

Analysis Report



REPORT ON: Analysis of Soil, Water Samples

REPORTED TO: Gartner Lee Limited
Suite 300
300 Town Centre Boulevard
Markham, ON
L3R 5Z6

Att'n: Ken Boldt

CHAIN OF CUSTODY: 2118959
PROJECT NAME: KITIK05
PROJECT NUMBER: 80297
P.O. NUMBER: 6076

NUMBER OF SAMPLES: 7

REPORT DATE: September 4, 2008

DATE SUBMITTED: August 25, 2008

GROUP NUMBER: 90825112

SAMPLE TYPE: Water, Soil

NOTE: Results contained in this report refer only to the testing of samples as submitted. Other information is available on request.

TEST METHODS:

CCME Petroleum Hydrocarbons in Soil - analysis was performed using Canadian Council of Ministers of the Environment (CCME) "Reference Method for the Canada-Wide Standard for Petroleum Hydrocarbons in Soil" approved December 2000. The method involves extraction of the different hydrocarbon fractions and analysis by gas chromatography with flame ionization detection (GC/FID).

Canada-Wide Standard for Petroleum Hydrocarbons in Soil (F1 Fraction) - The F1 Fraction (nC6 to nC10) was analyzed based on the CCME Reference Method for the Canada-Wide Standard for Petroleum Hydrocarbons in Soil-Tier 1 Method (2001). Analysis involves methanol extraction and quantitation using GasChromatography with Flame Ionization Detector (GC-FID). The F1 Fraction is reported with the BTEX compounds (benzene, toluene, ethylbenzene, and ortho, meta and para-xylenes) subtracted (e.g. corrected). These BTEX compounds analyzed by GCMS may be included in this report on request by the customer.

Canada-Wide Standard for Petroleum Hydrocarbons in Soil (F1 Fraction) - The F1 Fraction (nC6 to nC10) analysis was performed based on the CCME Reference Method for the Canada-Wide Standard for Petroleum Hydrocarbons in Soil - Tier 1 Method (2001). Analysis involves methanol extraction and quantitation using Gas Chromatography with a Flame Ionization Detector (GC-FID). The F1 Fraction is reported with the BTEX compounds (Benzene, Toluene, Ethylbenzene, and Total Xylenes) subtracted (e.g. corrected). These BTEX compounds may be included in this report on request by the customer.

(Continued)

CANTEST LTD.



Anna Becalska, PhD
Trace Metals Coordinator

Page 1 of 17

REPORTED TO: Gartner Lee Limited

REPORT DATE: September 4, 2008

GROUP NUMBER: 90825112



Canada-Wide Standard for Petroleum Hydrocarbons in Soil (F2,F3 and F4 Fractions) - The F2 to F4 Fractions (nC10 to nC50) analysis was performed based on the CCME Reference Method for the Canada-Wide Standard for Petroleum Hydrocarbons in Soil - Tier 1 Method (2001). Analysis involves extraction with 50:50 hexane:acetone, silica-gel cleanup and quantitation using Gas Chromatography with a Flame Ionization Detector (GC-FID).

Moisture in Soil - analysis was performed gravimetrically by heating a separate sample portion at 105 C and measuring the weight loss.

pH in Soil or Solid - analysis was performed based on procedures described in the "Manual on Soil Sampling and Methods of Analysis" (1993) published by the Canadian Society of Soil Science. The test was performed using a deionized water leach with measurement by pH meter.

Conventional Parameters - analyses were performed using procedures based on those described in the most current editions of "British Columbia Environmental Laboratory Manual for the Analysis of Water, Wastewater, Sediment and Biological Materials", (2005 edition) Province of British Columbia and "Standard Methods for the Examination of Water and Wastewater" (21st Edition), published by the American Public Health Association.

Mercury in Water - analysis was performed using procedures based on U. S. EPA Method 245.7, oxidative digestion using bromination, and analysis using Cold Vapour Atomic Fluorescence Spectroscopy.

