



**Environmental Division**

**Certificate of Analysis**

GARTNER LEE LTD.

**ATTN:** KEN BOLDT

300 TOWN CENTRE BOULEVARD  
SUITE 300  
MARKHAM ON L3R 5Z6

**Reported On:** 04-SEP-08 05:23 PM

**Revision:** 2

**Lab Work Order #:** L673741

**Date Received:** 25-AUG-08

**Project P.O. #:** KSL-00627

**Job Reference:** 80297

**Legal Site Desc:**

**CofC Numbers:** C065109

**Other Information:**

**Comments:**

  
NATASHA MARKOVIC-MIROVIC  
Account Manager

THIS REPORT SHALL NOT BE REPRODUCED EXCEPT IN FULL WITHOUT THE WRITTEN AUTHORITY OF THE LABORATORY.  
ALL SAMPLES WILL BE DISPOSED OF AFTER 30 DAYS FOLLOWING ANALYSIS. PLEASE CONTACT THE LAB IF YOU  
REQUIRE ADDITIONAL SAMPLE STORAGE TIME.

## ALS LABORATORY GROUP ANALYTICAL REPORT

		Sample ID	L673741-1	L673741-2	L673741-3	L673741-4	L673741-5
		Description					
		Sampled Date	19-AUG-08	19-AUG-08	19-AUG-08	19-AUG-08	19-AUG-08
		Sampled Time					
		Client ID	C2-MW-5	C2-MW-6	C2-MW-7	C2-MW-8	C2-MW-9
Grouping	Analyte						
<b>WATER</b>							
<b>Physical Tests</b>	Hardness (as CaCO <sub>3</sub> ) (mg/L)		1170	1090	2020	2260	1100
<b>Total Metals</b>	Arsenic (As)-Total (mg/L)		<0.010	<0.020	<0.020	<0.010	<0.020
	Cadmium (Cd)-Total (mg/L)		<0.00050	<0.0010	<0.0010	<0.00050	<0.0010
	Chromium (Cr)-Total (mg/L)		<0.0050	<0.010	<0.010	<0.0050	<0.010
	Cobalt (Co)-Total (mg/L)		<0.0050	<0.010	<0.010	<0.0050	<0.010
	Copper (Cu)-Total (mg/L)		<0.010	<0.020	<0.020	<0.010	<0.020
	Lead (Pb)-Total (mg/L)		<0.010	<0.020	<0.020	<0.010	<0.020
	Mercury (Hg)-Total (mg/L)		<0.00020	<0.00020	<0.00020	<0.00020	<0.00020
	Nickel (Ni)-Total (mg/L)		<0.050	<0.10	<0.10	<0.050	<0.10
	Zinc (Zn)-Total (mg/L)		0.125	<0.010	0.021	<0.0050	<0.010
<b>Volatile Organic Compounds</b>	Surrogate: 4-Bromofluorobenzene (SS) (%)		99	101	99	97	95
	Surrogate: Fluorobenzene (SS) (%)		97	99	98	98	101
<b>Hydrocarbons</b>	F1 (C6-C10) (mg/L)		<0.10	<0.10	<0.10	<0.10	<0.10
	TPH10-32 (mg/L)		<1.0	<1.0	<1.0	<1.0	<1.0
	Surrogate: 2,4-Dichlorotoluene (SS) (%)		118	105	107	107	104
<b>Polychlorinated Biphenyls</b>	PCB-1016 (mg/L)		<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
	PCB-1221 (mg/L)		<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
	PCB-1232 (mg/L)		<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
	PCB-1242 (mg/L)		<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
	PCB-1248 (mg/L)		<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
	PCB-1254 (mg/L)		<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
	PCB-1260 (mg/L)		<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
	PCB-1262 (mg/L)		<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
	PCB-1268 (mg/L)		<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
	Total Polychlorinated Biphenyls (mg/L)		<0.0010	<0.0010	<0.0010	<0.0010	<0.0010

\* Please refer to the Reference Information section for an explanation of any qualifiers detected.

