



City of Portage la Prairie
ATTN: c/o Owen Van Wallegem
AECOM - 99 Commerce Drive
Winnipeg MB R3P 0Y7

Date Received: 10-JUN-11
Report Date: 24-JUN-11 15:43 (MT)
Version: FINAL

Client Phone: 204-477-5381

Certificate of Analysis

Lab Work Order #: L1015942
Project P.O. #: NOT SUBMITTED
Job Reference: 60194510
Legal Site Desc:
C of C Numbers:

Paul Nicolas

Paul Nicolas
Account Manager

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ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters	Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L1015942-1 ENTERING DISTRIBUTION (ALS COMPARATIVE)							
Sampled By: CLIENT on 09-JUN-11							
Matrix: WATER							
Nitrate + Nitrite							
Nitrate as N							
Nitrate-N	0.223		0.050	mg/L		23-JUN-11	R2209380
Nitrate+Nitrite							
Nitrate and Nitrite as N	0.223		0.071	mg/L		24-JUN-11	
Nitrite as N							
Nitrite-N	<0.050		0.050	mg/L		23-JUN-11	R2209380
Miscellaneous Parameters							
Chloride	24.1		0.50	mg/L		23-JUN-11	R2209380
Colour, True	<5.0		5.0	CU		11-JUN-11	R2203320
Dissolved Organic Carbon	6.1		1.0	mg/L		21-JUN-11	R2207038
Hardness (as CaCO3)	198		0.30	mg/L		15-JUN-11	
Langelier Index (4 C)	0.023					15-JUN-11	
Langelier Index (60 C)	0.79					15-JUN-11	
Sulfate	224		0.50	mg/L		23-JUN-11	R2209380
Total Dissolved Solids	444		5.0	mg/L		13-JUN-11	R2203383
Total Organic Carbon	6.3		1.0	mg/L		21-JUN-11	R2207038
Transmittance, UV (254 nm)	82.6		1.0	% T	15-JUN-11	15-JUN-11	R2204307
Turbidity	0.12		0.10	NTU		11-JUN-11	R2203379
pH	8.10		0.10	pH units		11-JUN-11	R2202609
Alkalinity							
Alkalinity, Total (as CaCO3)	71.9		1.0	mg/L		11-JUN-11	R2202609
Bicarbonate (HCO3)	87.8		2.0	mg/L		11-JUN-11	R2202609
Carbonate (CO3)	<0.60		0.60	mg/L		11-JUN-11	R2202609
Hydroxide (OH)	<0.40		0.40	mg/L		11-JUN-11	R2202609
Total Metals by ICP-MS							
Aluminum (Al)-Total	<0.020		0.020	mg/L	14-JUN-11	14-JUN-11	R2204029
Antimony (Sb)-Total	<0.0010		0.0010	mg/L	14-JUN-11	14-JUN-11	R2204029
Arsenic (As)-Total	<0.0010		0.0010	mg/L	14-JUN-11	14-JUN-11	R2204029
Barium (Ba)-Total	0.0198		0.00050	mg/L	14-JUN-11	14-JUN-11	R2204029
Beryllium (Be)-Total	<0.0010		0.0010	mg/L	14-JUN-11	14-JUN-11	R2204029
Bismuth (Bi)-Total	<0.00050		0.00050	mg/L	14-JUN-11	14-JUN-11	R2204029
Boron (B)-Total	0.058		0.030	mg/L	14-JUN-11	14-JUN-11	R2204029
Cadmium (Cd)-Total	<0.00020		0.00020	mg/L	14-JUN-11	14-JUN-11	R2204029
Calcium (Ca)-Total	52.6		0.20	mg/L	14-JUN-11	14-JUN-11	R2204029
Cesium (Cs)-Total	<0.00050		0.00050	mg/L	14-JUN-11	14-JUN-11	R2204029
Chromium (Cr)-Total	<0.0020		0.0020	mg/L	14-JUN-11	14-JUN-11	R2204029
Cobalt (Co)-Total	<0.00050		0.00050	mg/L	14-JUN-11	14-JUN-11	R2204029
Copper (Cu)-Total	0.0087		0.0020	mg/L	14-JUN-11	14-JUN-11	R2204029
Iron (Fe)-Total	<0.10		0.10	mg/L	14-JUN-11	14-JUN-11	R2204029
Lead (Pb)-Total	<0.0010		0.0010	mg/L	14-JUN-11	14-JUN-11	R2204029
Lithium (Li)-Total	0.0550		0.0020	mg/L	14-JUN-11	14-JUN-11	R2204029
Magnesium (Mg)-Total	16.2		0.050	mg/L	14-JUN-11	14-JUN-11	R2204029
Manganese (Mn)-Total	<0.0010		0.0010	mg/L	14-JUN-11	14-JUN-11	R2204029
Molybdenum (Mo)-Total	0.00281		0.00050	mg/L	14-JUN-11	14-JUN-11	R2204029
Nickel (Ni)-Total	<0.0020		0.0020	mg/L	14-JUN-11	14-JUN-11	R2204029
Phosphorus (P)-Total	<0.50		0.50	mg/L	14-JUN-11	14-JUN-11	R2204029
Potassium (K)-Total	12.5		0.10	mg/L	14-JUN-11	14-JUN-11	R2204029
Rubidium (Rb)-Total	0.00340		0.00050	mg/L	14-JUN-11	14-JUN-11	R2204029
Selenium (Se)-Total	<0.0050		0.0050	mg/L	14-JUN-11	14-JUN-11	R2204029
Silicon (Si)-Total	1.98		0.30	mg/L	14-JUN-11	14-JUN-11	R2204029
Silver (Ag)-Total	<0.0010		0.0010	mg/L	14-JUN-11	14-JUN-11	R2204029

* Refer to Referenced Information for Qualifiers (if any) and Methodology.

ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters	Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L1015942-1 ENTERING DISTRIBUTION (ALS COMPARATIVE)							
Sampled By: CLIENT on 09-JUN-11							
Matrix: WATER							
Total Metals by ICP-MS							
Sodium (Na)-Total	59.5		0.050	mg/L	14-JUN-11	14-JUN-11	R2204029
Strontium (Sr)-Total	0.163		0.00050	mg/L	14-JUN-11	14-JUN-11	R2204029
Tellurium (Te)-Total	<0.0010		0.0010	mg/L	14-JUN-11	14-JUN-11	R2204029
Thallium (Tl)-Total	<0.0050		0.0050	mg/L	14-JUN-11	14-JUN-11	R2204029
Thorium (Th)-Total	<0.0010		0.0010	mg/L	14-JUN-11	14-JUN-11	R2204029
Tin (Sn)-Total	<0.00060		0.00060	mg/L	14-JUN-11	14-JUN-11	R2204029
Titanium (Ti)-Total	0.0011		0.0010	mg/L	14-JUN-11	14-JUN-11	R2204029
Tungsten (W)-Total	<0.0020		0.0020	mg/L	14-JUN-11	14-JUN-11	R2204029
Uranium (U)-Total	<0.00050		0.00050	mg/L	14-JUN-11	14-JUN-11	R2204029
Vanadium (V)-Total	<0.0020		0.0020	mg/L	14-JUN-11	14-JUN-11	R2204029
Zinc (Zn)-Total	<0.020		0.020	mg/L	14-JUN-11	14-JUN-11	R2204029
Zirconium (Zr)-Total	<0.0010		0.0010	mg/L	14-JUN-11	14-JUN-11	R2204029

* Refer to Referenced Information for Qualifiers (if any) and Methodology.

Reference Information

Test Method References:

ALS Test Code	Matrix	Test Description	Method Reference**
ALK-TOT-WP	Water	Alkalinity	APHA 2320B
Alkalinity of water is a measure of its acid neutralizing capacity. Alkalinity is imparted by bicarbonate, carbonate and hydroxide components of water. It is determined by titration with a standard solution of strong mineral acid to the successive HCO ₃ ⁻ and H ₂ CO ₃ endpoints indicated electrometrically.			
C-DIS-ORG-WP	Water	Dissolved Organic Carbon	APHA 5310 B-INSTRUMENTAL-WP
This method is applicable to the analysis of ground water, wastewater, and surface water samples. The form detected depends upon sample pretreatment: Unfiltered sample = TC, 0.45um filtered = TDC. Samples are injected into a combustion tube containing an oxidation catalyst. The carrier gas containing the combustion product from the combustion tube flows through an inorganic carbon reactor vessel and is then sent through a halogen scrubber into a sample cell set in a non-dispersive infrared gas analyzer (NDIR) where carbon dioxide is detected. For total inorganic carbon and dissolved inorganic carbon, the sample is injected into an IC reactor vessel where only the IC component is decomposed to become carbon dioxide.			
The peak area generated by the NDIR indicates the TC/TDC or TIC/DIC as applicable. The total organic carbon content of the sample is calculated by subtracting the TIC from the TC. TOC = TC-TIC, DOC = TDC-DIC, Particulate = Total - Dissolved.			
C-TOT-ORG-WP	Water	Total Organic Carbon	APHA 5310 B-INSTRUMENTAL-WP
This method is applicable to the analysis of ground water, wastewater, and surface water samples. The form detected depends upon sample pretreatment: Unfiltered sample = TC, 0.45um filtered = TDC. Samples are injected into a combustion tube containing an oxidation catalyst. The carrier gas containing the combustion product from the combustion tube flows through an inorganic carbon reactor vessel and is then sent through a halogen scrubber into a sample cell set in a non-dispersive infrared gas analyzer (NDIR) where carbon dioxide is detected. For total inorganic carbon and dissolved inorganic carbon, the sample is injected into an IC reactor vessel where only the IC component is decomposed to become carbon dioxide.			
The peak area generated by the NDIR indicates the TC/TDC or TIC/DIC as applicable. The total organic carbon content of the sample is calculated by subtracting the TIC from the TC. TOC = TC-TIC, DOC = TDC-DIC, Particulate = Total - Dissolved.			
CL-IC-WP	Water	Chloride	EPA 300.1 IC
This analysis is carried out using procedures adapted from EPA Method 300.1 "Determination of Inorganic Anions in Drinking Water by Ion Chromatography".			
COLOUR-TRUE-WP	Water	Colour, True	APHA 4500 COLOR
True colour in water is analyzed by discrete analyzer using the platinum-cobalt colourimetric method. Colour is pH dependant; unless otherwise indicated, reported colour results pertain to the pH of the sample as received to within +/- 1 pH unit.			
ETL-HARDNESS-TOT-WP	Water	Hardness Calculated	HARDNESS CALCULATED
ETL-LANGELIER-4-WP	Water	Langelier Index 4C	Calculated
ETL-LANGELIER-60-WP	Water	Langelier Index 60C	Calculated
MET-T-MS-WP	Water	Total Metals by ICP-MS	U.S. EPA 200.8-T
Total Metals by ICP-MS: This analysis is carried out using sample preparation procedures adapted from Standard Methods for the examination of Water and Wastewater Method 3030E and analytical procedures adapted from U.S EPA Method 200.8 for analysis of metals by inductively coupled-mass spectrometry.			
NO2+NO3-CALC-WP	Water	Nitrate+Nitrite	CALCULATION
NO2-IC-WP	Water	Nitrite as N	EPA 300.1 IC
NO3-IC-WP	Water	Nitrate as N	EPA 300.1 IC
PH-WP	Water	pH	APHA 4500H
The pH of a sample is the determination of the activity of the hydrogen ions by potentiometric measurement using a standard hydrogen electrode and a reference electrode.			
SO4-IC-WP	Water	Sulfate	EPA 300.1 IC
This analysis is carried out using procedures adapted from EPA Method 300.1 "Determination of Inorganic Anions in Drinking Water by Ion Chromatography".			
SOLIDS-TDS-WP	Water	Total Dissolved Solids	APHA 2540C
The residue remaining in a prepared casserole after passing the sample through a 1.2 um Whatman GF/C glass microfibre filter and drying at 180			

