

# **Appendix C: Water Quality Data**

## Analysis Report



CANTEST LTD.

Professional  
Analytical  
Services

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REPORT ON: Analysis of Water Sample

REPORTED TO: Stantec Consulting Ltd(Jacques Whitord/Axys)  
103-611 Corydon Avenue  
Winnipeg, MB  
R3L 0P3

Att'n: Mr. David Whetter

CHAIN OF CUSTODY: 51371 MB  
PROJECT NAME: TDL Sylvia  
PROJECT NUMBER: 1045466

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NUMBER OF SAMPLES: 1 REPORT DATE: November 17, 2009

DATE SUBMITTED: November 6, 2009 GROUP NUMBER: 101106006

SAMPLE TYPE: Water

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

### TEST METHODS:

Chlorophyll A and Pheophytin A - analyses were performed using procedures based on those described in Standard Methods for the Examination of Water and Wastewater" (21st Edition).

Anions in Water by Ion Chromatography - was determined based on Method 4110 in Standard Methods (21st Edition) and EPA Method 300.0 (Revision 2.1).

Dissolved Metals in Water - Samples were filtered in the laboratory and quantitatively determined using Inductively Coupled Plasma Optical Emission Spectroscopy (ICP) and/or Inductively Coupled Plasma-Mass Spectroscopy (ICP/MS). NOTE: If Sulphur is included in this report, only non-acid volatile sulphur is reported.

Nitrate and Nitrite in Water - was performed using Flow Injection Analysis where Nitrate is reduced to Nitrite by passing the sample through a cadmium reduction column. The nitrite produced is then determined by diazotizing sulphanilamide and N-(1-naphthyl)-ethylenediamine dihydrochloride to form a reddish azo dye which is then measured colorimetrically at 540 nm.

Ammonia in Water - was performed using Flow Injection Analysis where the aqueous sample is injected into a carrier stream, which merges a sodium hydroxide stream. Gaseous ammonia is formed, which diffuses through a gas permeable membrane into an indicator stream. This indicator stream is comprised of a mixture of acid-base indicators, which will react with the ammonia gas; resulting in a colour shift which is measured photometrically @ 590 nm.

(Continued)

CANTEST LTD.

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REPORT DATE: November 17, 2009

GROUP NUMBER: 101106006

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**Total Dissolved Solids in Water** - was determined based on Method 2540 C in Standard Methods for the Examination of Water and Wastewater (21st Edition).

**Total Kjeldahl Nitrogen in Water** - was determined based on Method 4500-N in Standard Methods (21st Edition) and Method X325 in the BC Laboratory Manual (2005).

**Total Organic Carbon in Water** - was determined based on Method 5310 A and B in Standard Methods (21st Edition) and Method X314 in the BC Laboratory Manual (2005).

**Total Suspended Solids in Water** - was determined based on Method 2540 D in Standard Methods (21st Edition) and Method X332 in the BC Laboratory Manual (2005).

**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.

**Conventional Parameters - Winnipeg Laboratory (Unit D-675 Berry Street, Winnipeg, Manitoba R3H 1A7):** - Analyses performed at Cantest's Winnipeg facilities follow procedures based on those described in the "British Columbia Environmental Laboratory Manual for the Analysis of Water, Wastewater, Sediment and Biological Materials" (2005 Edition) and "Standard Methods for the Examination of Water and Wastewater" (21st Edition).

**Hexavalent Chromium in Water** - analysis was performed using a colorimetric procedure based on EPA Methods 7196A "Chromium, Hexavalent (colorimetric)" July 1992, Revision 1.

**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). NOTE: If Sulphur is included in this report, only non-acid volatile sulphur is reported.

**COMMENTS:**

Total reactive phosphorus was not analyzed for sample 911060026 (Water 1) due to a lab error.

**TEST RESULTS:**

(See following pages)

REPORTED TO: Stantec Consulting Ltd(Jacques Whitord/Axys)



REPORT DATE: November 17, 2009

GROUP NUMBER: 101106006

Conventional Parameters in Water

CLIENT SAMPLE IDENTIFICATION:		Water 1		
DATE SAMPLED:		Nov 5/09		
CANTEST ID:		911060026		REPORTING LIMIT
		UNITS		
Hardness (Total)	CaCO3	39	1	mg/L
Total Dissolved Solids		78	10	mg/L
Total Suspended Solids		3	1	mg/L
Dissolved Chloride	Cl	1.34	0.2	mg/L
Nitrate and Nitrite	N	0.10	0.01	mg/L
Dissolved Sulphate	SO4	2.86	0.5	mg/L
Total Organic Carbon	C	11	1	mg/L
Total Inorganic Carbon	C	8.8	1	mg/L
Total Carbon	C	19	1	mg/L
Ammonia Nitrogen	N	<	0.01	mg/L
Total Kjeldahl Nitrogen	N	0.5	0.2	mg/L
Total Phosphorus	P	0.033	0.001	mg/L as P
Total Particulate Phosphorus	P	0.011	0.001	mg/L as P
Total Soluble Phosphorus	P	0.022	0.001	mg/L as P
Soluble Reactive Silicon	Si	1.70	0.05	mg/L

mg/L = milligrams per liter

< = Less than reporting limit

mg/L as P = milligrams per liter as P

REPORTED TO: Stantec Consulting Ltd(Jacques Whitord/Axys)



