

Manitoba Sustainable Development

Winnipeg Soil Survey Fall 2018

Addendum

Environmental Compliance and Enforcement Branch
January 2019

**Winnipeg Soil Survey, Fall 2018. Environmental Compliance and Enforcement, Manitoba
Sustainable Development, January 2019**

Certificates of Analysis from the ALS Environmental

Notes: Correction to Lab Work Order No. L2184284

- Reported sample No. 05-013 was corrected as 05-015
- Reported sample No. 05-015 was corrected as 05-016
- Reported sample No. 06-002 was corrected as 06-008
- Reported sample No. 06-008D was corrected as 06-008D



Environmental Operations
ATTN: YVONNE HAWRYLIUK
1007 Century Street
Winnipeg MB R3H 0W4

Date Received: 05-OCT-18
Report Date: 22-NOV-18 10:09 (MT)
Version: FINAL

Client Phone: 204-945-5305

Certificate of Analysis

Lab Work Order #: L2176898
Project P.O. #: Contract#: 5648 (MICROCHEM)
Job Reference: LEAD IN SOIL SURVEY
C of C Numbers:
Legal Site Desc:

Hua Wo
Chemistry Laboratory Manager

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ADDRESS: 1329 Niakwa Road East, Unit 12, Winnipeg, MB R2J 3T4 Canada | Phone: +1 204 255 9720 | Fax: +1 204 255 9721
ALS CANADA LTD Part of the ALS Group An ALS Limited Company

ALS ENVIRONMENTAL ANALYTICAL REPORT

		Sample ID	L2176898-1	L2176898-2	L2176898-3	L2176898-4	L2176898-5
		Description	SOIL	SOIL	SOIL	SOIL	SOIL
		Sampled Date	05-OCT-18	05-OCT-18	05-OCT-18	05-OCT-18	05-OCT-18
		Sampled Time	10:40	10:40	10:33	09:40	10:20
		Client ID	WSC1	WSC1D	WSD1	WSD2	WSE1
Grouping	Analyte						
SOIL							
Metals	Lead (Pb) (mg/kg)	199	219	375	184	372	

ALS ENVIRONMENTAL ANALYTICAL REPORT

		Sample ID	L2176898-6	L2176898-7	L2176898-8	L2176898-9
		Description	SOIL	SOIL	SOIL	SOIL
		Sampled Date	05-OCT-18	05-OCT-18	05-OCT-18	05-OCT-18
		Sampled Time	09:50	10:10	10:00	11:00
		Client ID	WSE2	WSF1	WSF2	COMPOSITE 1
Grouping	Analyte					
SOIL						
Metals	Lead (Pb) (mg/kg)	151	342	180	198	

Reference Information

Test Method References:

ALS Test Code	Matrix	Test Description	Method Reference**
---------------	--------	------------------	--------------------

MET-200.2-MS-WP	Soil	Metals	EPA 200.2/6020A
------------------------	------	--------	-----------------

Soil/sediment is dried, disaggregated, and sieved (2 mm). Strong Acid Leachable Metals in the <2mm fraction are solubilized by heated digestion with nitric and hydrochloric acids. Instrumental analysis is by Collision / Reaction Cell ICPMS.

Limitations: This method is intended to liberate environmentally available metals. Silicate minerals are not solubilized. Some metals may be only partially recovered (matrix dependent), including Al, Ba, Be, Cr, S, Sr, Ti, Tl, V, W, and Zr. Elemental Sulfur may be poorly recovered by this method. Volatile forms of sulfur (e.g. sulfide, H₂S) may be excluded if lost during sampling, storage, or digestion.

** 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

Chain of Custody Numbers:

GLOSSARY OF REPORT TERMS

Surrogate - A compound that is similar in behaviour to target analyte(s), but that does not occur naturally in environmental samples. For applicable tests, surrogates are added to samples prior to analysis as a check on recovery.

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 of sample.

mg/L - milligrams per litre.

< - Less than.

D.L. - The reported Detection Limit, also known as the Limit of Reporting (LOR).

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.

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Quality Control Report

Workorder: L2176898

Report Date: 22-NOV-18

Page 1 of 2

Client: Environmental Operations
 1007 Century Street
 Winnipeg MB R3H 0W4

Contact: YVONNE HAWRYLIUK

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
MET-200.2-MS-WP	Soil							
Batch R4287630								
WG2906349-3 CRM		CANMET TILL-1						
Lead (Pb)			105.4		%		70-130	17-OCT-18
WG2906349-2 LCS								
Lead (Pb)			102.1		%		80-120	17-OCT-18
WG2906349-1 MB								
Lead (Pb)			<0.20		mg/kg		0.2	17-OCT-18
Batch R4299872								
WG2911829-4 CRM		CANMET TILL-1						
Lead (Pb)			112.8		%		70-130	24-OCT-18
WG2911829-2 LCS								
Lead (Pb)			100.3		%		80-120	24-OCT-18
WG2911829-1 MB								
Lead (Pb)			<0.20		mg/kg		0.2	24-OCT-18

Quality Control Report

Workorder: L2176898

Report Date: 22-NOV-18

Page 2 of 2

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

Hold Time Exceedances:

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

Requ

Canada Toll Free



L2176898-COFC

Barcode label here (use only)

Page of

L2176898

Report To Contact and company name below will appear on the final report

Company: **MANITIBA SUSTAINABLE DEVELOPMENT**

Contact: **Yvonne Hawryliuk**

Phone: **955 5215**

Company address below will appear on the final report

Street: **1007 CENTURY ST**

City/Province: **WPG MB**

Postal Code: **R3H 0Y4**

Invoice To: Same as Report To YES NO

Copy of Invoice with Report YES NO

Company: **MANITIBA SUSTAINABLE DEVELOPMENT**

Contact: **Yvonne Hawryliuk**

Project Information

ALS Account # / Quote #: **@ 70175**

Job #: _____

PO / AFE: _____

LSD: _____

Oil and Gas Required Fields (client use)

AFE/Cost Center: _____ PO#: _____

Major/Minor Code: _____ Routing Code: _____

Requisitioner: _____

Location: _____

ALS Lab Work Order # (lab use only): _____

ALS Contact: _____

Sampler: **NN/KO**

ALS Sample # (lab use only)	Sample Identification and/or Coordinates (This description will appear on the report)	Date (dd-mmm-yy)	Time (hh:mm)	Sample Type	Lead
	WSCI	05-10-18	10:40	soil	✓
	WSCI.D	"	10:40	"	✓
	WSD1	"	10:33	"	✓
	WSD2	"	9:40	"	✓
	WSE1	"	10:20	"	✓
	WSE2	"	9:50	"	✓
	WSF1	"	10:10	"	✓
	WSF2	"	10:00	"	✓
	"Composite 1"	"	11:00	"	✓

Drinking Water (DW) Samples (client use)

Are samples taken from a Regulated DW System? YES NO

Are samples for human drinking water use? YES NO

SPECIAL INSTRUCTIONS / Specify Criteria to add on report by clicking on the drop-down list below (electronic COC only)

SAMPLE CONDITION AS RECEIVED (lab use only)

Frozen Ice Packs Ice Cubes SIF Observations Yes No Custody seal intact Yes No Cooling Initiated

INITIAL COOLER TEMPERATURES °C: _____ FINAL COOLER TEMPERATURES °C: _____

SHIPMENT RELEASE (client use)

Released by: _____ Date: _____ Time: _____

INITIAL SHIPMENT RECEPTION (lab use only)

Received by: **MH** Date: **5-10-18** Time: **3:40**

FINAL SHIPMENT RECEPTION (lab use only)

Received by: _____ Date: _____ Time: _____

Indicate Filtered (F), Preserved (P) or Filtered and Preserved (FP) below

Number of Containers

REFER TO BACK PAGE FOR ALS LOCATIONS AND SAMPLING INFORMATION

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 back page of the white - report copy

1. If any water samples are taken from a Regulated Drinking Water (DW) System, please submit using an Authorized DW COC form.

