAMPLED:		8/19/2015	8/19/2015	8/19/2015	8/19/2015	8/19/2015	8/19/2015	8/19/2015	8/19/2015	8/19/2015
				6897300	6897308	6897310	6897324	6897326	6897327	6897328	6897333	
Benzene	mg/kg	0.005	<0.005	<0.005	<0.005	<0.005	<0.005	0.020	<0.005	<0.005	0.018	
Toluene	mg/kg	0.05	<0.05	9.73	0.30	<0.05	<0.05	1.98	1.17	<0.05	6.30	
Ethylbenzene	mg/kg	0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	0.26	
Xylenes	mg/kg	0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	1.93	
C6 - C10 (F1)	mg/kg	10	<10	10	<10	<10	<10	<10	10	<10	20	
C6 - C10 (F1 minus BTEX)	mg/kg	10	<10	<10	<10	<10	<10	<10	10	<10	<10	
C10 - C16 (F2)	mg/kg	10	<10	20	<10	<10	<10	16	<10	<10	123	
C16 - C34 (F3)	mg/kg	10	<10	906	36	<10	<10	913	1190	12	511	
C34 - C50 (F4)	mg/kg	10	<10	515	34	<10	<10	518	685	14	305	
Gravimetric Heavy Hydrocarbons	mg/kg	1000	NA	NA	NA	NA	NA	NA	NA	NA	NA	
Moisture Content	%	1	24	46	18	16	31	68	18	42	42	
Surrogate	Unit	Acceptable Limits										
Toluene-d8 (BTEX)	%	50-150	100	104	104	104	104	100	100	100	102	
Ethylbenzene-d10 (BTEX)	%	50-150	104	100	108	107	92	85	103	96	96	
o-Terphenyl (F2-F4)	%	50-150	92	88	95	92	92	88	89	86	86	

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CLIENT NAME: IEG CONSULTANTS LTD

ATTENTION TO: Nicole Wills

SAMPLING SITE:

SAMPLED BY:

Petroleum Hydrocarbons (BTEX/F1-F4) in Soil (CWS)

DATE RECEIVED: 2015-08-24

DATE REPORTED: 2015-10-10

Parameter	Unit	SAMPLE DESCRIPTION:		BH15-105 (0.	BH15-105 (1.	BH15-106 (0.	BH15-106 (0.	BH15-106 (1.	BH15-107 (0.	BH15-107 (0.	BH15-107 (2.	
		G / S	RDL	3-0.6)	0-1.5)	3-0.6)	6-1.0)	0-1.5)	15-0.3)	3-0.6)	5-3.0)	
		DATE SAMPLED:		8/19/2015	8/19/2015	8/19/2015	8/19/2015	8/19/2015	8/19/2015	8/19/2015	8/19/2015	8/19/2015
		G / S		6897336	6897340	6897342	6897344	6897448	6897468	6897472	6897498	
Benzene	mg/kg	0.005	0.009	<0.005	0.005	<0.005	<0.005	0.011	<0.005	0.776	<0.005	
Toluene	mg/kg	0.05	2.30	<0.05	6.43	0.46	<0.05	0.17	25.5	<0.05		
Ethylbenzene	mg/kg	0.01	0.04	<0.01	0.06	<0.01	<0.01	0.15	0.64	<0.01		
Xylenes	mg/kg	0.05	0.18	<0.05	0.39	<0.05	<0.05	1.29	4.40	<0.05		
C6 - C10 (F1)	mg/kg	10	<10	<10	10	<10	<10	10	70	<10		
C6 - C10 (F1 minus BTEX)	mg/kg	10	<10	<10	<10	<10	<10	10	40	<10		
C10 - C16 (F2)	mg/kg	10	37	<10	118	<10	<10	204	59	<10		
C16 - C34 (F3)	mg/kg	10	1410	<10	627	60	<10	122	2450	<10		
C34 - C50 (F4)	mg/kg	10	747	18	327	57	<10	51	1120	37		
Gravimetric Heavy Hydrocarbons	mg/kg	1000	NA	NA	NA	NA	NA	NA	NA	NA		
Moisture Content	%	1	52	18	30	17	16	6	60	17		
Surrogate	Unit	Acceptable Limits										
Toluene-d8 (BTEX)	%	50-150	100	104	97	102	101	101	99	98		
Ethylbenzene-d10 (BTEX)	%	50-150	102	85	86	100	110	110	81	92		
o-Terphenyl (F2-F4)	%	50-150	87	93	82	104	105	96	91	88		

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PROJECT: A04012A07

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CLIENT NAME: IEG CONSULTANTS LTD

ATTENTION TO: Nicole Wills

SAMPLING SITE:

SAMPLED BY:

Petroleum Hydrocarbons (BTEX/F1-F4) in Soil (CWS)

DATE RECEIVED: 2015-08-24

DATE REPORTED: 2015-10-10

Parameter	Unit	SAMPLE DESCRIPTION:		BH15-108 (0.	BH15-108 (1.	BH15-108 (2.	BH15-109 (1.	BH15-109 (2.	BH15-109 (9.	BH15-110 (0.	BH15-110 (0.
		Soil		15-0.3)	0-1.5)	5-3.0)	0-1.5)	0-2.5)	0-9.5)	15-0.3)	3-0.6)
		Soil		Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil
		Soil		DATE SAMPLED:	8/19/2015	8/19/2015	8/19/2015	8/19/2015	8/19/2015	8/19/2015	8/19/2015
G / S	RDL	6897514	6897541	6897543	6897545	6897546	6897548	6897550	6897551		
Benzene	mg/kg	0.005	0.103	0.527	<0.005	0.012	<0.005	0.029	0.073	0.421	
Toluene	mg/kg	0.05	2.09	0.44	<0.05	<0.05	<0.05	0.09	0.65	3.71	
Ethylbenzene	mg/kg	0.01	0.57	3.38	<0.01	0.01	<0.01	0.02	0.72	0.78	
Xylenes	mg/kg	0.05	9.61	18.4	<0.05	0.10	<0.05	<0.05	3.56	4.48	
C6 - C10 (F1)	mg/kg	10	330	130	<10	<10	<10	<10	140	70	
C6 - C10 (F1 minus BTEX)	mg/kg	10	320	110	<10	<10	<10	<10	140	60	
C10 - C16 (F2)	mg/kg	10	9420	652	<10	226	<10	<10	3280	718	
C16 - C34 (F3)	mg/kg	10	167	<10	<10	36	<10	14	115	1930	
C34 - C50 (F4)	mg/kg	10	67	13	11	<10	<10	36	44	989	
Gravimetric Heavy Hydrocarbons	mg/kg	1000	NA	NA	NA	NA	NA	NA	NA	N/A	
Moisture Content	%	1	17	20	18	17	21	24	8	53	
Surrogate	Unit	Acceptable Limits									
Toluene-d8 (BTEX)	%	50-150	90	96	97	98	98	93	99	98	
Ethylbenzene-d10 (BTEX)	%	50-150	80	102	99	97	90	84	93	84	
o-Terphenyl (F2-F4)	%	50-150	84	101	90	88	105	87	88	84	

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CLIENT NAME: IEG CONSULTANTS LTD

ATTENTION TO: Nicole Wills

SAMPLING SITE:

SAMPLED BY:

Petroleum Hydrocarbons (BTEX/F1-F4) in Soil (CWS)

DATE RECEIVED: 2015-08-24

DATE REPORTED: 2015-10-10

Parameter	Unit	SAMPLE DESCRIPTION:		BH15-110 (1.	BH15-111 (0.	BH15-111 (0.	BH15-111 (1.	BH15-112 (0.	BH15-112 (1.	BH15-112 (2.	BH15-113 (0.	
		G / S	RDL	0-1.5)	0-0.15)	3-0.6)	0-1.5)	6-1.0)	0-1.5)	5-3.0)	3-0.6)	
		DATE SAMPLED:		8/19/2015	8/19/2015	8/19/2015	8/19/2015	8/19/2015	8/19/2015	8/19/2015	8/19/2015	8/20/2015
		Soil		Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil
Benzene	mg/kg	0.005	<0.005	0.034	0.055	<0.005	0.026	0.021	<0.005	0.006		
Toluene	mg/kg	0.05	<0.05	0.94	1.32	<0.05	0.05	<0.05	<0.05	<0.05		
Ethylbenzene	mg/kg	0.01	<0.01	0.38	0.01	<0.01	0.06	<0.01	<0.01	<0.01		
Xylenes	mg/kg	0.05	<0.05	2.88	<0.05	<0.05	0.34	<0.05	<0.05	0.16		
C6 - C10 (F1)	mg/kg	10	<10	160	<10	<10	<10	<10	<10	<10		
C6 - C10 (F1 minus BTEX)	mg/kg	10	<10	150	<10	<10	<10	<10	<10	<10		
C10 - C16 (F2)	mg/kg	10	<10	1540	44	<10	<10	<10	<10	16		
C16 - C34 (F3)	mg/kg	10	<10	239	1160	<10	<10	<10	<10	540		
C34 - C50 (F4)	mg/kg	10	<10	51	544	<10	<10	<10	<10	328		
Gravimetric Heavy Hydrocarbons	mg/kg	1000	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A		
Moisture Content	%	1	16	26	39	18	17	21	23	48		
Surrogate	Unit	Acceptable Limits										
Toluene-d8 (BTEX)	%	50-150	98	97	97	95	96	100	97	98		
Ethylbenzene-d10 (BTEX)	%	50-150	100	104	86	96	97	106	96	86		
o-Terphenyl (F2-F4)	%	50-150	93	89	87	91	92	88	91	99		

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ATTENTION TO: Nicole Wills

SAMPLING SITE:

SAMPLED BY:

Petroleum Hydrocarbons (BTEX/F1-F4) in Soil (CWS)

DATE RECEIVED: 2015-08-24

DATE REPORTED: 2015-10-10

Parameter	Unit	SAMPLE DESCRIPTION:									
		DATE SAMPLED:		BH15-113 (0.)	BH15-113 (1.)	BH15-114 (0.)	BH15-114 (0.)	BH15-114 (1.)	BH15-115	BH15-116 (0.)	BH15-117 (0.)
		G / S	RDL	6-1.0)	0-1.5)	3-0.6)	6-1.0)	0-1.5)	(0-0.15)	0-0.15)	0-0.15)
				Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil
Benzene	mg/kg	0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Toluene	mg/kg	0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Ethylbenzene	mg/kg	0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Xylenes	mg/kg	0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
C6 - C10 (F1)	mg/kg	10	<10	<10	<10	<10	<10	<10	<10	<10	<10
C6 - C10 (F1 minus BTEX)	mg/kg	10	<10	<10	<10	<10	<10	<10	<10	<10	<10
C10 - C16 (F2)	mg/kg	10	<10	<10	232	71	<10	<10	<10	<10	<10
C16 - C34 (F3)	mg/kg	10	69	18	73	32	22	243	133	282	
C34 - C50 (F4)	mg/kg	10	44	18	64	27	<10	201	111	228	
Gravimetric Heavy Hydrocarbons	mg/kg	1000	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	
Moisture Content	%	1	20	17	16	18	18	49	39	52	
Surrogate	Unit	Acceptable Limits									
Toluene-d8 (BTEX)	%	50-150	100	100	102	101	98	98	101	99	
Ethylbenzene-d10 (BTEX)	%	50-150	102	104	108	104	97	89	93	82	
o-Terphenyl (F2-F4)	%	50-150	92	113	93	109	108	95	95	97	

Certified By:



Certificate of Analysis

AGAT WORK ORDER: 15E011146

PROJECT: A04012A07

6310 ROPER ROAD
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CLIENT NAME: IEG CONSULTANTS LTD

ATTENTION TO: Nicole Wills

SAMPLING SITE:

SAMPLED BY:

Petroleum Hydrocarbons (BTEX/F1-F4) in Soil (CWS)

DATE RECEIVED: 2015-08-24

DATE REPORTED: 2015-10-10

Parameter	Unit	SAMPLE DESCRIPTION:		BH15-118 (0.	BH15-119 (0.	BH15-120 (0.	BH15-121 (0.	BH15-122 (0.	BH15-122 (0.	BH15-122 (1.	BH15-116 (0.
		Soil		0-0.15)	0-0.15)	0-0.15)	0-0.15)	3-0.6)	6-1.0)	0-1.5)	15-0.3)
		Soil		Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil
		DATE SAMPLED:		8/20/2015	8/20/2015	8/20/2015	8/20/2015	8/20/2015	8/20/2015	8/20/2015	8/20/2015
G / S	RDL	6897609	6897610	6897627	6897645	6897651	6897696	6897704	6897706		
Benzene	mg/kg	0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Toluene	mg/kg	0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Ethylbenzene	mg/kg	0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Xylenes	mg/kg	0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
C6 - C10 (F1)	mg/kg	10	<10	<10	<10	<10	<10	<10	<10	<10	<10
C6 - C10 (F1 minus BTEX)	mg/kg	10	<10	<10	<10	<10	<10	<10	<10	<10	<10
C10 - C16 (F2)	mg/kg	10	<10	<10	76	<10	44	<10	<10	<10	35
C16 - C34 (F3)	mg/kg	10	152	244	215	160	2090	22	20	771	
C34 - C50 (F4)	mg/kg	10	114	226	174	123	1770	31	19	613	
Gravimetric Heavy Hydrocarbons	mg/kg	1000	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	
Moisture Content	%	1	50	64	49	44	62	17	18	50	
Surrogate	Unit	Acceptable Limits									
Toluene-d8 (BTEX)	%	50-150	101	100	99	103	99	98	103	104	
Ethylbenzene-d10 (BTEX)	%	50-150	97	86	88	98	78	98	106	93	
o-Terphenyl (F2-F4)	%	50-150	92	93	94	91	107	92	93	113	

Certified By:



Certificate of Analysis

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CLIENT NAME: IEG CONSULTANTS LTD

ATTENTION TO: Nicole Wills

SAMPLING SITE:

SAMPLED BY:

Petroleum Hydrocarbons (BTEX/F1-F4) in Soil (CWS)

DATE RECEIVED: 2015-08-24

DATE REPORTED: 2015-10-10

Parameter	Unit	SAMPLE DESCRIPTION:		DUP M	DUP K	DUP L	BH15-123 (0.0-0.15)	BH15-124 (0.0-0.15)
		SAMPLE TYPE:		Soil	Soil	Soil	Soil	Soil
		DATE SAMPLED:		8/20/2015	8/19/2015	8/19/2015	8/21/2015	8/21/2015
		G / S	RDL	6897710	6901462	6901471	6901950	6901985
Benzene	mg/kg		0.005	<0.005	<0.005	0.033	<0.005	<0.005
Toluene	mg/kg		0.05	<0.05	0.16	0.30	<0.05	<0.05
Ethylbenzene	mg/kg		0.01	<0.01	<0.01	0.04	<0.01	<0.01
Xylenes	mg/kg		0.05	<0.05	<0.05	0.27	<0.05	<0.05
C6 - C10 (F1)	mg/kg		10	<10	<10	<10	<10	<10
C6 - C10 (F1 minus BTEX)	mg/kg		10	<10	<10	<10	<10	<10
C10 - C16 (F2)	mg/kg		10	<10	<10	<10	651	217
C16 - C34 (F3)	mg/kg		10	150	46	<10	3430	1440
C34 - C50 (F4)	mg/kg		10	140	<10	<10	1030	348
Gravimetric Heavy Hydrocarbons	mg/kg		1000	N/A	NA	NA	N/A	N/A
Moisture Content	%		1	44	33	20	2	2
Surrogate	Unit	Acceptable Limits						
Toluene-d8 (BTEX)	%	50-150	97	95	97	95	95	100
Ethylbenzene-d10 (BTEX)	%	50-150	76	78	95	92	92	110
o-Terphenyl (F2-F4)	%	50-150	109	105	106	109	109	104

Comments: RDL - Reported Detection Limit; G / S - Guideline / Standard

6896314-6901985 Results are based on the dry weight of the sample.

The C6-C10 (F1) fraction is calculated using toluene response factor.

The C10 - C16 (F2), C16 - C34 (F3), and C34 - C50 (F4) fractions are calculated using the average response factor for n-C10, n-C16, and n-C34.

Gravimetric Heavy Hydrocarbons (F4g) are not included in and cannot be added to the Total C6-C50 and are only determined if the chromatogram of the C34 - C50 hydrocarbons indicates that hydrocarbons >C50 are present.

Total C6 - C50 results are corrected for BTEX and PAH contributions (if requested).

Quality control data is available upon request.

Assistance in the interpretation of data is available upon request.

This method complies with the Reference Method for the CWS PHC and is validated for use in the laboratory.

nC6 and nC10 response factors are within 30% of Toluene response factor.

nC10, nC16 and nC34 response factors are within 10% of their average.

C50 response factor is within 70% of nC10 + nC16 + nC34 average.

Linearity is within 15%.

The chromatogram returned to baseline by the retention time of nC50.

Extraction and holding times were met for this sample.