Metals in Water - analysis was performed using Inductively Coupled Plasma Optical Emission Spectroscopy (ICP), Inductively Coupled Plasma-Mass Spectroscopy (ICP/MS).

Polychlorinated Biphenyls - analysis was performed using procedures based upon U.S. EPA Methods 608/8080, involving extraction, clean-up steps, and analysis using GC/ECD. Arochlors 1242, 1248, 1254 and 1260 were included.

Silver in Soil - analysis was performed using Inductively Coupled Plasma Mass Spectrometry (ICP/MS).

Arsenic in Soil - analysis was performed using Inductively Coupled Plasma Mass Spectrometry (ICP/MS).

Cadmium in Soil - analysis was performed using Inductively Coupled Plasma Mass Spectrometry (ICP/MS).

Mercury in Soil - analysis was performed using Cold Vapour Atomic Fluorescence.

Molybdenum in Soil - analysis was performed using an acid digestion followed by determination using Inductively Coupled Plasma Mass Spectrometry (ICP/MS).

Strong Acid Leachable Metals in Soil - analysis was performed using B.C. MOELP Method "Strong Acid Leachable Metals in Soil, Version 1.0". The method involves drying the sample at 60 C, sieving using a 2 mm (10 mesh) sieve and digestion using a mixture of hydrochloric and nitric acids. Analysis was performed using Inductively Coupled Argon Plasma Spectroscopy (ICAP) or by specific techniques as described.

(Continued)

REPORTED TO: Gartner Lee Limited

REPORT DATE: September 4, 2008

GROUP NUMBER: 90825112



Selenium in Soil - analysis was using Inductively Coupled Plasma Mass Spectrometry (ICP/MS).

Thallium in Soil - analysis was performed using Inductively Coupled Plasma Mass Spectrometry (ICP/MS).

Semi-Volatile Hydrocarbons - analysis was performed using procedures based on U.S. EPA Method 8015, involving dichloromethane extraction and analysis using GC/FID. Components in the C10 to C30 range are included, using an alkane standard for quantitation.

TEST RESULTS:

(See following pages)

REPORTED TO: Gartner Lee Limited

REPORT DATE: September 4, 2008

GROUP NUMBER: 90825112



Conventional Parameters in Water

CLIENT SAMPLE IDENTIFICATION:	SAMPLE DATE	CANTEST ID	Hardness (Total) CaCO ₃
C2-MW-9	Aug 19/08	808250426	1120
P3-MW-13	Aug 19/08	808250446	1220
DETECTION LIMIT UNITS			10 mg/L

mg/L = milligrams per liter

REPORTED TO: Gartner Lee Limited

REPORT DATE: September 4, 2008

GROUP NUMBER: 90825112



Metals Analysis in Water

CLIENT SAMPLE IDENTIFICATION:		C2-MW-9	P3-MW-13	DETECTION LIMIT	UNITS
SAMPLE PREPARATION:		TOTAL	TOTAL		
DATE SAMPLED:		Aug 19/08	Aug 19/08		
CANTEST ID:		808250426	808250446		
Aluminum	Al	0.022	0.013	0.001	mg/L
Antimony	Sb	<	<	0.0002	mg/L
Arsenic	As	0.002	0.0006	0.0002	mg/L
Barium	Ba	0.039	0.011	0.0002	mg/L
Beryllium	Be	<	<	0.0002	mg/L
Bismuth	Bi	<	<	0.0002	mg/L
Boron	B	1.08	0.39	0.01	mg/L
Cadmium	Cd	<	<	0.00004	mg/L
Calcium	Ca	136	261	0.01	mg/L
Chromium	Cr	0.0003	<	0.0002	mg/L
Cobalt	Co	0.0009	0.0006	0.0002	mg/L
Copper	Cu	0.0033	0.0026	0.0002	mg/L
Iron	Fe	0.25	0.25	0.01	mg/L
Lead	Pb	<	<	0.0002	mg/L
Lithium	Li	0.068	0.014	0.0002	mg/L
Magnesium	Mg	188	136	0.5	mg/L
Manganese	Mn	0.067	0.019	0.0002	mg/L
Mercury	Hg	<	<	0.02	µg/L
Molybdenum	Mo	0.018	0.0021	0.0001	mg/L
Nickel	Ni	0.0036	0.015	0.0002	mg/L
Phosphorus	P	<	<	0.03	mg/L
Potassium	K	48.8	15.9	0.02	mg/L
Selenium	Se	<	0.0015	0.0002	mg/L
Silicon	Si	5.19	0.88	0.05	mg/L
Silver	Ag	<	<	0.00005	mg/L
Sodium	Na	1170	86	1	mg/L
Strontium	Sr	1.2	0.466	0.0002	mg/L
Tellurium	Te	<	<	0.0002	mg/L
Thallium	Tl	0.00003	0.00003	0.00002	mg/L
Thorium	Th	<	<	0.0001	mg/L
Tin	Sn	0.0003	<	0.0002	mg/L