Reference Information

Test Method References:

ALS Test Code	Matrix	Test Description	Method Reference**
		degrees C. Samples may be dried at 105 degrees C if the client specifically requests this drying temperature.	
TRANSM-UV-WT	Water	Transmittance, UV (254 nm)	APHA 5910 B-Spectrophotometer
TURBIDITY-WP	Water	Turbidity	APHA, 1998, 2130B
A strong light beam is sent through a transparent tube containing the sample. Light that is reflected at 90 degrees to the axis by suspended particles is detected by the photocell. The electrical response is proportional to the sample turbidity.			

** ALS test methods may incorporate modifications from specified reference methods to improve performance.

The last two letters of the above test code(s) indicate the laboratory that performed analytical analysis for that test. Refer to the list below:

Laboratory Definition Code	Laboratory Location
WP	ALS ENVIRONMENTAL - WINNIPEG, MANITOBA, CANADA
WT	ALS ENVIRONMENTAL - WATERLOO, ONTARIO, CANADA

Chain of Custody Numbers:

GLOSSARY OF REPORT TERMS

Surrogates are compounds that are similar in behaviour to target analyte(s), but that do not normally occur in environmental samples. For applicable tests, surrogates are added to samples prior to analysis as a check on recovery. In reports that display the D.L. column, laboratory objectives for surrogates are listed there.

mg/kg - milligrams per kilogram based on dry weight of sample

mg/kg wwt - milligrams per kilogram based on wet weight of sample

mg/kg lwt - milligrams per kilogram based on lipid-adjusted weight

mg/L - unit of concentration based on volume, parts per million.

< - Less than.

D.L. - The reporting limit.

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.

Analytical results in unsigned test reports with the DRAFT watermark are subject to change, pending final QC review.



Quality Control Report

Workorder: L1015942

Report Date: 24-JUN-11

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Client: City of Portage la Prairie
AECOM - 99 Commerce Drive
Winnipeg MB R3P 0Y7

Contact: c/o Owen Van Wallegem

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
ALK-TOT-WP		Water						
Batch	R2202609							
WG1294273-3	CVS							
Alkalinity, Total (as CaCO3)			99		%		85-115	11-JUN-11
WG1294273-4	DUP	L1015756-1						
Alkalinity, Total (as CaCO3)		59.4	59.2		mg/L	0.26	20	11-JUN-11
Bicarbonate (HCO3)		72.5	72.3		mg/L	0.26	25	11-JUN-11
Carbonate (CO3)		<0.60	<0.60	RPD-NA	mg/L	N/A	25	11-JUN-11
Hydroxide (OH)		<0.40	<0.40	RPD-NA	mg/L	N/A	25	11-JUN-11
WG1294273-5	DUP	L1015756-2						
Alkalinity, Total (as CaCO3)		34.1	33.9		mg/L	0.63	20	11-JUN-11
Bicarbonate (HCO3)		41.6	41.3		mg/L	0.63	25	11-JUN-11
Carbonate (CO3)		<0.60	<0.60	RPD-NA	mg/L	N/A	25	11-JUN-11
Hydroxide (OH)		<0.40	<0.40	RPD-NA	mg/L	N/A	25	11-JUN-11
C-DIS-ORG-WP		Water						
Batch	R2207038							
WG1299348-2	DUP	L1014457-1						
Dissolved Organic Carbon		14.8	14.4		mg/L	2.6	20	20-JUN-11
C-TOT-ORG-WP		Water						
Batch	R2207038							
WG1299354-3	DUP	L1015556-1						
Total Organic Carbon		10.1	10.0		mg/L	1.5	20	20-JUN-11
WG1299354-1	MB							
Total Organic Carbon			<1.0		mg/L		1	20-JUN-11
CL-IC-WP		Water						
Batch	R2209380							
WG1301886-2	LCS							
Chloride			100		%		85-115	23-JUN-11
WG1301886-1	MB							
Chloride			<0.50		mg/L		0.5	23-JUN-11
COLOUR-TRUE-WP		Water						
Batch	R2203320							
WG1294187-3	DUP	L1014233-1						
Colour, True		<5.0	<5.0	RPD-NA	CU	N/A	400	11-JUN-11
WG1294187-4	DUP	L1015539-2						
Colour, True		40.6	39.2		CU	3.7	20	11-JUN-11
WG1294187-2	LCS							