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CLIENT NAME: IEG CONSULTANTS LTD

ATTENTION TO: Nicole Wills

SAMPLING SITE:

SAMPLED BY:

Polyaromatic Hydrocarbon Analysis - Soil

DATE RECEIVED: 2015-08-24

DATE REPORTED: 2015-10-10

Parameter	Unit	SAMPLE DESCRIPTION:		BH15-054 (0.	BH15-056 (0.	BH15-060 (1.	BH15-070 (0.	BH15-072 (2.	DUP F	DUP G	BH15-081 (0.
		Soil		3-0.6)	6-1.0)	0-1.5)	6-1.0)	5-3.0)	Soil	Soil	6-1.0)
		Soil		Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil
		DATE SAMPLED:		8/17/2015	8/17/2015	8/17/2015	8/17/2015	8/17/2015	8/17/2015	8/17/2015	8/17/2015
G / S	RDL	6896402	6896425	6896479	6896622	6896641	6896777	6896778	6896839		
Naphthalene	mg/kg	0.005	<0.005	<0.005	<0.005	<0.005	0.024	<0.005	<0.005	<0.005	0.069
2-Methylnaphthalene	mg/kg	0.005	0.007	<0.005	<0.005	<0.005	0.010	<0.005	<0.005	0.007	0.293
Acenaphthylene	mg/kg	0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Acenaphthene	mg/kg	0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Fluorene	mg/kg	0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	0.10
Phenanthrene	mg/kg	0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	0.11
Anthracene	mg/kg	0.004	<0.004	<0.004	<0.004	<0.004	<0.004	<0.004	<0.004	<0.004	<0.004
Fluoranthene	mg/kg	0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Pyrene	mg/kg	0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Benzo[a]anthracene	mg/kg	0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03
Chrysene	mg/kg	0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Benzo[b+j]fluoranthene	mg/kg	0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Benzo[k]fluoranthene	mg/kg	0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Benzo[a]pyrene	mg/kg	0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03
Indeno[1,2,3-cd]pyrene	mg/kg	0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Dibenzo[ah]anthracene	mg/kg	0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Benzo[ghi]perylene	mg/kg	0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
B[a]P TPE	mg/kg	0.027	0.027	0.027	0.027	0.027	0.027	0.027	0.027	0.027	0.027
IACR (coarse)		0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11
IACR (fine)		0.22	0.22	0.22	0.22	0.22	0.22	0.22	0.22	0.22	0.22
Surrogate	Unit	Acceptable Limits									
2-Fluorobiphenyl (PAH)	%	50-150	79	77	83	83	83	83	89	80	85
p-Terphenyl-d14 (PAH)	%	50-150	88	85	92	92	91	97	85	92	

Certified By:



Certificate of Analysis

AGAT WORK ORDER: 15E011146

PROJECT: A04012A07

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CLIENT NAME: IEG CONSULTANTS LTD

ATTENTION TO: Nicole Wills

SAMPLING SITE:

SAMPLED BY:

Polyaromatic Hydrocarbon Analysis - Soil

DATE RECEIVED: 2015-08-24

DATE REPORTED: 2015-10-10

Parameter	Unit	G / S	RDL	BH15-113 (0.	BH15-113 (0.	BH15-113 (1.	BH15-114 (0.	BH15-114 (0.	BH15-114 (1.	BH15-116 (0.	BH15-120 (0.
				3-0.6)	6-1.0)	0-1.5)	3-0.6)	6-1.0)	0-1.5)	0-0.15)	0-0.15)
SAMPLE DESCRIPTION:		Soil		Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil
SAMPLE TYPE:		Soil		Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil
DATE SAMPLED:		8/20/2015		8/20/2015	8/20/2015	8/20/2015	8/20/2015	8/20/2015	8/20/2015	8/20/2015	8/20/2015
Naphthalene	mg/kg	0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
2-Methylnaphthalene	mg/kg	0.005	<0.005	<0.005	0.012	<0.005	<0.005	<0.005	<0.005	0.008	0.007
Acenaphthylene	mg/kg	0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Acenaphthene	mg/kg	0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Fluorene	mg/kg	0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02
Phenanthrene	mg/kg	0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02
Anthracene	mg/kg	0.004	<0.004	<0.004	<0.004	<0.004	<0.004	<0.004	<0.004	<0.004	<0.004
Fluoranthene	mg/kg	0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Pyrene	mg/kg	0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Benzo[a]anthracene	mg/kg	0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03
Chrysene	mg/kg	0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Benzo[b+j]fluoranthene	mg/kg	0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Benzo[k]fluoranthene	mg/kg	0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Benzo[a]pyrene	mg/kg	0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03
Indeno[1,2,3-cd]pyrene	mg/kg	0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Dibenzo[ah]anthracene	mg/kg	0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Benzo[ghi]perylene	mg/kg	0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
B[a]P TPE	mg/kg	0.027	0.027	0.027	0.027	0.027	0.027	0.027	0.027	0.027	0.027
IACR (coarse)		0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11
IACR (fine)		0.22	0.22	0.22	0.22	0.22	0.22	0.22	0.22	0.22	0.22
Surrogate	Unit	Acceptable Limits									
2-Fluorobiphenyl (PAH)	%	50-150		85	86	84	87	91	87	85	81
p-Terphenyl-d14 (PAH)	%	50-150		89	92	93	95	98	93	93	90

Certified By:



Certificate of Analysis

AGAT WORK ORDER: 15E011146

PROJECT: A04012A07

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CLIENT NAME: IEG CONSULTANTS LTD

ATTENTION TO: Nicole Wills

SAMPLING SITE:

SAMPLED BY:

Polyaromatic Hydrocarbon Analysis - Soil

DATE RECEIVED: 2015-08-24

DATE REPORTED: 2015-10-10

Parameter	Unit	SAMPLE DESCRIPTION:		BH15-122 (0.	BH15-116 (0.
		G / S	RDL	6897651	6897706
Naphthalene	mg/kg		0.005	<0.005	<0.005
2-Methylnaphthalene	mg/kg		0.005	<0.005	<0.005
Acenaphthylene	mg/kg		0.005	<0.005	<0.005
Acenaphthene	mg/kg		0.005	<0.005	<0.005
Fluorene	mg/kg		0.02	<0.02	<0.02
Phenanthrene	mg/kg		0.02	<0.02	<0.02
Anthracene	mg/kg		0.004	<0.004	<0.004
Fluoranthene	mg/kg		0.01	<0.01	<0.01
Pyrene	mg/kg		0.01	<0.01	<0.01
Benzo[a]anthracene	mg/kg		0.03	<0.03	<0.03
Chrysene	mg/kg		0.05	<0.05	<0.05
Benzo[b+j]fluoranthene	mg/kg		0.05	<0.05	<0.05
Benzo[k]fluoranthene	mg/kg		0.05	<0.05	<0.05
Benzo[a]pyrene	mg/kg		0.03	<0.03	<0.03
Indeno[1,2,3-cd]pyrene	mg/kg		0.05	<0.05	<0.05
Dibenzo[ah]anthracene	mg/kg		0.005	<0.005	<0.005
Benzo[ghi]perylene	mg/kg		0.05	<0.05	<0.05
B[a]P TPE	mg/kg		0.027	0.027	0.027
IACR (coarse)			0.11	0.11	0.11
IACR (fine)			0.22	0.22	0.22
Surrogate	Unit	Acceptable Limits			
2-Fluorobiphenyl (PAH)	%	50-150	81	85	
p-Terphenyl-d14 (PAH)	%	50-150	88	93	

Comments: RDL - Reported Detection Limit; G / S - Guideline / Standard

6896402-6897706 Results are based on the dry weight of the sample.

Based on GC/MS target ion analysis.

Isomers Benzo(b)fluoranthene and Benzo(j)fluoranthene have the same GC retention time and are reported as the sum of the two.

Certified By:

Quality Assurance

CLIENT NAME: IEG CONSULTANTS LTD

AGAT WORK ORDER: 15E011146

PROJECT: A04012A07

ATTENTION TO: Nicole Wills

SAMPLING SITE:

SAMPLED BY:

Soil Analysis																
RPT Date: Oct 10, 2015			DUPLICATE				Method Blank	REFERENCE MATERIAL			METHOD BLANK SPIKE			MATRIX SPIKE		
PARAMETER	Batch	Sample Id	Dup #1	Dup #2	RPD	Measured Value		Acceptable Limits		Recovery	Acceptable Limits		Recovery	Acceptable Limits		
								Lower	Upper		Lower	Upper		Lower	Upper	

Soil Analysis - Salinity (AB Tier 1 - pH Calcium Chloride)

pH (CaCl ₂ Extraction)	243	6896427	5.93	5.96	0.5%	< 0.02	97%	90%	110%	NA			NA		
Electrical Conductivity (Sat. Paste)	243	6896427	0.32	0.32	1.3%	< 0.01	110%	90%	110%	NA			NA		
Saturation Percentage	243	6896427	49	49	0.0%	< 1	112%	80%	120%	NA			NA		
Chloride, Soluble	1330	6896427	7	7	0.0%	< 5	94%	80%	120%	98%	80%	120%	103%	80%	120%
Calcium, Soluble	243	6896427	38	39	2.6%	< 1	108%	80%	120%				101%	80%	120%
Potassium, Soluble	243	6896427	2	2	0.0%	< 2	99%	80%	120%				95%	80%	120%
Magnesium, Soluble	243	6896427	16	16	0.0%	< 2	102%	80%	120%				97%	80%	120%
Sodium, Soluble	243	6896427	7	7	0.0%	< 2	96%	80%	120%				98%	80%	120%
Sulfate, Soluble	243	6896427	31	32	3.2%	< 2	94%	80%	120%				99%	80%	120%

Comments: If the RPD value is NA, the results of the duplicates are under 5X the RDL and will not be calculated
 If Matrix spike value is NA, the spiked analyte concentration was lower than that of the matrix contribution.

Soil Analysis - Salinity (AB Tier 1 - pH Calcium Chloride)

pH (CaCl ₂ Extraction)	243	6896532	6.79	6.84	0.7%	< 0.02	98%	90%	110%	NA			NA		
Electrical Conductivity (Sat. Paste)	243	6896532	0.35	0.38	7.4%	< 0.01	108%	90%	110%	NA			NA		
Saturation Percentage	243	6896532	38	37	2.7%	< 1	115%	80%	120%	NA			NA		
Calcium, Soluble	243	6896532	41	42	2.4%	< 1	107%	80%	120%				101%	80%	120%
Potassium, Soluble	243	6896532	7	7	0.0%	< 2	98%	80%	120%				92%	80%	120%
Magnesium, Soluble	243	6896532	10	10	0.0%	< 2	101%	80%	120%				97%	80%	120%
Sodium, Soluble	243	6896532	11	12	8.7%	< 2	96%	80%	120%				91%	80%	120%
Sulfate, Soluble	243	6896532	28	32	13.3%	< 2	91%	80%	120%				103%	80%	120%

Comments: If the RPD value is NA, the results of the duplicates are under 5X the RDL and will not be calculated
 If Matrix spike value is NA, the spiked analyte concentration was lower than that of the matrix contribution.

Soil Analysis - Salinity (AB Tier 1 - pH Calcium Chloride)

pH (CaCl ₂ Extraction)	243	6896777	6.69	6.53	2.4%	< 0.02	97%	90%	110%	NA			NA		
Electrical Conductivity (Sat. Paste)	243	6896777	0.37	0.40	8.0%	< 0.01	103%	90%	110%	NA			NA		
Saturation Percentage	243	6896777	38	37	2.7%	< 1	100%	80%	120%	NA			NA		
Calcium, Soluble	243	6896777	55	58	5.3%	< 1	105%	80%	120%				99%	80%	120%
Potassium, Soluble	243	6896777	3	4	28.6%	< 2	96%	80%	120%				102%	80%	120%
Magnesium, Soluble	243	6896777	12	13	8.0%	< 2	101%	80%	120%				105%	80%	120%
Sodium, Soluble	243	6896777	8	8	0.0%	< 2	95%	80%	120%				97%	80%	120%
Sulfate, Soluble	243	6896777	24	31	NA	< 2	94%	80%	120%				98%	80%	120%

Comments: If the RPD value is NA, the results of the duplicates are under 5X the RDL and will not be calculated
 If Matrix spike value is NA, the spiked analyte concentration was lower than that of the matrix contribution.

Soil Analysis - Salinity (AB Tier 1 - pH Calcium Chloride)

Calcium, Soluble	243	6914083	293	293	0.0%	< 1	103%	80%	120%				106%	80%	120%
Potassium, Soluble	243	6914083	9	10	10.5%	< 2	99%	80%	120%				102%	80%	120%
Magnesium, Soluble	243	6914083	134	131	2.3%	< 2	100%	80%	120%				110%	80%	120%
Sodium, Soluble	243	6914083	359	358	0.3%	< 2	99%	80%	120%				88%	80%	120%

Quality Assurance

CLIENT NAME: IEG CONSULTANTS LTD

AGAT WORK ORDER: 15E011146

PROJECT: A04012A07

ATTENTION TO: Nicole Wills

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Soil Analysis (Continued)															
RPT Date: Oct 10, 2015			DUPLICATE				Method Blank	REFERENCE MATERIAL			METHOD BLANK SPIKE		MATRIX SPIKE		
PARAMETER	Batch	Sample Id	Dup #1	Dup #2	RPD	Measured Value		Acceptable Limits		Recovery	Acceptable Limits		Recovery	Acceptable Limits	
								Lower	Upper		Lower	Upper		Lower	Upper

Sulfate, Soluble	243	6914083	1830	1890	3.2%	< 2	92%	80%	120%			96%	80%	120%
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Comments: If the RPD value is NA, the results of the duplicates are under 5X the RDL and will not be calculated
If Matrix spike value is NA, the spiked analyte concentration was lower than that of the matrix contribution.

CCME / Tier 1 Metals

Antimony	243	6897018	<0.5	<0.5	NA	< 0.5	110%	80%	120%			105%	80%	120%
Arsenic	243	6897018	5.1	5.2	1.9%	< 0.5	99%	80%	120%			115%	80%	120%
Barium	243	6897018	139	134	3.7%	< 0.5	104%	80%	120%			109%	80%	120%
Beryllium	243	6897018	0.7	<0.5	NA	< 0.5	100%	80%	120%			111%	80%	120%
Cadmium	243	6897018	<0.5	<0.5	NA	< 0.5	95%	80%	120%			104%	80%	120%
Chromium	243	6897018	6.7	6.9	2.9%	< 0.5	90%	80%	120%			111%	80%	120%
Cobalt	243	6897018	5.6	5.2	7.4%	< 0.5	96%	80%	120%			110%	80%	120%
Copper	243	6897018	5.3	5.4	1.9%	< 0.5	92%	80%	120%			106%	80%	120%
Lead	243	6897018	7.5	7.8	3.9%	< 0.5	96%	80%	120%			110%	80%	120%
Molybdenum	243	6897018	0.9	0.9	0.0%	< 0.5	101%	80%	120%			110%	80%	120%
Nickel	243	6897018	13.1	12.1	7.9%	< 0.5	103%	80%	120%			109%	80%	120%
Selenium	243	6897018	<0.5	<0.5	NA	< 0.5	105%	80%	120%			102%	80%	120%
Silver	243	6897018	<0.5	<0.5	NA	< 0.5	94%	80%	120%			108%	80%	120%
Thallium	243	6897018	<0.5	<0.5	NA	< 0.5	96%	80%	120%			108%	80%	120%
Tin	243	6897018	0.7	0.5	NA	< 0.5	99%	80%	120%			102%	80%	120%
Uranium	243	6897018	1.4	1.4	0.0%	< 0.5	98%	80%	120%			111%	80%	120%
Vanadium	243	6897018	13.9	13.7	1.4%	< 0.5	96%	80%	120%			118%	80%	120%
Zinc	243	6897018	24	23	4.3%	< 1	98%	80%	120%			117%	80%	120%

Comments: If Matrix spike value is NA, the spiked analyte concentration was lower than that of the matrix contribution.
If the RPD value is NA, the results of the duplicates are under 5X the RDL and will not be calculated.

CCME / Tier 1 Metals

Antimony	244	6896314	<0.5	<0.5	NA	< 0.5	110%	80%	120%			100%	80%	120%
Arsenic	244	6896314	4.9	5.1	3.4%	< 0.5	97%	80%	120%			93%	80%	120%
Barium	244	6896314	233	245	5.0%	< 0.5	94%	80%	120%			109%	80%	120%
Beryllium	244	6896314	<0.5	<0.5	NA	< 0.5	94%	80%	120%			108%	80%	120%
Cadmium	244	6896314	<0.5	<0.5	NA	< 0.5	120%	80%	120%			94%	80%	120%
Chromium	244	6896314	17.4	14.3	19.6%	< 0.5	98%	80%	120%			102%	80%	120%
Cobalt	244	6896314	2.1	2.1	0.0%	< 0.5	102%	80%	120%			100%	80%	120%
Copper	244	6896314	4.8	4.4	8.7%	< 0.5	100%	80%	120%			96%	80%	120%
Lead	244	6896314	6.1	6.2	1.6%	< 0.5	97%	80%	120%			103%	80%	120%
Molybdenum	244	6896314	1.5	1.1	NA	< 0.5	104%	80%	120%			104%	80%	120%
Nickel	244	6896314	10.9	9.2	16.9%	< 0.5	111%	80%	120%			96%	80%	120%
Selenium	244	6896314	<0.5	<0.5	NA	< 0.5	91%	80%	120%			90%	80%	120%
Silver	244	6896314	<0.5	<0.5	NA	< 0.5	103%	80%	120%			101%	80%	120%

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 AGAT WORK ORDER: 15E011146
 ATTENTION TO: Nicole Wills
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Soil Analysis (Continued)															
RPT Date: Oct 10, 2015			DUPLICATE				Method Blank	REFERENCE MATERIAL			METHOD BLANK SPIKE		MATRIX SPIKE		
PARAMETER	Batch	Sample Id	Dup #1	Dup #2	RPD	Measured Value		Acceptable Limits		Recovery	Acceptable Limits		Recovery	Acceptable Limits	
								Lower	Upper		Lower	Upper		Lower	Upper
Thallium	244	6896314	<0.5	<0.5	NA	< 0.5	96%	80%	120%			101%	80%	120%	
Tin	244	6896314	<0.5	<0.5	NA	< 0.5	97%	80%	120%			97%	80%	120%	
Uranium	244	6896314	<0.5	<0.5	NA	< 0.5	102%	80%	120%			103%	80%	120%	
Vanadium	244	6896314	14.5	13.6	6.4%	< 0.5	110%	80%	120%			108%	80%	120%	
Zinc	244	6896314	13	11	16.7%	< 1	101%	80%	120%			93%	80%	120%	

Comments: If Matrix spike value is NA, the spiked analyte concentration was lower than that of the matrix contribution.
 If the RPD value is NA, the results of the duplicates are under 5X the RDL and will not be calculated.

CCME / Tier 1 Metals

Antimony	244	6896479	< 0.5	< 0.5	NA	< 0.5	108%	80%	120%			105%	80%	120%
Arsenic	244	6896479	5.2	5.1	1.9%	< 0.5	94%	80%	120%			93%	80%	120%
Barium	244	6896479	93.6	89.1	4.9%	< 0.5	96%	80%	120%			104%	80%	120%
Beryllium	244	6896479	< 0.5	< 0.5	NA	< 0.5	87%	80%	120%			101%	80%	120%
Cadmium	244	6896479	< 0.5	< 0.5	NA	< 0.5	92%	80%	120%			93%	80%	120%
Chromium	244	6896479	5.8	5.9	1.7%	< 0.5	88%	80%	120%			94%	80%	120%
Cobalt	244	6896479	3.4	3.8	11.1%	< 0.5	92%	80%	120%			95%	80%	120%
Copper	244	6896479	3.6	3.4	5.7%	< 0.5	92%	80%	120%			93%	80%	120%
Lead	244	6896479	3.5	3.6	2.8%	< 0.5	91%	80%	120%			103%	80%	120%
Molybdenum	244	6896479	< 0.5	< 0.5	NA	< 0.5	96%	80%	120%			105%	80%	120%
Nickel	244	6896479	8.8	8.9	1.1%	< 0.5	94%	80%	120%			94%	80%	120%
Selenium	244	6896479	< 0.5	< 0.5	NA	< 0.5	95%	80%	120%			90%	80%	120%
Silver	244	6896479	< 0.5	< 0.5	NA	< 0.5	88%	80%	120%			99%	80%	120%
Thallium	244	6896479	< 0.5	< 0.5	NA	< 0.5	90%	80%	120%			103%	80%	120%
Tin	244	6896479	< 0.5	< 0.5	NA	< 0.5	94%	80%	120%			95%	80%	120%
Uranium	244	6896479	< 0.5	< 0.5	NA	< 0.5	92%	80%	120%			106%	80%	120%
Vanadium	244	6896479	13.0	12.3	5.5%	< 0.5	90%	80%	120%			102%	80%	120%
Zinc	244	6896479	21	21	0.0%	< 1	96%	80%	120%			89%	80%	120%

Comments: If Matrix spike value is NA, the spiked analyte concentration was lower than that of the matrix contribution.
 If the RPD value is NA, the results of the duplicates are under 5X the RDL and will not be calculated.