WHITE - LABORATORY COPY YELLOW - CLIENT COPY



Environmental Operations
ATTN: YVONNE HAWRYLIUK
1007 Century Street
Winnipeg MB R3H 0W4

Date Received: 05-OCT-18
Report Date: 22-NOV-18 10:09 (MT)
Version: FINAL

Client Phone: 204-945-5305

Certificate of Analysis

Lab Work Order #: L2176904
Project P.O. #: Contract#: 5648 (MICROCHEM)
Job Reference: LEAD IN SOIL SURVEY
C of C Numbers:
Legal Site Desc:

Hua Wo
Chemistry Laboratory Manager

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		Sample ID	L2176904-1	L2176904-2	L2176904-3	L2176904-4	L2176904-5
		Description	SOIL	SOIL	SOIL	SOIL	SOIL
		Sampled Date	05-OCT-18	05-OCT-18	05-OCT-18	05-OCT-18	05-OCT-18
		Sampled Time	09:40	09:59	10:13	10:26	10:46
		Client ID	WSA5	WSB5	WSC5	WSA4	WSB4
Grouping	Analyte						
SOIL							
Metals	Lead (Pb) (mg/kg)	96.3	203	171	201	120	

ALS ENVIRONMENTAL ANALYTICAL REPORT

		Sample ID	L2176904-6	L2176904-7	L2176904-8		
		Description	SOIL	SOIL	SOIL		
		Sampled Date	05-OCT-18	05-OCT-18	05-OCT-18		
		Sampled Time	11:00	11:14	11:14		
		Client ID	WSC4	WSC3	WSC3D		
Grouping	Analyte						
SOIL							
Metals	Lead (Pb) (mg/kg)		225	119	117		

Reference Information

Test Method References:

ALS Test Code	Matrix	Test Description	Method Reference**
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MET-200.2-MS-WP

Soil

Metals

EPA 200.2/6020A

Soil/sediment is dried, disaggregated, and sieved (2 mm). Strong Acid Leachable Metals in the <2mm fraction are solubilized by heated digestion with nitric and hydrochloric acids. Instrumental analysis is by Collision / Reaction Cell ICPMS.

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Quality Control Report

Workorder: L2176904

Report Date: 22-NOV-18

Page 1 of 2

Client: Environmental Operations
 1007 Century Street
 Winnipeg MB R3H 0W4
 Contact: YVONNE HAWRYLIUK

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
MET-200.2-MS-WP	Soil							
Batch	R4299872							
WG2911829-4	CRM	CANMET TILL-1						
Lead (Pb)			112.8		%		70-130	24-OCT-18
WG2911829-2	LCS							
Lead (Pb)			100.3		%		80-120	24-OCT-18
WG2911829-1	MB							
Lead (Pb)			<0.20		mg/kg		0.2	24-OCT-18

Quality Control Report

Workorder: L2176904

Report Date: 22-NOV-18

Page 2 of 2

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

Hold Time Exceedances:

All test results reported with this submission were conducted within ALS recommended hold times.

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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.

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L2176904-COFC

Label here

COC Number: 15 - 552846

Page of
L2176904

Report To Contact and company name below will appear on the final report		Report Format / Distribution			Select Service Level Below - Please confirm all E&P TATs with your AM - surcharges will apply												
Company: Manitoba Sustainable Development		Select Report Format: <input checked="" type="checkbox"/> PDF <input checked="" type="checkbox"/> EXCEL <input type="checkbox"/> EDD (DIGITAL)			Regular [R] <input type="checkbox"/> Standard TAT if received by 3 pm - business days - no surcharges apply					EMERGENCY							
Contact: Yvonne Hawrylyuk		Quality Control (QC) Report with Report <input checked="" type="checkbox"/> YES <input type="checkbox"/> NO			4 day [P4] <input type="checkbox"/>		1 Business day [E1] <input type="checkbox"/>										
Phone: 204-945-7843		<input type="checkbox"/> Compare Results to Criteria on Report - provide details below if box checked			3 day [P3] <input type="checkbox"/>		Same Day, Weekend or Statutory holiday [E0] <input type="checkbox"/>										
Company address below will appear on the final report		Select Distribution: <input checked="" type="checkbox"/> EMAIL <input type="checkbox"/> MAIL <input type="checkbox"/> FAX															
Street: 1007 Century Street		Email 1 or Fax: yvonne.hawrylyuk@gov.mb.ca			Date and Time Required for all E&P TATs:					01 Monday thru							
City/Province: Winnipeg, MB		Email 2:			For tests that can not be performed according to the service level selected, you will be contacted.												
Postal Code: R3H 0W4		Email 3:			Analysis Request												
Invoice To: Same as Report To <input checked="" type="checkbox"/> YES <input type="checkbox"/> NO		Invoice Distribution			Indicate Filtered (F), Preserved (P) or Filtered and Preserved (F/P) below												
Copy of Invoice with Report <input checked="" type="checkbox"/> YES <input type="checkbox"/> NO		Select Invoice Distribution: <input type="checkbox"/> EMAIL <input type="checkbox"/> MAIL <input type="checkbox"/> FAX															
Company:		Email 1 or Fax: yvonne.hawrylyuk@gov.mb.ca			Number of Containers												
Contact:		Email 2:															
Project Information		Oil and Gas Required Fields (client use)															
ALS Account # / Quote #: Q 70175		APE/Cost Center: PO#															
Job #:		Major/Minor Code: Routing Code:															
PO / AFE:		Requisitioner:															
LSD:		Location:															
ALS Lab Work Order # (lab use only)		ALS Contact:		Sampler: AD/AC													
ALS Sample # (lab use only)	Sample Identification and/or Coordinates (This description will appear on the report)			Date (dd-mm-yy)	Time (hh:mm)	Sample Type											
	W5A5			05-10-18	09:40	Soil											
	W5B5			"	09:59	"											
	W5C5			"	10:13	"											
	W5A4			"	10:26	"											
	W5B4			"	10:46	"											
	W5C4			"	11:00	"											
	W5C3			"	11:14	"											
	W5C3.D			"	11:14	"											
Drinking Water (DW) Samples¹ (client use)		Special Instructions / Specify Criteria to add on report by clicking on the drop-down list below (electronic COC only)			SAMPLE CONDITION AS RECEIVED (lab use only)												
Are samples taken from a Regulated DW System? <input type="checkbox"/> YES <input type="checkbox"/> NO					Frozen <input type="checkbox"/>					SIF Observations Yes <input type="checkbox"/> No <input type="checkbox"/>							
Are samples for human drinking water use? <input type="checkbox"/> YES <input type="checkbox"/> NO					Ice Packs <input type="checkbox"/>					Ice Cubes <input type="checkbox"/>					Custody seal intact Yes <input type="checkbox"/> No <input type="checkbox"/>		
					Cooling Initiated <input type="checkbox"/>												
					INITIAL COOLER TEMPERATURES °C					FINAL COOLER TEMPERATURES °C							
					10.6												
SHIPMENT RELEASE (client use)				INITIAL SHIPMENT RECEPTION (lab use only)				FINAL SHIPMENT RECEPTION (lab use only)									
Released by:		Date:		Time:		Received by: MH		Date: 5-10-18		Time: 3:40		Received by:		Date:		Time:	