REPORT DATE: November 17, 2009

GROUP NUMBER: 101106006

Metals Analysis in Water

CLIENT SAMPLE IDENTIFICATION:		Water 1	Water 1		
SAMPLE PREPARATION:		TOTAL	DISSOLVED		
DATE SAMPLED:		Nov 5/09	Nov 5/09		
CANTEST ID:		911060026	911060026	REPORTING LIMIT	UNITS
Aluminum	Al	0.21	0.11	0.005	mg/L
Antimony	Sb	<	-	0.0005	mg/L
Arsenic	As	0.001	-	0.001	mg/L
Barium	Ba	0.01	-	0.001	mg/L
Beryllium	Be	<	-	0.0005	mg/L
Bismuth	Bi	<	-	0.0005	mg/L
Boron	B	<	-	0.025	mg/L
Cadmium	Cd	<	-	0.00005	mg/L
Calcium	Ca	10	-	0.05	mg/L
Cesium	Cs	<	-	0.0005	mg/L
Chromium	Cr	<	-	0.001	mg/L
Cobalt	Co	<	-	0.0005	mg/L
Copper	Cu	0.0014	-	0.0005	mg/L
Hexavalent Chromium	Cr	-	<	0.01	mg/L
Iron	Fe	0.25	-	0.05	mg/L
Lanthanum	La	<	-	0.0005	mg/L
Lead	Pb	<	-	0.00025	mg/L
Lithium	Li	0.002	-	0.0005	mg/L
Magnesium	Mg	3.29	-	0.025	mg/L
Manganese	Mn	0.0098	-	0.0005	mg/L
Mercury	Hg	<	-	0.02	µg/L
Molybdenum	Mo	<	-	0.0005	mg/L
Nickel	Ni	0.001	-	0.001	mg/L
Phosphorus	P	<	-	0.075	mg/L
Potassium	K	0.75	-	0.05	mg/L
Rhenium	Re	<	-	0.0005	mg/L
Rubidium	Rb	0.0016	-	0.0005	mg/L
Selenium	Se	<	-	0.001	mg/L
Silicon	Si	1.9	-	0.25	mg/L
Silver	Ag	<	-	0.0002	mg/L
Sodium	Na	2.1	-	0.025	mg/L

(Continued on next page)

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REPORT DATE: November 17, 2009

GROUP NUMBER: 101106006

**Metals Analysis in Water**

CLIENT SAMPLE IDENTIFICATION:		Water 1	Water 1		
SAMPLE PREPARATION:		TOTAL	DISSOLVED		
DATE SAMPLED:		Nov 5/09	Nov 5/09		
CANTEST ID:		911060026	911060026	REPORTING LIMIT	UNITS
Strontium	Sr	0.022	-	0.0005	mg/L
Sulphur	S	<	-	5	mg/L
Tellurium	Te	<	-	0.001	mg/L
Thallium	Tl	<	-	0.0001	mg/L
Thorium	Th	<	-	0.00025	mg/L
Tin	Sn	<	-	0.0005	mg/L
Titanium	Ti	0.007	-	0.001	mg/L
Tungsten	W	<	-	0.0005	mg/L
Uranium	U	<	-	0.00025	mg/L
Vanadium	V	0.0006	-	0.0005	mg/L
Zinc	Zn	<	-	0.005	mg/L
Zirconium	Zr	<	-	0.0005	mg/L

mg/L = milligrams per liter

µg/L = micrograms per liter

< = Less than reporting limit

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REPORT DATE: November 17, 2009

GROUP NUMBER: 101106006

Conventional Parameters-Winnipeg Laboratory- in Water

CLIENT SAMPLE IDENTIFICATION:		Water 1	
DATE SAMPLED:		Nov 5/09	
CANTEST ID:		911060026	
		REPORTING LIMIT	UNITS
pH, Laboratory		7.18	-
Conductivity		89	1
True Color		52	5
Turbidity		3.9	0.1
Total Alkalinity	CaCO3	37.4	1
Bicarbonate Alkalinity	HCO3	45.7	0.5
Carbonate Alkalinity	CO3	<	0.5
Hydroxide Alkalinity	OH	<	0.5
Dissolved Oxygen, Winkler		12.0	0.1
Total BOD		1	1
			pH units
			µS/cm
			CU
			NTU
			mg/L
			mg/L
			mg/L
			mg/L
			mg/L