Quality Control Report

Workorder: L1015942

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Client: City of Portage la Prairie
AECOM - 99 Commerce Drive
Winnipeg MB R3P 0Y7

Contact: c/o Owen Van Wallegghem

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
COLOUR-TRUE-WP		Water						
Batch	R2203320							
WG1294187-2	LCS							
Colour, True			102		%		85-115	11-JUN-11
WG1294187-1	MB							
Colour, True			<5.0		CU		5	11-JUN-11
MET-T-MS-WP		Water						
Batch	R2204029							
WG1295304-4	DUP	WG1295304-3						
Aluminum (Al)-Total		0.384	0.408		mg/L	5.9	20	14-JUN-11
Antimony (Sb)-Total		<0.0010	<0.0010	RPD-NA	mg/L	N/A	400	14-JUN-11
Arsenic (As)-Total		0.0011	0.0011		mg/L	4.2	400	14-JUN-11
Barium (Ba)-Total		0.0198	0.0204		mg/L	3.0	20	14-JUN-11
Beryllium (Be)-Total		<0.0010	<0.0010	RPD-NA	mg/L	N/A	400	14-JUN-11
Bismuth (Bi)-Total		<0.00050	<0.00050	RPD-NA	mg/L	N/A	400	14-JUN-11
Boron (B)-Total		0.041	0.041		mg/L	0.42	400	14-JUN-11
Cadmium (Cd)-Total		<0.00020	<0.00020	RPD-NA	mg/L	N/A	400	14-JUN-11
Calcium (Ca)-Total		41.0	41.1		mg/L	0.39	20	14-JUN-11
Cesium (Cs)-Total		<0.00050	<0.00050	RPD-NA	mg/L	N/A	400	14-JUN-11
Chromium (Cr)-Total		<0.0020	<0.0020	RPD-NA	mg/L	N/A	400	14-JUN-11
Cobalt (Co)-Total		<0.00050	<0.00050	RPD-NA	mg/L	N/A	400	14-JUN-11
Copper (Cu)-Total		0.0078	0.0078		mg/L	0.58	400	14-JUN-11
Iron (Fe)-Total		0.47	0.50		mg/L	7.8	400	14-JUN-11
Lead (Pb)-Total		<0.0010	<0.0010	RPD-NA	mg/L	N/A	400	14-JUN-11
Lithium (Li)-Total		0.0093	0.0105		mg/L	12	400	14-JUN-11
Magnesium (Mg)-Total		8.81	8.69		mg/L	1.4	20	14-JUN-11
Manganese (Mn)-Total		0.0417	0.0432		mg/L	3.5	20	14-JUN-11
Molybdenum (Mo)-Total		0.00276	0.00286		mg/L	3.5	20	14-JUN-11
Nickel (Ni)-Total		<0.0020	<0.0020	RPD-NA	mg/L	N/A	400	14-JUN-11
Phosphorus (P)-Total		<0.50	<0.50	RPD-NA	mg/L	N/A	400	14-JUN-11
Potassium (K)-Total		2.09	2.10		mg/L	0.90	20	14-JUN-11
Rubidium (Rb)-Total		0.00148	0.00151		mg/L	2.3	400	14-JUN-11
Selenium (Se)-Total		<0.0050	<0.0050	RPD-NA	mg/L	N/A	400	14-JUN-11
Silicon (Si)-Total		2.29	2.40		mg/L	4.8	20	14-JUN-11
Silver (Ag)-Total		<0.0010	<0.0010	RPD-NA	mg/L	N/A	400	14-JUN-11
Sodium (Na)-Total		7.55	7.55		mg/L	0.042	20	14-JUN-11



Quality Control Report

Workorder: L1015942

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Client: City of Portage la Prairie
 AECOM - 99 Commerce Drive
 Winnipeg MB R3P 0Y7