REFER TO BACK PAGE FOR ALS LOCATIONS AND SAMPLING INFORMATION

WHITE - LABORATORY COPY YELLOW - CLIENT COPY

OCTOBER 2013 FRONT

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 back page of the white - report copy.

1. If any water samples are taken from a Regulated Drinking Water (DW) System, please submit using an Authorized DW COC form.



Environmental Operations
ATTN: YVONNE HAWRYLIUK
1007 Century Street
Winnipeg MB R3H 0W4

Date Received: 05-OCT-18
Report Date: 22-NOV-18 10:10 (MT)
Version: FINAL

Client Phone: 204-945-5305

Certificate of Analysis

Lab Work Order #: L2176912
Project P.O. #: Contract#: 5648 (MICROCHEM)
Job Reference: LEAD IN SOIL SURVEY
C of C Numbers:
Legal Site Desc:

Hua Wo
Chemistry Laboratory Manager

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ALS ENVIRONMENTAL ANALYTICAL REPORT

		Sample ID	L2176912-1	L2176912-2	L2176912-3	L2176912-4	L2176912-5
		Description	SOIL	SOIL	SOIL	SOIL	SOIL
		Sampled Date	05-OCT-18	05-OCT-18	05-OCT-18	05-OCT-18	05-OCT-18
		Sampled Time	09:47	10:12	10:31	10:48	10:48
		Client ID	WSA1	WSB1	WSB2	WSC2	WSC2-D
Grouping	Analyte						
SOIL							
Metals	Lead (Pb) (mg/kg)	271	114	239	189	259	

ALS ENVIRONMENTAL ANALYTICAL REPORT

		Sample ID	L2176912-6	L2176912-7	L2176912-8		
		Description	SOIL	SOIL	SOIL		
		Sampled Date	05-OCT-18	05-OCT-18	05-OCT-18		
		Sampled Time	11:22	11:32	11:32		
		Client ID	WSB3	WSA2	WSA3		
Grouping	Analyte						
SOIL							
Metals	Lead (Pb) (mg/kg)		183	446	224		

Reference Information

Test Method References:

ALS Test Code	Matrix	Test Description	Method Reference**
---------------	--------	------------------	--------------------

MET-200.2-MS-WP	Soil	Metals	EPA 200.2/6020A
------------------------	------	--------	-----------------

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Workorder: L2176912

Report Date: 22-NOV-18

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 1007 Century Street
 Winnipeg MB R3H 0W4
 Contact: YVONNE HAWRYLIUK

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
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Batch	R4299872							
WG2911829-4	CRM	CANMET TILL-1						
Lead (Pb)			112.8		%		70-130	24-OCT-18
WG2911829-2	LCS							
Lead (Pb)			100.3		%		80-120	24-OCT-18
WG2911829-1	MB							
Lead (Pb)			<0.20		mg/kg		0.2	24-OCT-18

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Page 2 of 2

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L2176912-COFC

Label here only

L2176912

Report To Contact and company name below will appear on the final report		Report Format / Distribution			Select Service Level Below - Please confirm all E&P TATs with your AM - surcharges will apply																																																																																																																													
Company: <i>Manitoba Sustainable Development</i>		Select Report Format: <input checked="" type="checkbox"/> PDF <input checked="" type="checkbox"/> EXCEL <input checked="" type="checkbox"/> EDD (DIGITAL)			Regular [R] <input type="checkbox"/> Standard TAT if received by 3 pm - business days - no surcharges apply																																																																																																																													
Contact: <i>Yvonne Hawryliuk</i>		Quality Control (QC) Report with Report <input type="checkbox"/> YES <input type="checkbox"/> NO			PRIORITY (Business Days)	4 day [P4] <input type="checkbox"/>		EMERGENCY	1 Business day [E1] <input type="checkbox"/>																																																																																																																									
Phone: <i>204-945-7043</i>		<input type="checkbox"/> Compare Results to Criteria on Report - provide details below if box checked				3 day [P3] <input type="checkbox"/>			Same Day, Weekend or Statutory holiday [E0] <input type="checkbox"/>																																																																																																																									
Company address below will appear on the final report		Select Distribution: <input checked="" type="checkbox"/> EMAIL <input type="checkbox"/> MAIL <input type="checkbox"/> FAX				2 day [P2] <input type="checkbox"/>																																																																																																																												
Street: <i>1007 Century Street</i>		Email 1 or Fax: <i>yvonne.hawryliuk@gov.mb.ca</i>			Date and Time Required for all E&P TATs: _____																																																																																																																													
City/Province: <i>Winnipeg MB</i>		Email 2: _____			For tests that can not be performed according to the service level selected, you will be contacted.																																																																																																																													
Postal Code: <i>R3H 0W4</i>		Email 3: _____			Analysis Request																																																																																																																													
Invoice To		Invoice Distribution			Indicate Filtered (F), Preserved (P) or Filtered and Preserved (F/P) below																																																																																																																													
Same as Report To <input checked="" type="checkbox"/> YES <input type="checkbox"/> NO		Select Invoice Distribution: <input checked="" type="checkbox"/> EMAIL <input type="checkbox"/> MAIL <input type="checkbox"/> FAX			<table border="1" style="width:100%; height: 300px;"> <tr><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr> <tr><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr> <tr><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr> <tr><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr> <tr><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr> <tr><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr> <tr><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr> <tr><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr> <tr><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr> <tr><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr> <tr><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr> </table>																																																																																																																													
Copy of Invoice with Report <input checked="" type="checkbox"/> YES <input type="checkbox"/> NO		Company: _____			Number of Containers																																																																																																																													
Company: _____		Email 1 or Fax: <i>yvonne.hawryliuk@gov.mb.ca</i>																																																																																																																																
Contact: _____		Email 2: _____																																																																																																																																
Project Information		Oil and Gas Required Fields (client use)																																																																																																																																
ALS Account # / Quote #: <i>Q70175</i>		AFE/Cost Center: _____ PO#: _____																																																																																																																																
Job #: _____		Major/Minor Code: _____ Routing Code: _____																																																																																																																																
PO / AFE: _____		Requisitioner: _____																																																																																																																																
LSD: _____		Location: _____																																																																																																																																
ALS Lab Work Order # (lab use only): _____		ALS Contact: _____		Sampler: <i>JF/KO</i>																																																																																																																														
ALS Sample # (lab use only)		Sample Identification and/or Coordinates (This description will appear on the report)		Date (dd-mmm-yy)						Time (hh:mm)	Sample Type																																																																																																																							
		<i>WSA1</i>		<i>5-10-18</i>	<i>9:47</i>	<i>Soil</i>																																																																																																																												
		<i>WSB1</i>		<i>5-10-18</i>	<i>10:12</i>	<i>Soil</i>																																																																																																																												
		<i>WSB2</i>		<i>5-10-18</i>	<i>10:31</i>	<i>Soil</i>																																																																																																																												
		<i>WSC2</i>		<i>5-10-18</i>	<i>10:48</i>	<i>Soil</i>																																																																																																																												
		<i>WSC2-D</i>		<i>5-10-18</i>	<i>10:48</i>	<i>Soil</i>																																																																																																																												
		<i>WSB3 WSB3</i>		<i>5-10-18</i>	<i>11:22</i>	<i>Soil</i>																																																																																																																												
		<i>WSA2</i>		<i>5-10-18</i>	<i>11:32</i>	<i>Soil</i>																																																																																																																												
Drinking Water (DW) Samples¹ (client use)		Special Instructions / Specify Criteria to add on report by clicking on the drop-down list below (electronic COC only)			SAMPLE CONDITION AS RECEIVED (lab use only)																																																																																																																													
Are samples taken from a Regulated DW System? <input type="checkbox"/> YES <input type="checkbox"/> NO					Frozen <input type="checkbox"/> SIF Observations Yes <input type="checkbox"/> No <input type="checkbox"/>																																																																																																																													
Are samples for human drinking water use? <input type="checkbox"/> YES <input type="checkbox"/> NO					Ice Packs <input type="checkbox"/> Ice Cubes <input type="checkbox"/> Custody seal intact Yes <input type="checkbox"/> No <input type="checkbox"/>																																																																																																																													
					Cooling Initiated <input type="checkbox"/>																																																																																																																													
					INITIAL COOLER TEMPERATURES °C		FINAL COOLER TEMPERATURES °C																																																																																																																											
					<i>10.6</i>																																																																																																																													
SHIPMENT RELEASE (client use)		INITIAL SHIPMENT RECEPTION (lab use only)			FINAL SHIPMENT RECEPTION (lab use only)																																																																																																																													
Released by: _____ Date: _____ Time: _____		Received by: <i>MA</i> Date: <i>5-10-18</i> Time: <i>3:40</i>			Received by: _____ Date: _____ Time: _____																																																																																																																													