CCME / Tier 1 Metals

Antimony	244	6896778	<0.5	<0.5	NA	< 0.5	111%	80%	120%			105%	80%	120%
Arsenic	244	6896778	4.0	4.0	0.8%	< 0.5	104%	80%	120%			100%	80%	120%
Barium	244	6896778	318	289	9.6%	< 0.5	89%	80%	120%			93%	80%	120%
Beryllium	244	6896778	<0.5	<0.5	NA	< 0.5	119%	80%	120%			93%	80%	120%
Cadmium	244	6896778	<0.5	<0.5	NA	< 0.5	119%	80%	120%			91%	80%	120%
Chromium	244	6896778	10.8	10.4	4.1%	< 0.5	97%	80%	120%			99%	80%	120%
Cobalt	244	6896778	3.9	3.7	4.8%	< 0.5	97%	80%	120%			99%	80%	120%



Quality Assurance

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AGAT WORK ORDER: 15E011146
ATTENTION TO: Nicole Wills
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Soil Analysis (Continued)

RPT Date: Oct 10, 2015			DUPLICATE				Method Blank	REFERENCE MATERIAL			METHOD BLANK SPIKE		MATRIX SPIKE		
PARAMETER	Batch	Sample Id	Dup #1	Dup #2	RPD	Measured Value		Acceptable Limits		Recovery	Acceptable Limits		Recovery	Acceptable Limits	
								Lower	Upper		Lower	Upper		Lower	Upper
Copper	244	6896778	6.4	6.6	2.5%	< 0.5	95%	80%	120%			96%	80%	120%	
Lead	244	6896778	4.8	4.8	0.9%	< 0.5	92%	80%	120%			99%	80%	120%	
Molybdenum	244	6896778	0.6	0.6	0.0%	< 0.5	102%	80%	120%			105%	80%	120%	
Nickel	244	6896778	12.2	12.0	1.6%	< 0.5	97%	80%	120%			94%	80%	120%	
Selenium	244	6896778	0.7	0.7	0.0%	< 0.5	99%	80%	120%			97%	80%	120%	
Silver	244	6896778	<0.5	<0.5	NA	< 0.5	104%	80%	120%			100%	80%	120%	
Thallium	244	6896778	<0.5	<0.5	NA	< 0.5	91%	80%	120%			99%	80%	120%	
Tin	244	6896778	0.5	0.5	0.0%	< 0.5	98%	80%	120%			94%	80%	120%	
Uranium	244	6896778	0.7	0.7	0.0%	< 0.5	103%	80%	120%			103%	80%	120%	
Vanadium	244	6896778	21.7	20.9	3.5%	< 0.5	105%	80%	120%			98%	80%	120%	
Zinc	244	6896778	31	30	4.7%	< 1	95%	80%	120%			91%	80%	120%	

Comments: If Matrix spike value is NA, the spiked analyte concentration was lower than that of the matrix contribution.
If the RPD value is NA, the results of the duplicates are under 5X the RDL and will not be calculated.

Particle Size by Sieve

Sieve Analysis	243	6896777	94	93	1.1%	N/A	104%	80%	120%					
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Soil Analysis - Salinity (AB Tier 1 - pH Calcium Chloride)

pH (CaCl ₂ Extraction)	243	6914562	5.28	5.14	2.7%	< 0.02	97%	90%	110%	NA		NA		
Electrical Conductivity (Sat. Paste)	243	6914562	0.77	0.76	1.3%	< 0.01	103%	90%	110%	NA		NA		
Saturation Percentage	243	6914562	71	71	0.0%	< 1	112%	80%	120%	NA		NA		

Comments: If the RPD value is NA, the results of the duplicates are under 5X the RDL and will not be calculated.
If Matrix spike value is NA, the spiked analyte concentration was lower than that of the matrix contribution.

CCME / Tier 1 Metals

Antimony	243	6897018	< 0.5	< 0.5	NA	< 0.5	110%	80%	120%			105%	80%	120%
Arsenic	243	6897018	5.1	5.2	1.9%	< 0.5	99%	80%	120%			115%	80%	120%
Barium	243	6897018	139	134	3.7%	< 0.5	104%	80%	120%			109%	80%	120%
Beryllium	243	6897018	<0.5	<0.5	NA	< 0.5	100%	80%	120%			111%	80%	120%
Cadmium	243	6897018	<0.5	<0.5	NA	< 0.5	95%	80%	120%			104%	80%	120%
Chromium	243	6897018	6.7	6.9	2.7%	< 0.5	90%	80%	120%			111%	80%	120%
Cobalt	243	6897018	5.6	5.2	6.4%	< 0.5	96%	80%	120%			110%	80%	120%
Copper	243	6897018	5.3	5.4	1.4%	< 0.5	92%	80%	120%			106%	80%	120%
Lead	243	6897018	7.8	7.5	3.9%	< 0.5	96%	80%	120%			111%	80%	120%
Molybdenum	243	6897018	0.9	0.9	0.0%	< 0.5	101%	80%	120%			110%	80%	120%
Nickel	243	6897018	13.1	12.1	8.3%	< 0.5	103%	80%	120%			109%	80%	120%
Selenium	243	6897018	< 0.5	< 0.5	NA	< 0.5	105%	80%	120%			102%	80%	120%
Silver	243	6897018	<0.5	<0.5	NA	< 0.5	94%	80%	120%			108%	80%	120%
Thallium	243	6897018	< 0.5	< 0.5	NA	< 0.5	96%	80%	120%			108%	80%	120%
Tin	243	6897018	0.6	0.5	18.2%	< 0.5	99%	80%	120%			102%	80%	120%



Quality Assurance

CLIENT NAME: IEG CONSULTANTS LTD
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AGAT WORK ORDER: 15E011146
ATTENTION TO: Nicole Wills
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Soil Analysis (Continued)

RPT Date: Oct 10, 2015			DUPLICATE				Method Blank	REFERENCE MATERIAL			METHOD BLANK SPIKE		MATRIX SPIKE		
PARAMETER	Batch	Sample Id	Dup #1	Dup #2	RPD	Measured Value		Acceptable Limits		Recovery	Acceptable Limits		Recovery	Acceptable Limits	
								Lower	Upper		Lower	Upper		Lower	Upper
Uranium	243	6897018	2.3	1.4	0.0%	< 0.5	98%	80%	120%			111%	80%	120%	
Vanadium	243	6897018	13.9	13.7	1.2%	< 0.5	96%	80%	120%			99%	80%	120%	
Zinc	243	6897018	24	23	0.3%	< 1	98%	80%	120%			105%	80%	120%	

Comments: If Matrix spike value is NA, the spiked analyte concentration was lower than that of the matrix contribution.
If the RPD value is NA, the results of the duplicates are under 5X the RDL and will not be calculated.

Soil Analysis - Barium by Fusion ICP (CA)

Barium by Fusion ICP-OES	283	6896458	885	862	2.6%	< 40	103%	80%	120%			104%	80%	120%
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Comments: If Matrix spike value is NA, the spiked analyte concentration was lower than that of the matrix contribution.
If the RPD value is NA, the results of the duplicates are under 5X the RDL and will not be calculated.

Soil Analysis - Barium by Fusion ICP (CA)

Barium by Fusion ICP-OES	6896564	6896564	629	748	17.2%	< 40	99%	80%	120%			NA	80%	120%
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Comments: If Matrix spike value is NA, the spiked analyte concentration was lower than that of the matrix contribution.
If the RPD value is NA, the results of the duplicates are under 5X the RDL and will not be calculated.

Soil Analysis - Barium by Fusion ICP (CA)

Barium by Fusion ICP-OES	6897609	6897609	623	694	10.8%	< 40	100%	80%	120%			NA	80%	120%
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Comments: If Matrix spike value is NA, the spiked analyte concentration was lower than that of the matrix contribution.
If the RPD value is NA, the results of the duplicates are under 5X the RDL and will not be calculated.

Soil Analysis - Barium by Fusion ICP

Barium by Fusion ICP-OES	283	7013701	1960	1890	3.6%	< 40	100%	80%	120%			104%	80%	120%
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Comments: If the RPD value is NA, the results of the duplicates are under 5X the RDL and will not be calculated.

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Quality Assurance

CLIENT NAME: IEG CONSULTANTS LTD

AGAT WORK ORDER: 15E011146

PROJECT: A04012A07

ATTENTION TO: Nicole Wills

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Trace Organics Analysis														
RPT Date: Oct 10, 2015			DUPLICATE				Method Blank	REFERENCE MATERIAL			METHOD BLANK SPIKE		MATRIX SPIKE	
PARAMETER	Batch	Sample Id	Dup #1	Dup #2	RPD	Measured Value		Acceptable Limits		Recovery	Acceptable Limits		Recovery	Acceptable Limits
							Lower	Upper	Lower		Upper	Lower		Upper

Petroleum Hydrocarbons (BTEX/F1-F4) in Soil (CWS)

Benzene	911	6896448	< 0.005	< 0.005	NA	< 0.005	83%	80%	120%	84%	80%	120%	84%	60%	140%
Toluene	911	6896448	0.08	0.07	13.3%	< 0.05	92%	80%	120%	81%	80%	120%	82%	60%	140%
Ethylbenzene	911	6896448	0.02	0.02	0.0%	< 0.01	99%	80%	120%	99%	80%	120%	100%	60%	140%
Xylenes	911	6896448	0.11	0.09	20.0%	< 0.05	110%	80%	120%	83%	80%	120%	79%	60%	140%
C6 - C10 (F1)	911	6896448	< 10	< 10	NA	< 10	87%	80%	120%	107%	80%	120%	104%	60%	140%
C10 - C16 (F2)	587	6896448	<10	<10	NA	< 10	89%	80%	120%	91%	80%	120%	93%	60%	140%
C16 - C34 (F3)	587	6896448	350	356	1.7%	< 10	91%	80%	120%	89%	80%	120%	92%	60%	140%
C34 - C50 (F4)	587	6896448	235	253	7.4%	< 10	89%	80%	120%	81%	80%	120%	80%	60%	140%
Moisture Content	587	6896448	36	36	NA	< 1									

Comments: If the RPD value is NA, the results of the duplicates are under 5X the RDL and will not be calculated.

Petroleum Hydrocarbons (BTEX/F1-F4) in Soil (CWS)

Benzene	2141	6896814	<0.005	<0.005	NA	< 0.005	110%	80%	120%	111%	80%	120%	106%	60%	140%
Toluene	2141	6896814	<0.05	<0.05	NA	< 0.05	107%	80%	120%	88%	80%	120%	98%	60%	140%
Ethylbenzene	2141	6896814	<0.01	<0.01	NA	< 0.01	92%	80%	120%	87%	80%	120%	92%	60%	140%
Xylenes	2141	6896814	<0.05	<0.05	NA	< 0.05	108%	80%	120%	81%	80%	120%	96%	60%	140%
C6 - C10 (F1)	2141	6896814	<10	<10	NA	< 10	83%	80%	120%	112%	80%	120%	71%	60%	140%

Comments: If the RPD value is NA, the results of the duplicates are under 5X the RDL and will not be calculated.

Petroleum Hydrocarbons (BTEX/F1-F4) in Soil (CWS)

Benzene	3065	6897034	0.083	0.086	3.6%	< 0.005	95%	80%	120%	90%	80%	120%	89%	60%	140%
Toluene	3065	6897034	1.38	1.16	17.0%	< 0.05	97%	80%	120%	92%	80%	120%	95%	60%	140%
Ethylbenzene	3065	6897034	0.53	0.38	33.0%	< 0.01	86%	80%	120%	90%	80%	120%	88%	60%	140%
Xylenes	3065	6897034	1.64	1.32	22.0%	< 0.05	96%	80%	120%	92%	80%	120%	97%	60%	140%
C6 - C10 (F1)	3065	6897034	10	<10	NA	< 10	92%	80%	120%	88%	80%	120%	98%	60%	140%

Comments: If the RPD value is NA, the results of the duplicates are under 5X the RDL and will not be calculated.

Petroleum Hydrocarbons (BTEX/F1-F4) in Soil (CWS)

Benzene	3853	6897152	0.046	0.049	6.3%	< 0.005	102%	80%	120%	95%	80%	120%	99%	60%	140%
Toluene	3853	6897152	6.85	6.44	6.0%	< 0.05	106%	80%	120%	108%	80%	120%	108%	60%	140%
Ethylbenzene	3853	6897152	<0.01	<0.01	NA	< 0.01	107%	80%	120%	117%	80%	120%	113%	60%	140%
Xylenes	3853	6897152	<0.05	<0.05	NA	< 0.05	112%	80%	120%	120%	80%	120%	123%	60%	140%
C6 - C10 (F1)	3853	6897152	<10	<10	NA	< 10	84%	80%	120%	87%	80%	120%	88%	60%	140%

Comments: If the RPD value is NA, the results of the duplicates are under 5X the RDL and will not be calculated.

Petroleum Hydrocarbons (BTEX/F1-F4) in Soil (CWS)

Benzene	3067	6897246	<0.005	<0.005	NA	< 0.005	95%	80%	120%	84%	80%	120%	86%	60%	140%
Toluene	3067	6897246	0.88	0.85	3.0%	< 0.05	97%	80%	120%	87%	80%	120%	91%	60%	140%
Ethylbenzene	3067	6897246	<0.01	<0.01	NA	< 0.01	97%	80%	120%	85%	80%	120%	87%	60%	140%
Xylenes	3067	6897246	<0.05	<0.05	NA	< 0.05	97%	80%	120%	86%	80%	120%	90%	60%	140%
C6 - C10 (F1)	3067	6897246	<10	<10	NA	< 10	90%	80%	120%	96%	80%	120%	92%	60%	140%

Quality Assurance

CLIENT NAME: IEG CONSULTANTS LTD

AGAT WORK ORDER: 15E011146

PROJECT: A04012A07

ATTENTION TO: Nicole Wills

SAMPLING SITE:

SAMPLED BY:

Trace Organics Analysis (Continued)

RPT Date: Oct 10, 2015			DUPLICATE				Method Blank	REFERENCE MATERIAL			METHOD BLANK SPIKE		MATRIX SPIKE		
PARAMETER	Batch	Sample Id	Dup #1	Dup #2	RPD	Measured Value		Acceptable Limits		Recovery	Acceptable Limits		Recovery	Acceptable Limits	
								Lower	Upper		Lower	Upper		Lower	Upper

Comments: If the RPD value is NA, the results of the duplicates are under 5X the RDL and will not be calculated.

Petroleum Hydrocarbons (BTEX/F1-F4) in Soil (CWS)

Benzene	3854	6897328	<0.005	<0.005	NA	< 0.005	100%	80%	120%	93%	80%	120%	95%	60%	140%
Toluene	3854	6897328	<0.05	<0.05	NA	< 0.05	106%	80%	120%	104%	80%	120%	104%	60%	140%
Ethylbenzene	3854	6897328	<0.01	<0.01	NA	< 0.01	100%	80%	120%	103%	80%	120%	109%	60%	140%
Xylenes	3854	6897328	<0.05	<0.05	NA	< 0.05	109%	80%	120%	118%	80%	120%	119%	60%	140%
C6 - C10 (F1)	3854	6897328	<10	<10	NA	< 10	82%	80%	120%	82%	80%	120%	80%	60%	140%

Comments: If the RPD value is NA, the results of the duplicates are under 5X the RDL and will not be calculated.

Petroleum Hydrocarbons (BTEX/F1-F4) in Soil (CWS)

Benzene	1115	6897583	<0.005	<0.005	NA	< 0.005	94%	80%	120%	88%	80%	120%	88%	60%	140%
Toluene	1115	6897583	<0.05	<0.05	NA	< 0.05	92%	80%	120%	87%	80%	120%	90%	60%	140%
Ethylbenzene	1115	6897583	<0.01	<0.01	NA	< 0.01	87%	80%	120%	82%	80%	120%	88%	60%	140%
Xylenes	1115	6897583	<0.05	<0.05	NA	< 0.05	84%	80%	120%	81%	80%	120%	87%	60%	140%
C6 - C10 (F1)	1115	6897583	<10	<10	NA	< 10	96%	80%	120%	81%	80%	120%	120%	60%	140%

Comments: If the RPD value is NA, the results of the duplicates are under 5X the RDL and will not be calculated.

Petroleum Hydrocarbons (BTEX/F1-F4) in Soil (CWS)

Benzene	3066	6897556	0.034	0.031	9.2%	< 0.005	91%	80%	120%	81%	80%	120%	87%	60%	140%
Toluene	3066	6897556	0.94	0.67	34.0%	< 0.05	96%	80%	120%	84%	80%	120%	91%	60%	140%
Ethylbenzene	3066	6897556	0.38	0.30	24.0%	< 0.01	92%	80%	120%	83%	80%	120%	90%	60%	140%
Xylenes	3066	6897556	2.88	2.27	24.0%	< 0.05	97%	80%	120%	85%	80%	120%	93%	60%	140%
C6 - C10 (F1)	3066	6897556	160	150	6.0%	< 10	90%	80%	120%	97%	80%	120%	88%	60%	140%

Comments: If the RPD value is NA, the results of the duplicates are under 5X the RDL and will not be calculated.

