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Date Received: 01-OCT-10  
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Version: FINAL

## Certificate of Analysis

Lab Work Order #: L938488  
Project P.O. #: NOT SUBMITTED  
Job Reference: RANKIN FARM 171  
Legal Site Desc:  
C of C Numbers:

Robert S. Kitlar  
Account Manager

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MANITOBA TECHNOLOGY CENTRE LTD. Part of the ALS Group A Campbell Brothers Limited Company

Sample Details/Parameters		Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L938488-1	TANK FARM PROJECT 171							
Sampled By:	CLIENT on 27-SEP-10							
Matrix:	WATER							
<b>BTEX</b>								
<b>BTX by GCMS</b>								
Benzene		<0.00050		0.00050	mg/L		05-OCT-10	R1488719
Toluene		<0.0010		0.0010	mg/L		05-OCT-10	R1488719
Ethyl benzene		<0.00050		0.00050	mg/L		05-OCT-10	R1488719
o-Xylene		<0.0010	DLM	0.0010	mg/L		05-OCT-10	R1488719
m+p-Xylenes		<0.00050		0.00050	mg/L		05-OCT-10	R1488719
Xylenes		<0.0015		0.0015	mg/L		05-OCT-10	R1488719
F1 (C6-C10)		<0.10		0.10	mg/L		05-OCT-10	R1488719
Surrogate: 4-Bromofluorobenzene (SS)		93		N/A	%		05-OCT-10	R1488719
<b>Single Metal in Water by ICPMS (Dis)</b>								
<b>Dissolved Metals by ICP-MS</b>								
Lead (Pb)-Dissolved		<0.10	DLA	0.000090	mg/L	01-OCT-10	05-OCT-10	R1489584
<b>Miscellaneous Parameters</b>								
Total Oil and Grease		<1.0		1.0	mg/L	04-OCT-10	05-OCT-10	R1484791
Total Suspended Solids		<5.0		5.0	mg/L		04-OCT-10	R1488144
pH		7.39		0.10	pH units		01-OCT-10	R1486303

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

## Reference Information

### Sample Parameter Qualifier Key:

Qualifier	Description
DLA	Detection Limit Adjusted For required dilution
DLM	Detection Limit Adjusted For Sample Matrix Effects

### Test Method References:

ALS Test Code	Matrix	Test Description	Method Reference**
BTEXS+F1-HSMS-WP	Water	BTX by GCMS	EPA SW846 8260B REV 2 SEPT 1994

The water sample, with added reagents, is heated in a sealed vial to equilibrium. The headspace from the vial is transferred into a gas chromatograph. Target compound concentrations are measured using mass spectrometry detection.

MET-D-L-MS-WP	Water	Dissolved Metals by ICP-MS	U.S. EPA 200.8-DL
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Dissolved 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 3030B for filtration through a 0.45 µm filter and analytical procedures adapted from U.S EPA Method 200.8 for analysis of metals by inductively coupled-mass spectrometry.

OGG-IR-WP	Water	Total Oil and Grease	APHA METHOD 5520C
PH-WP	Water	pH	APHA 4500H

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.

SOLIDS-TOTSUS-WP	Water	Total Suspended Solids	APHA 2540
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The residue retained by a prepared 1.5 µm Whatman 934-AH glass microfibre filter dried at 105 degrees C.

\*\* 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 LABORATORY GROUP - WINNIPEG, MANITOBA, 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.

