



**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 04:52 PM

**Lab Work Order #:** L671383

**Date Received:** 19-AUG-08

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

**Job Reference:** 80297

**Legal Site Desc:**

**CofC Numbers:** C065198

**Other Information:**

**Comments:** Please note that Polychlorinated Biphenyl detection limits have been increased for some of the samples due to the analytical interferences encountered during the analysis.

  
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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 Description Sampled Date Sampled Time Client ID		L671383-1	L671383-2	L671383-3	L671383-4	L671383-5
		16-AUG-08	16-AUG-08	16-AUG-08	16-AUG-08	16-AUG-08
		BMW-3	MW-15	MW-150	MW-14A	MW-16
Grouping	Analyte					
<b>WATER</b>						
<b>Physical Tests</b>	Hardness (as CaCO <sub>3</sub> ) (mg/L)	191	335	338	304	157
<b>Total Metals</b>	Arsenic (As)-Total (mg/L)	0.0023	0.0020	0.0020	0.00067	0.00076
	Cadmium (Cd)-Total (mg/L)	0.000061	<0.000034	<0.000034	0.000067	0.000082
	Chromium (Cr)-Total (mg/L)	0.0437	0.0024	<0.0030	0.0100	0.0025
	Cobalt (Co)-Total (mg/L)	0.00817	0.00216	0.00208	0.00135	0.00210
	Copper (Cu)-Total (mg/L)	0.0155	<0.0020	<0.0020	0.0146	0.0040
	Lead (Pb)-Total (mg/L)	0.0091	<0.0010	<0.0010	0.00112	0.00056
	Mercury (Hg)-Total (mg/L)	<0.000020	<0.000020	<0.000020	<0.000020	<0.000020
	Nickel (Ni)-Total (mg/L)	0.0180	0.0065	0.0063	0.0091	0.0120
	Zinc (Zn)-Total (mg/L)	0.0513	0.250	0.239	2.41	0.0149
<b>Hydrocarbons</b>	F1 (C6-C10) (mg/L)	<0.10	0.35	0.33	<0.10	2.23
	F2 (C10-C16) (mg/L)	<0.30	5.98	5.15	<0.30	76.7
	F3 (C16-C34) (mg/L)	<0.30	1.65	1.40	0.33	8.01
<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.

## ALS LABORATORY GROUP ANALYTICAL REPORT

Sample ID Description Sampled Date Sampled Time Client ID		L671383-6	L671383-7	L671383-8	L671383-9	
		16-AUG-08	16-AUG-08	16-AUG-08	16-AUG-08	
		MW-8	MW-9	MW-13	MW-12	
Grouping	Analyte					
<b>WATER</b>						
<b>Physical Tests</b>	Hardness (as CaCO3) (mg/L)	1380	202	140	186	
<b>Total Metals</b>	Arsenic (As)-Total (mg/L)	<0.0025	<0.0025	0.00216	0.0051	
	Cadmium (Cd)-Total (mg/L)	0.000170	<0.000085	0.000176	0.000135	
	Chromium (Cr)-Total (mg/L)	<0.0050	0.0183	0.0205	0.0540	
	Cobalt (Co)-Total (mg/L)	0.0031	<0.0015	0.00978	0.0156	
	Copper (Cu)-Total (mg/L)	0.0228	0.0071	0.0288	0.0433	
	Lead (Pb)-Total (mg/L)	<0.0025	<0.0025	0.00725	0.0158	
	Mercury (Hg)-Total (mg/L)	<0.000020	<0.000020	<0.000020	<0.000020	
	Nickel (Ni)-Total (mg/L)	0.0268	0.0079	0.0257	0.0418	
	Zinc (Zn)-Total (mg/L)	0.0391	0.0382	0.0809	0.208	
<b>Hydrocarbons</b>	F1 (C6-C10) (mg/L)	2.89	<0.10	<0.10	<0.10	
	F2 (C10-C16) (mg/L)	8.17	0.44	<0.30	1.26	
	F3 (C16-C34) (mg/L)	1.84	0.63	1.11	2.02	
<b>Polychlorinated Biphenyls</b>	PCB-1016 (mg/L)	<0.0010	<0.0010	<0.0011	<0.0012	
	PCB-1221 (mg/L)	<0.0010	<0.0010	<0.0011	<0.0012	
	PCB-1232 (mg/L)	<0.0010	<0.0010	<0.0011	<0.0012	
	PCB-1242 (mg/L)	<0.0010	<0.0010	<0.0011	<0.0012	
	PCB-1248 (mg/L)	<0.0010	<0.0010	<0.0011	<0.0012	
	PCB-1254 (mg/L)	<0.0010	<0.0010	<0.0011	<0.0012	
	PCB-1260 (mg/L)	<0.0010	<0.0010	<0.0011	<0.0012	
	PCB-1262 (mg/L)	<0.0010	<0.0010	<0.0011	<0.0012	
	PCB-1268 (mg/L)	<0.0010	<0.0010	<0.0011	<0.0012	
	Total Polychlorinated Biphenyls (mg/L)	<0.0010	<0.0010	<0.0011	<0.0012	

\* 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)
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**F1-PT-FID-VA** Water CCME F1 By P&T with GCFID EPA SW-846, METHOD 8260

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.