Environmental Operations
ATTN: YVONNE HAWRYLIUK
1007 Century Street
Winnipeg MB R3H 0W4

Date Received: 10-OCT-18
Report Date: 22-NOV-18 10:11 (MT)
Version: FINAL

Client Phone: 204-945-5305

Certificate of Analysis

Lab Work Order #: L2177910
Project P.O. #: Contract#: 5648 (MICROCHEM)
Job Reference: LEAD IN SOIL SURVEY
C of C Numbers:
Legal Site Desc:

Hua Wo
Chemistry Laboratory Manager

[This report shall not be reproduced except in full without the written authority of the Laboratory.]

ADDRESS: 1329 Niakwa Road East, Unit 12, Winnipeg, MB R2J 3T4 Canada | Phone: +1 204 255 9720 | Fax: +1 204 255 9721
ALS CANADA LTD Part of the ALS Group An ALS Limited Company

ALS ENVIRONMENTAL ANALYTICAL REPORT

		Sample ID	L2177910-1	L2177910-2	L2177910-3	L2177910-4	L2177910-5
		Description	SOIL	SOIL	SOIL	SOIL	SOIL
		Sampled Date	09-OCT-18	09-OCT-18	09-OCT-18	09-OCT-18	09-OCT-18
		Sampled Time	08:58	09:38	10:20	11:44	10:49
		Client ID	03-001	03-002	03-003	03-004	03-005
Grouping	Analyte						
SOIL							
Metals	Lead (Pb) (mg/kg)	98.8	72.5	134	87.4	14.2	

ALS ENVIRONMENTAL ANALYTICAL REPORT

		Sample ID	L2177910-6	L2177910-7	L2177910-8	L2177910-9	L2177910-10
		Description	SOIL	SOIL	SOIL	SOIL	SOIL
		Sampled Date	09-OCT-18	09-OCT-18	09-OCT-18	09-OCT-18	09-OCT-18
		Sampled Time	11:19	14:26	15:03	13:50	14:02
		Client ID	03-006	03-007	03-009	03-012	03-013
Grouping	Analyte						
SOIL							
Metals	Lead (Pb) (mg/kg)	27.9	67.5	29.1	21.6	34.3	

ALS ENVIRONMENTAL ANALYTICAL REPORT

		Sample ID	L2177910-11	L2177910-12			
		Description	SOIL	SOIL			
		Sampled Date	09-OCT-18	09-OCT-18			
		Sampled Time	13:04	14:26			
		Client ID	03-016	03-007-D			
Grouping	Analyte						
SOIL							
Metals	Lead (Pb) (mg/kg)	43.9	17.0				

Reference Information

Test Method References:

ALS Test Code	Matrix	Test Description	Method Reference**
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MET-200.2-MS-WP

Soil

Metals

EPA 200.2/6020A

Soil/sediment is dried, disaggregated, and sieved (2 mm). Strong Acid Leachable Metals in the <2mm fraction are solubilized by heated digestion with nitric and hydrochloric acids. Instrumental analysis is by Collision / Reaction Cell ICPMS.

Limitations: This method is intended to liberate environmentally available metals. Silicate minerals are not solubilized. Some metals may be only partially recovered (matrix dependent), including Al, Ba, Be, Cr, S, Sr, Ti, Tl, V, W, and Zr. Elemental Sulfur may be poorly recovered by this method. Volatile forms of sulfur (e.g. sulfide, H₂S) may be excluded if lost during sampling, storage, or digestion.

** 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

Chain of Custody Numbers:

GLOSSARY OF REPORT TERMS

Surrogate - A compound that is similar in behaviour to target analyte(s), but that does not occur naturally in environmental samples. For applicable tests, surrogates are added to samples prior to analysis as a check on recovery.

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 of sample.

mg/L - milligrams per litre.

< - Less than.

D.L. - The reported Detection Limit, also known as the Limit of Reporting (LOR).

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: L2177910

Report Date: 22-NOV-18

Page 1 of 2

Client: Environmental Operations
1007 Century Street
Winnipeg MB R3H 0W4
Contact: YVONNE HAWRYLIUK

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
MET-200.2-MS-WP	Soil							
Batch	R4294048							
WG2910802-4	CRM	CANMET TILL-1						
Lead (Pb)			100.9		%		70-130	22-OCT-18
WG2910802-2	LCS							
Lead (Pb)			99.3		%		80-120	22-OCT-18
WG2910802-1	MB							
Lead (Pb)			<0.20		mg/kg		0.2	22-OCT-18

Quality Control Report

Workorder: L2177910

Report Date: 22-NOV-18

Page 2 of 2

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

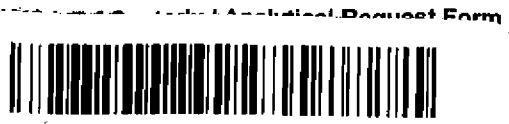
Hold Time Exceedances:

All test results reported with this submission were conducted within ALS recommended hold times.