µS/cm = microsiemens per centimeter  
 NTU = nephelometric turbidity units  
 < = Less than reporting limit

CU = color units  
 mg/L = milligrams per liter

REPORTED TO: Stantec Consulting Ltd(Jacques Whitord/Axys)



REPORT DATE: November 17, 2009

GROUP NUMBER: 101106006

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**Chlorophyll A and Pheophytin A (Methanol Extraction) in Water**

CLIENT SAMPLE IDENTIFICATION:	SAMPLE DATE	CANTEST ID	Chlorophyll A	Pheophytin A
Water 1	Nov 5/09	911060026	8.98	<
REPORTING LIMIT UNITS			0.5 $\mu\text{g/L}$	0.5 $\mu\text{g/L}$

$\mu\text{g/L}$  = micrograms per liter  
< = Less than reporting limit



Your Project #: 111257005  
Site: TIM HORTONS SYLVIA LAKE  
NSD # 16300R

**Attention: DAVID WHETTER**  
STANTEC CONSULTING LTD  
603-386 BROADWAY AVENUE  
WINNIPEG, MB  
CANADA R3C 3R6

Report Date: 2010/10/06

## CERTIFICATE OF ANALYSIS

**MAXXAM JOB #: B090939**  
**Received: 2010/09/23, 16:30**

Sample Matrix: Water  
# Samples Received: 1

Analyses	Quantity	Date	Date	Laboratory Method	Analytical Method
		Extracted	Analyzed		
Alkalinity	1	2010/10/04	2010/10/04	74-C-002	Based on SM-2320B
Biochemical Oxygen Demand	1	2010/09/30	2010/09/29	74-C-016	Based on SM-5210B
Chloride by Automated Colourimetry ☺	1	N/A	2010/09/27	BRN-SOP 00234 R3.0	Based on EPA 325.2
Colour (True)	1	N/A	2010/09/24	74-C-059	Based on SM-2120B
Chromium, Hexavalent ☺	1	N/A	2010/09/27	BRN SOP-00238 R4.0	SM - 3500Cr B
Carbon (DOC) ☺	1	N/A	2010/09/28	BRN SOP-00224 R4.0	Based on M 860-87T
Conductivity	1	N/A	2010/09/28	74-C-003	Based on SM-2510B
Hardness Total (calculated as CaCO <sub>3</sub> ) ☺	1	N/A	2010/10/04		
Hardness (calculated as CaCO <sub>3</sub> ) ☺	1	N/A	2010/10/02		
Na, K, Ca, Mg, S by CRC ICPMS (diss.) ☺	1	N/A	2010/10/02	BRN SOP-00206	Based on EPA 200.8
Elements by CRC ICPMS (dissolved) ☺	1	N/A	2010/10/01	BRN SOP-00206	Based on EPA 200.8
Na, K, Ca, Mg, S by CRC ICPMS (total) ☺	1	2010/09/23	2010/10/04	BRN SOP-00206	Based on EPA 200.8
Elements by CRC ICPMS (total) ☺	1	2010/09/29	2010/10/01	BRN SOP-00206	Based on EPA 200.8
Nitrogen (Total) ☺	1	2010/10/05	2010/10/05	BRN SOP-00242 R3.0	Based on SM-4500N C
Ammonia-N Dissolved ☺	1	N/A	2010/10/01		
Nitrate + Nitrite (N) ☺	1	N/A	2010/09/29		Based on USEPA 353.2
Filter and HNO <sub>3</sub> Preserve for Metals ☺	1	N/A	2010/10/04	BRN WI-00006 R1.0	Based on EPA 200.2
pH	1	N/A	2010/09/23	74-C-001	SM4500-H+A,B
Orthophosphate by Konelab ☺	1	N/A	2010/10/05	BRN SOP-00235 R5.0	SM 4500 P F
Silica (Reactive) ☺	1	N/A	2010/09/27	BRN SOP-00237 R4.0	SM - 4500Si F
Sulphate by Automated Colourimetry ☺	1	N/A	2010/09/27	BRN-SOP 00243 R1.0	Based on EPA 375.4
Carbon (total) (Calc. - Org. + Inorg.) ☺	1	N/A	2010/10/04	CAL WI# 0013	
Total Dissolved Solids (Filt. Residue) ☺	1	N/A	2010/09/29	BRN SOP 00276 R4.0	SM 2540C
Carbon (Total Inorganic) ☺	1	N/A	2010/10/04	BRN SOP-00244 R2.0	Based on SM-5310C
TKN (Calc. TN, N/N) total ☺	1	N/A	2010/10/05		
Carbon (Total Organic) ☺	1	N/A	2010/09/28	BRN SOP-00224 R4.0	Based on SM-5310C
Phosphorus-P (Total, dissolved) ☺	1	2010/09/24	2010/09/27	BRN SOP-00236 R4.0	SM-4500PF
Total Phosphorus ☺	1	N/A	2010/09/27	BRN SOP-00236 R4.0	SM 4500
Phosphate-P (Total, particulate) ☺	1	N/A	2010/09/27	CAL SOP-0108, EDM SOP-0043	Calculation
Total Suspended Solids ☺	1	N/A	2010/09/29	BRN SOP-00277 R5.0	Based on SM - 2540 D
Turbidity	1	N/A	2010/09/24	74-C-056	Based on SM-2130B

\* Results relate only to the items tested.