Polyaromatic Hydrocarbon Analysis - Soil

Naphthalene	26	6897583	<0.005	<0.005	NA	< 0.005	91%	70%	130%	93%	70%	130%	89%	70%	130%
2-Methylnaphthalene	26	6897583	<0.005	<0.005	NA	< 0.005				96%	70%	130%	91%	70%	130%
Acenaphthylene	26	6897583	<0.005	<0.005	NA	< 0.005	108%	70%	130%	101%	70%	130%	89%	70%	130%
Acenaphthene	26	6897583	<0.005	<0.005	NA	< 0.005	90%	70%	130%	89%	70%	130%	85%	70%	130%
Fluorene	26	6897583	<0.02	<0.02	NA	< 0.02	95%	70%	130%	93%	70%	130%	87%	70%	130%
Phenanthrene	26	6897583	<0.02	<0.02	NA	< 0.02	83%	70%	130%	89%	70%	130%	86%	70%	130%
Anthracene	26	6897583	<0.004	<0.004	NA	< 0.004	103%	70%	130%	101%	70%	130%	83%	70%	130%
Fluoranthene	26	6897583	<0.01	<0.01	NA	< 0.01	97%	70%	130%	102%	70%	130%	95%	70%	130%
Pyrene	26	6897583	<0.01	<0.01	NA	< 0.01	88%	70%	130%	95%	70%	130%	91%	70%	130%
Benzo[a]anthracene	26	6897583	<0.03	<0.03	NA	< 0.03	120%	70%	130%	121%	70%	130%	115%	70%	130%
Chrysene	26	6897583	<0.05	<0.05	NA	< 0.05	91%	70%	130%	92%	70%	130%	86%	70%	130%
Benzo[b+j]fluoranthene	26	6897583	<0.05	<0.05	NA	< 0.05	81%	70%	130%	82%	70%	130%	100%	70%	130%
Benzo[k]fluoranthene	26	6897583	<0.05	<0.05	NA	< 0.05	77%	70%	130%	83%	70%	130%	71%	70%	130%
Benzo[a]pyrene	26	6897583	<0.03	<0.03	NA	< 0.03	104%	70%	130%	103%	70%	130%	94%	70%	130%
Indeno[1,2,3-cd]pyrene	26	6897583	<0.05	<0.05	NA	< 0.05	91%	70%	130%	90%	70%	130%	90%	70%	130%



Quality Assurance

CLIENT NAME: IEG CONSULTANTS LTD
PROJECT: A04012A07
SAMPLING SITE:

AGAT WORK ORDER: 15E011146
ATTENTION TO: Nicole Wills
SAMPLED BY:

Trace Organics Analysis (Continued)

RPT Date: Oct 10, 2015			DUPLICATE				Method Blank	REFERENCE MATERIAL			METHOD BLANK SPIKE			MATRIX SPIKE		
PARAMETER	Batch	Sample Id	Dup #1	Dup #2	RPD	Measured Value		Acceptable Limits			Recovery	Acceptable Limits		Recovery	Acceptable Limits	
								Lower	Upper	Lower		Upper	Lower		Upper	
Dibenzo[ah]anthracene	26	6897583	<0.005	<0.005	NA	< 0.005	81%	70%	130%	83%	70%	130%	83%	70%	130%	
Benzo[ghi]perylene	26	6897583	<0.05	<0.05	NA	< 0.05	86%	70%	130%	82%	70%	130%	84%	70%	130%	

Comments: If the RPD value is NA, the results of the duplicates are under 5X the RDL and will not be calculated.

Certified By: _____



Method Summary

CLIENT NAME: IEG CONSULTANTS LTD
PROJECT: A04012A07
SAMPLING SITE:

AGAT WORK ORDER: 15E011146
ATTENTION TO: Nicole Wills
SAMPLED BY:

PARAMETER	AGAT S.O.P	LITERATURE REFERENCE	ANALYTICAL TECHNIQUE
Soil Analysis			
Antimony	INOR-171-6006, INOR-171-6202	EPA SW 846-3050/6010; SHEPPARD	ICP-MS
Arsenic	INOR-171-6006, INOR-171-6202	EPA SW 846-3050/6010; SHEPPARD S	ICP-MS
Barium	INOR-171-6006, INOR-171-6202	EPA SW 846-3050/6010; SHEPPARD	ICP-MS
Beryllium	INOR-171-6006, INOR-171-6202	EPA SW 846-3050/6010; SHEPPARD	ICP-MS
Cadmium	INOR-171-6006, INOR-171-6202	EPA SW 846-3050/6010; SHEPPARD	ICP-MS
Chromium	INOR-171-6006, INOR-171-6202	EPA SW 846-3050/6010; SHEPPARD	ICP/MS
Cobalt	INOR-171-6006, INOR-171-6202	EPA SW 846-3050/6010; SHEPPARD	ICP-MS
Copper	INOR-171-6006, INOR-171-6202	EPA SW 846-3050/6010; SHEPPARD	ICP-MS
Lead	INOR-171-6006, INOR-171-6202	EPA SW 846-3050/6010; SHEPPARD	ICP-MS
Molybdenum	INOR-171-6006, INOR-171-6202	EPA SW 846-3050/6010; SHEPPARD	ICP-MS
Nickel	INOR-171-6006, INOR-171-6202	EPA SW 846-3050/6010; SHEPPARD	ICP-MS
Selenium	INORG-171-6006, INOR-171-6202	EPA SW 846-3050/6010; SHEPPARD S	ICP-MS
Silver	INOR-171-6006, INOR-171-6202	EPA SW 846-3050/6010; SHEPPARD	ICP-MS
Thallium	INOR-171-6006, INOR-171-6202	EPA SW 846-3050/6010; SHEPPARD	ICP-MS
Tin	INOR-171-6006, INOR-171-6202	EPA SW 846-3050/6010; SHEPPARD	ICP-MS
Uranium	INOR-171-6006, INOR-171-6202	EPA SW 846-3050/6010; SHEPPARD	ICP-MS
Vanadium	INOR-171-6006, INOR-171-6202	EPA SW 846-3050/6010; SHEPPARD	ICP-MS
Zinc	INOR-171-6006, INOR-171-6202	EPA SW 846-3050/6010; SHEPPARD	ICP-MS
Sieve Analysis	INOR-171-6009	KROETSCH 2007; SHEPPARD 2007	SIEVE
True Barium by Fusion ICP	INOR-171-60008	ASTM D4503.08	ICP/OES
True Barium by Fusion ICP	SOIL- 0620, INST- 0140	ASTM D4503.08 S	ICP/OES
pH (CaCl2 Extraction)	INOR-171-6207	SHEPPARD 2007; HENDERSHOT 2008	PH METER
Electrical Conductivity (Sat. Paste)	INO-171-6208	SHEPPARD 2007; MILLER 2007	CONDUCTIVITY METER
Sodium Adsorption Ratio	INOR-171-6201 & INOR-171-6002	McKeague 3.26	CALCULATION
Saturation Percentage	SOIL 0140; SOIL 0110; SOIL 0120	MILLER 2007; SHEPPARD 2007	GRAVIMETRIC
Chloride, Soluble	INOR-171-6200 & INOR-171-6002	SHEPPARD 2007, EATON 2005	COLORIMETER
Calcium, Soluble	SOIL 0110; SOIL 0120; INST 0140	CARTER & GREGORICH 2007, SM 3120B	ICP/OES
Potassium, Soluble	SOIL 0110; SOIL 0120; INST 0140	CARTER & GREGORICH 2007, SM 3120B	ICP/OES
Magnesium, Soluble	SOIL 0110; SOIL 0120; INST 0140	CARTER & GREGORICH 2007, SM 3120B	ICP/OES



Method Summary

CLIENT NAME: IEG CONSULTANTS LTD
PROJECT: A04012A07
SAMPLING SITE:

AGAT WORK ORDER: 15E011146
ATTENTION TO: Nicole Wills
SAMPLED BY:

PARAMETER	AGAT S.O.P	LITERATURE REFERENCE	ANALYTICAL TECHNIQUE
Sodium, Soluble	SOIL 0110; SOIL 0120; INST 0140	CARTER & GREGORICH 2007, SM 3120B	ICP/OES
Sulfate, Soluble	INOR-171-6201 & INOR-171-6002	SHEPPARD 2007; EATON 2005; MILLER 2007, SM 3120B	ICP/OES
Theoretical Gypsum Requirement	SOIL 0260	USDA HDBK 60, 22D	N/A
Trace Organics Analysis			
Benzene	ORG-170-5110/5140/5430/5440	EPA SW-846 8260-S	GC/MS
Toluene	ORG-170-5110/5140/5430/5440	EPA SW-846 8260-S	GC/MS
Ethylbenzene	ORG-170-5110/5140/5430/5440	EPA SW-846 8260-S	GC/MS
Xylenes	ORG-170-5110/5140/5430/5440	EPA SW-846 8260-S	GC/MS
C6 - C10 (F1)	ORG-170-5110/5140/5430/5440	CCME Tier 1 Method-S L	GC/FID
C6 - C10 (F1 minus BTEX)	ORG-170-5110/5140/5430/5440	CCME Tier 1 Method-S L	GC/FID
C10 - C16 (F2)	ORG-170-5120/5300	CCME Tier 1 Method-S H	GC/FID
C16 - C34 (F3)	ORG-170-5120/5300	CCME Tier 1 Method-S H	GC/FID
C34 - C50 (F4)	ORG-170-5120/5300	CCME Tier 1 Method-S H	GC/FID
Gravimetric Heavy Hydrocarbons	ORG-170-5120/5300	CCME Tier 1 Method-S H	GC/FID
Moisture Content	LAB-175-4002	CCME Tier 1 Method-S %	GRAVIMETRIC
Toluene-d8 (BTEX)	ORG-170-5110/5140/5430/5440	EPA SW-846 8260-S	GC/MS
Ethylbenzene-d10 (BTEX)	ORG-170-5110/5140/5430/5440	EPA SW-846 8260-S	GC/MS
o-Terphenyl (F2-F4)	ORG-170-5120/5300	CCME Tier 1 Method-S H	GC/FID
Naphthalene	ORG-170-5420	EPA SW846 8270 D/3540 C/3570	GC/MS
2-Methylnaphthalene	ORG-170-5420	EPA SW846 8270 D/3540 C/3570	GC/MS
Acenaphthylene	ORG-170-5420	EPA SW846 8270 D/3540 C/3570	GC/MS
Acenaphthene	ORG-170-5420	EPA SW846 8270 D/3540 C/3570	GC/MS
Fluorene	ORG-170-5420	EPA SW846 8270 D/3540 C/3570	GC/MS
Phenanthrene	ORG-170-5420	EPA SW846 8270 D/3540 C/3570	GC/MS
Anthracene	ORG-170-5420	EPA SW846 8270 D/3540 C/3570	GC/MS
Fluoranthene	ORG-170-5420	EPA SW846 8270 D/3540 C/3570	GC/MS
Pyrene	ORG-170-5420	EPA SW846 8270 D/3540 C/3570	GC/MS
Benzo[a]anthracene	ORG-170-5420	EPA SW846 8270 D/3540 C/3570	GC/MS
Chrysene	ORG-170-5420	EPA SW846 8270 D/3540 C/3570	GC/MS
Benzo[b+]fluoranthene	ORG-170-5420	EPA SW846 8270 D/3540 C/3570	GC/MS
Benzo[k]fluoranthene	ORG-170-5420	EPA SW846 8270 D/3540 C/3570	GC/MS
Benzo[a]pyrene	ORG-170-5420	EPA SW846 8270 D/3540 C/3570	GC/MS
Indeno[1,2,3-cd]pyrene	ORG-170-5420	EPA SW846 8270 D/3540 C/3570	GC/MS
Dibenzo[ah]anthracene	ORG-170-5420	EPA SW846 8270 D/3540 C/3570	GC/MS
Benzo[ghi]perylene	ORG-170-5420	EPA SW846 8270 D/3540 C/3570	GC/MS
2-Fluorobiphenyl (PAH)	TO 0500	EPA SW846 8270 D/3540 C/3570	GC/MS
p-Terphenyl-d14 (PAH)	TO 0500	EPA SW846 8270 D/3540 C/3570	GC/MS
B[a]P TPE	ORG-170-5420		CALCULATION
IACR (coarse)			GC/MS
IACR (fine)			GC/MS



Laboratory Use Only

Arrival Temperature: _____
AGAT Job Number: **ISE011146**
Date and Time: **15 AUG 24 16:43**

Chain of Custody Record

Report Information

Company: **KCB**
Contact: **Nicole Wills**
Address: **2618 Hopewell place
Calgary Alberta**
Phone: **403-730-6809** Fax: _____
LSD: _____
Client Project #: **A04012A07**

Report Information

1. Name: **Nicole Wills**
Email: **Nwills@klohn.com**
2. Name: **Kenned Ross**
Email: **Kross@klohn.com**
3. Name: **Ken Smart**
Email: **Ksmart@klohn.com**

Report Format

Single Sample per Page
 Multiple Samples per Page

Requirements (Selection may impact detection limits)

CCME AB Tier 1 BC CSR
 Agricultural Agricultural AW
 Industrial Industrial IW
 Residential/Park Residential/Park LW
 Commercial Commercial DW
 Drinking Water Natural Area
 FWAL AB Surface Water
 Other
 D50 (Drilling) SPIGEC

Invoice To

Same Yes No

Company: _____
Contact: _____
Address: _____
Phone: _____ Fax: _____
PO/AFE#: _____

Turnaround Time Required (TAT)

Regular TAT 5 to 7 business days
Rush TAT Less than 24 hours
 24 to 48 hours
 48 to 72 hours

RUSH TAT REQUESTS
UPON SELECTING A RUSH TAT, THE CLIENT ACCEPTS THAT A RUSH SURCHARGE WILL BE ADDED TO THE INVOICE. SEE BACK FOR SURCHARGE.

Date Required: _____

LABORATORY USE (LAB ID #)	SAMPLE IDENTIFICATION	SAMPLE MATRIX	DATE/TIME SAMPLED	COMMENTS - SITE SAMPLE INFO. SAMPLE CONTAINMENT	# OF CONTAINERS	Detailed Soil Salinity (Saturated Paste)	CCME BTEX/F1-F4	Soil Metals <input type="checkbox"/> HWS-B <input type="checkbox"/> Cr ⁶ <input type="checkbox"/> Hg	Water Metals <input type="checkbox"/> Dissolved <input type="checkbox"/> Total <input type="checkbox"/> Hg <input type="checkbox"/> Cr ⁶	Routine Water Potability	AB Class 2 Landfill	BC Landfill	D50 Detailed Soil Salinity (As Received)	Microtox	BTEXs/VPH/EPH <input type="checkbox"/> LEPH/HEPH <input type="checkbox"/>	Barium (Fusion) Particle Size PAH	HOLD FOR 60 DAYS	PRESERVED (Y/N)	CONTAMINATED/HAZARDOUS (Y/N)	
6896314	BH15-054 (0.15-0.3)	SOIL	Aug 17/15	Samples below 1.0m are frozen, Head space / water possible.	3	X	X	X												
402	BH15-054 (0.3-0.6)				3	X	X	X												
408	BH15-054 (1.0-1.5)				3	X	X	X												
419	BH15-055 (0.-0.15)				3	X	X	X												
420	BH15-055 (0.6-1.0)				3	X	X	X												
422	BH15-055 (1.0-1.5)				3	X	X	X												
424	BH15-056 (0.3-0.6)				3	X	X	X												
425	BH15-056 (0.6-1.0)				3	X	X	X								X	X			
427	BH15-056 (1.0-1.5)			3	X	X	X													

Samples Relinquished By (Print Name and Sign): **Ken Smart** [Signature] Date/Time: _____
 Samples Relinquished By (Print Name and Sign): _____ Date/Time: _____
 Samples Relinquished By (Print Name and Sign): _____ Date/Time: _____
 Samples Received By (Print Name and Sign): **A. [Signature]** Date/Time: **29 AUG 15 @ 16:43**
 Samples Received By (Print Name and Sign): _____ Date/Time: _____
 Samples Received By (Print Name and Sign): _____ Date/Time: _____

Pink Copy - Client
Yellow Copy - AGAT
White Copy - AGAT

Page **1** of _____
N^o: AB **000863**



Chain of Custody Record

Report to:

Company: _____ Same as COC#: _____

LABORATORY USE (LAB ID #)	SAMPLE IDENTIFICATION	SAMPLE MATRIX	DATE/TIME SAMPLED	COMMENTS - SITE SAMPLE INFO. SAMPLE CONTAINMENT	# OF CONTAINERS	Detailed Soil Salinity (Saturated Paste)	CCME BTEX/F1-F4	Soil Metals <input type="checkbox"/> HWS-B <input type="checkbox"/> Cr ⁶ <input type="checkbox"/> Hg	Water Metals <input type="checkbox"/> Dissolved <input type="checkbox"/> Total <input type="checkbox"/> Hg <input type="checkbox"/> Cr ⁶	Routine Water Potability	AB Class 2 Landfill	BC Landfill	D50 Detailed Soil Salinity (As Received)	Microtox	BTEX/VPH/EPH <input type="checkbox"/> LEPH/HEPH <input type="checkbox"/>	Barium (Fusion)	Particle Size	PAH	HOLD FOR 60 DAYS	PRESERVED (Y/N)	CONTAMINATED/HAZARDOUS (Y/N)
6896429	BH15-057 (0.15-0.3)	SOIL	Aug 17/15		3	X	X	X								X					
434	BH15-057 (0.6-1.0)				3	X	X	X								X					
437	BH15-057 (1.0-1.5)				3	X	X	X								X					
448	BH15-058 (0.3-0.6)				3	X	X	X								X					
458	BH15-058 (0.6-1.0)				3	X	X	X								X					
464	BH15-058 (1.0-1.5)				3	X	X	X								X					
465	BH15-059 (0.0-0.15)				3	X	X	X								X					
468	BH15-059 (0.15-0.3)				3	X	X	X								X					
469	BH15-059 (1.0-1.5)				3	X	X	X								X					
472	BH15-060 (0.15-0.3)				3	X	X	X								X					
476	BH15-060 (0.3-0.6)				3	X	X	X								X					
479	BH15-060 (1.0-1.5)				3	X	X	X								X					
482	BH15-061 (0.0-0.15)				3	X	X	X								X					
492	BH15-061 (0.3-0.6)				3	X	X	X								X					
509	BH15-061 (1.0-1.5)				3	X	X	X								X					
514	BH15-062 (0.15-0.3)				3	X	X	X								X					
527	BH15-062 (0.3-0.6)				3	X	X	X								X					
529	BH15-062 (1.0-1.5)				3	X	X	X								X					
530	BH15-063 (0.15-0.3)				3	X	X	X								X					
531	BH15-063 (0.3-0.6)				3	X	X	X								X					
532	BH15-063 (1.0-1.5)				3	X	X	X								X					
535	BH15-064 (0.15-0.3)				3	X	X	X								X					
537	BH15-064 (0.6-1.0)				3	X	X	X								X					
540	BH15-064 (1.0-1.5)				3	X	X	X								X					