## Reference Information

### Methods Listed (if applicable):

ALS Test Code	Matrix	Test Description	Analytical Method Reference(Based On)
<b>EPH-SF-SG-FID-VA</b>	Water	EPH in Water with Silica gel by GCFID	BCMOE EPHsg GCFID
<p>This analysis is carried out using British Columbia Ministry of Water, Land and Air Protection (BC WLAP) methods. Water samples are extracted and analyzed using the BC WLAP method "Extractable Petroleum Hydrocarbons in Water by GC/FID" (version 2.1, July 1999). This procedure involves extraction of the entire water sample with dichloromethane prior to capillary column gas chromatography with flame ionization detection (GC/FID). A silica gel cleanup procedure is applied before GC analysis, which is intended to selectively remove most naturally occurring organics. The silica gel cleanup follows the BC WLAP method "Silica Gel Cleanup of Extractable Petroleum Hydrocarbons" (Draft, October 23, 2003). This analysis is sometimes also referred to as Total Petroleum Hydrocarbons.</p>			
<b>F1-BTX-CALC-VA</b>	Water	F1-Total BTX	CCME CWS PHC TIER 1 (2001)
<p>This analysis is based on the "Reference Method for the Canada-Wide Standard for Petroleum Hydrocarbons in Soil - Tier 1 Method, Canadian Council of Ministers of the Environment, December 2000." For F1 (C6-C10), the sample undergoes a purge and trap extraction prior to analysis by GC/FID. The F1-BTEX result is calculated as follows:</p> <p>F1-BTEX: F1 (C6-C10) minus benzene, toluene, ethylbenzene and xylenes (BTEX).</p>			
<b>F1-PT-FID-VA</b>	Water	CCME F1 By P&T with GCFID	EPA SW-846, METHOD 8260
<p>This analysis is based on the "Reference Method for the Canada-Wide Standard for Petroleum Hydrocarbons in Soil - Tier 1 Method, Canadian Council of Ministers of the Environment, December 2000." For F1 (C6-C10), the sample undergoes a purge and trap extraction prior to analysis by GC/FID.</p> <p>F1 (C6-C10): Sum of all hydrocarbons that elute between nC6 and nC10.</p>			
<b>HARDNESS-CALC-VA</b>	Water	Hardness	APHA 2340B
<p>Hardness is calculated from Calcium and Magnesium concentrations, and is expressed as calcium carbonate equivalents.</p>			
<b>HG-TOT-CSR-CVAFS-VA</b>	Water	Total Mercury in Water by CVAFS (CSR)	EPA 245.7
<p>This analysis is carried out using procedures adapted from "Standard Methods for the Examination of Water and Wastewater" published by the American Public Health Association, and with procedures adapted from "Test Methods for Evaluating Solid Waste" SW-846 published by the United States Environmental Protection Agency (EPA). The procedure involves a cold-oxidation of the acidified sample using bromine monochloride prior to reduction of the sample with stannous chloride. Instrumental analysis is by cold vapour atomic fluorescence spectrophotometry (EPA Method 245.7).</p>			
<b>MET-TOT-CSR-ICP-VA</b>	Water	Total Metals in Water by ICP-OES (CSR)	EPA SW-846 3005A/6010B
<p>This analysis is carried out using procedures adapted from "Standard Methods for the Examination of Water and Wastewater" published by the American Public Health Association, and with procedures adapted from "Test Methods for Evaluating Solid Waste" SW-846 published by the United States Environmental Protection Agency (EPA). The procedures may involve preliminary sample treatment by acid digestion, using either hotblock or microwave oven, or filtration (EPA Method 3005A). Instrumental analysis is by inductively coupled plasma - optical emission spectrophotometry (EPA Method 6010B).</p>			
<b>MET-TOT-CSR-MS-VA</b>	Water	Total Metals in Water by ICPMS (CSR)	EPA SW-846 3005A/6020A
<p>This analysis is carried out using procedures adapted from "Standard Methods for the Examination of Water and Wastewater" published by the American Public Health Association, and with procedures adapted from "Test Methods for Evaluating Solid Waste" SW-846 published by the United States Environmental Protection Agency (EPA). The procedures may involve preliminary sample treatment by acid digestion, using either hotblock or microwave oven, or filtration (EPA Method 3005A). Instrumental analysis is by inductively coupled plasma - mass spectrometry (EPA Method 6020A).</p>			
<b>PCB-SF-ECD-VA</b>	Water	PCB by Extraction with GCECD	EPA 3510/8082 Liq-Liq GCECD
<p>This analysis is carried out using procedures adapted from "Test Methods for Evaluating Solid Waste" SW-846, Methods 3510, 3620, 3660, 3665 &amp; 8082, published by the United States Environmental Protection Agency (EPA). The procedure involves a liquid-liquid extraction of the entire water sample using dichloromethane. The extract is then solvent exchanged to hexane followed by one or more of the following clean-up procedures (if required): florisil clean-up, sulphur clean-up and/or sulphuric acid clean-up. The final extract is analysed by capillary column gas chromatography with electron capture detection (GC/ECD).</p>			
<b>VOC7-PT-MS-VA</b>	Water	BTEX by Purge Trap GCMS	EPA 8260b, BCMELP CSR Method
<p>This procedure involves the purge and trap extraction of the sample prior to analysis for specific Volatile Organic Compounds (VOC) by capillary column gas chromatography with mass spectrometric detection (GC/MS). The VOC analysis is carried out using procedures adapted from "Test Methods for Evaluating Solid Waste" SW-846, Method 8260, published by the United States Environmental Protection Agency (EPA). Note: For</p>			

## Reference Information

### Methods Listed (if applicable):

ALS Test Code	Matrix	Test Description	Analytical Method Reference(Based On)
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chlorinated waters certain conditions may cause the formation of trihalomethanes after sample collection. Appropriate chemical treatment of chlorinated waters will prevent trihalomethane formation in the samples. Surrogate recoveries may not be reported in cases where interferences from the sample matrix prevent accurate quantitation.