Contact: c/o Owen Van Wallegem

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
MET-T-MS-WP		Water						
Batch	R2204029							
WG1295304-4	DUP	WG1295304-3						
Strontium (Sr)-Total		0.167	0.174		mg/L	3.6	20	14-JUN-11
Tellurium (Te)-Total		<0.0010	<0.0010	RPD-NA	mg/L	N/A	400	14-JUN-11
Thallium (Tl)-Total		<0.0050	<0.0050	RPD-NA	mg/L	N/A	400	14-JUN-11
Thorium (Th)-Total		<0.0010	<0.0010	RPD-NA	mg/L	N/A	25	14-JUN-11
Tin (Sn)-Total		<0.00060	<0.00060	RPD-NA	mg/L	N/A	400	14-JUN-11
Titanium (Ti)-Total		0.0093	0.0100		mg/L	7.3	20	14-JUN-11
Tungsten (W)-Total		0.0102	0.0106		mg/L	3.8	20	14-JUN-11
Uranium (U)-Total		0.00059	0.00061		mg/L	3.4	400	14-JUN-11
Vanadium (V)-Total		<0.0020	<0.0020	RPD-NA	mg/L	N/A	400	14-JUN-11
Zinc (Zn)-Total		<0.020	<0.020	RPD-NA	mg/L	N/A	400	14-JUN-11
Zirconium (Zr)-Total		<0.0010	<0.0010	RPD-NA	mg/L	N/A	400	14-JUN-11
WG1295304-6	DUP	WG1295304-5						
Aluminum (Al)-Total		0.082	0.075		mg/L	8.3	400	14-JUN-11
Antimony (Sb)-Total		<0.0010	<0.0010	RPD-NA	mg/L	N/A	400	14-JUN-11
Arsenic (As)-Total		0.0035	0.0036		mg/L	1.8	400	14-JUN-11
Barium (Ba)-Total		0.0605	0.0612		mg/L	1.2	20	14-JUN-11
Beryllium (Be)-Total		<0.0010	<0.0010	RPD-NA	mg/L	N/A	400	14-JUN-11
Bismuth (Bi)-Total		<0.00050	<0.00050	RPD-NA	mg/L	N/A	400	14-JUN-11
Boron (B)-Total		0.036	0.038		mg/L	5.1	400	14-JUN-11
Cadmium (Cd)-Total		<0.00020	<0.00020	RPD-NA	mg/L	N/A	400	14-JUN-11
Calcium (Ca)-Total		50.3	50.3		mg/L	0.15	20	14-JUN-11
Cesium (Cs)-Total		<0.00050	<0.00050	RPD-NA	mg/L	N/A	400	14-JUN-11
Chromium (Cr)-Total		<0.0020	<0.0020	RPD-NA	mg/L	N/A	400	14-JUN-11
Cobalt (Co)-Total		<0.00050	<0.00050	RPD-NA	mg/L	N/A	400	14-JUN-11
Copper (Cu)-Total		<0.0020	<0.0020	RPD-NA	mg/L	N/A	400	14-JUN-11
Iron (Fe)-Total		0.21	0.22		mg/L	4.9	400	14-JUN-11
Lead (Pb)-Total		<0.0010	<0.0010	RPD-NA	mg/L	N/A	400	14-JUN-11
Lithium (Li)-Total		0.0146	0.0144		mg/L	1.0	20	14-JUN-11
Magnesium (Mg)-Total		26.8	27.7		mg/L	3.3	20	14-JUN-11
Manganese (Mn)-Total		0.0038	0.0038		mg/L	0.58	400	14-JUN-11
Molybdenum (Mo)-Total		0.00121	0.00118		mg/L	2.7	400	14-JUN-11
Nickel (Ni)-Total		<0.0020	<0.0020	RPD-NA	mg/L	N/A	400	14-JUN-11
Phosphorus (P)-Total		<0.50	<0.50	RPD-NA	mg/L	N/A	400	14-JUN-11



Quality Control Report

Workorder: L1015942

Report Date: 24-JUN-11

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Client: City of Portage la Prairie
 AECOM - 99 Commerce Drive
 Winnipeg MB R3P 0Y7

Contact: c/o Owen Van Wallegem

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
MET-T-MS-WP		Water						
Batch	R2204029							
WG1295304-6	DUP	WG1295304-5						
Potassium (K)-Total		2.67	2.74		mg/L	2.7	20	14-JUN-11
Rubidium (Rb)-Total		0.00112	0.00108		mg/L	3.5	400	14-JUN-11
Selenium (Se)-Total		<0.0050	<0.0050	RPD-NA	mg/L	N/A	400	14-JUN-11
Silicon (Si)-Total		7.98	8.22		mg/L	2.9	20	14-JUN-11
Silver (Ag)-Total		<0.0010	<0.0010	RPD-NA	mg/L	N/A	400	14-JUN-11
Sodium (Na)-Total		8.63	8.95		mg/L	3.6	20	14-JUN-11
Strontium (Sr)-Total		0.171	0.166		mg/L	2.7	20	14-JUN-11
Tellurium (Te)-Total		<0.0010	<0.0010	RPD-NA	mg/L	N/A	400	14-JUN-11
Thallium (Tl)-Total		<0.0050	<0.0050	RPD-NA	mg/L	N/A	400	14-JUN-11
Thorium (Th)-Total		<0.0010	<0.0010	RPD-NA	mg/L	N/A	25	14-JUN-11
Tin (Sn)-Total		<0.00060	<0.00060	RPD-NA	mg/L	N/A	400	14-JUN-11
Titanium (Ti)-Total		0.0048	0.0049		mg/L	2.2	400	14-JUN-11
Tungsten (W)-Total		<0.0020	<0.0020	RPD-NA	mg/L	N/A	400	14-JUN-11
Uranium (U)-Total		0.00076	0.00076		mg/L	0.79	400	14-JUN-11
Vanadium (V)-Total		<0.0020	<0.0020	RPD-NA	mg/L	N/A	400	14-JUN-11
Zinc (Zn)-Total		<0.020	<0.020	RPD-NA	mg/L	N/A	400	14-JUN-11
Zirconium (Zr)-Total		<0.0010	<0.0010	RPD-NA	mg/L	N/A	400	14-JUN-11
WG1295304-2	LCS							
Aluminum (Al)-Total			104		%		80-120	14-JUN-11
Antimony (Sb)-Total			99		%		80-120	14-JUN-11
Arsenic (As)-Total			102		%		80-120	14-JUN-11
Barium (Ba)-Total			102		%		80-120	14-JUN-11
Beryllium (Be)-Total			102		%		80-120	14-JUN-11
Bismuth (Bi)-Total			104		%		80-120	14-JUN-11
Boron (B)-Total			99		%		80-120	14-JUN-11
Cadmium (Cd)-Total			101		%		80-120	14-JUN-11
Calcium (Ca)-Total			99		%		80-120	14-JUN-11
Cesium (Cs)-Total			100		%		80-120	14-JUN-11
Chromium (Cr)-Total			104		%		80-120	14-JUN-11
Cobalt (Co)-Total			105		%		80-120	14-JUN-11
Copper (Cu)-Total			99		%		80-120	14-JUN-11
Iron (Fe)-Total			102		%		80-120	14-JUN-11
Lead (Pb)-Total			96		%		80-120	14-JUN-11