Samples Relinquished By (Print Name and Sign):	Date/Time	Samples Received By (Print Name and Sign):	Date/Time	Pink Copy - Client Yellow Copy - AGAT White Copy - AGAT	Page <u>2</u> of <u> </u>
Samples Relinquished By (Print Name and Sign):	Date/Time	Samples Received By (Print Name and Sign):	Date/Time		No: AB 000863 A
Samples Relinquished By (Print Name and Sign):	Date/Time	Samples Received By (Print Name and Sign):	Date/Time		



Chain of Custody Record

Report to:

Company: _____

Same as COC#: _____

LABORATORY USE (LAB ID #)	SAMPLE IDENTIFICATION	SAMPLE MATRIX	DATE/TIME SAMPLED	COMMENTS - SITE SAMPLE INFO. SAMPLE CONTAINMENT	# OF CONTAINERS	Detailed Soil Salinity (Saturated Paste)	CCME BTEX/F1-F4	Soil Metals <input type="checkbox"/> HWS-B <input type="checkbox"/> Cr ⁶ <input type="checkbox"/> Hg	Water Metals <input type="checkbox"/> Dissolved <input type="checkbox"/> Total <input type="checkbox"/> Hg <input type="checkbox"/> Cr ⁶	Routine Water Potability	AB Class 2 Landfill	BC Landfill	D50 Detailed Soil Salinity (As Received)	Microtox	BTEX/VPH/EPH <input type="checkbox"/> LEPH/HEPH <input type="checkbox"/>	Barium (Fusion)	Particle Size	PAH	HOLD FOR 60 DAYS	PRESERVED (Y/N)	CONTAMINATED/HAZARDOUS (Y/N)
6896551	BH15-065 (0.15-0.3)	SOIL	Aug 17/15		3	X	X														
558	BH15-065 (0.3-0.6)				3	X	X														
558	BH15-065 (1.0-1.5)				3	X	X														
560	BH15-066 (0.15-0.3)				3	X	X	X													
564	BH15-066 (0.3-0.6)				3	X	X	X													
567	BH15-066 (1.0-1.5)				3	X	X	X													
572	BH15-067 (0.3-0.6)				3	X	X	X													
574	BH15-067 (0.6-1.0)				3	X	X	X													
578	BH15-067 (1.0-1.5)				3	X	X	X													
583	BH15-068 (0.15-0.3)				3	X	X	X													
599	BH15-068 (0.3-0.6)				3	X	X	X													
600	BH15-068 (0.6-1.0)				3	X	X	X													
601	BH15-069 (0.3-0.6)				3	X	X	X													
604	BH15-069 (0.6-1.0)				3	X	X	X													
609	BH15-069 (1.0-1.5)				3	X	X	X													
619	BH15-070 (0.3-0.6)				3	X	X	X													
622	BH15-070 (0.6-1.0)				3	X	X	X													
628	BH15-070 (1.0-1.5)				3	X	X	X													
631	BH15-071 (0.3-0.6)				3	X	X	X													
634	BH15-071 (0.6-1.0)				3	X	X	X													
636	BH15-071 (1.0-1.5)				3	X	X	X													
639	BH15-072 (0.6-1.0)				3	X	X	X													
640	BH15-072 (1.0-1.5)				3	X	X	X													
641	BH15-072 (2.5-3.0)				3	X	X	X													

Samples Relinquished By (Print Name and Sign):	Date/Time	Samples Received By (Print Name and Sign):	Date/Time	Pink Copy - Client Yellow Copy - AGAT White Copy - AGAT	Page <u>3</u> of _____
Samples Relinquished By (Print Name and Sign):	Date/Time	Samples Received By (Print Name and Sign):	Date/Time		N ^o : AB 000864 A
Samples Relinquished By (Print Name and Sign):	Date/Time	Samples Received By (Print Name and Sign):	Date/Time		



Chain of Custody Record

Report to:

Company: _____ Same as COC#: _____

LABORATORY USE (LAB ID #)	SAMPLE IDENTIFICATION	SAMPLE MATRIX	DATE/TIME SAMPLED	COMMENTS - SITE SAMPLE INFO. SAMPLE CONTAINMENT	# OF CONTAINERS	Detailed Soil Salinity (Saturated Paste)	CCME BTEX/F1-F4	Soil Metals <input type="checkbox"/> HWS-B <input type="checkbox"/> Cr ⁶ <input type="checkbox"/> Hg	Water Metals <input type="checkbox"/> Dissolved <input type="checkbox"/> Total <input type="checkbox"/> Hg <input type="checkbox"/> Cr ⁶	Routine Water Potability	AB Class 2 Landfill	BC Landfill	D50 Detailed Soil Salinity (As Received)	Microtox	BTEXS/VPH/EPH <input type="checkbox"/> LEPH/HEPH <input type="checkbox"/>	Barium (Fusion) Particle Size PAH	HOLD FOR 60 DAYS	PRESERVED (Y/N)	CONTAMINATED/HAZARDOUS (Y/N)	
6896686	BH15-073 (0.3-0.6)	SOIL	Aug 17/15		2															
721	BH15-073 (1.0-1.5)	↓	↓		2															
728	BH15-073 (2.5-3.0)			2																
750	BH15-074 (0.3-0.6)			2																
758	BH15-074 (1.0-1.5)			2																
768	BH15-074 (4.0-4.5)			2																
777	DUP F			3																
778	DUP G			3																
779	DUP H			3																
784	DUP I			3																
792	BH15-075 (0.3-0.6)			2	Aug 18/15															
801	BH15-075 (0.6-1.0)			2	↓															
802	BH15-075 (1.0-1.5)			2	↓															

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Samples Relinquished By (Print Name and Sign):	Date/Time	Samples Received By (Print Name and Sign):	Date/Time		
Samples Relinquished By (Print Name and Sign):	Date/Time	Samples Received By (Print Name and Sign):	Date/Time		



Chain of Custody Record

Report to:

Company: _____ Same as COC#: _____

LABORATORY USE (LAB ID #)	SAMPLE IDENTIFICATION	SAMPLE MATRIX	DATE/TIME SAMPLED	COMMENTS - SITE SAMPLE INFO. SAMPLE CONTAINMENT	# OF CONTAINERS	Detailed Soil Salinity (Saturated Paste)	CCME BTEX/F1-F4	Soil Metals <input type="checkbox"/> HWS-B <input type="checkbox"/> Cr ⁶ <input type="checkbox"/> Hg	Water Metals <input type="checkbox"/> Dissolved <input type="checkbox"/> Total <input type="checkbox"/> Hg <input type="checkbox"/> Cr ⁶	Routine Water Potability	AB Class 2 Landfill	BC Landfill	D50 Detailed Soil Salinity (As Received)	Microtox	BTEXS/VPH/EPH <input type="checkbox"/> LEPH/HEPH <input type="checkbox"/>	Barium (Fusion)	Particle size	PAH	HOLD FOR 60 DAYS	PRESERVED (Y/N)	CONTAMINATED/HAZARDOUS (Y/N)
6896807	BH15-076 (0.3-0.6)	SOIL	Aug 18/15		2		X														
810	BH15-076 (3.5-4.0)				2		X														
814	BH15-076 (4.0-4.5)				2		X														
816	BH15-077 (0.3-0.6)				2		X														
818	BH15-077 (1.0-1.5)				2		X														
819	BH15-077 (2.5-3.0)				2		X														
820	BH15-078 (0.3-0.6)				2		X														
821	BH15-078 (0.6-1.0)				2		X														
823	BH15-078 (2.5-3.0)				2		X														
825	BH15-079 (0.15-0.3)				2		X														
830	BH15-079 (0.6-1.0)				2		X														
832	BH15-079 (1.0-1.5)				2		X														
833	BH15-080 (0.3-0.6)				2		X														
834	BH15-080 (1.0-1.5)				2		X														
836	BH15-080 (2.5-3.0)				2		X														
838	BH15-081 (0.15-0.3)				2		X														
839	BH15-081 (0.6-1.0)				2	X	X									X	X	X			
846	BH15-081 (2.5-3.0)				2		X														
854	BH15-082 (0.0-0.15)				2		X														
861	BH15-082 (0.6-1.0)				2		X														
998	BH15-082 (1.0-1.5)				2		X														
7004	BH15-083 (0.3-0.6)				2		X														
015	BH15-083 (0.6-1.0)				2		X														
016	BH15-083 (2.5-3.0)				2		X														
018	DUP J																				

Samples Relinquished By (Print Name and Sign):	Date/Time	Samples Received By (Print Name and Sign):	Date/Time	Pink Copy - Client Yellow Copy - AGAT White Copy - AGAT	Page <u>6</u> of _____ N ^o : AB 000867 A
Samples Relinquished By (Print Name and Sign):	Date/Time	Samples Received By (Print Name and Sign):	Date/Time		
Samples Relinquished By (Print Name and Sign):	Date/Time	Samples Received By (Print Name and Sign):	Date/Time		



Chain of Custody Record

Report to:

Company: _____ Same as COC#: _____

LABORATORY USE (LAB ID #)	SAMPLE IDENTIFICATION	SAMPLE MATRIX	DATE/TIME SAMPLED	COMMENTS - SITE SAMPLE INFO. SAMPLE CONTAINMENT	# OF CONTAINERS	Detailed Soil Salinity (Saturated Paste)	CCME BTEX/F1-F4	Soil Metals <input type="checkbox"/> HWS-B <input type="checkbox"/> Cr ⁶ <input type="checkbox"/> Hg	Water Metals <input type="checkbox"/> Dissolved <input type="checkbox"/> Total <input type="checkbox"/> Hg <input type="checkbox"/> Cr ⁶	Routine Water Potability	AB Class 2 Landfill	BC Landfill	D50 Detailed Soil Salinity (As Received)	Microtox	BTEX/VPH/EPH <input type="checkbox"/> LEPH/HEPH <input type="checkbox"/>	Barium (Fusion) Particle size. PAH	HOLD FOR 60 DAYS	PRESERVED (Y/N)	CONTAMINATED/HAZARDOUS (Y/N)			
6897025	BH15-084 (0.3-0.6)	SOIL	Aug 18/15		2	X	X															
026	BH15-084 (1.0-1.5)	↓	↓		2	X	X															
029	BH15-084 (2.5-3.0)				2	X	X															
034	BH15-085 (0.6-1.0)				2	X	X															
037	BH15-085 (1.5-2.0)				2	X	X															
042	BH15-085 (4.0-4.5)				2	X	X															
043	BH15-086 (0.6-1.0)				2	X	X															
046	BH15-086 (1.0-1.5)				2	X	X															
057	BH15-086 (2.5-3.0)				2	X	X															
059	BH15-087 (0.3-0.6)				2	X	X															
061	BH15-087 (2.5-3.0)				2	X	X															
070	BH15-087 (5.5-6.6)				2	X	X															
073	BH15-087 (7.0-7.5)				2	X	X															
075	BH15-088 (0.3-0.6)				2	X	X															
078	BH15-088 (1.0-1.5)				2	X	X															
083	BH15-088 (2.5-3.0)				2	X	X															
086	BH15-089 (0.0-0.15)				2	X	X															
093	BH15-089 (0.6-1.0)				2	X	X															
103	BH15-089 (1.0-1.5)				2	X	X															
113	BH15-090 (0.3-0.6)				2	X	X															
117	BH15-090 (1.0-1.5)				2	X	X															
143	BH15-090 (2.5-3.0)	2	X	X																		
152	BH15-091 (0.3-0.6)	2	X	X																		
167	BH15-091 (0.6-1.0)	2	X	X																		
191	BH15-091 (1.0-1.5)	2	X	X																		

Samples Relinquished By (Print Name and Sign):	Date/Time	Samples Received By (Print Name and Sign):	Date/Time	Pink Copy - Client Yellow Copy - AGAT White Copy - AGAT	Page <u>7</u> of _____ N ^o : AB 000866 A
Samples Relinquished By (Print Name and Sign):	Date/Time	Samples Received By (Print Name and Sign):	Date/Time		
Samples Relinquished By (Print Name and Sign):	Date/Time	Samples Received By (Print Name and Sign):	Date/Time		



Chain of Custody Record

Report to:

Company: _____ Same as COC#: _____

LABORATORY USE (LAB ID #)	SAMPLE IDENTIFICATION	SAMPLE MATRIX	DATE/TIME SAMPLED	COMMENTS - SITE SAMPLE INFO. SAMPLE CONTAINMENT	# OF CONTAINERS	Detailed Soil Salinity (Saturated Paste)	CCME BTEX/F1-F4	Soil Metals <input type="checkbox"/> HWS-B <input type="checkbox"/> Cr ⁶ <input type="checkbox"/> Hg	Water Metals <input type="checkbox"/> Dissolved <input type="checkbox"/> Total <input type="checkbox"/> Hg <input type="checkbox"/> Cr ⁶	Routine Water Potability	AB Class 2 Landfill	BC Landfill	D50 Detailed Soil Salinity (As Received)	Microtox	BTEXS/VPH/EPH <input type="checkbox"/> LEPH/HEPH <input type="checkbox"/>	Barium (Fusion) Particle Size PAK	HOLD FOR 60 DAYS	PRESERVED (Y/N)	CONTAMINATED/HAZARDOUS (Y/N)
6897211	BH15-092 (0.3-0.6)	SOIL	Aug 19/15		2	X													
215	BH15-092 (0.6-1.0)				2	X													
217	BH15-092 (1.0-1.5)				2	X													
218	BH15-093 (0.3-0.6)				2	X													
222	BH15-093 (0.6-1.0)				2	X													
224	BH15-093 (1.0-1.5)				2	X													
225	BH15-094 (0.3-0.6)				2	X													
228	BH15-094 (0.6-1.0)				2	X													
229	BH15-094 (1.0-1.5)				2	X													
230	BH15-095 (0.6-1.0)				2	X													
235	BH15-095 (1.5-2.0)				2	X													
238	BH15-095 (2.5-3.0)				2	X													
241	BH15-096 (0.3-0.6)				2	X													
243	BH15-096 (0.6-1.0)				2	X													
244	BH15-096 (1.0-1.5)				2	X													
246	BH15-097 (0.3-0.6)				2	X													
248	BH15-097 (0.6-1.0)				2	X													
250	BH15-097 (1.0-1.5)				2	X													
254	BH15-098 (0.6-1.0)				2	X													
256	BH15-098 (1.5-2.0)				2	X													
258	BH15-098 (2.5-3.0)				2	X													
271	BH15-098 (0.3-0.6)				2	X													
273	BH15-099 (1.0-1.5)				2	X													
275	BH15-099 (2.5-3.0)				2	X													

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Samples Relinquished By (Print Name and Sign):	Date/Time	Samples Received By (Print Name and Sign):	Date/Time		
Samples Relinquished By (Print Name and Sign):	Date/Time	Samples Received By (Print Name and Sign):	Date/Time		



Chain of Custody Record

Report to:

Company: _____ Same as COC#: _____

LABORATORY USE (LAB ID #)	SAMPLE IDENTIFICATION	SAMPLE MATRIX	DATE/TIME SAMPLED	COMMENTS - SITE SAMPLE INFO. SAMPLE CONTAINMENT	# OF CONTAINERS	Detailed Soil Salinity (Saturated Paste)	CCME BTEX/F1-F4	Soil Metals <input type="checkbox"/> HWS-B <input type="checkbox"/> Cr ⁶ <input type="checkbox"/> Hg	Water Metals <input type="checkbox"/> Dissolved <input type="checkbox"/> Total <input type="checkbox"/> Hg <input type="checkbox"/> Cr ⁶	Routine Water Potability	AB Class 2 Landfill	BC Landfill	D50 Detailed Soil Salinity (As Received)	Microtox	BTEXS/VPH/EPH <input type="checkbox"/> LEPH/HEPH <input type="checkbox"/>	Barium (Fusion)	Particle Size	PAH	HOLD FOR 60 DAYS	PRESERVED (Y/N)	CONTAMINATED/HAZARDOUS (Y/N)
6897288	BH15-100 (0.3-0.6)	SOIL	Aug 17/15		2		X														
290	BH15-100 (0.6-1.0)	↓	↓		2		X														
292	BH15-100 (2.5-3.0)			2		X															
293	BH15-101 (0.6-1.0)			2		X	X										X	X			
295	BH15-101 (1.0-1.5)			2		X	X														
297	BH15-101 (2.5-3.0)			2		X	X														
298	BH15-102 (1.0-1.5)			2		X	X														
299	BH15-102 (1.5-2.0)			2		X	X														
300	BH15-102 (2.5-3.0)			2		X	X														
308	BH15-103 (0.3-0.6)			2		X	X														
310	BH15-103 (0.6-1.0)			2		X	X														
324	BH15-103 (1.0-1.5)			2		X	X														
326	BH15-104 (0.15-0.3)			2		X	X														
327	BH15-104 (0.3-0.6)			2		X	X														
328	BH15-104 (1.0-1.5)			2		X	X														
333	BH15-105 (0.15-0.3)			2		X	X														
336	BH15-105 (0.3-0.6)			2		X	X														
340	BH15-105 (1.0-1.5)			2		X	X														
342	BH15-106 (0.3-0.6)			2		X	X														
344	BH15-106 (0.6-1.0)			2		X	X														
448	BH15-106 (1.0-1.5)			2		X	X														
468	BH15-107 (0.15-0.3)	2		X	X	X										X	X				
472	BH15-107 (0.3-0.6)	2		X	X	X															
498	BH15-107 (2.5-3.0)	2		X	X																

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Samples Relinquished By (Print Name and Sign):	Date/Time	Samples Received By (Print Name and Sign):	Date/Time		



Chain of Custody Record

Report to:

Company: _____ Same as COC#: _____

LABORATORY USE (LAB ID #)	SAMPLE IDENTIFICATION	SAMPLE MATRIX	DATE/TIME SAMPLED	COMMENTS - SITE SAMPLE INFO. SAMPLE CONTAINMENT	# OF CONTAINERS	Detailed Soil Salinity (Saturated Paste)	CCME BTEX/F1-F4	Soil Metals <input type="checkbox"/> HWS-B <input type="checkbox"/> Cr ⁶ <input type="checkbox"/> Hg	Water Metals <input type="checkbox"/> Dissolved <input type="checkbox"/> Total <input type="checkbox"/> Hg <input type="checkbox"/> Cr ⁶	Routine Water Potability	AB Class 2 Landfill	BC Landfill	D50 Detailed Soil Salinity (As Received)	Microtox	BTEXS/VPH/EPH <input type="checkbox"/> LEPH/HEPH <input type="checkbox"/>	Barium (fusion) Particle Size PAH	HOLD FOR 60 DAYS	PRESERVED (Y/N)	CONTAMINATED/HAZARDOUS (Y/N)		
6897514	BH15-108 (0.15-0.3)	SOIL	Aug 19 / 15		3	X	X	X													
541	BH15-108 (1.0-1.5)	↓	↓		2	X	X														
543	BH15-108 (2.5-3.0)				1	X	X														
545	BH15-109 (1.0-1.5)				2	X	X														
546	BH15-109 (2.0-2.5)				2	X	X														
548	BH15-109 (9.0-9.5)				2	X															
550	BH15-110 (0.15-0.3)				2	X	X														
551	BH15-110 (0.3-0.6)				2	X	X														
555	BH15-110 (1.0-1.5)				2	X	X														
556	BH15-111 (0.0-0.15)				2	X	X														
557	BH15-111 (0.3-0.6)				2	X	X														
559	BH15-111 (1.0-1.5)				2	X	X														
560	BH15-112 (0.6-1.0)				2	X	X														
561	BH15-112 (1.0-1.5)				2	X	X														
564	BH15-112 (2.5-3.0)				2	X	X														
567	BH15-113 (0.3-0.6)					Aug 20 / 15		2	X	X	X										
569	BH15-113 (0.6-1.0)		↓		2	X	X	X													
574	BH15-113 (1.0-1.5)		↓		2	X	X	X													
578	BH15-114 (0.3-0.6)		↓		2	X	X	X													
580	BH15-114 (0.6-1.0)		↓		2	X	X	X													
583	BH15-114 (1.0-1.5)		↓		2	X	X	X													
586	BH15-115 (0-0.15)		↓		2	X															
	BH15-115																				
	BH15-115																				

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Samples Relinquished By (Print Name and Sign):	Date/Time	Samples Received By (Print Name and Sign):	Date/Time		



Chain of Custody Record

Report to:

Company: _____

Same as COC#: _____

LABORATORY USE (LAB ID #)	SAMPLE IDENTIFICATION	SAMPLE MATRIX	DATE/TIME SAMPLED	COMMENTS - SITE SAMPLE INFO. SAMPLE CONTAINMENT	# OF CONTAINERS	Detailed Soil Salinity (Saturated Paste)	CGME BTEX/F1-F4	Soil Metals <input type="checkbox"/> HWS-B <input type="checkbox"/> Cr <input type="checkbox"/> Hg	Water Metals <input type="checkbox"/> Dissolved <input type="checkbox"/> Total <input type="checkbox"/> Hg <input type="checkbox"/> Cr ⁶	Routine Water Potability	AB Class 2 Landfill	BC Landfill	D50 Detailed Soil Salinity (As Received)	Microtox	BTEX/VPH/EPH <input type="checkbox"/> LEPH/HEPH <input type="checkbox"/>	Barium (Fusion)	Particle Size	PAH	HOLD FOR 60 DAYS	PRESERVED (Y/N)	CONTAMINATED/HAZARDOUS (Y/N)	
6897588	BH15-116 (0.0-0.15)	SOIL	Aug 20/15		3	X	X	X								X	X	X				
607	BH15-117 (0.0-0.15)	↓	↓		3	X	X	X								X	X	X				
609	BH15-118 (0.0-0.15)			3	X	X	X										X	X	X			
610	BH15-119 (0.0-0.15)			3	X	X	X										X	X	X			
627	BH15-120 (0.0-0.15)			3	X	X	X										X	X	X			
645	BH15-121 (0.0-0.15)			3	X	X	X										X	X	X			
651	BH15-122 (0.3-0.6)			3	X	X	X										X	X	X			
696	BH15-122 (0.6-1.0)			2	X	X																
704	BH15-122 (1.0-1.5)			2	X	X																
706	BH15-116 (0.15-0.3)			4	X	X	X										X	X	X			
710	DUP m			2	X	X																

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Samples Relinquished By (Print Name and Sign):	Date/Time	Samples Received By (Print Name and Sign):	Date/Time	Pink Copy - Client Yellow Copy - AGAT White Copy - AGAT	Page <u>11</u> of <u> </u>
Samples Relinquished By (Print Name and Sign):	Date/Time	Samples Received By (Print Name and Sign):	Date/Time		N ^o : AB 000872 A
Samples Relinquished By (Print Name and Sign):	Date/Time	Samples Received By (Print Name and Sign):	Date/Time		



AGAT Laboratories

SAMPLE INTEGRITY RECEIPT FORM

RECEIVING BASICS - Shipping

Company/Consultant: KCB
 Courier: CANADIAN NORTH Prepaid Collect
 Waybill #: 28-YEN-7060-2722
 Branch: EDM GP FN FM RD VAN LYD FSJ EST Other: _____
 Custody Seal Intact: Yes No NA
 TAT: <24hr 24-48hr 48-72hr Reg Other _____
 Cooler Quantity: 11

TIME SENSITIVE ISSUES - Shipping

Earliest Date Sampled: 17 AUG 14 ALREADY EXCEEDED? Yes No
 MIBI/Time Sensitive Test*: _____ Expiry: _____
 Hydrocarbon Test: OK Expiry: 24 AUG 15
 Are samples received more than 5 days after sampling: Yes No
 *Residual Chlorine, DO, Turbidity, BOD, Nitrate/Nitrite, Microtox

Temperature (to be recorded from bottles/jars only)

N/A - Only Soil Bags Received

(1) (Bottle/Jar) 6.0 + 5.5 + 5.7 = 5.7 °C (2) (Bottle/Jar) 6.5 + 5.6 + 5.6 = 5.9 °C
 (3) (Bottle/Jar) 5.5 + 5.4 + 5.4 = 5.6 °C (4) (Bottle/Jar) 2.9 + 2.7 + 2.8 = 2.8 °C
 (5) (Bottle/Jar) 2.9 + 2.8 + 2.6 = 2.8 °C (6) (Bottle/Jar) 2.6 + 2.6 + 2.7 = 2.6 °C
 (If more than 6 coolers are received use another sheet of paper and attach)

SAMPLE INTEGRITY - Shipping

Hazardous Samples: Why Hazardous: _____
 Precaution taken: _____
 Legal Samples: Yes No
 International Samples: Yes No Tape Sealed: Yes No
 Coolant used: Icepack Bagged Ice Free Ice Free Water None

LOGISTICS USE ONLY

Workorder No: 1SE011146
 Samples Damaged: Yes No If YES why?
 No Bubble Wrap Frozen Courier
 Other: _____
 Correct Sample Requirements for Testing
 Correct Bottles: Yes No Correct Amount: Yes No
 Correct Labels: Yes No
 If NO to any of the above, explain why:

Visible Sediment in Waters : Yes No

Additional Integrity Issues or concerns:

Broken sample: BH15-061 0-0.15 (482B) rec'd broken.
Extra and contaminated sample: BH15-072 0.6-1.0 (639C)
Extra sample: 640C, 641C, 686C, 750C, 758C, 784C, 018C, 950C
 Account Project Manager: Alueyn Pasco have they been notified of the above issues: Yes No
 Whom spoken to: _____ Date/Time: _____
 CPM Initial _____



AGAT Laboratories

SAMPLE INTEGRITY RECEIPT FORM

RECEIVING BASICS - Shipping

Company/Consultant: KCB

Courier: CANADIAN NORTH Prepaid Collect

Waybill #: 518-YEV-7060-2722

Branch: EDM GP FN FM RD VAN LYD FSJ EST Other: _____

Custody Seal Intact: Yes No NA

TAT: <24hr 24-48hr 48-72hr Reg Other _____

Cooler Quantity: _____

TIME SENSITIVE ISSUES - Shipping

Earliest Date Sampled: 17 AUG 15 ALREADY EXCEEDED? Yes No

MIBI/Time Sensitive Test*: _____ Expiry: _____

Hydrocarbon Test: PHC Expiry: 24 AUG 15

Are samples received more than 5 days after sampling: Yes No

**Residual Chlorine, DO, Turbidity, BOD, Nitrate/Nitrite, Microtox*

Temperature (to be recorded from bottles/jars only)

N/A - Only Soil Bags Received

(1) (Bottle/Jar) 2.8 + 2.7 + 1.7 = 2.4 °C (2) (Bottle/Jar) 3.2 + 4.4 + 3.3 = 3.6 °C

(3) (Bottle/Jar) _____ + _____ + _____ = _____ °C (4) (Bottle/Jar) _____ + _____ + _____ = _____ °C

(5) (Bottle/Jar) _____ + _____ + _____ = _____ °C (6) (Bottle/Jar) _____ + _____ + _____ = _____ °C

(If more than 6 coolers are received use another sheet of paper and attach)

SAMPLE INTEGRITY - Shipping

Hazardous Samples: Why Hazardous: _____

Precaution taken: _____

Legal Samples: Yes No

International Samples: Yes No Tape Sealed: Yes No

Coolant used: Icepack Bagged Ice Free Ice Free Water None

LOGISTICS USE ONLY

Workorder No: _____

Samples Damaged: Yes No If YES why? _____

No Bubble Wrap Frozen Courier

Other: _____

Correct Sample Requirements for Testing

Correct Bottles: Yes No Correct Amount: Yes No

Correct Labels: Yes No

If NO to any of the above, explain why: _____

Visible Sediment in Waters : Yes No

Additional Integrity Issues or concerns:
Extra samples: 985C, 463A, 464A, 465A, 466A, 477A, 468A, 469A, 470A, 471A, 472A, 473A, 474A, 475A, 476A, 477A, 478A, 479A, 480A, 481A, 511A

Account Project Manager: Alvyn Pasco have they been notified of the above issues: Yes No

Whom spoken to: _____ Date/Time: _____

CPM Initial _____

518 YEV 7060-2722

518-YEV-7060-2722

SHIPPER'S NAME AND ADDRESS
IEG Consultants
Northwind Ind
Project # A04012A07.02.02
Inuvik, NT
867 777 2426
Registered

SHIPPER'S ACCOUNT NUMBER

NOT NEGOTIABLE
Canadian North
AIR WAYBILL 101 3731 52 Ave E
(AIR CONSIGNMENT NOTE) Edmonton Int Arpt, AB T9E 0V4
Canada

GST #R 892440629

Copies 1, 2 and 3 of this Air Waybill are originals and have the same validity.

CONSIGNEE'S NAME AND ADDRESS

AGAT Laboratories Ltd
6310 Roper Road
Alveilyn Pasco
Edmonton, AB T6B 3P9
Canada
780 243 8889 403-735-2745

CONSIGNEE'S ACCOUNT NUMBER
AGA10000

It is agreed that the goods described herein are accepted in apparent good order and condition (except as noted) for carriage by air. The carrier does not accept liability for any loss or damage to the goods unless the shipper makes a written declaration of value and pays a supplemental charge therefor. If a higher value is declared, a supplemental charge is required.
Copies 1, 2 and 3 of this Air Waybill are originals and have the same validity.

SIGNATURE RECEIVED IN GOOD ORDER PLACE DATETIME

ISSUING CARRIER'S AGENT NAME AND CITY

PRINTED NAME

ALSO NOTIFY NAME AND ADDRESS (OPTIONAL ACCOUNTING INFORMATION)

Acc. # : K10100CW

Klohn Crippen Berger Ltd

500 - 2618 Hopewell Place NE

Calgary, AB T1Y 7J7

Marty Mack, 403-291-0777

TO OPERATE UNDER THE AIR CARRIER ACT AND REGULATIONS AND TO ACCEPT LIABILITY FOR THE CARRIER'S ACTIONS UNDER THE AIR CARRIER ACT AND REGULATIONS.

DOMESTIC LIABILITY:

AGENT'S IATA CODE

ACCOUNT NO.

AIRPORT OF DEPARTURE (ADDR OF FIRST CARRIER AND REQUESTED ROUTING)
Inuvik

ROUTING AND DESTINATION

TO BY TO BY
YEG Canadian North

Edmonton

FOR CARRIER USE ONLY
FLIGHTDATE 445/22 AU FLIGHTDATE

Currency Code
CAD 3RD

WT/VOL

OTHER

DECLARED VALUE FOR CARRIAGE

DECLARED VALUE FOR CUSTOMS

INSURANCE DECLARED

AMOUNT OF INSURANCE

to be insured in figures in box marked "Amount of Insurance"

INSURANCE

DECLARED

AMOUNT

HANDLING INFORMATION These commodities licensed by US for ultimate destination
HFPU KDDP COOL Project # A04012A07.02.02

DUPLICATE COPY

NO OF PIECES RCP GROSS WEIGHT

12 328 K

RATE CLASS
COMMODITY ITEM NO.

CHARGEABLE WEIGHT

RATE / CHARGE

TOTAL

NATURE AND QUANTITY OF GOODS
(INCL DIMENSIONS OR VOLUME)
Soil Samples
DIMS 48x40x28IN (bulk)

PREPAID	WEIGHT CHARGE	COLLECT	P-UP ZONE	PICKUP CHARGES	ORIGIN ADVANCE CHARGES	DESCRIPTION OF ORIGIN ADVANCE	ITEMS PREPAID	ITEMS COLLECT
2,361.60		0.00		0.00	0.00			
	VALUATION CHARGE		DEL. ZONE	DELIVERY CHARGES	DEST. ADVANCE CHARGES	DESCRIPTION OF DEST. ADVANCE		
	0.00			0.00	0.00			
	TAX							
	153.50			708.48 Nav Canada Charge, Fuel S				
	TOTAL OTHER CHARGES DUE AGENT							
	0.00							
	TOTAL OTHER CHARGES DUE CARRIER							
	708.48							

RE-WEIGHT/DIMENSIONAL WEIGHT AND SHIPPER GUARANTEES ALL CHARGES SUBJECT TO RATE AUDIT

COLETTED CURRENCY
TOTAL PREPAID 3,223.58
TOTAL COLLECT 0.00

PRINTED NAME
SIGNATURE OF SHIPPER ABOVE AND INITIAL APPLICABLE TO BOX BELOW
THIS SHIPMENT DOES NOT CONTAIN DANGEROUS GOODS
EXEMPTED ON 8/21/2015 15:13
SIGNED IN (Date) at (Place)

FOR CARRIER USE ONLY AT DESTINATION
CHARGES AT DESTINATION
TOTAL COLLECT CHARGES

SIGNATURE OF ISSUING CARRIER OR ITS AGENT
518-YEV-7060-2722



CLIENT NAME: KLOHN CRIPPEN
100 16812 114th AVENUE
EDMONTON, AB T5M3S2
(000) 000-0000

ATTENTION TO: Nicole Wills

PROJECT: A04012A07

AGAT WORK ORDER: 15E011193

TRACE ORGANICS REVIEWED BY: Ngoc (Ruby) Vu, Lab Technician

WATER ANALYSIS REVIEWED BY: Ngoc (Ruby) Vu, Lab Technician

DATE REPORTED: Sep 02, 2015

PAGES (INCLUDING COVER): 13

VERSION*: 1

Should you require any information regarding this analysis please contact your client services representative at (780) 395-2525

*NOTES

All samples will be disposed of within 30 days following analysis. Please contact the lab if you require additional sample storage time.



Certificate of Analysis

AGAT WORK ORDER: 15E011193

PROJECT: A04012A07

6310 ROPER ROAD
EDMONTON, ALBERTA
CANADA T6B 3P9
TEL (780)395-2525
FAX (780)462-2490
<http://www.agatlabs.com>

CLIENT NAME: KLOHN CRIPPEN

ATTENTION TO: Nicole Wills

SAMPLING SITE:

SAMPLED BY:

Polyaromatic Hydrocarbon Analysis - Water FWAL

DATE RECEIVED: 2015-08-24

DATE REPORTED: 2015-09-02

Parameter	Unit	SAMPLE DESCRIPTION:		P06-01	P06-02	P06-03	FEILD BLANK	TRIP BLANK	PO6-07	PO6-06
		SAMPLE TYPE:		Water	Water	Water	Water	Water	Water	Water
		DATE SAMPLED:		8/20/2015	8/20/2015	8/20/2015	8/20/2015	8/20/2015	8/20/2015	8/20/2015
		G / S	RDL	6896102	6896292	6896293	6896296	6896298	6896305	6896306
Naphthalene	mg/L		0.00001	<0.00001	<0.00001	0.0192	<0.00001	<0.00001	0.00002	<0.00001
2-Methylnaphthalene	mg/L		0.00001	<0.00001	<0.00001	0.0119	<0.00001	<0.00001	<0.00001	<0.00001
Quinoline	mg/L		0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005
Acenaphthylene	mg/L		0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
Acenaphthene	mg/L		0.00001	<0.00001	<0.00001	0.00002	<0.00001	<0.00001	<0.00001	<0.00001
Fluorene	mg/L		0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
Phenanthrene	mg/L		0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
Anthracene	mg/L		0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
Fluoranthene	mg/L		0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
Pyrene	mg/L		0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
Acridine	mg/L		0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005
Benzo[a]anthracene	mg/L		0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
Chrysene	mg/L		0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
Benzo[b+j]fluoranthene	mg/L		0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
Benzo[k]fluoranthene	mg/L		0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
Benzo[a]pyrene	mg/L		0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
Indeno[1,2,3-cd]pyrene	mg/L		0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
Dibenzo[ah]anthracene	mg/L		0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
Benzo[ghi]perylene	mg/L		0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
B[a]P TPE	mg/L		0.00001	0.00001	0.00001	0.00001	0.00001	0.00001	0.00001	0.00001
Surrogate	Unit	Acceptable Limits								
2-Fluorobiphenyl	%	50-150	105	99	98	98	98	98	99	98
p-Terphenyl-d14	%	50-150	107	101	103	99	96	98	98	100

Comments: RDL - Reported Detection Limit; G / S - Guideline / Standard

6896102-6896306 Based on GC/MS target ion analysis.

Isomers Benzo(b)fluoranthene and Benzo(j)fluoranthene have the same GC retention time and are reported as the sum based on the Benzo(b)fluoranthene response.