F1 (C6-C10): Sum of all hydrocarbons that elute between nC6 and nC10.

**F2-F3-SF-FID-VA** Water Extractable Hydrocarbons in water GCFID CWS (CCME)

Petroleum Hydrocarbons (F2-F3) in Water

This analysis is carried out using procedures adapted from "Test Methods for Evaluating Solid Waste" SW-846, published by the United States Environmental Protection Agency (EPA) and 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." The procedure involves a liquid-liquid extraction of the entire water sample using 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.

**HARDNESS-CALC-VA** Water Hardness APHA 2340B

Hardness is calculated from Calcium and Magnesium concentrations, and is expressed as calcium carbonate equivalents.

**HG-TOT-CCME-CVAFS-VA** Water Total Mercury in Water by CVAFS (CCME) EPA 245.7

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).

**MET-TOT-CCME-ICP-VA** Water Total Metals in Water by ICPOES (CCME) EPA SW-846 3005A/6010B

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).

**MET-TOT-CCME-MS-VA** Water Total Metals in Water by ICPMS (CCME) EPA SW-846 3005A/6020A

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).

**PCB-SF-ECD-VA** Water PCB by Extraction with GCECD EPA 3510/8082 Liq-Liq GCECD

This analysis is carried out using procedures adapted from "Test Methods for Evaluating Solid Waste" SW-846, Methods 3510, 3620, 3660, 3665 & 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).

\*\* 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		

## Reference Information

**Methods Listed (if applicable):**

ALS Test Code	Matrix	Test Description	Analytical Method Reference(Based On)
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**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 enviromental 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: GARTNER LEE LTD.		STANDARD <input checked="" type="checkbox"/> OTHER		REGULAR SERVICE (DEFAULT) <input checked="" type="checkbox"/>	
CONTACT: KEN BOLDT		PDF <input checked="" type="checkbox"/> EXCEL <input checked="" type="checkbox"/> CUSTOM <input type="checkbox"/> FAX		RUSH SERVICE (2-3 DAYS)	
ADDRESS: 300 TOWN CENTRE BLVD.		EMAIL 1: kbaldt@gartnerlee.com		PRIORITY SERVICE (1 DAY or ASAP)	
SUITE 300, MARKHAM ON.		EMAIL 2: TRAC@gartnerlee.com		EMERGENCY SERVICE (<1 DAY / WEEKEND) - CONTACT ALS	
PHONE: 905-477-8800 FAX:		INDICATE BOTTLES: FILTERED / PRESERVED (F/P)		ANALYSIS REQUEST	
INVOICE TO: SAME AS REPORT ? YES (NO)		CLIENT / PROJECT INFORMATION:			
COMPANY: KITHUNA PROJECTS INC.		JOB #: 80297			
CONTACT: PETER ARMSTRONG		PO / AFE:			
ADDRESS: CAMBRIDGE BAY, NU.		Legal Site Description:			
PHONE: 867-983-7828 FAX:		QUOTE #: 1/6 KITHUNA PROJECTS INC.			
Lab Work Order # (lab use only) L671383		SAMPLER (Initials): TB.			
Sample #	SAMPLE IDENTIFICATION (This description will appear on the report)	DATE	TIME	SAMPLE TYPE	
	BMW-3	16-AUG-08		GW	
	MW-15				
	MW-150				
	MW-14-A				
	MW-16				
	MW-8				
	MW-9				
	MW-13				
	MW-12				
PLEASE DECANT GROUNDWATER SAMPLES					
GUIDELINES / REGULATIONS		SPECIAL INSTRUCTIONS / HAZARDOUS DETAILS			
CCME		CCME DETECTION LIMITS (2 codes SHIPPED) METALS = TOTAL METALS			
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:	DATE & TIME:	RECEIVED BY:	DATE & TIME:	TEMPERATURE	SAMPLE CONDITION (lab use only)
	17/AUG/08/PO			13/12°C	SAMPLES RECEIVED IN GOOD CONDITION ? YES (NO)
RELINQUISHED BY:	DATE & TIME:	RECEIVED BY:	DATE & TIME:		
		GMW	Aug. 19		