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.



Report To	R	L2177910-COFC	Service Requested (Rush for routine analysis subject to availability)
Company: Sustainable Development (W10410)	<input checked="" type="checkbox"/>		<input checked="" type="radio"/> Regular (Standard Turnaround Times - Business Days)
Contact: YVONNE HAWRYLIUK	<input checked="" type="checkbox"/> PDF <input checked="" type="checkbox"/> Excel <input type="checkbox"/> Digital <input type="checkbox"/> Fax		<input type="radio"/> Priority (2-4 Business Days) - 50% Surcharge - Contact ALS to Confirm TAT
Address: 1007 Century Street	Email 1: yvonne.hawryliuk@gov.mb.ca		<input type="radio"/> Emergency (1-2 Bus. Days) - 100% Surcharge - Contact ALS to Confirm TAT
Winnipeg, MB, R3H 0W4	Email 2:		<input type="radio"/> Same Day or Weekend Emergency - Contact ALS to Confirm TAT
Phone: 204-945-5305 CELL #:	Email 3:		

Invoice To Same as Report? <input checked="" type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Client / Project Information	Analysis Request											
Hardcopy of Invoice with Report? <input type="checkbox"/> Yes <input type="checkbox"/> No	Job #: Lead in Soil Survey	Please indicate below Filtered, Preserved or both (F, P, F/P)											
Company: Sustainable Development (W10410)	PO / AFE:												
Contact:	LSD:												
Address:	Quote #: Q70175												
Phone: Fax:	ALS Contact: Craig Riddell												

Lab Work Order # (lab use only)	ALS Contact: Craig Riddell	Sampled By: AD/DI												
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Sample #	Sample Identification (This description will appear on the report)	Date Sampled	Time Sampled	Sample Type	(2) MET-200.2-MS-1-WP	(REP) WP-PB-200.2	(14) Special Req-61-WP (for dry/grind & homogenization)											Number of Containers			
	03-001	09-10-18	08:58	Soil	x	x	x														1
	03-002	"	09:38	"																	
	03-003	"	10:20	"																	
	03-004	"	10:44	"																	
	03-005	"	10:49	"																	
	03-006	"	11:19	"																	
	03-007	"	14:26	"																	
	03-009	"	15:03	"																	
	03-012	"	13:50	"																	
	03-013	"	14:02	"																	
	03-016	"	13:04	"																	
	03-007-D	"	14:26	"	x	x	x														1

Special Instructions / Regulations with water or land use (CCME-Freshwater Aquatic Life/BC CSR - Commercial/AB Tier 1 - Natural, etc) / 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 provided on a separate Excel tab.
 Also provided on another Excel tab are the ALS location addresses, phone numbers and sample container / preservation / holding time table for common analyses.

SHIPMENT RELEASE (client use)			SHIPMENT RECEPTION (lab use only)				SHIPMENT VERIFICATION (lab use only)			
Released by:	Date (dd-mm-yy)	Time (hh-mm)	Received by:	Date:	Time:	Temperature:	Verified by:	Date:	Time:	Observations: Yes / No ? If Yes add SIF
			<i>K</i>	OCT 10 2018	13:00	13 °C				



L2177910-COFC

Report To	R	Service Requested (Rush for routine analysis subject to availability)
Company: Sustainable Development (W10410)	<input checked="" type="checkbox"/> PDF <input checked="" type="checkbox"/> Excel <input type="checkbox"/> Digital <input type="checkbox"/> Fax	<input checked="" type="radio"/> Regular (Standard Turnaround Times - Business Days)
Contact: YVONNE HAWRYLIUK	Email 1: yvonne.hawryliuk@gov.mb.ca	<input type="radio"/> Priority (2-4 Business Days) - 50% Surcharge - Contact ALS to Confirm TAT
Address: 1007 Century Street	Email 2:	<input type="radio"/> Emergency (1-2 Bus. Days) - 100% Surcharge - Contact ALS to Confirm TAT
Winnipeg, MB, R3H 0W4	Email 3:	<input type="radio"/> Same Day or Weekend Emergency - Contact ALS to Confirm TAT
Phone: 204-945-5305 CELL #:		Analysis Request

Invoice To Same as Report? <input checked="" type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Client / Project Information	Please indicate below Filtered, Preserved or both (F, P, F/P)																				
Hardcopy of Invoice with Report? <input type="checkbox"/> Yes <input type="checkbox"/> No	Job #: Lead in Soil Survey																					
Company: Sustainable Development (W10410)	PO / AFE:																					
Contact:	LSD:																					
Address:	Quote #: Q70175																					
Phone: Fax:	ALS Contact: Craig Riddell																					

Lab Work Order # (lab use only)	ALS Contact: Craig Riddell	Sampled By: AD/DI
---------------------------------	-----------------------------------	--------------------------

Sample #	Sample Identification (This description will appear on the report)	Date Sampled	Time Sampled	Sample Type	(2) MET-200.2-MS-1-WP	(REP) WP-PB-200.2	(14) Special Req-61-WP (for dry/grind & homogenization)													Number of Containers			
	03-001	09-10-18	08:58	Soil	x	x	x																1
	03-002	"	09:38	"																			
	03-003	"	10:20	"																			
	03-004	"	10:44	"																			
	03-005	"	10:49	"																			
	03-006	"	11:19	"																			
	03-007	"	14:26	"																			
	03-009	"	15:03	"																			
	03-012	"	13:50	"																			
	03-013	"	14:02	"																			
	03-016	"	13:04	"																			
	03-007-D	"	14:26	"	x	x	x																1

Special Instructions / Regulations with water or land use (CCME-Freshwater Aquatic Life/BC CSR - Commercial/AB Tier 1 - Natural, etc) / Hazardous Details

Failure to complete all portions of this form may delay analysis. Please fill in this form LEGIBLY.

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Also provided on another Excel tab are the ALS location addresses, phone numbers and sample container / preservation / holding time table for common analyses.