(1) This test was performed by Maxxam Vancouver

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Maxxam Job #: B090939  
Report Date: 2010/10/06

STANTEC CONSULTING LTD  
Client Project #: 111257005  
Site Reference: TIM HORTONS SYLVIA LAKE

-2-

Encryption Key

Please direct all questions regarding this Certificate of Analysis to your Project Manager.

JANELLE KOCHAN, B.Sc,  
Email: [janelle.kochan@maxxamanalytics.com](mailto:janelle.kochan@maxxamanalytics.com)  
Phone# (204) 772-7276 Ext:2209

=====  
Maxxam has procedures in place to guard against improper use of the electronic signature and have the required "signatories", as per section 5.10.2 of ISO/IEC 17025:2005(E), signing the reports. For Service Group specific validation please refer to the Validation Signature Page.

Total cover pages: 2

Maxxam Job #: B090939  
Report Date: 2010/10/06

STANTEC CONSULTING LTD  
Client Project #: 111257005  
Site Reference: TIM HORTONS SYLVIA LAKE

**RESULTS OF CHEMICAL ANALYSES OF WATER**

Maxxam ID		X17529	X17529		
Sampling Date		2010/09/23 14:00	2010/09/23 14:00		
	Units	SYLVIA LAKE WATER 1	SYLVIA LAKE WATER 1 Lab-Dup	RDL	QC Batch
<b>ANIONS</b>					
Silica	mg/L	2.7	N/A	0.5	4290622
<b>Calculated Parameters</b>					
Filter and HNO3 Preservation	N/A	FIELD	N/A	N/A	ONSITE
<b>Demand Parameters</b>					
Biochemical Oxygen Demand	mg/L	<1	N/A	1	4303735
<b>Misc. Inorganics</b>					
Conductivity	uS/cm	92	N/A	1	4301983
Dissolved Organic Carbon (C)	mg/L	11.5	N/A	0.5	4293998
Alkalinity (Total as CaCO3)	mg/L	32	N/A	1	4310617
Total Organic Carbon (C)	mg/L	11.2	N/A	0.5	4293944
pH	pH Units	7.3	N/A	N/A	4301581
Bicarbonate (HCO3)	mg/L	39	N/A	0.5	4310617
Carbonate (CO3)	mg/L	<0.5	N/A	0.5	4310617
Hydroxide (OH)	mg/L	<0.5	N/A	0.5	4310617
<b>Anions</b>					
Orthophosphate (P)	mg/L	0.007	N/A	0.001	4311835
Dissolved Sulphate (SO4)	mg/L	3.7	N/A	0.5	4294065
Dissolved Chloride (Cl)	mg/L	1.0	N/A	0.5	4294021
<b>Metals</b>					
Hex. Chromium (Cr 6+)	mg/L	<0.001	N/A	0.001	4293094
<b>Nutrients</b>					
Dissolved Ammonia (N)	mg/L	<0.005	<0.005	0.005	4308339
Total Carbon (C)	mg/L	12.0	N/A	0.5	4286292
Particulate Phosphate (P)	mg/L	0.005	N/A	0.002	4286294
Dissolved Phosphorus (P)	mg/L	0.014	N/A	0.002	4288643
Total Total Kjeldahl Nitrogen (Calc)	mg/L	0.40	N/A	0.02	4284063
Total Inorganic Carbon (C)	mg/L	0.7	N/A	0.5	4308937
Nitrate plus Nitrite (N)	mg/L	0.06 <sup>(1)</sup>	N/A	0.02	4300253
Total Nitrogen (N)	mg/L	0.46	N/A	0.02	4314853
Total Phosphorus (P)	mg/L	0.019	0.019	0.002	4288650

N/A = Not Applicable

RDL = Reportable Detection Limit

(1) - Sample analysed past recommended hold time

Maxxam Job #: B090939  
 Report Date: 2010/10/06

STANTEC CONSULTING LTD  
 Client Project #: 111257005  
 Site Reference: TIM HORTONS SYLVIA LAKE