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Workorder: L1015942

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Client: City of Portage la Prairie
AECOM - 99 Commerce Drive
Winnipeg MB R3P 0Y7

Contact: c/o Owen Van Wallegghem

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
MET-T-MS-WP		Water						
Batch	R2204029							
WG1295304-2	LCS							
Lithium (Li)-Total			97		%		80-120	14-JUN-11
Magnesium (Mg)-Total			102		%		80-120	14-JUN-11
Manganese (Mn)-Total			102		%		80-120	14-JUN-11
Molybdenum (Mo)-Total			106		%		80-120	14-JUN-11
Nickel (Ni)-Total			101		%		80-120	14-JUN-11
Phosphorus (P)-Total			109		%		80-120	14-JUN-11
Potassium (K)-Total			100		%		80-120	14-JUN-11
Rubidium (Rb)-Total			103		%		80-120	14-JUN-11
Selenium (Se)-Total			103		%		80-120	14-JUN-11
Silicon (Si)-Total			107		%		80-120	14-JUN-11
Silver (Ag)-Total			102		%		80-120	14-JUN-11
Sodium (Na)-Total			102		%		80-120	14-JUN-11
Strontium (Sr)-Total			98		%		80-120	14-JUN-11
Tellurium (Te)-Total			103		%		80-120	14-JUN-11
Thallium (Tl)-Total			102		%		80-120	14-JUN-11
Thorium (Th)-Total			98		%		70-130	14-JUN-11
Tin (Sn)-Total			102		%		80-120	14-JUN-11
Titanium (Ti)-Total			102		%		80-120	14-JUN-11
Tungsten (W)-Total			102		%		80-120	14-JUN-11
Uranium (U)-Total			105		%		80-120	14-JUN-11
Vanadium (V)-Total			104		%		80-120	14-JUN-11
Zinc (Zn)-Total			101		%		80-120	14-JUN-11
Zirconium (Zr)-Total			103		%		80-120	14-JUN-11
WG1295304-1	MB							
Aluminum (Al)-Total			<0.020		mg/L		0.02	14-JUN-11
Antimony (Sb)-Total			<0.0010		mg/L		0.001	14-JUN-11
Arsenic (As)-Total			<0.0010		mg/L		0.001	14-JUN-11
Barium (Ba)-Total			<0.00050		mg/L		0.0005	14-JUN-11
Beryllium (Be)-Total			<0.0010		mg/L		0.001	14-JUN-11
Bismuth (Bi)-Total			<0.00050		mg/L		0.0005	14-JUN-11
Boron (B)-Total			<0.030		mg/L		0.03	14-JUN-11
Cadmium (Cd)-Total			<0.00020		mg/L		0.0002	14-JUN-11
Calcium (Ca)-Total			<0.20		mg/L		0.2	14-JUN-11
Cesium (Cs)-Total			<0.00050		mg/L		0.0005	14-JUN-11



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Client: City of Portage la Prairie
AECOM - 99 Commerce Drive
Winnipeg MB R3P 0Y7