(Continued on next page)

REPORTED TO: Gartner Lee Limited

REPORT DATE: September 4, 2008

GROUP NUMBER: 90825112



Metals Analysis in Water

CLIENT SAMPLE IDENTIFICATION:		C2-MW-9	P3-MW-13		
SAMPLE PREPARATION:		TOTAL	TOTAL		
DATE SAMPLED:		Aug 19/08	Aug 19/08		
CANTEST ID:		808250426	808250446	DETECTION LIMIT	UNITS
Titanium	Ti	0.0013	0.0004	0.0002	mg/L
Uranium	U	0.0095	0.012	0.0001	mg/L
Vanadium	V	<	0.0003	0.0002	mg/L
Zinc	Zn	0.004	0.002	0.001	mg/L
Zirconium	Zr	<	<	0.002	mg/L

mg/L = milligrams per liter
< = Less than detection limit

µg/L = micrograms per liter

REPORTED TO: Gartner Lee Limited

REPORT DATE: September 4, 2008

GROUP NUMBER: 90825112



Polychlorinated Biphenyls in Water

CLIENT SAMPLE IDENTIFICATION:	C2-MW-9	P3-MW-13	
DATE SAMPLED:	Aug 19/08	Aug 19/08	
CANTEST ID:	808250426	808250446	DETECTION LIMIT
Arochlor 1242	<	<	0.1
Arochlor 1248	<	<	0.1
Arochlor 1254	<	<	0.1
Arochlor 1260	<	<	0.1
Total PCB	<	<	0.4
Surrogate Recovery			
2,2',4,4',6,6'-hexabromobiphenyl	97	92	-

Results expressed as micrograms per liter (µg/L)

Surrogate recoveries expressed as percent (%)

< = Less than detection limit

REPORTED TO: Gartner Lee Limited

REPORT DATE: September 4, 2008

GROUP NUMBER: 90825112



Semi-Volatile Hydrocarbons in Water

CLIENT SAMPLE IDENTIFICATION:	SAMPLE DATE	CANTEST ID	Total Extractable Hydrocarbons
C2-MW-9	Aug 19/08	808250426	200
P3-MW-13	Aug 19/08	808250446	190
DETECTION LIMIT UNITS			100 µg/L

µg/L = micrograms per liter

REPORTED TO: Gartner Lee Limited

REPORT DATE: September 4, 2008

GROUP NUMBER: 90825112



Conventional Parameters in Soil

CLIENT SAMPLE IDENTIFICATION:	SAMPLE DATE	CANTEST ID	Moisture	pH
C2-15A	Aug 18/08	808250447	15.2	7.8
C2-MW-9A	Aug 19/08	808250449	5.4	8.0
P3-MW-13B	Aug 15/08	808250450	16.1	7.3
C2-MW-10A	Aug 19/08	808250451	3.2	8.3
C2-16A	Aug 20/08	808250452	7.0	7.8
DETECTION LIMIT UNITS			0.1 %	0.1 pH units