**RESULTS OF CHEMICAL ANALYSES OF WATER**

Maxxam ID		X17529	X17529		
Sampling Date		2010/09/23 14:00	2010/09/23 14:00		
	Units	SYLVIA LAKE WATER 1	SYLVIA LAKE WATER 1 Lab-Dup	RDL	QC Batch
<b>Physical Properties</b>					
True Colour	Col. Unit	44	N/A	5	4301762
Total Suspended Solids	mg/L	7	N/A	4	4295865
Total Dissolved Solids	mg/L	60	N/A	10	4296352
Turbidity	NTU	5.2	N/A	0.1	4301725

N/A = Not Applicable  
 RDL = Reportable Detection Limit

Maxxam Job #: B090939  
Report Date: 2010/10/06

STANTEC CONSULTING LTD  
Client Project #: 111257005  
Site Reference: TIM HORTONS SYLVIA LAKE

**CSR DISSOLVED METALS IN WATER (WATER)**

Maxxam ID		X17529		
Sampling Date		2010/09/23 14:00		
	Units	SYLVIA LAKE WATER 1	RDL	QC Batch
<b>Misc. Inorganics</b>				
Dissolved Hardness (CaCO3)	mg/L	39.7	0.5	4283429
<b>Dissolved Metals by ICPMS</b>				
Dissolved Aluminum (Al)	ug/L	68	3	4301723
Dissolved Antimony (Sb)	ug/L	<0.5	0.5	4301723
Dissolved Arsenic (As)	ug/L	1.0	0.1	4301723
Dissolved Barium (Ba)	ug/L	8	1	4301723
Dissolved Beryllium (Be)	ug/L	<0.1	0.1	4301723
Dissolved Bismuth (Bi)	ug/L	<1	1	4301723
Dissolved Boron (B)	ug/L	<50	50	4301723
Dissolved Cadmium (Cd)	ug/L	0.01	0.01	4301723
Dissolved Chromium (Cr)	ug/L	<1	1	4301723
Dissolved Cobalt (Co)	ug/L	0.7	0.5	4301723
Dissolved Copper (Cu)	ug/L	3.5	0.2	4301723
Dissolved Iron (Fe)	ug/L	116	5	4301723
Dissolved Lead (Pb)	ug/L	<0.2	0.2	4301723
Dissolved Lithium (Li)	ug/L	<5	5	4301723
Dissolved Manganese (Mn)	ug/L	4	1	4301723
Dissolved Mercury (Hg)	ug/L	<0.02	0.02	4301723
Dissolved Molybdenum (Mo)	ug/L	1	1	4301723
Dissolved Nickel (Ni)	ug/L	1	1	4301723
Dissolved Selenium (Se)	ug/L	<0.1	0.1	4301723
Dissolved Silicon (Si)	ug/L	1450	100	4301723
Dissolved Silver (Ag)	ug/L	<0.02	0.02	4301723
Dissolved Strontium (Sr)	ug/L	21	1	4301723
Dissolved Thallium (Tl)	ug/L	<0.05	0.05	4301723
Dissolved Tin (Sn)	ug/L	<5	5	4301723
Dissolved Titanium (Ti)	ug/L	<5	5	4301723
Dissolved Uranium (U)	ug/L	0.1	0.1	4301723
Dissolved Vanadium (V)	ug/L	<5	5	4301723
Dissolved Zinc (Zn)	ug/L	<5	5	4301723
Dissolved Zirconium (Zr)	ug/L	<0.5	0.5	4301723
Dissolved Calcium (Ca)	mg/L	10.9	0.05	4283498
Dissolved Magnesium (Mg)	mg/L	3.04	0.05	4283498
Dissolved Potassium (K)	mg/L	0.81	0.05	4283498
Dissolved Sodium (Na)	mg/L	2.25	0.05	4283498
Dissolved Sulphur (S)	mg/L	<3	3	4283498

RDL = Reportable Detection Limit

Maxxam Job #: B090939  
Report Date: 2010/10/06

STANTEC CONSULTING LTD  
Client Project #: 111257005  
Site Reference: TIM HORTONS SYLVIA LAKE