Contact: c/o Owen Van Wallegem

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
MET-T-MS-WP		Water						
Batch	R2204029							
WG1295304-1	MB							
Chromium (Cr)-Total			<0.0020		mg/L		0.002	14-JUN-11
Cobalt (Co)-Total			<0.00050		mg/L		0.0005	14-JUN-11
Copper (Cu)-Total			<0.0020		mg/L		0.002	14-JUN-11
Iron (Fe)-Total			<0.10		mg/L		0.1	14-JUN-11
Lead (Pb)-Total			<0.0010		mg/L		0.001	14-JUN-11
Lithium (Li)-Total			<0.0020		mg/L		0.002	14-JUN-11
Magnesium (Mg)-Total			<0.050		mg/L		0.05	14-JUN-11
Manganese (Mn)-Total			<0.0010		mg/L		0.001	14-JUN-11
Molybdenum (Mo)-Total			<0.00050		mg/L		0.0005	14-JUN-11
Nickel (Ni)-Total			<0.0020		mg/L		0.002	14-JUN-11
Phosphorus (P)-Total			<0.50		mg/L		0.5	14-JUN-11
Potassium (K)-Total			<0.10		mg/L		0.1	14-JUN-11
Rubidium (Rb)-Total			<0.00050		mg/L		0.0005	14-JUN-11
Selenium (Se)-Total			<0.0050		mg/L		0.005	14-JUN-11
Silicon (Si)-Total			<0.30		mg/L		0.3	14-JUN-11
Silver (Ag)-Total			<0.0010		mg/L		0.001	14-JUN-11
Sodium (Na)-Total			<0.050		mg/L		0.05	14-JUN-11
Strontium (Sr)-Total			<0.00050		mg/L		0.0005	14-JUN-11
Tellurium (Te)-Total			<0.0010		mg/L		0.001	14-JUN-11
Thallium (Tl)-Total			<0.0050		mg/L		0.005	14-JUN-11
Thorium (Th)-Total			<0.0010		mg/L		0.001	14-JUN-11
Tin (Sn)-Total			<0.00060		mg/L		0.0006	14-JUN-11
Titanium (Ti)-Total			<0.0010		mg/L		0.001	14-JUN-11
Tungsten (W)-Total			<0.0020		mg/L		0.002	14-JUN-11
Uranium (U)-Total			<0.00050		mg/L		0.0005	14-JUN-11
Vanadium (V)-Total			<0.0020		mg/L		0.002	14-JUN-11
Zinc (Zn)-Total			<0.020		mg/L		0.02	14-JUN-11
Zirconium (Zr)-Total			<0.0010		mg/L		0.001	14-JUN-11
NO2-IC-WP		Water						
Batch	R2209380							
WG1301886-2	LCS							
Nitrite-N			100		%		85-115	23-JUN-11
WG1301886-1	MB							
Nitrite-N			<0.050		mg/L		0.05	23-JUN-11



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Client: City of Portage la Prairie
 AECOM - 99 Commerce Drive
 Winnipeg MB R3P 0Y7

Contact: c/o Owen Van Wallegem

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
NO3-IC-WP								
	Water							
Batch	R2209380							
WG1301886-3	DUP	L1020937-6						
Nitrate-N		2.86	2.87		mg/L	0.38	20	23-JUN-11
WG1301886-2	LCS							
Nitrate-N			100		%		85-115	23-JUN-11
WG1301886-1	MB							
Nitrate-N			<0.050		mg/L		0.05	23-JUN-11
WG1301886-4	MS	L1020937-6						
Nitrate-N			N/A	MS-B	%		-	23-JUN-11
PH-WP								
	Water							
Batch	R2202609							
WG1294273-2	LCS							
pH			7.42		pH units		7.3-7.5	11-JUN-11
SO4-IC-WP								
	Water							
Batch	R2209380							
WG1301886-2	LCS							
Sulfate			101		%		85-115	23-JUN-11
WG1301886-1	MB							
Sulfate			<0.50		mg/L		0.5	23-JUN-11
SOLIDS-TDS-WP								
	Water							
Batch	R2203383							
WG1294389-2	CVS							
Total Dissolved Solids			101		%		85-115	13-JUN-11
WG1294389-11	DUP	L1016303-1						
Total Dissolved Solids		1370	1470		mg/L	7.0	20	13-JUN-11
WG1294389-6	DUP	L1015756-1						
Total Dissolved Solids		1380	1440		mg/L	3.8	20	13-JUN-11
WG1294389-7	DUP	L1015756-2						
Total Dissolved Solids		404	418		mg/L	3.4	20	13-JUN-11
WG1294389-9	DUP	L1015756-4						
Total Dissolved Solids		410	408		mg/L	0.49	20	13-JUN-11
WG1294389-1	MB							
Total Dissolved Solids			<5.0		mg/L		5	13-JUN-11
TRANSM-UV-WT								
	Water							



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Client: City of Portage la Prairie
AECOM - 99 Commerce Drive
Winnipeg MB R3P 0Y7

Contact: c/o Owen Van Wallegem

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
TRANSM-UV-WT								
	Water							
Batch	R2204307							
WG1295872-2	DUP	L1015942-1						
Transmittance, UV (254 nm)		82.6	83.5		% T	1.1	25	15-JUN-11
WG1295872-1	MB							
Transmittance, UV (254 nm)			100		% T		100	15-JUN-11
TURBIDITY-WP								
	Water							
Batch	R2203379							
WG1295225-3	DUP	L1016016-4						
Turbidity		21.0	20.9		NTU	0.48	15	11-JUN-11
WG1295225-4	DUP	L1016021-3						
Turbidity		29.6	29.5		NTU	0.34	15	11-JUN-11
WG1295225-2	LCS							
Turbidity			96		%		85-115	11-JUN-11
WG1295225-1	MB							
Turbidity			<0.10		NTU		0.1	11-JUN-11

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Legend:

Limit	ALS Control Limit (Data Quality Objectives)
DUP	Duplicate
RPD	Relative Percent Difference
N/A	Not Available
LCS	Laboratory Control Sample
SRM	Standard Reference Material
MS	Matrix Spike
MSD	Matrix Spike Duplicate
ADE	Average Desorption Efficiency
MB	Method Blank
IRM	Internal Reference Material
CRM	Certified Reference Material
CCV	Continuing Calibration Verification
CVS	Calibration Verification Standard
LCSD	Laboratory Control Sample Duplicate

Sample Parameter Qualifier Definitions:

Qualifier	Description
MS-B	Matrix Spike recovery could not be accurately calculated due to high analyte background in sample.
RPD-NA	Relative Percent Difference Not Available due to result(s) being less than detection limit.