Certified By:



Certificate of Analysis

AGAT WORK ORDER: 15E011193

PROJECT: A04012A07

6310 ROPER ROAD
EDMONTON, ALBERTA
CANADA T6B 3P9
TEL (780)395-2525
FAX (780)462-2490
<http://www.agatlabs.com>

CLIENT NAME: KLOHN CRIPPEN

ATTENTION TO: Nicole Wills

SAMPLING SITE:

SAMPLED BY:

Total Petroleum Hydrocarbon Analysis with BTEX - Water

DATE RECEIVED: 2015-08-24

DATE REPORTED: 2015-09-02

Parameter	Unit	SAMPLE DESCRIPTION:		P06-01	P06-02	P06-03	FEILD BLANK	TRIP BLANK	PO6-07	PO6-06
		G / S	RDL	6896102	6896292	6896293	6896296	6896298	6896305	6896306
Benzene	mg/L	0.0005	<0.0005	<0.0005	<0.0005	0.0062	<0.0005	<0.0005	<0.0005	<0.0005
Toluene	mg/L	0.0003	0.0004	<0.0003	<0.0003	0.0003	<0.0003	<0.0003	<0.0003	<0.0003
Ethylbenzene	mg/L	0.0005	<0.0005	<0.0005	<0.0005	0.0161	<0.0005	<0.0005	<0.0005	<0.0005
Xylenes	mg/L	0.0005	0.0006	<0.0005	<0.0005	0.0217	<0.0005	<0.0005	0.001	<0.0005
Total Purgeable Hydrocarbons	mg/L	0.1	<0.1	<0.1	<0.1	0.4	<0.1	<0.1	<0.1	<0.1
Total Extractable Hydrocarbons	mg/L	0.1	<0.1	<0.1	<0.1	0.5	<0.1	<0.1	<0.1	<0.1
Total Petroleum Hydrocarbons	mg/L	0.1	<0.1	<0.1	<0.1	0.9	<0.1	<0.1	<0.1	<0.1
Surrogate	Unit	Acceptable Limits								
Toluene-d8 (BTEX)	%	50-150	83	98	85	80	82	76	76	76
o-Terphenyl (TEH)	%	50-150	88	91	96	89	95	97	61	61

Comments: RDL - Reported Detection Limit; G / S - Guideline / Standard

6896102-6896306 Total Petroleum Hydrocarbons (TPH, n-C5 - n-C32); Calculated based on addition of n-C5 - n-C10 fraction (purgeable method) and n-C10 - n-C32 fraction (TEH extraction)
Total Extractable Hydrocarbons (TEH, n-C10 - n-C32); Extractable compounds calculated based on the average of the n-C10, n-C16, and n-C34 which is also equal to the n-icosane (n-C20) response.
Total Purgeable Hydrocarbons (TPGH, n-C5 - n-C10); Purgeable compounds calculated based on toluene response.

Certified By:



Certificate of Analysis

AGAT WORK ORDER: 15E011193

PROJECT: A04012A07

6310 ROPER ROAD
EDMONTON, ALBERTA
CANADA T6B 3P9
TEL (780)395-2525
FAX (780)462-2490
<http://www.agatlabs.com>

CLIENT NAME: KLOHN CRIPPEN

ATTENTION TO: Nicole Wills

SAMPLING SITE:

SAMPLED BY:

Metals - Dissolved - Alberta Tier 1

DATE RECEIVED: 2015-08-24

DATE REPORTED: 2015-09-02

Parameter	Unit	SAMPLE DESCRIPTION:		P06-01	P06-02	P06-03	FEILD BLANK	TRIP BLANK	PO6-07
		SAMPLE TYPE:		Water	Water	Water	Water	Water	Water
		DATE SAMPLED:		8/20/2015	8/20/2015	8/20/2015	8/20/2015	8/20/2015	8/20/2015
		G / S	RDL	6896102	6896292	6896293	6896296	6896298	6896305
Dissolved Aluminum	mg/L	0.1	0.004	0.293	0.087	0.063	<0.004	<0.004	0.124
Dissolved Antimony	mg/L	0.006	0.001	0.003	0.002	0.001	<0.001	<0.001	<0.001
Dissolved Arsenic	mg/L	0.010	0.001	0.003	0.002	0.005	<0.001	<0.001	0.003
Dissolved Barium	mg/L	1	0.05	0.24	0.16	0.33	<0.05	<0.05	0.25
Dissolved Boron	mg/L	5	0.01	0.30	0.22	0.21	<0.01	<0.01	0.05
Dissolved Cadmium	mg/L	0.005	0.000016	0.000063	0.000128	0.000028	<0.000016	<0.000016	0.000216
Dissolved Chromium	mg/L	0.05	0.001	<0.001	0.001	0.001	<0.001	<0.001	0.001
Dissolved Copper	mg/L	1	0.001	0.003	0.005	0.001	0.002	<0.001	0.004
Dissolved Iron	mg/L	0.3	0.1	6.8	0.2	13.1	<0.1	<0.1	1.8
Dissolved Lead	mg/L	0.01	0.0005	0.0026	0.0011	<0.0005	<0.0005	<0.0005	0.0011
Dissolved Manganese	mg/L	0.05	0.005	0.182	0.283	1.22	<0.005	<0.005	0.718
Dissolved Molybdenum	mg/L		0.001	0.020	0.007	0.005	<0.001	<0.001	0.002
Dissolved Nickel	mg/L		0.01	0.01	0.01	<0.01	<0.01	<0.01	0.01
Dissolved Selenium	mg/L		0.0005	0.0010	<0.0005	<0.0005	<0.0005	<0.0005	0.0018
Dissolved Silver	mg/L	NA	0.00006	<0.00006	<0.00006	<0.00006	<0.00006	<0.00006	<0.00006
Dissolved Sodium	mg/L	200	0.6	67.3	75.2	23.4	<0.6	<0.6	47.7
Dissolved Thallium	mg/L		0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
Dissolved Uranium	mg/L	0.02	0.001	0.001	0.002	<0.001	<0.001	<0.001	0.003
Dissolved Zinc	mg/L	5	0.01	<0.01	0.02	<0.01	<0.01	<0.01	0.02

Comments: RDL - Reported Detection Limit; G / S - Guideline / Standard: Refers to CCME (D Water)

6896102 < - Values refer to Report Detection Limit.
Values verified by repeat analysis.

6896292-6896293 < - Values refer to Report Detection Limit.

6896296 < - Values refer to Report Detection Limit.
Values verified by repeat analysis.

6896298 < - Values refer to Report Detection Limit.

6896305 < - Values refer to Report Detection Limit.
Values verified by repeat analysis.

Certified By:



Certificate of Analysis

AGAT WORK ORDER: 15E011193

PROJECT: A04012A07

6310 ROPER ROAD
EDMONTON, ALBERTA
CANADA T6B 3P9
TEL (780)395-2525
FAX (780)462-2490
<http://www.agatlabs.com>

CLIENT NAME: KLOHN CRIPPEN

ATTENTION TO: Nicole Wills

SAMPLING SITE:

SAMPLED BY:

Routine Chemistry Water Analysis

DATE RECEIVED: 2015-08-24

DATE REPORTED: 2015-09-02

Parameter	Unit	SAMPLE DESCRIPTION:		P06-01	P06-02	P06-03	FEILD BLANK	TRIP BLANK	PO6-07
		SAMPLE TYPE:		Water	Water	Water	Water	Water	Water
		DATE SAMPLED:		8/20/2015	8/20/2015	8/20/2015	8/20/2015	8/20/2015	8/20/2015
		G / S	RDL	6896102	6896292	6896293	6896296	6896298	6896305
pH	pH Units	6.5-8.5	NA	6.97	6.97	6.95	5.91	5.35	6.96
p - Alkalinity (as CaCO3)	mg/L		5	<5	<5	<5	<5	<5	<5
T - Alkalinity (as CaCO3)	mg/L		5	475	262	459	<5	<5	371
Bicarbonate	mg/L		5	580	319	560	<5	<5	452
Carbonate	mg/L		5	<5	<5	<5	<5	<5	<5
Hydroxide	mg/L		5	<5	<5	<5	<5	<5	<5
Electrical Conductivity	uS/cm		1	888	571	1020	<1	<1	729
Fluoride	mg/L	1.5	0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Chloride	mg/L	250	1	10	14	30	<1	<1	13
Nitrite	mg/L	3	0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Nitrite-N	mg/L	1	0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02
Nitrate	mg/L	45	0.5	<0.5	<0.5	0.7	<0.5	<0.5	<0.5
Nitrate-N	mg/L	10	0.02	<0.02	<0.02	0.16	<0.02	<0.02	<0.02
Nitrate+Nitrite - Nitrogen	mg/L		0.02	<0.02	<0.02	0.16	<0.02	<0.02	<0.02
Sulfate	mg/L	500	1	3	6	31	<1	<1	6
Dissolved Calcium	mg/L		0.3	84.4	41.8	94.4	<0.3	<0.3	75.9
Dissolved Magnesium	mg/L		0.2	35.7	14.8	28.4	<0.2	<0.2	29.2
Dissolved Sodium	mg/L	200	0.6	67.3	75.2	23.4	<0.6	<0.6	47.7
Dissolved Potassium	mg/L		0.6	<0.6	1.1	66.4	<0.6	<0.6	0.9
Dissolved Iron	mg/L	0.3	0.1	6.8	0.2	13.1	<0.1	<0.1	1.8
Dissolved Manganese	mg/L	0.05	0.005	0.182	0.283	1.22	<0.005	<0.005	0.718
Calculated TDS	mg/L		0.6	554	347	616	<0.6	<0.6	448
Sodium Adsorption Ratio	N/A			1.55	2.54	0.542	0	0	1.18
Hardness	mg CaCO3/L		1	358	165	353	<1	<1	310
Ion Balance	%		1	105	115	96	13	13	106

Certified By:



Certificate of Analysis

AGAT WORK ORDER: 15E011193

PROJECT: A04012A07

6310 ROPER ROAD
EDMONTON, ALBERTA
CANADA T6B 3P9
TEL (780)395-2525
FAX (780)462-2490
<http://www.agatlabs.com>

CLIENT NAME: KLOHN CRIPPEN

ATTENTION TO: Nicole Wills

SAMPLING SITE:

SAMPLED BY:

Routine Chemistry Water Analysis

DATE RECEIVED: 2015-08-24

DATE REPORTED: 2015-09-02

Comments: RDL - Reported Detection Limit; G / S - Guideline / Standard: Refers to CCME (D Water)

- 6896102-6896293 < - Values refer to Report Detection Limits.
pH has been analyzed past the recommended holding time of 15 minutes from sampling (field measurement ideal if more accurate data required)
Nitrate and Nitrite: The regulatory hold time for the analysis of nitrate and/or nitrite in water is 48 hours in Alberta and 72 hours in British Columbia.
- 6896296-6896298 < - Values refer to Report Detection Limits.
pH has been analyzed past the recommended holding time of 15 minutes from sampling (field measurement ideal if more accurate data required)
Nitrate and Nitrite: The regulatory hold time for the analysis of nitrate and/or nitrite in water is 48 hours in Alberta and 72 hours in British Columbia.
*Balance Reviewed: Interference or Non- Measured Component
- 6896305 < - Values refer to Report Detection Limits.
pH has been analyzed past the recommended holding time of 15 minutes from sampling (field measurement ideal if more accurate data required)
Nitrate and Nitrite: The regulatory hold time for the analysis of nitrate and/or nitrite in water is 48 hours in Alberta and 72 hours in British Columbia.

Certified By:

Quality Assurance

 CLIENT NAME: KLOHN CRIPPEN
 PROJECT: A04012A07
 SAMPLING SITE:

 AGAT WORK ORDER: 15E011193
 ATTENTION TO: Nicole Wills
 SAMPLED BY:

Trace Organics Analysis

RPT Date: Sep 02, 2015			DUPLICATE			Method Blank	REFERENCE MATERIAL			METHOD BLANK SPIKE			MATRIX SPIKE		
PARAMETER	Batch	Sample Id	Dup #1	Dup #2	RPD		Measured Value	Acceptable Limits		Recovery	Acceptable Limits		Recovery	Acceptable Limits	
								Lower	Upper		Lower	Upper		Lower	Upper
Polyaromatic Hydrocarbon Analysis - Water FWAL															
Naphthalene	23	6896102	0.00001	<0.00001	NA	<0.00001	115%	70%	130%	93%	70%	130%	96%	70%	130%
2-Methylnaphthalene	23	6896102	<0.00001	<0.00001	NA	<0.00001				94%	70%	130%	95%	70%	130%
Quinoline	23	6896102	<0.00005	<0.00005	NA	<0.00005	110%	70%	130%	121%	70%	130%	115%	70%	130%
Acenaphthylene	23	6896102	<0.00001	<0.00001	NA	<0.00001	116%	70%	130%	83%	70%	130%	87%	70%	130%
Acenaphthene	23	6896102	<0.00001	<0.00001	NA	<0.00001	116%	70%	130%	92%	70%	130%	97%	70%	130%
Fluorene	23	6896102	<0.00001	<0.00001	NA	<0.00001	113%	70%	130%	90%	70%	130%	94%	70%	130%
Phenanthrene	23	6896102	0.00001	<0.00001	NA	<0.00001	111%	70%	130%	88%	70%	130%	91%	70%	130%
Anthracene	23	6896102	<0.00001	<0.00001	NA	<0.00001	94%	70%	130%	79%	70%	130%	88%	70%	130%
Fluoranthene	23	6896102	<0.00001	<0.00001	NA	<0.00001	115%	70%	130%	89%	70%	130%	88%	70%	130%
Pyrene	23	6896102	<0.00001	<0.00001	NA	<0.00001	114%	70%	130%	87%	70%	130%	87%	70%	130%
Acridine	23	6896102	<0.00005	<0.00005	NA	<0.00005	108%	70%	130%	79%	70%	130%	89%	70%	130%
Benzo[a]anthracene	23	6896102	0.00001	<0.00001	NA	<0.00001	120%	70%	130%	85%	70%	130%	84%	70%	130%
Chrysene	23	6896102	<0.00001	<0.00001	NA	<0.00001	118%	70%	130%	93%	70%	130%	96%	70%	130%
Benzo[b+j]fluoranthene	23	6896102	<0.00001	<0.00001	NA	<0.00001	114%	70%	130%	83%	70%	130%	101%	70%	130%
Benzo[k]fluoranthene	23	6896102	<0.00001	<0.00001	NA	<0.00001	109%	70%	130%	92%	70%	130%	84%	70%	130%
Benzo[a]pyrene	23	6896102	<0.00001	<0.00001	NA	<0.00001	107%	70%	130%	83%	70%	130%	83%	70%	130%
Indeno[1,2,3-cd]pyrene	23	6896102	<0.00001	<0.00001	NA	<0.00001	109%	70%	130%	93%	70%	130%	88%	70%	130%
Dibenzo[ah]anthracene	23	6896102	<0.00001	<0.00001	NA	<0.00001	109%	70%	130%	98%	70%	130%	94%	70%	130%
Benzo[ghi]perylene	23	6896102	<0.00001	<0.00001	NA	<0.00001	111%	70%	130%	95%	70%	130%	94%	70%	130%

Comments: If the RPD value is NA, the results of the duplicates are under 5X the RDL and will not be calculated.

Total Petroleum Hydrocarbon Analysis with BTEX - Water

Benzene	745	LS	<0.0005	<0.0005	NA	<0.0005	113%	80%	120%	117%	80%	120%	127%	70%	130%
Toluene	745	LS	<0.0003	<0.0003	NA	<0.0003	113%	80%	120%	113%	80%	120%	127%	70%	130%
Ethylbenzene	745	LS	<0.0005	<0.0005	NA	<0.0005	113%	80%	120%	107%	80%	120%	120%	70%	130%
Xylenes	745	LS	0.0006	0.0007	NA	<0.0005	116%	80%	120%	107%	80%	120%	121%	70%	130%
Total Purgeable Hydrocarbons	745	LS	<0.1	<0.1	NA	<0.1	97%	80%	120%	106%	80%	120%	116%	70%	130%
Total Extractable Hydrocarbons	862	6894078	0.6	0.7	15.4%	<0.1	108%	80%	120%	91%	80%	120%	79%	70%	130%

Comments: If the RPD value is NA, the results of the duplicates are under 5X the RDL and will not be calculated.

Certified By: _____



Quality Assurance

CLIENT NAME: KLOHN CRIPPEN

AGAT WORK ORDER: 15E011193

PROJECT: A04012A07

ATTENTION TO: Nicole Wills

SAMPLING SITE:

SAMPLED BY:

Water Analysis															
RPT Date: Sep 02, 2015			DUPLICATE				Method Blank	REFERENCE MATERIAL			METHOD BLANK SPIKE		MATRIX SPIKE		
PARAMETER	Batch	Sample Id	Dup #1	Dup #2	RPD	Measured Value		Acceptable Limits		Recovery	Acceptable Limits		Recovery	Acceptable Limits	
								Lower	Upper		Lower	Upper		Lower	Upper

Metals - Dissolved - Alberta Tier 1

Dissolved Aluminum	237	6895576	0.022	0.021	4.7%	< 0.004	98%	80%	120%				109%	80%	120%
Dissolved Antimony	237	6895576	0.004	0.003	NA	< 0.001	113%	80%	120%				105%	80%	120%
Dissolved Arsenic	237	6895576	0.007	0.007	0.0%	< 0.001	101%	80%	120%				98%	80%	120%
Dissolved Barium	237	6895576	0.05	0.06	18.2%	< 0.05	103%	80%	120%				110%	80%	120%
Dissolved Boron	237	6895576	3.21	3.16	1.6%	< 0.01	94%	80%	120%				95%	80%	120%
Dissolved Cadmium	237	6895576	0.000198	0.000222	11.4%	< 0.000016	98%	80%	120%				98%	80%	120%
Dissolved Chromium	237	6895576	< 0.001	< 0.001	NA	< 0.001	99%	80%	120%				95%	80%	120%
Dissolved Copper	237	6895576	< 0.001	< 0.001	NA	< 0.001	98%	80%	120%				93%	80%	120%
Dissolved Lead	237	6895576	< 0.0005	< 0.0005	NA	< 0.0005	97%	80%	120%				101%	80%	120%
Dissolved Molybdenum	237	6895576	0.298	0.297	0.3%	< 0.001	98%	80%	120%				101%	80%	120%
Dissolved Nickel	237	6895576	0.009	0.011	20.0%	< 0.01	99%	80%	120%				94%	80%	120%
Dissolved Selenium	237	6895576	< 0.0005	< 0.0005	NA	< 0.0005	100%	80%	120%				96%	80%	120%
Dissolved Silver	237	6895576	< 0.00005	< 0.00005	NA	< 0.00005	92%	80%	120%				97%	80%	120%
Dissolved Thallium	237	6895576	< 0.0005	< 0.0005	NA	< 0.0005	95%	80%	120%				104%	80%	120%
Dissolved Uranium	237	6895576	0.007	0.008	13.3%	< 0.001	94%	80%	120%				101%	80%	120%
Dissolved Zinc	237	6895576	2.30	2.14	7.2%	< 0.01	98%	80%	120%				93%	80%	120%

Comments: If Matrix spike value is NA, the spiked analyte concentration was lower than that of the matrix contribution.
 If the RPD value is NA, the results of the duplicates are under 5X the RDL and will not be calculated.