**CSR TOTAL METALS IN WATER (WATER)**

Maxxam ID		X17529		
Sampling Date		2010/09/23 14:00		
	<b>Units</b>	<b>SYLVIA LAKE WATER 1</b>	<b>RDL</b>	<b>QC Batch</b>
<b>Calculated Parameters</b>				
Total Hardness (CaCO3)	mg/L	42.6	0.5	4283428
<b>Total Metals by ICPMS</b>				
Total Aluminum (Al)	ug/L	250	3	4300583
Total Antimony (Sb)	ug/L	<0.5	0.5	4300583
Total Arsenic (As)	ug/L	1.1	0.1	4300583
Total Barium (Ba)	ug/L	10	1	4300583
Total Beryllium (Be)	ug/L	<0.1	0.1	4300583
Total Bismuth (Bi)	ug/L	<1	1	4300583
Total Boron (B)	ug/L	<50	50	4300583
Total Cadmium (Cd)	ug/L	<0.01	0.01	4300583
Total Chromium (Cr)	ug/L	<1	1	4300583
Total Cobalt (Co)	ug/L	<0.5	0.5	4300583
Total Copper (Cu)	ug/L	1.5	0.2	4300583
Total Iron (Fe)	ug/L	355	5	4300583
Total Lead (Pb)	ug/L	0.2	0.2	4300583
Total Lithium (Li)	ug/L	<5	5	4300583
Total Manganese (Mn)	ug/L	14	1	4300583
Total Mercury (Hg)	ug/L	<0.02	0.02	4300583
Total Molybdenum (Mo)	ug/L	<1	1	4300583
Total Nickel (Ni)	ug/L	1	1	4300583
Total Selenium (Se)	ug/L	<0.1	0.1	4300583
Total Silicon (Si)	ug/L	1910	100	4300583
Total Silver (Ag)	ug/L	<0.02	0.02	4300583
Total Strontium (Sr)	ug/L	23	1	4300583
Total Thallium (Tl)	ug/L	<0.05	0.05	4300583
Total Tin (Sn)	ug/L	<5	5	4300583
Total Titanium (Ti)	ug/L	8	5	4300583
Total Uranium (U)	ug/L	0.1	0.1	4300583
Total Vanadium (V)	ug/L	<5	5	4300583
Total Zinc (Zn)	ug/L	<5	5	4300583
Total Zirconium (Zr)	ug/L	<0.5	0.5	4300583
Total Calcium (Ca)	mg/L	11.8	0.05	4283431
Total Magnesium (Mg)	mg/L	3.21	0.05	4283431
Total Potassium (K)	mg/L	1.08	0.05	4283431
Total Sodium (Na)	mg/L	2.55	0.05	4283431
Total Sulphur (S)	mg/L	<3	3	4283431

RDL = Reportable Detection Limit

Maxxam Job #: B090939  
Report Date: 2010/10/06

STANTEC CONSULTING LTD  
Client Project #: 111257005  
Site Reference: TIM HORTONS SYLVIA LAKE

Package 1	13.3°C
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Each temperature is the average of up to three cooler temperatures taken at receipt

**General Comments**

Maxxam Job #: B090939  
Report Date: 2010/10/06

STANTEC CONSULTING LTD  
Client Project #: 111257005  
Site Reference: TIM HORTONS SYLVIA LAKE