SHIPMENT RELEASE (client use)			SHIPMENT RECEPTION (lab use only)				SHIPMENT VERIFICATION (lab use only)			
Released by:	Date (dd-mm-yy)	Time (hh-mm)	Received by:	Date:	Time:	Temperature:	Verified by:	Date:	Time:	Observations: Yes / No ? If Yes add SIF
			<i>[Signature]</i>	OCT 10 2018	13:00	13 °C				



Environmental Operations
ATTN: YVONNE HAWRYLIUK
1007 Century Street
Winnipeg MB R3H 0W4

Date Received: 10-OCT-18
Report Date: 22-NOV-18 10:11 (MT)
Version: FINAL

Client Phone: 204-945-5305

Certificate of Analysis

Lab Work Order #: L2177911
Project P.O. #: Contract#: 5648 (MICROCHEM)
Job Reference: LEAD IN SOIL SURVEY
C of C Numbers:
Legal Site Desc:

Hua Wo
Chemistry Laboratory Manager

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ADDRESS: 1329 Niakwa Road East, Unit 12, Winnipeg, MB R2J 3T4 Canada | Phone: +1 204 255 9720 | Fax: +1 204 255 9721
ALS CANADA LTD Part of the ALS Group An ALS Limited Company

ALS ENVIRONMENTAL ANALYTICAL REPORT

		Sample ID	L2177911-1	L2177911-2	L2177911-3	L2177911-4	L2177911-5
		Description	SOIL	SOIL	SOIL	SOIL	SOIL
		Sampled Date	09-OCT-18	09-OCT-18	09-OCT-18	09-OCT-18	09-OCT-18
		Sampled Time	09:20	09:45	10:00	10:30	10:45
		Client ID	02-012	02-013	02-015	02-014	02-016
Grouping	Analyte						
SOIL							
Metals	Lead (Pb) (mg/kg)	96.9	57.4	75.5	17.9	24.9	

ALS ENVIRONMENTAL ANALYTICAL REPORT

		Sample ID	L2177911-6	L2177911-7	L2177911-8	L2177911-9	L2177911-10
		Description	SOIL	SOIL	SOIL	SOIL	SOIL
		Sampled Date	09-OCT-18	09-OCT-18	09-OCT-18	09-OCT-18	09-OCT-18
		Sampled Time	11:00	11:40	11:50	13:00	13:15
		Client ID	02-005	02-006	02-004	02-001	02-003
Grouping	Analyte						
SOIL							
Metals	Lead (Pb) (mg/kg)	34.3	34.4	36.0	26.3	27.1	

ALS ENVIRONMENTAL ANALYTICAL REPORT

		Sample ID	L2177911-11	L2177911-12	L2177911-13	L2177911-14	L2177911-15
		Description	SOIL	SOIL	SOIL	SOIL	SOIL
		Sampled Date	09-OCT-18	09-OCT-18	09-OCT-18	09-OCT-18	09-OCT-18
		Sampled Time	13:15	13:20	13:45	14:15	14:30
		Client ID	02-003 D	02-002	02-007	02-008	02-009
Grouping	Analyte						
SOIL							
Metals	Lead (Pb) (mg/kg)	24.4	56.7	17.8	26.6	70.4	

ALS ENVIRONMENTAL ANALYTICAL REPORT

		Sample ID	L2177911-16	L2177911-17			
		Description	SOIL	SOIL			
		Sampled Date	09-OCT-18				
		Sampled Time	13:45				
		Client ID	02-017	02-018			
Grouping	Analyte						
SOIL							
Metals	Lead (Pb) (mg/kg)	110	25.4				

Reference Information

Test Method References:

ALS Test Code	Matrix	Test Description	Method Reference**
---------------	--------	------------------	--------------------

MET-200.2-MS-WP

Soil

Metals

EPA 200.2/6020A

Soil/sediment is dried, disaggregated, and sieved (2 mm). Strong Acid Leachable Metals in the <2mm fraction are solubilized by heated digestion with nitric and hydrochloric acids. Instrumental analysis is by Collision / Reaction Cell ICPMS.

Limitations: This method is intended to liberate environmentally available metals. Silicate minerals are not solubilized. Some metals may be only partially recovered (matrix dependent), including Al, Ba, Be, Cr, S, Sr, Ti, Tl, V, W, and Zr. Elemental Sulfur may be poorly recovered by this method. Volatile forms of sulfur (e.g. sulfide, H₂S) may be excluded if lost during sampling, storage, or digestion.

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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

Chain of Custody Numbers:

GLOSSARY OF REPORT TERMS

Surrogate - A compound that is similar in behaviour to target analyte(s), but that does not occur naturally in environmental samples. For applicable tests, surrogates are added to samples prior to analysis as a check on recovery.

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 of sample.

mg/L - milligrams per litre.

< - Less than.

D.L. - The reported Detection Limit, also known as the Limit of Reporting (LOR).

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: L2177911

Report Date: 22-NOV-18

Page 1 of 2

Client: Environmental Operations
 1007 Century Street
 Winnipeg MB R3H 0W4
 Contact: YVONNE HAWRYLIUK

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
MET-200.2-MS-WP		Soil						
Batch	R4311589							
WG2918216-4	CRM	CANMET TILL-1						
Lead (Pb)			106.3		%		70-130	31-OCT-18
WG2918216-2	LCS							
Lead (Pb)			97.7		%		80-120	31-OCT-18
WG2918216-1	MB							
Lead (Pb)			<0.20		mg/kg		0.2	31-OCT-18
Batch	R4313464							
WG2920638-10	CRM	CANMET TILL-1						
Lead (Pb)			103.3		%		70-130	01-NOV-18
WG2920638-8	LCS							
Lead (Pb)			103.3		%		80-120	01-NOV-18
WG2920638-7	MB							
Lead (Pb)			<0.20		mg/kg		0.2	01-NOV-18
Batch	R4323648							
WG2923180-4	CRM	CANMET TILL-1						
Lead (Pb)			104.1		%		70-130	05-NOV-18
WG2923180-2	LCS							
Lead (Pb)			98.9		%		80-120	05-NOV-18
WG2923180-1	MB							
Lead (Pb)			<0.20		mg/kg		0.2	05-NOV-18

Quality Control Report

Workorder: L2177911

Report Date: 22-NOV-18

Page 2 of 2

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

Hold Time Exceedances:

All test results reported with this submission were conducted within ALS recommended hold times.

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.



Report To		Ref: L2177911-COFC	Service Requested (Rush for routine analysis subject to availability)	
Company: Sustainable Development (W10410)		<input checked="" type="checkbox"/> S	<input checked="" type="radio"/> Regular (Standard Turnaround Times - Business Days)	
Contact: YVONNE HAWRYLIUK		<input checked="" type="checkbox"/> PDF <input checked="" type="checkbox"/> Excel <input type="checkbox"/> Digital <input type="checkbox"/> Fax	<input type="radio"/> Priority (2-4 Business Days) - 50% Surcharge - Contact ALS to Confirm TAT	
Address: 1007 Century Street		Email 1: yvonne.hawryliuk@gov.mb.ca	<input type="radio"/> Emergency (1-2 Bus. Days) - 100% Surcharge - Contact ALS to Confirm TAT	
Winnipeg, MB, R3H 0W4		Email 2:	<input type="radio"/> Same Day or Weekend Emergency - Contact ALS to Confirm TAT	
Phone: 204-945-5305 CELL #:		Email 3:	Analysis Request	

Invoice To Same as Report? <input checked="" type="checkbox"/> Yes <input checked="" type="checkbox"/> No		Client / Project Information		Please indicate below Filtered, Preserved or both (F, P, F/P)											
Hardcopy of Invoice with Report? <input type="checkbox"/> Yes <input type="checkbox"/> No		Job #: Lead in Soil Survey													
Company: Sustainable Development (W10410)		PO / AFE:													
Contact:		LSD:													
Address:		Quote #: Q70175													
Phone: Fax:		ALS Contact: Craig Riddell		Sampled By:											