Routine Chemistry Water Analysis

pH	1028	6898425	6.21	6.13	1.3%		100%	90%	110%						
p - Alkalinity (as CaCO3)	1028	6898425	<5	<5	NA	< 5	NA								
T - Alkalinity (as CaCO3)	1028	6898425	<5	<5	NA	< 5	95%	80%	120%						
Bicarbonate	1028	6898425	<5	<5	NA	< 5	NA								
Carbonate	1028	6898425	<5	<5	NA	< 5	NA								
Hydroxide	1028	6898425	<5	<5	NA	< 5	NA								
Electrical Conductivity	1028	6898425	1	<1	NA	< 1	100%	80%	120%						
Fluoride	972	6899137	< 0.05	< 0.05	NA	< 0.05	105%	80%	120%	95%	80%	120%	98%	80%	120%
Chloride	972	6904725	11	11	0.0%	< 1	107%	80%	120%	102%	80%	120%	100%	80%	120%
Nitrite	972	6904725	< 0.05	< 0.05	NA	< 0.05	105%	80%	120%	99%	80%	120%	98%	80%	120%
Nitrate	972	6904725	< 0.5	< 0.5	NA	< 0.5	106%	80%	120%	102%	80%	120%	98%	80%	120%
Sulfate	972	6904725	147	148	0.7%	< 1	101%	80%	120%	100%	80%	120%	100%	80%	120%
Dissolved Calcium	238	6898972	1360	1600	16.2%	< 0.3	89%	80%	120%				106%	80%	120%
Dissolved Magnesium	238	6898972	615	671	8.7%	< 0.2	86%	80%	120%				96%	80%	120%
Dissolved Sodium	238	6898972	306	327	6.6%	< 0.6	85%	80%	120%				83%	80%	120%
Dissolved Potassium	238	6898972	15.4	16.5	6.9%	< 0.6	82%	80%	120%				105%	80%	120%
Dissolved Iron	238	6898972	<0.1	<0.1	NA	< 0.1	96%	80%	120%				95%	80%	120%
Dissolved Manganese	238	6898972	2.33	2.49	6.6%	< 0.005	93%	80%	120%				108%	80%	120%



Quality Assurance

CLIENT NAME: KLOHN CRIPPEN
 PROJECT: A04012A07
 SAMPLING SITE:

AGAT WORK ORDER: 15E011193
 ATTENTION TO: Nicole Wills
 SAMPLED BY:

Water Analysis (Continued)

RPT Date: Sep 02, 2015			DUPLICATE			Method Blank	REFERENCE MATERIAL		METHOD BLANK SPIKE		MATRIX SPIKE				
PARAMETER	Batch	Sample Id	Dup #1	Dup #2	RPD		Measured Value	Acceptable Limits		Recovery	Acceptable Limits		Recovery	Acceptable Limits	
								Lower	Upper		Lower	Upper		Lower	Upper

Comments: If the RPD value is NA, the results of the duplicates are under 5X the RDL and will not be calculated.
 If Matrix spike value is NA, the spiked analyte concentration was lower than that of the matrix contribution.

Certified By: _____

Method Summary

CLIENT NAME: KLOHN CRIPPEN

AGAT WORK ORDER: 15E011193

PROJECT: A04012A07

ATTENTION TO: Nicole Wills

SAMPLING SITE:

SAMPLED BY:

PARAMETER	AGAT S.O.P	LITERATURE REFERENCE	ANALYTICAL TECHNIQUE
Trace Organics Analysis			
Naphthalene	ORG-170-5421	EPA SW-846 3510 & 8270	GC/MS
2-Methylnaphthalene	ORG-170-5421	EPA SW-846 3510 & 8270	GC/MS
Quinoline	ORG-170-5421	EPA SW-846 3510 & 8270	GC/MS
Acenaphthylene	ORG-170-5421	EPA SW-846 3510 & 8270	GC/MS
Acenaphthene	ORG-170-5421	EPA SW-846 3510 & 8270	GC/MS
Fluorene	ORG-170-5421	EPA SW-846 3510 & 8270	GC/MS
Phenanthrene	ORG-170-5421	EPA SW-846 3510 & 8270	GC/MS
Anthracene	ORG-170-5421	EPA SW-846 3510 & 8270	GC/MS
Fluoranthene	ORG-170-5421	EPA SW-846 3510 & 8270	GC/MS
Pyrene	ORG-170-5421	EPA SW-846 3510 & 8270	GC/MS
Acridine	ORG-170-5421	EPA SW-846 3510 & 8270	GC/MS
Benzo[a]anthracene	ORG-170-5421	EPA SW-846 3510 & 8270	GC/MS
Chrysene	ORG-170-5421	EPA SW-846 3510 & 8270	GC/MS
Benzo[b+j]fluoranthene	ORG-170-5421	EPA SW-846 3510 & 8270	GC/MS
Benzo[k]fluoranthene	ORG-170-5421	EPA SW-846 3510 & 8270	GC/MS
Benzo[a]pyrene	ORG-170-5421	EPA SW-846 3510 & 8270	GC/MS
Indeno[1,2,3-cd]pyrene	ORG-170-5421	EPA SW-846 3510 & 8270	GC/MS
Dibenzo[ah]anthracene	ORG-170-5421	EPA SW-846 3510 & 8270	GC/MS
Benzo[ghi]perylene	ORG-170-5421	EPA SW-846 3510 & 8270	GC/MS
2-Fluorobiphenyl	ORG-170-5420/-5421	EPA SW-846 3510 & 8270	GC/MS
p-Terphenyl-d14	ORG-170-5420/-5421	EPA SW-846 3510 & 8270	GC/MS
B[a]P TPE	ORG-170-5420		CALCULATION
Benzene	ORG-170-5110/5140/5430/5440	EPA 624 & SW-846 5030	GC/MS
Toluene	ORG-170-5110/5140/5430/5440	EPA 624 & SW-846 5030	GC/MS
Ethylbenzene	ORG-170-5110/5140/5430/5440	EPA 624 & SW-846 5030	GC/MS
Xylenes	ORG-170-5110/5140/5430/5440	EPA 624 & SW-846 5030	GC/MS
Total Purgeable Hydrocarbons	ORG-170-5110/5140/5430/5440	EPA 624 & SW-846 3810	GC/MS
Total Extractable Hydrocarbons	ORG-170-5120/5300	AEC A108.0, EPA SW-846 3510	GC/FID
Total Petroleum Hydrocarbons	ORG-170-5120/5300/5110/5140/5430/5440	EPA 624 & SW-846 3810/3510, AEC A108.0	GC/MS & GC/FID
Toluene-d8 (BTEX)	ORG-170-5110/5140/5430/5440	EPA 624 & SW-846 5030	GC/MS
o-Terphenyl (TEH)	ORG-170-5120/5300	AEC A108.0, EPA SW-846 3510	GC/FID

Method Summary

CLIENT NAME: KLOHN CRIPPEN

AGAT WORK ORDER: 15E011193

PROJECT: A04012A07

ATTENTION TO: Nicole Wills

SAMPLING SITE:

SAMPLED BY:

PARAMETER	AGAT S.O.P	LITERATURE REFERENCE	ANALYTICAL TECHNIQUE
Water Analysis			
Dissolved Aluminum	INO-171-6202	SM 3125 B	ICP-MS
Dissolved Antimony	INOR-171-6202	SM 3125 B	ICP-MS
Dissolved Arsenic	INOR-171-6202	SM 3125 B	ICP-MS
Dissolved Barium	INOR-171-6202	SM 3125 B	ICP-MS
Dissolved Boron	INOR-171-6202	SM 3125 B	ICP-MS
Dissolved Cadmium	INOR-171-6202	SM 3125 B	ICP-MS
Dissolved Chromium	INOR-171-6202	SM 3125 B	ICP-MS
Dissolved Copper	INOR-171-6202	SM 3125 B	ICP-MS
Dissolved Iron	INOR-171-6201	SM 3120 B	ICP/OES
Dissolved Lead	INOR-171-6202	SM 3125 B DW	ICP-MS
Dissolved Manganese	INOR-171-6201	SM 3120 B	ICP/OES
Dissolved Molybdenum	INOR-171-6202	SM 3125 B	ICP-MS
Dissolved Nickel	INOR-171-6202	SM 3125 B	ICP-MS
Dissolved Selenium	INOR-171-6202	SM 3125 B	ICP-MS
Dissolved Silver	INOR-171-6202	SM 3125 B	ICP-MS
Dissolved Sodium	INOR-171-6201	SM 3120 B	ICP/OES
Dissolved Thallium	INOR-171-6202	SM 3125 B	ICP-MS
Dissolved Uranium	INOR-171-6202	SM 3125 B	ICP-MS
Dissolved Zinc	INOR-171-6202	SM 3125 B	ICP-MS
pH	INOR-171-6205	SM 4500 H+	PH METER
p - Alkalinity (as CaCO ₃)	INOR-171-6205	SM 2320 B	TITRATION
T - Alkalinity (as CaCO ₃)	INOR-171-6205	SM 2320 B	TITRATION
Bicarbonate	INOR-171-6205	SM 2320 B	PC TITRATE
Carbonate	INOR-171-6205	SM 2320 B	PC TITRATE
Hydroxide	INOR-171-6205	SM 2320 B	TITRATION
Electrical Conductivity	INOR-171-6205	SM 2510 B	CONDUCTIVITY METER
Fluoride	INST 0150	SM 4110 B	ION CHROMATOGRAPH
Chloride	INOR-171-6200	SM 4110 B	ION CHROMATOGRAPH
Nitrite	INST 0150	SM 4110 B	ION CHROMATOGRAPH
Nitrite-N	INST 0150	SM 4110 B	ION CHROMATOGRAPH
Nitrate	INOR-171-6200	SM 4110 B	ION CHROMATOGRAPH
Nitrate-N	INST 0150	SM 4110 B	ION CHROMATOGRAPH
Nitrate+Nitrite - Nitrogen	INOR-171-6200	SM 4110 B	ION CHROMATOGRAPH
Sulfate	INOR-171-6200	SM 4110 B	ION CHROMATOGRAPH
Dissolved Calcium	INOR-171-6201	SM 3120 B	ICP/OES
Dissolved Magnesium	INST 0140	SM 3120 B	ICP/OES
Dissolved Potassium	INST 0140	SM 3120 B	ICP/OES
Calculated TDS		SM 1030E	CALCULATION
Sodium Adsorption Ratio		CARTER & GREGORICH 2007	ICP/OES
Hardness		SM 3120 B	ICP/OES
Ion Balance		SM 1030E	CALCULATION



Laboratory Use Only

Arrival Temperature: 6.6°C
AGAT Job Number: 15E011193

Chain of Custody Record

Report Information

Company: KCB
Contact: Nicole Wills
Address: 2618 Hopewell place
Calgary, Alberta
Phone: 403-730-6809 Fax: _____
LSD: _____
Client Project #: A04012A07

Report Information

1. Name: Nicole Wills
Email: Nwills@klohn.com
2. Name: Konrad Ross
Email: Kross@klohn.com
3. Name: Ken Smart
Email: KSmart@klohn.com

Report Format

Single Sample per Page
 Multiple Samples per Page

Date and Time: 15 AUG 24 16:44

Turnaround Time Required (TAT)

Regular TAT 5 to 7 business days
Rush TAT Less than 24 hours
 24 to 48 hours
 48 to 72 hours

Date Required: _____

RUSH TAT REQUESTS UPON SELECTING A RUSH TAT. THE CLIENT ACCEPTS THAT A RUSH SURCHARGE WILL BE ADDED TO THE INVOICE. SEE BACK FOR SURCHARGE.

Invoice To Same Yes / No

Company: _____
Contact: _____
Address: _____
Phone: _____ Fax: _____
PO/AFE#: _____

Requirements (Selection may impact detection limits)

CCME AB Tier 1 BC CSR

Agricultural Agricultural AW
 Industrial Industrial IW
 Residential/Park Residential/Park LW
 Commercial Commercial DW
 Drinking Water Natural Area
 FWAL AB Surface Water

Other
 D50 (Drilling) SPIGEC

LABORATORY USE (LAB ID #)	SAMPLE IDENTIFICATION	SAMPLE MATRIX	DATE/TIME SAMPLED	COMMENTS - SITE SAMPLE INFO. SAMPLE CONTAINMENT	# OF CONTAINERS	Detailed Soil Salinity (Saturated Paste)	CCME BTEX/F1-#	Soil Metals <input type="checkbox"/> HWS-B <input type="checkbox"/> Cr ⁶ <input type="checkbox"/> Hg	Water Metals <input checked="" type="checkbox"/> Dissolved <input type="checkbox"/> Total <input type="checkbox"/> Hg <input type="checkbox"/> Cr ⁶	Routine Water Potability	AB Class 2 Landfill	BC Landfill	D50 Detailed Soil Salinity (As Received)	Microtox	BTEX/VPH/EPH <input type="checkbox"/> LEPH/HEPH <input type="checkbox"/>	PAH	TEH/TNH	HOLD FOR 60 DAYS	PRESERVED (Y/N)	CONTAMINATED/HAZARDOUS (Y/N)	
6896102	P06-01	Water	Aug 20 / 15	Metals	9	X	X	X	X							X	X				
6292	P06-02	↓		preserved and	9	X	X	X	X							X	X				
6293	P06-03		Field & filtered.	9	X	X	X	X								X	X				
-	P06-04																				
6296	FIELD BLANK					9	X	X	X								X	X			
-	P06-06																				
6298	TRIP BLANK					9	X	X	X								X	X			
6305	P06-07					9	X	X	X								X	X			
6306	P06-06					6	X										X	X			

Samples Relinquished By (Print Name and Sign): <u>Ken Smart</u>	Date/Time	Samples Received By (Print Name and Sign): <u>ABBY B.</u>	Date/Time <u>24 AUG 17</u>	Pink Copy - Client Yellow Copy - AGAT White Copy - AGAT	Page <u>1</u> of _____ Nº: AB 000873
Samples Relinquished By (Print Name and Sign):	Date/Time	Samples Received By (Print Name and Sign):	Date/Time <u>8/16/14</u>		
Samples Relinquished By (Print Name and Sign):	Date/Time	Samples Received By (Print Name and Sign):	Date/Time		



AGAT Laboratories

SAMPLE INTEGRITY RECEIPT FORM

RECEIVING BASICS - Shipping

Company/Consultant: KCB
 Courier: CANADIAN NORTH Prepaid Collect
 Waybill #: 518-YEV-7060-2722
 Branch: EDM GP FN FM RD VAN LYD FSJ EST Other: _____
 Custody Seal Intact: Yes No NA
 TAT: <24hr 24-48hr 48-72hr Reg Other _____
 Cooler Quantity: 1

TIME SENSITIVE ISSUES - Shipping

Earliest Date Sampled: 20 AUG 15 ALREADY EXCEEDED? Yes No
 MIBI/Time Sensitive Test*: ~ / ~ Expiry: ~ / ~
 Hydrocarbon Test: ~ / ~ Expiry: ~ / ~
 Are samples received more than 5 days after sampling: Yes No

*Residual Chlorine, DO, Turbidity, BOD, Nitrate/Nitrite, Microtox

Temperature (to be recorded from bottles/jars only)

N/A - Only Soil Bags Received

(1) (Bottle/Jar) 7.8 + 4.7 + 2.4 = 6.6 °C (2) (Bottle/Jar) ___ + ___ + ___ = ___ °C
 (3) (Bottle/Jar) ___ + ___ + ___ = ___ °C (4) (Bottle/Jar) ___ + ___ + ___ = ___ °C
 (5) (Bottle/Jar) ___ + ___ + ___ = ___ °C (6) (Bottle/Jar) ___ + ___ + ___ = ___ °C

(If more than 6 coolers are received use another sheet of paper and attach)

SAMPLE INTEGRITY - Shipping

Hazardous Samples: Why Hazardous: ~ / ~
 Precaution taken: ~ / ~
 Legal Samples: Yes No
 International Samples: Yes No Tape Sealed: Yes No
 Coolant used: Icepack Bagged Ice Free Ice Free Water None

LOGISTICS USE ONLY

Workorder No: ISE011193
 Samples Damaged: Yes No If YES why?
 No Bubble Wrap Frozen Courier
 Other: N/A
 Correct Sample Requirements for Testing
 Correct Bottles: Yes No Correct Amount: Yes No
 Correct Labels: Yes No
 If NO to any of the above, explain why: _____
 Visible Sediment in Waters : Yes No
 Additional Integrity Issues or concerns:
Sample ID 6306B + 6292F have less than 50% of sample in bottle.
 Account Project Manager: Alvelyn P. have they been notified of the above issues: Yes No
 Whom spoken to: Alvelyn P. Date/Time: 25 AUG 2015
 CPM Initial _____

I-1 QUALITY ASSURANCE/QUALITY CONTROL

As part of routine QA/QC, 13 field replicate samples were collected during the Soil Assessment and sent to the laboratory for analysis. The replicate samples were collected at the same time as the initial soil sample and following the same sampling procedures.

The purpose of the replicate samples is to ensure consistency in the analytical results that the laboratory produces. Large variances between replicate results and the original sampling results could indicate errors in the testing process conducted by the laboratory. Variances in results are investigated further with the laboratory.

Precision in analytical results may be evaluated by calculating the relative percent difference (RPD) or absolute difference (AD) of replicate samples using the following formulae:

$$RPD = \frac{(S - D)}{(S + D) / 2} \times 100 \qquad AD = (S - D)$$

where: RPD and AD are absolute values,
S is the original sample result (mg/kg), and,
D is the replicate sample result (mg/kg).

Zeiner's Environmental Standard's Field Duplicate Criteria has been applied in order to evaluate the precision of the results (Zeiner 1994).

If both the original and replicate soil sample concentrations are greater than five times the MDL for a given parameter, the RPD must be less than or equal to 40% to be considered precise. If the results lie outside of the range, they should be considered estimates only.

If at least one of the sample concentrations is less than or equal to five times the MDL for a given parameter, the AD should be less than or equal to two times the MDL. If the AD is greater than two times the MDL, the results should be considered estimates only.

If one of the sample concentrations is positive and its replicate sample concentration is less than the MDL, the AD between the reported concentration and one-half the MDL should be less than or equal to two times the MDL. If the AD is greater than two times the MDL, the results should be considered estimates only.

COC procedures were followed throughout the sampling program. COC forms were provided by AGAT and filled out by KCB personnel for each sample delivered to the laboratory.

AGAT has internal QA/QC protocols and procedures to ensure accuracy and consistency of results. These procedures include COC tracking, storage and holding times, instrument calibration, surrogate matrix spikes, blanks, and laboratory duplicates.