QUALITY ASSURANCE REPORT

QC Batch	Parameter	Date	Matrix Spike		Spiked Blank		Method Blank		RPD		Calibration Check	
			% Recovery	QC Limits	% Recovery	QC Limits	Value	Units	Value (%)	QC Limits	% Recovery	QC Limits
4288643	Dissolved Phosphorus (P)	2010/09/27	107	80 - 120	96	80 - 120	<0.002	mg/L	0.8	20		
4288650	Total Phosphorus (P)	2010/09/27	104	80 - 120	102	80 - 120	<0.002	mg/L	0.7	20		
4290622	Silica	2010/09/27	105	80 - 120	100	80 - 120	<0.5	mg/L	0.1	20		
4293094	Hex. Chromium (Cr 6+)	2010/09/27	101	80 - 120	100	80 - 120	<0.001	mg/L	NC	20		
4293944	Total Organic Carbon (C)	2010/09/28	112	80 - 120	101	80 - 120	<0.5	mg/L	NC	20		
4293998	Dissolved Organic Carbon (C)	2010/09/28	NC	80 - 120	100	80 - 120	<0.5	mg/L	2.0	20		
4294021	Dissolved Chloride (Cl)	2010/09/27	90	80 - 120	99	80 - 120	<0.5	mg/L	NC	20		
4294065	Dissolved Sulphate (SO4)	2010/09/27	97	80 - 120	99	80 - 120	<0.5	mg/L	2.1	20		
4295865	Total Suspended Solids	2010/09/29	109	80 - 120	103	80 - 120	<4	mg/L	NC	25		
4296352	Total Dissolved Solids	2010/09/29	98	80 - 120	96	80 - 120	<10	mg/L	1.9	20		
4300253	Nitrate plus Nitrite (N)	2010/09/29	106	80 - 120	103	80 - 120	<0.02	mg/L	NC	25		
4300583	Total Arsenic (As)	2010/10/01	108	80 - 120	98	80 - 120	<0.1	ug/L	NC	20		
4300583	Total Beryllium (Be)	2010/10/01	100	80 - 120	99	80 - 120	<0.1	ug/L	NC	20		
4300583	Total Cadmium (Cd)	2010/10/01	106	80 - 120	100	80 - 120	<0.01	ug/L	NC	20		
4300583	Total Chromium (Cr)	2010/10/01	104	80 - 120	97	80 - 120	<1	ug/L	NC	20		
4300583	Total Cobalt (Co)	2010/10/01	104	80 - 120	96	80 - 120	<0.5	ug/L	NC	20		
4300583	Total Copper (Cu)	2010/10/01	NC	80 - 120	98	80 - 120	0.3, RDL=0.2	ug/L	0.9	20		
4300583	Total Lead (Pb)	2010/10/01	106	80 - 120	101	80 - 120	<0.2	ug/L	NC	20		
4300583	Total Lithium (Li)	2010/10/01	107	80 - 120	97	80 - 120	<5	ug/L	NC	20		
4300583	Total Nickel (Ni)	2010/10/01	106	80 - 120	108	80 - 120	<1	ug/L	NC	20		
4300583	Total Selenium (Se)	2010/10/01	107	80 - 120	103	80 - 120	<0.1	ug/L	NC	20		
4300583	Total Uranium (U)	2010/10/01	102	80 - 120	99	80 - 120	<0.1	ug/L	NC	20		
4300583	Total Vanadium (V)	2010/10/01	101	80 - 120	91	80 - 120	<5	ug/L	NC	20		
4300583	Total Zinc (Zn)	2010/10/01	NC	80 - 120	91	80 - 120	<5	ug/L	2.4	20		
4300583	Total Aluminum (Al)	2010/10/01					<3	ug/L	NC	20		
4300583	Total Antimony (Sb)	2010/10/01					<0.5	ug/L	NC	20		
4300583	Total Barium (Ba)	2010/10/01					<1	ug/L	NC	20		
4300583	Total Bismuth (Bi)	2010/10/01					<1	ug/L	NC	20		
4300583	Total Boron (B)	2010/10/01					<50	ug/L	NC	20		
4300583	Total Iron (Fe)	2010/10/01					<5	ug/L	NC	20		
4300583	Total Manganese (Mn)	2010/10/01					<1	ug/L	NC	20		
4300583	Total Mercury (Hg)	2010/10/01					<0.02	ug/L	NC	20		
4300583	Total Molybdenum (Mo)	2010/10/01					<1	ug/L	NC	20		
4300583	Total Silicon (Si)	2010/10/01					<100	ug/L	NC	20		
4300583	Total Silver (Ag)	2010/10/01					<0.02	ug/L	NC	20		
4300583	Total Strontium (Sr)	2010/10/01					<1	ug/L	NC	20		
4300583	Total Thallium (Tl)	2010/10/01					<0.05	ug/L	NC	20		
4300583	Total Tin (Sn)	2010/10/01					<5	ug/L	NC	20		
4300583	Total Titanium (Ti)	2010/10/01					<5	ug/L	NC	20		
4300583	Total Zirconium (Zr)	2010/10/01					<0.5	ug/L	NC	20		



Maxxam Job #: B090939  
Report Date: 2010/10/06

STANTEC CONSULTING LTD  
Client Project #: 111257005  
Site Reference: TIM HORTONS SYLVIA LAKE