% = percent

REPORTED TO: Gartner Lee Limited

REPORT DATE: September 4, 2008

GROUP NUMBER: 90825112



Polychlorinated Biphenyls in Soil

CLIENT SAMPLE IDENTIFICATION:	C2-15A	C2-MW-9A	P3-MW-13B	C2-MW-10A	
DATE SAMPLED:	Aug 18/08	Aug 19/08	Aug 15/08	Aug 19/08	
CANTEST ID:	808250447	808250449	808250450	808250451	
Arochlor 1242	<	<	<	<	0.03
Arochlor 1248	<	<	<	<	0.03
Arochlor 1254	<	<	<	<	0.03
Arochlor 1260	<	<	<	<	0.03
Total PCB	<	<	<	<	0.03
Surrogate Recovery					
2,2',4,4',6,6'-hexabromobiphenyl	71	89	98	94	-

Results expressed as micrograms per gram, on a dry weight basis. (µg/g)

Surrogate recoveries expressed as percent (%)

< = Less than detection limit

REPORTED TO: Gartner Lee Limited

REPORT DATE: September 4, 2008

GROUP NUMBER: 90825112



Polychlorinated Biphenyls in Soil

CLIENT SAMPLE IDENTIFICATION:	C2-16A	
DATE SAMPLED:	Aug 20/08	
CANTEST ID:	808250452	DETECTION LIMIT
Arochlor 1242	<	0.03
Arochlor 1248	<	0.03
Arochlor 1254	<	0.03
Arochlor 1260	<	0.03
Total PCB	<	0.03
Surrogate Recovery		
2,2',4,4',6,6'-hexabromobiphenyl	69	-

Results expressed as micrograms per gram, on a dry weight basis. (µg/g)

Surrogate recoveries expressed as percent (%)

< = Less than detection limit

REPORTED TO: Gartner Lee Limited

REPORT DATE: September 4, 2008

GROUP NUMBER: 90825112



CCME Petroleum Hydrocarbons in Soil

CLIENT SAMPLE IDENTIFICATION:	SAMPLE DATE	CANTEST ID	F1 (C6-C10) uncorrected	F1 minus BTEX (C6-C10)
C2-15A	Aug 18/08	808250447	<	<
C2-MW-9A	Aug 19/08	808250449	<	<
P3-MW-13B	Aug 15/08	808250450	<	<
C2-MW-10A	Aug 19/08	808250451	<	<
C2-16A	Aug 20/08	808250452	<	<
DETECTION LIMIT UNITS			5 µg/g	5 µg/g

µg/g = micrograms per gram, on a dry weight basis.

< = Less than detection limit

REPORTED TO: Gartner Lee Limited

REPORT DATE: September 4, 2008

GROUP NUMBER: 90825112



CCME Petroleum Hydrocarbons in Soil

CLIENT SAMPLE IDENTIFICATION:	SAMPLE DATE	CANTEST ID	F2 (C10-C16) uncorrected	F3 (C16-C34) uncorrected
C2-15A	Aug 18/08	808250447	<	<
C2-MW-9A	Aug 19/08	808250449	<	33
P3-MW-13B	Aug 15/08	808250450	<	<
C2-MW-10A	Aug 19/08	808250451	<	12
C2-16A	Aug 20/08	808250452	<	22
DETECTION LIMIT UNITS			5 µg/g	5 µg/g

µg/g = micrograms per gram, on a dry weight basis.