Sample #	Sample Identification (This description will appear on the report)	Date Sampled	Time Sampled	Sample Type	(2) MET-200.2-MS-1-WP	(REP) WP-PB-200.2	(14) Special Req-61-WP (for dry/grnd & homogenization)	Number of Containers													
02-012 ✓		Oct-09-2018	9:20	Soil	X	X	X														
02-013 ✓		Oct-09-2018	9:45	Soil	X	X	X														
02-015 ✓		Oct-09-2018	10:00	Soil	X	X	X														
02-014 ✓		Oct-09-2018	10:30	Soil	X	X	X														
02-016 ✓		Oct-09-2018	10:45	Soil	X	X	X														
02-005 ✓		Oct-09-2018	11:00	Soil	X	X	X														
02-006 ✓		Oct-09-2018	11:40	Soil	X	X	X														
02-004 ✓		Oct-09-2018	11:50	Soil	X	X	X														
02-001 ✓		Oct-09-2018	13:00	Soil	X	X	X														
02-003 ✓		Oct-09-2018	13:15	Soil	X	X	X														
02-003 D ✓		Oct-09-2018	13:15	Soil	X	X	X														
02-002 ✓		Oct-09-2018	13:20	Soil	X	X	X														

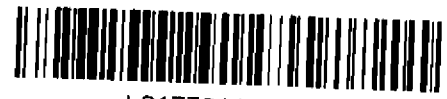
Special Instructions / Regulations with water or land use (CCME-Freshwater Aquatic Life/BC CSR - Commercial/AB Tier 1 - Natural, etc) / Hazardous Details

Failure to complete all portions of this form may delay analysis. Please fill in this form LEGIBLY.

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Also provided on another Excel tab are the ALS location addresses, phone numbers and sample container / preservation / holding time table for common analyses.

SHIPMENT RELEASE (client use)			SHIPMENT RECEPTION (lab use only)				SHIPMENT VERIFICATION (lab use only)			
Released by:	Date (dd-mmm-yy)	Time (hh-mm)	Received by:	Date:	Time:	Temperature:	Verified by:	Date:	Time:	Observations: Yes / No ? If Yes add SIF
			<i>[Signature]</i>	OCT 10 2018	13:30	5 °C				



L2177911-COFC

Report To	Rep	Service Requested (Rush for routine analysis subject to availability)
Company: Sustainable Development (W10410)	<input checked="" type="checkbox"/> Standard <input type="checkbox"/> Other	<input checked="" type="radio"/> Regular (Standard Turnaround Times - Business Days)
Contact: YVONNE HAWRYLIUK	<input checked="" type="checkbox"/> PDF <input checked="" type="checkbox"/> Excel <input type="checkbox"/> Digital <input type="checkbox"/> Fax	<input type="radio"/> Priority (2-4 Business Days) - 50% Surcharge - Contact ALS to Confirm TAT
Address: 1007 Century Street	Email 1: yvonne.hawryliuk@gov.mb.ca	<input type="radio"/> Emergency (1-2 Bus. Days) - 100% Surcharge - Contact ALS to Confirm TAT
Winnipeg, MB, R3H 0W4	Email 2:	<input checked="" type="radio"/> Same Day or Weekend Emergency - Contact ALS to Confirm TAT
Phone: 204-945-5305 CELL #:	Email 3:	Analysis Request

Invoice To Same as Report? <input checked="" type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Client / Project Information	Please indicate below Filtered, Preserved or both (F, P, F/P)									
Hardcopy of Invoice with Report? <input type="checkbox"/> Yes <input type="checkbox"/> No	Job #: Lead in Soil Survey										
Company: Sustainable Development (W10410)	PO / AFE:										
Contact:	LSD:										
Address:											
Phone: Fax:	Quote #: Q70175										

Lab Work Order # (lab use only)	ALS Contact: Craig Riddell	Sampled By:												
Sample #	Sample Identification (This description will appear on the report)	Date Sampled	Time Sampled	Sample Type	(2) MET-200.2-MS-1-WP	(REP) WP-PB-200.2	(14) Special Req-61-WP (for dry/grind & homogenization)							Number of Containers
02-007 ✓		Oct-09-2018	13:45	Soil	X	X	X							
02-008 ✓		Oct-09-2018	14:15	Soil	X	X	X							
02-009 ✓		Oct-09-2018	14:30	Soil	X	X	X							
02-017 ✓		Oct-09-2018	14:45	Soil	X	X	X							
02-018 ✓														

Special Instructions / Regulations with water or land use (CCME-Freshwater Aquatic Life/BC CSR - Commercial/AB Tier 1 - Natural, etc) / Hazardous Details

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SHIPMENT RELEASE (client use)			SHIPMENT RECEPTION (lab use only)				SHIPMENT VERIFICATION (lab use only)			
Released by:	Date (dd-mmm-yy)	Time (hh-mm)	Received by:	Date:	Time:	Temperature:	Verified by:	Date:	Time:	Observations: Yes / No ? If Yes add SIF
			<i>JL</i>	OCT 10 2018	<i>13:00</i>	<i>5 °C</i>				



Environmental Operations
ATTN: YVONNE HAWRYLIUK
1007 Century Street
Winnipeg MB R3H 0W4

Date Received: 10-OCT-18
Report Date: 23-NOV-18 15:18 (MT)
Version: FINAL

Client Phone: 204-945-5305

Certificate of Analysis

Lab Work Order #: L2177915
Project P.O. #: Contract#: 5648 (MICROCHEM)
Job Reference: LEAD IN SOIL SURVEY
C of C Numbers:
Legal Site Desc:

Hua Wo
Chemistry Laboratory Manager

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ADDRESS: 1329 Niakwa Road East, Unit 12, Winnipeg, MB R2J 3T4 Canada | Phone: +1 204 255 9720 | Fax: +1 204 255 9721
ALS CANADA LTD Part of the ALS Group An ALS Limited Company

ALS ENVIRONMENTAL ANALYTICAL REPORT

		Sample ID	L2177915-1	L2177915-2	L2177915-3	L2177915-4	L2177915-5
		Description	SOIL	SOIL	SOIL	SOIL	SOIL
		Sampled Date	09-OCT-18	09-OCT-18	09-OCT-18	09-OCT-18	09-OCT-18
		Sampled Time	13:30	09:40	10:25	09:00	11:45
		Client ID	06-011	04-002	04-005	04-010	04-014
Grouping	Analyte						
SOIL							
Metals	Lead (Pb) (mg/kg)	141	22.9	204	78.3	29.9	

* Please refer to the Reference Information section for an explanation of any qualifiers detected.

ALS ENVIRONMENTAL ANALYTICAL REPORT

		Sample ID	L2177915-6	L2177915-7			
		Description	SOIL	SOIL			
		Sampled Date	09-OCT-18	09-OCT-18			
		Sampled Time	09:45	11:20			
		Client ID	04-021	04-022			
Grouping	Analyte						
SOIL							
Metals	Lead (Pb) (mg/kg)	99.1	25.4				

* Please refer to the Reference Information section for an explanation of any qualifiers detected.