Quality Control Report

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Hold Time Exceedances:

ALS Product Description	Sample ID	Sampling Date	Date Processed	Rec. HT	Actual HT	Units	Qualifier
Physical Tests							
Transmittance, UV (254 nm)	1	09-JUN-11	15-JUN-11 15:48	48	148	hours	EHT
pH	1	09-JUN-11	11-JUN-11 13:20	0.25	49	hours	EHTR-FM
Anions and Nutrients							
Nitrate as N	1	09-JUN-11	23-JUN-11 16:15	48	340	hours	EHT
Nitrite as N	1	09-JUN-11	23-JUN-11 16:15	48	340	hours	EHT

Legend & Qualifier Definitions:

EHTR-FM: Exceeded ALS recommended hold time prior to sample receipt. Field Measurement recommended.
EHTR: Exceeded ALS recommended hold time prior to sample receipt.
EHTL: Exceeded ALS recommended hold time prior to analysis. Sample was received less than 24 hours prior to expiry.
EHT: Exceeded ALS recommended hold time prior to analysis.
Rec. HT: ALS recommended hold time (see units).

Notes*:
Where actual sampling date is not provided to ALS, the date (& time) of receipt is used for calculation purposes.
Where actual sampling time is not provided to ALS, the earlier of 12 noon on the sampling date or the time (& date) of receipt is used for calculation purposes. Samples for L1015942 were received on 10-JUN-11 09:00.

ALS recommended hold times may vary by province. They are assigned to meet known provincial and/or federal government requirements. In the absence of regulatory hold times, ALS establishes recommendations based on guidelines published by the US EPA, APHA Standard Methods, or Environment Canada (where available). For more information, please contact ALS.

The ALS Quality Control Report is provided to ALS clients upon request. ALS includes comprehensive QC checks with every analysis to ensure our high standards of quality are met. Each QC result has a known or expected target value, which is compared against pre-determined data quality objectives to provide confidence in the accuracy of associated test results.

Please note that this report may contain QC results from anonymous Sample Duplicates and Matrix Spikes that do not originate from this Work Order.

Environmental Division



REPORT TO:		DISTRIBUTION		SERVICE REQUESTED	
COMPANY: <u>CITY OF PORTAGE LA PRAIRIE</u>	STANDARD <input checked="" type="checkbox"/>	OTHER <input type="checkbox"/>	REGULAR SERVICE (DEFAULT)		
CONTACT: <u>Donc Campbell</u>	PDF <input type="checkbox"/>	EXCEL <input type="checkbox"/>	RUSH SERVICE (2-3 DAYS)		
ADDRESS: <u>130 YELLOW QUILL TRAIL</u>	EMAIL 1: <u>d.campbell@city-pla.com</u>		PRIORITY SERVICE (1 DAY or ASAP)		
<u>Portage La Prairie MS.</u>	EMAIL 2: <u>OVEN VAN WALLEGHEM@AECOM.COM</u>		EMERGENCY SERVICE (<1 DAY / WEEKEND) - CONTACT ALS		
PHONE: <u>1-204-239-8373</u>	FAX: <u>1-204-239-8371</u>				

INVOICE TO: SAME AS REPORT? YES <input checked="" type="checkbox"/> NO <input type="checkbox"/>	INDICATE BOTTLES: FILTERED / PRESERVED (F/P) → → →	ANALYSIS REQUEST									
COMPANY: <u>CITY OF PORTAGE LA PRAIRIE</u>	CLIENT / PROJECT INFORMATION:										
CONTACT:	JOB #: <u>60194510</u>										
ADDRESS: <u>97 SASK. AVE.</u>	PO / AFE:										
PHONE:	Legal Site Description:										
FAX:	QUOTE #: <u>Q 28596</u>										
Lab Work Order # (lab use only)	SAMPLER (Initials):										

Sample #	SAMPLE IDENTIFICATION (This description will appear on the report)	DATE	TIME	SAMPLE TYPE	PH	Alkalinity	Turbidity	Hardness	zsi	TDS	UVT	True Colour	TOTAL METALS	TOC	DOC	HAZARDOUS?	HIGHLY CONTAMINATED?	NUMBER OF CONTAINERS
	<u>ENTERING DISTRIBUTION (ALS Comparative)</u>	<u>JUNE 9, 2011</u>		<u>WATER</u>	<u>X</u>	<u>X</u>	<u>X</u>	<u>X</u>	<u>X</u>	<u>X</u>	<u>X</u>	<u>X</u>	<u>X</u>	<u>X</u>	<u>X</u>			

GUIDELINES / REGULATIONS	SPECIAL INSTRUCTIONS / HAZARDOUS DETAILS

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: <u>DC SVNP</u>	DATE & TIME: <u>09:00</u>	SAMPLE CONDITION (lab use only)	
RELINQUISHED BY:	DATE & TIME:	RECEIVED BY:	DATE & TIME:	TEMPERATURE <u>15.8</u>	SAMPLES RECEIVED IN GOOD CONDITION? YES / NO (If no provide details)