< = Less than detection limit

REPORTED TO: Gartner Lee Limited

REPORT DATE: September 4, 2008

GROUP NUMBER: 90825112



Strong Acid Soluble Metals in Soil

CLIENT SAMPLE IDENTIFICATION:		C2-15A	C2-MW-9A	P3-MW-13B	C2-MW-10A	DETECTION LIMIT
DATE SAMPLED:		Aug 18/08	Aug 19/08	Aug 15/08	Aug 19/08	
CANTEST ID:		808250447	808250449	808250450	808250451	
Antimony	Sb	<	<	<	<	0.1
Arsenic	As	0.5	0.9	0.6	0.8	0.1
Barium	Ba	4	8	15	6	1
Beryllium	Be	<	<	<	<	1
Cadmium	Cd	<	<	<	<	0.2
Chromium	Cr	2	3	3	2	2
Cobalt	Co	<	1	1	<	1
Copper	Cu	1	2	4	2	1
Lead	Pb	1.2	3.4	0.9	2.1	0.2
Mercury	Hg	<	<	<	<	0.01
Molybdenum	Mo	<	0.3	0.1	0.3	0.1
Nickel	Ni	<	2	3	<	2
Selenium	Se	<	0.3	<	0.3	0.2
Silver	Ag	<	<	<	<	0.1
Thallium	Tl	<	<	<	<	0.1
Tin	Sn	<	<	<	<	5
Vanadium	V	3	5	12	5	1
Zinc	Zn	5	7	6	5	1
Aluminum	Al	1130	1560	1670	1180	10
Boron	B	6	12	5	11	1
Calcium	Ca	15500	38600	21300	36500	1
Iron	Fe	1620	2540	3530	2000	2
Magnesium	Mg	12700	33000	18300	27600	1
Manganese	Mn	42	58	52	53	1
Phosphorus	P	197	226	171	184	20
Potassium	K	260	622	265	484	10
Sodium	Na	46	94	130	86	5
Strontium	Sr	6	14	8	15	1
Titanium	Ti	60	91	164	67	1
Zirconium	Zr	<	2	2	2	1

Results expressed as micrograms per gram, on a dry weight basis. (µg/g)

< = Less than detection limit

REPORTED TO: Gartner Lee Limited

REPORT DATE: September 4, 2008

GROUP NUMBER: 90825112



Strong Acid Soluble Metals in Soil

CLIENT SAMPLE IDENTIFICATION:		C2-16A	
DATE SAMPLED:		Aug 20/08	
CANTEST ID:		808250452	
			DETECTION LIMIT
Antimony	Sb	<	0.1
Arsenic	As	1.6	0.1
Barium	Ba	10	1
Beryllium	Be	<	1
Cadmium	Cd	<	0.2
Chromium	Cr	4	2
Cobalt	Co	2	1
Copper	Cu	3	1
Lead	Pb	4.1	0.2
Mercury	Hg	<	0.01
Molybdenum	Mo	0.4	0.1
Nickel	Ni	4	2
Selenium	Se	0.4	0.2
Silver	Ag	<	0.1
Thallium	Tl	<	0.1
Tin	Sn	<	5
Vanadium	V	7	1
Zinc	Zn	8	1
Aluminum	Al	2310	10
Boron	B	16	1
Calcium	Ca	61400	10
Iron	Fe	3980	2
Magnesium	Mg	37700	1
Manganese	Mn	89	1
Phosphorus	P	248	20
Potassium	K	853	10
Sodium	Na	263	5
Strontium	Sr	22	1
Titanium	Ti	129	1
Zirconium	Zr	2	1

Results expressed as micrograms per gram, on a dry weight basis. (µg/g)

< = Less than detection limit

REPORTED TO: Gartner Lee Limited

REPORT DATE: September 4, 2008

GROUP NUMBER: 90825112



CCME Petroleum Hydrocarbons in Soil

CLIENT SAMPLE IDENTIFICATION:	C2-15A	C2-MW-9A	P3-MW-13B	C2-MW-10A	
DATE SAMPLED:	Aug 18/08	Aug 19/08	Aug 15/08	Aug 19/08	
CANTEST ID:	808250447	808250449	808250450	808250451	DETECTION LIMIT
Benzene	<	<	<	<	0.005
Ethylbenzene	<	<	<	<	0.018
Toluene	<	<	<	<	0.02
Total Xylenes	<	<	<	<	0.02

Results expressed as micrograms per gram, on a dry weight basis. ($\mu\text{g/g}$)