QUALITY ASSURANCE REPORT

QC Batch	Parameter	Date	Matrix Spike		Spiked Blank		Method Blank		RPD		Calibration Check	
			% Recovery	QC Limits	% Recovery	QC Limits	Value	Units	Value (%)	QC Limits	% Recovery	QC Limits
4301723	Dissolved Arsenic (As)	2010/10/01	NC	80 - 120	100	80 - 120	<0.1	ug/L	2.7	20		
4301723	Dissolved Beryllium (Be)	2010/10/01	105	80 - 120	104	80 - 120	<0.1	ug/L	NC	20		
4301723	Dissolved Cadmium (Cd)	2010/10/01	106	80 - 120	101	80 - 120	<0.01	ug/L	NC	20		
4301723	Dissolved Chromium (Cr)	2010/10/01	104	80 - 120	104	80 - 120	<1	ug/L	NC	20		
4301723	Dissolved Cobalt (Co)	2010/10/01	103	80 - 120	103	80 - 120	<0.5	ug/L	NC	20		
4301723	Dissolved Copper (Cu)	2010/10/01	101	80 - 120	109	80 - 120	<0.2	ug/L	NC	20		
4301723	Dissolved Lead (Pb)	2010/10/01	103	80 - 120	101	80 - 120	<0.2	ug/L	NC	20		
4301723	Dissolved Lithium (Li)	2010/10/01	NC	80 - 120	107	80 - 120	<5	ug/L	8.0	20		
4301723	Dissolved Nickel (Ni)	2010/10/01	100	80 - 120	104	80 - 120	<1	ug/L	NC	20		
4301723	Dissolved Selenium (Se)	2010/10/01	109	80 - 120	102	80 - 120	<0.1	ug/L	NC	20		
4301723	Dissolved Uranium (U)	2010/10/01	105	80 - 120	100	80 - 120	<0.1	ug/L	10.4	20		
4301723	Dissolved Vanadium (V)	2010/10/01	109	80 - 120	103	80 - 120	<5	ug/L	NC	20		
4301723	Dissolved Zinc (Zn)	2010/10/01	103	80 - 120	103	80 - 120	<5	ug/L	NC	20		
4301723	Dissolved Aluminum (Al)	2010/10/01					<3	ug/L	NC	20		
4301723	Dissolved Antimony (Sb)	2010/10/01					<0.5	ug/L	NC	20		
4301723	Dissolved Barium (Ba)	2010/10/01					<1	ug/L	11.7	20		
4301723	Dissolved Bismuth (Bi)	2010/10/01					<1	ug/L	NC	20		
4301723	Dissolved Boron (B)	2010/10/01					<50	ug/L	NC	20		
4301723	Dissolved Iron (Fe)	2010/10/01					<5	ug/L	4.4	20		
4301723	Dissolved Manganese (Mn)	2010/10/01					<1	ug/L	0.4	20		
4301723	Dissolved Mercury (Hg)	2010/10/01					0.02, RDL=0.02	ug/L	NC	20		
4301723	Dissolved Molybdenum (Mo)	2010/10/01					<1	ug/L	NC	20		
4301723	Dissolved Silicon (Si)	2010/10/01					<100	ug/L	4.3	20		
4301723	Dissolved Silver (Ag)	2010/10/01					<0.02	ug/L	NC	20		
4301723	Dissolved Strontium (Sr)	2010/10/01					<1	ug/L	9.6	20		
4301723	Dissolved Thallium (Tl)	2010/10/01					<0.05	ug/L	NC	20		
4301723	Dissolved Tin (Sn)	2010/10/01					<5	ug/L	NC	20		
4301723	Dissolved Titanium (Ti)	2010/10/01					<5	ug/L	NC	20		
4301723	Dissolved Zirconium (Zr)	2010/10/01					<0.5	ug/L	NC	20		
4301725	Turbidity	2010/09/24					<0.1	NTU	NC	20	99	N/A
4301762	True Colour	2010/09/24					<5	Col. Unit	NC	20	84	75 - 105
4301983	Conductivity	2010/09/28					<1	uS/cm	0.3	5	102	96 - 104
4303735	Biochemical Oxygen Demand	2010/09/29					<1	mg/L	NC	20	101	81 - 119
4308339	Dissolved Ammonia (N)	2010/10/01	115	80 - 120	106	80 - 120	<0.005	mg/L	NC	25		
4308937	Total Inorganic Carbon (C)	2010/10/04	NC	80 - 120	114	80 - 120	<0.5	mg/L	1	20		
4310617	Alkalinity (Total as CaCO3)	2010/10/04					<1	mg/L	1.2	9	94	85 - 115
4310617	Bicarbonate (HCO3)	2010/10/04							1.2	20		
4310617	Carbonate (CO3)	2010/10/04							NC	20		
4310617	Hydroxide (OH)	2010/10/04							NC	20		

Maxxam Job #: B090939  
Report Date: 2010/10/06

STANTEC CONSULTING LTD  
Client Project #: 111257005  
Site Reference: TIM HORTONS SYLVIA LAKE

QUALITY ASSURANCE REPORT

QC Batch	Parameter	Date	Matrix Spike		Spiked Blank		Method Blank		RPD		Calibration Check	
			% Recovery	QC Limits	% Recovery	QC Limits	Value	Units	Value (%)	QC Limits	% Recovery	QC Limits
4311835	Orthophosphate (P)	2010/10/05	100	80 - 120	96	80 - 120	0.001, RDL=0.001	mg/L	NC	20		
4314853	Total Nitrogen (N)	1899/12/30	TBA	80 - 120	91	80 - 120	<0.02	mg/L	TBA	20		

N/A = Not Applicable

RDL = Reportable Detection Limit

RPD = Relative Percent Difference

Duplicate: Paired analysis of a separate portion of the same sample. Used to evaluate the variance in the measurement.

Calibration Check: A calibration standard analyzed at different times to evaluate on-going calibration accuracy.

Matrix Spike: A sample to which a known amount of the analyte of interest has been added. Used to evaluate sample matrix interference.

Spiked Blank: A blank matrix to which a known amount of the analyte has been added. Used to evaluate analyte recovery.

Method Blank: A blank matrix containing all reagents used in the analytical procedure. Used to identify laboratory contamination.

NC (Matrix Spike): The recovery in the matrix spike was not calculated. The relative difference between the concentration in the parent sample and the spiked amount was not sufficiently significant to permit a reliable recovery calculation.

NC (RPD): The RPD was not calculated. The level of analyte detected in the parent sample and its duplicate was not sufficiently significant to permit a reliable calculation.