<b>XYLENES-CALC-VA</b>	Water	CSR VOC7 by MeOH with DI GCMS	CALCULATION
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Calculation of Total Xylenes

Total Xylenes is the sum of the concentrations of the ortho, meta, and para Xylene isomers. Results below detection limit (DL) are treated as zero. The DL for Total Xylenes is set to a value no less than the square root of the sum of the squares of the DLs of the individual Xylenes.

\*\* Laboratory Methods employed follow in-house procedures, which are generally based on nationally or internationally accepted methodologies. The last two letters of the above ALS Test Code column indicate the laboratory that performed analytical analysis for that test. Refer to the list below:

Laboratory Definition Code	Laboratory Location	Laboratory Definition Code	Laboratory Location
VA	ALS LABORATORY GROUP - VANCOUVER, BC, CANADA		

### GLOSSARY OF REPORT TERMS

*Surr - A surrogate is an organic compound that is similar to the target analyte(s) in chemical composition and behavior but not normally detected in environmental samples. Prior to sample processing, samples are fortified with one or more surrogate compounds.*

*The reported surrogate recovery value provides a measure of method efficiency.*

*mg/kg (units) - unit of concentration based on mass, parts per million*

*mg/L (units) - unit of concentration based on volume, parts per million*

*N/A - Result not available. Refer to qualifier code and definition for explanation*

*Test results reported relate only to the samples as received by the laboratory.*

*UNLESS OTHERWISE STATED, ALL SAMPLES WERE RECEIVED IN ACCEPTABLE CONDITION.*

*Although test results are generated under strict QA/QC protocols, any unsigned test reports, faxes, or emails are considered preliminary.*

*ALS Laboratory Group has an extensive QA/QC program where all analytical data reported is analyzed using approved referenced procedures followed by checks and reviews by senior managers and quality assurance personnel. However, since the results are obtained from chemical measurements and thus cannot be guaranteed, ALS Laboratory Group assumes no liability for the use or interpretation of the results.*



Environmental Division

www.alsenviro.com

REPORT TO:		REPORT FORMAT / DISTRIBUTION		SERVICE REQUESTED					
COMPANY: <u>Gartner kee limited</u>		STANDARD <u>✓</u> OTHER		<input checked="" type="checkbox"/> REGULAR SERVICE (DEFAULT)					
CONTACT: <u>Ken Boldt</u>		PDF <u>✓</u> EXCEL <u>✓</u> CUSTOM <u>✓</u> FAX		<input type="checkbox"/> RUSH SERVICE (2-3 DAYS)					
ADDRESS: <u>300-300 Town Centre Blvd</u>		EMAIL 1: <u>kboldt@gartner kee.com</u>		<input type="checkbox"/> PRIORITY SERVICE (1 DAY or ASAP)					
PHONE: <u>905 477 8400</u> FAX: <u>905 477 1456</u>		EMAIL 2:		<input type="checkbox"/> EMERGENCY SERVICE (<1 DAY / WEEKEND) - CONTACT ALS					
INVOICE TO: <u>SAME AS REPORT ? YES / NO</u>		INDICATE BOTTLES: FILTERED / PRESERVED (F/P)		ANALYSIS REQUEST					
COMPANY: <u>Kihuna Projects Inc</u>		CLIENT / PROJECT INFORMATION:		<input type="checkbox"/>					
CONTACT: <u>Peter Armstrong</u>		JOB #: <u>80297</u>		<input type="checkbox"/>					
ADDRESS: <u>PoBox 92, Cambridge Bay, Nu</u>		PO / AFE:		<input type="checkbox"/>					
<u>XDBOCO</u>		Legal Site Description:		<input type="checkbox"/>					
PHONE: <u>867 983 7508</u> FAX: <u>867 983 7501</u>		QUOTE #: <u>ALSEQ08-411</u>		<input type="checkbox"/>					
Lab Work Order # <u>1673741</u>		SAMPLER (Initials): <u>KB</u>		<input type="checkbox"/>					
SAMPLE IDENTIFICATION (This description will appear on the report)	DATE	TIME	SAMPLE TYPE	CUS FI	Metals CSRs	Total PCB	HAZARDOUS ?	HIGHLY CONTAMINATED ?	NUMBER OF CONTAINERS
C2-MW-5	Aug 17		Water						7
C2-MW-6	"		"						7
C2-MW-7	"		"						7
C2-MW-8	"		"						7
C2-MW-9	"		"						7
SPECIAL INSTRUCTIONS / HAZARDOUS DETAILS									
GUIDELINES / REGULATIONS									
See Quote									

Failure to complete all portions of this form may delay analysis. Please fill in this form LEGIBLY.

By the use of this form the user acknowledges and agrees with the Terms and Conditions as specified on the reverse page of the white report copy.

RELINQUISHED BY: <u>Ken Boldt</u>	DATE & TIME: _____	RECEIVED BY: _____	DATE & TIME: _____
RELINQUISHED BY: _____	DATE & TIME: _____	RECEIVED BY: <u>KB</u>	DATE & TIME: <u>Aug 25</u>
TEMPERATURE: <u>70°</u>		SAMPLE CONDITION (lab use only)	
SAMPLER RECEIVED IN GOOD CONDITION ? (YES / NO)		(If no provide details)	