< = Less than detection limit

REPORTED TO: Gartner Lee Limited

REPORT DATE: September 4, 2008

GROUP NUMBER: 90825112



CCME Petroleum Hydrocarbons in Soil

CLIENT SAMPLE IDENTIFICATION:	C2-16A	
DATE SAMPLED:	Aug 20/08	
CANTEST ID:	808250452	DETECTION LIMIT
Benzene	<	0.005
Ethylbenzene	<	0.018
Toluene	<	0.02
Total Xylenes	<	0.02

Results expressed as micrograms per gram, on a dry weight basis. ($\mu\text{g/g}$)

< = Less than detection limit

CHAIN OF CUSTODY RECORD

CANTEST

0000

2118959

08/14/03 10:44:23

Special Instructions: ☐ Return Cooler ☐ Ship Sample Bottles (please specify) ☐ AutoFax ☐ AutoEmail

Bill to: Kithuna Projects Inc
PO Box 92, Cambridge Bay, NU
X0B 0C0
Contact: Peter Armstrong
Ph: 867-983-7508

4606 Canada Way
Burnaby, B.C.
V5G 1K5

Tel: 604.734.7276
Fax: 604.731.2386
Toll Free: 800.665.8566

www.cantest.com

Client Name:

Gartner Lee Limited (CAPP05)

Postal Code
V3R 5Z6

Street Address (including suite number):
300 - 300 Town Centre Blvd.

City: Markham

Telephone: 905-477-8400

Fax: 905-477-1456

E-Mail Address (Required for Electronic Reporting):
kboldt@gartnerlee.com

Contact Name:

Ken Boldt

Sampler's Name:

Ken Boldt

Quotation Number:

99906 080308 vjo 01

Project Number:

60247

Project Name:

KITIKOS

P.O. Number

Page 1 of 1

RESULTS
REQUESTED BY:

Day Month Year

(Surcharges May Apply)

Samples are from a Drinking Water source servicing multiple households

Yes ☐

Group Number	Sample Identification	Date/Time Sampled (D/M/Y & 24hr clock)	Sample Type	Total Metals	Dissolved Metals	Field Filtered	Soil Metals	pH	Conductivity	TSS	TDS	Alkalinity	BOD	COD	Coliform, Total	Coliform, F	Cl	Nitrite	Oil & Grease	Oil & Grease	PCP (Tri)	PCP (Mono)	BETX/VP	VOC	EPH (not PAH)	LEPH/HE	PCB	Asbestos	TPA -	CCMI	HOLD -	Number	
90625112																																	
80825046	C2-MW-9	D: Aug 19	water	X																													
		T: Aug 19																															
A 446	P3-MW-13	D: Aug 15	water	X																													
		T: Aug 15																															
B 447	C2-15A	D: Aug 18	Soil				X																										
		T: Aug 18																															
U 449	C2-MW-9A	D: Aug 19	"				X																										
		T: Aug 19																															
S 450	P3-MW-13 B	D: Aug 15	"				X																										
		T: Aug 15																															
E 451	C2-MW-10A	D: Aug 19	"				X																										
		T: Aug 19																															
O 452	C2-16 A	D: Aug 20	"				X																										
		T: Aug 20																															
N		D:																															
		T:																															
L		D:																															
		T:																															
Y		D:																															
		T:																															

Relinquished by: Ken Boldt Date: Aug 21 Time: Received by: [Signature] Date: Aug 21 Time: 10:36

Method of Shipment: MB Waybill No.: Shipment Condition: Received for Lab by: [Signature] Date: Aug 21 Time: 10:36

Shipped by: Shipment Condition: Cooler opened by: Date: Time:

Total Number of Containers: 21

*Please indicate appropriate regulatory guidelines:

WATER ☐ CCME ☐ BC-CSR ☒ Other (please specify) LVL-AW1

SOIL ☐ CCME ☐ BC-CSR ☒ Other (please specify) TMGRMS

FOR LABORATORY USE ONLY

Sample State at Receipt: ☐ Ambient ☒ Cold ☐ Frozen ☐ N/A

Comments: ☐ Custody Seal Intact? ☐ Yes ☒ No

Temperature: 16.3C

Custody of Coolers/Shipping Containers: 1

Number of Containers: 1