Reference Information

QC Samples with Qualifiers & Comments:

QC Type Description	Parameter	Qualifier	Applies to Sample Number(s)
Duplicate	Lead (Pb)	DUP-H	L2177915-1, -2, -3, -4, -5, -6, -7

Qualifiers for Individual Parameters Listed:

Qualifier	Description
DUP-H	Duplicate results outside ALS DQO, due to sample heterogeneity.

Test Method References:

ALS Test Code	Matrix	Test Description	Method Reference**
---------------	--------	------------------	--------------------

MET-200.2-MS-WP Soil Metals EPA 200.2/6020A
 Soil/sediment is dried, disaggregated, and sieved (2 mm). Strong Acid Leachable Metals in the <2mm fraction are solubilized by heated digestion with nitric and hydrochloric acids. Instrumental analysis is by Collision / Reaction Cell ICPMS.

Limitations: This method is intended to liberate environmentally available metals. Silicate minerals are not solubilized. Some metals may be only partially recovered (matrix dependent), including Al, Ba, Be, Cr, S, Sr, Ti, Tl, V, W, and Zr. Elemental Sulfur may be poorly recovered by this method. Volatile forms of sulfur (e.g. sulfide, H₂S) may be excluded if lost during sampling, storage, or digestion.

** 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

Chain of Custody Numbers:

GLOSSARY OF REPORT TERMS

Surrogate - A compound that is similar in behaviour to target analyte(s), but that does not occur naturally in environmental samples. For applicable tests, surrogates are added to samples prior to analysis as a check on recovery.

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 of sample.

mg/L - milligrams per litre.

< - Less than.

D.L. - The reported Detection Limit, also known as the Limit of Reporting (LOR).

N/A - Result not available. Refer to qualifier code and definition for explanation.

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



Quality Control Report

Workorder: L2177915

Report Date: 23-NOV-18

Page 1 of 2

Client: Environmental Operations
1007 Century Street
Winnipeg MB R3H 0W4
Contact: YVONNE HAWRYLIUK

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
MET-200.2-MS-WP	Soil							
Batch	R4355740							
WG2925425-4	CRM	CANMET TILL-1						
Lead (Pb)			105.9		%		70-130	22-NOV-18
WG2925425-2	LCS							
Lead (Pb)			97.4		%		80-120	22-NOV-18
WG2925425-1	MB							
Lead (Pb)			<0.20		mg/kg		0.2	22-NOV-18

Quality Control Report

Workorder: L2177915

Report Date: 23-NOV-18

Page 2 of 2

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

Hold Time Exceedances:

All test results reported with this submission were conducted within ALS recommended hold times.

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.



Chain of Custody / Analytical Request Form

COC # _____

Page ____ of ____



L2177915-COFC

Report To
Company: Sustainable Development (W10410)
Contact: YVONNE HAWRYLIUK
Address: 1007 Century Street
 Winnipeg, MB, R3H 0W4
Phone: 204-945-5305 **CELL #:**
Invoice To Same as Report? Yes No
Hardcopy of Invoice with Report? Yes No
Company: Sustainable Development (W10410)
Contact:
Address:
Phone: **Fax:**

Analog Digital Fax
Email 1: yvonne.hawryliuk@gov.mb.ca
Email 2:
Email 3:

Service Requested (Rush for routine analysis subject to availability)
 Regular (Standard Turnaround Times - Business Days)
 Priority (2-4 Business Days) - 50% Surcharge - Contact ALS to Confirm TAT
 Emergency (1-2 Bus. Days) - 100% Surcharge - Contact ALS to Confirm TAT
 Same Day or Weekend Emergency - Contact ALS to Confirm TAT

Client / Project Information
Job #: Lead in Soil Survey
PO / AFE:
LSD:
Quote #: Q70175

Analysis Request
 Please indicate below Filtered, Preserved or both (F, P, F/P)

Lab Work Order #
 (lab use only)

ALS Contact: Craig Riddell
Sampled By: K. Derward

	(2) MET-200.2-MS-1-WP	(REP) WP-PB-200.2	(14) Special Req-61-WP	(for dry/grind & homogenization)																Number of Containers
06-011	x	x	x																	
04-002																				
04-005																				
04-010																				
04-014																				
04-021																				
04-022																				

Sample #	Sample Identification (This description will appear on the report)	Date Sampled	Time Sampled	Sample Type
	06-011	2018-10-09	1330h	soil
	04-002	2018-10-09	0940h	
	04-005	2018-10-09	1025h	
	04-010	2018-10-09	0900h	
	04-014	2018-10-09	1145h	
	04-021	2018-10-09	0954h	
	04-022	2018-10-09	1120h	✓

Special Instructions / Regulations with water or land use (CCME-Freshwater Aquatic Life/BC CSR - Commercial/AB Tier 1 - Natural, etc) / 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 provided on a separate Excel tab.
 Also provided on another Excel tab are the ALS location addresses, phone numbers and sample container / preservation / holding time table for common analyses.

SHIPMENT RELEASE (client use)			SHIPMENT RECEPTION (lab use only)				SHIPMENT VERIFICATION (lab use only)			
Released by:	Date (dd-mm-yy)	Time (hh-mm)	Received by:	Date	Time	Temperature:	Verified by:	Date:	Time:	Observations: Yes / No? If Yes add SIF
			<i>[Signature]</i>	OCT 10 2018	<i>[Signature]</i>	3 °C				



L2177915-COFC

Report To

Company: Sustainable Development (W10410)

Contact: YVONNE HAWRYLIUK

Address: 1007 Century Street

Winnipeg, MB, R3H 0W4

Phone: 204-945-5305 CELL #: _____

Invoice To Same as Report? Yes No

Hardcopy of Invoice with Report? Yes No

Company: Sustainable Development (W10410)

Contact: _____

Address: _____

Phone: _____ Fax: _____

Lab Work Order # _____

(lab use only)

Email 1: yvonne.hawryliuk@gov.mb.ca

Email 2: _____

Email 3: _____

Client / Project Information

Job #: Lead in Soil Survey

PO / AFE: _____

LSD: _____

Quote #: Q70175

ALS Contact: Craig Riddell

Sampled By: K. Derward

Service Requested (Rush for routine analysis subject to availability)

Regular (Standard Turnaround Times - Business Days)

Priority (2-4 Business Days) - 50% Surcharge - Contact ALS to Confirm TAT

Emergency (1-2 Bus. Days) - 100% Surcharge - Contact ALS to Confirm TAT

Same Day or Weekend Emergency - Contact ALS to Confirm TAT

Analysis Request

Please indicate below Filtered, Preserved or both (F, P, F/P)

(2) MET-200.2-MS-1-WP	(REP) WP-PB-200.2	(14) Special Req-61-WP	(for dry/grind & homogenization)																		Number of Containers	
x	x	x																				

Sample #	Sample Identification (This description will appear on the report)	Date Sampled	Time Sampled	Sample Type
	06-011	2018-10-09	1330h	soil
	04-002	2018-10-09	0940h	
	04-005	2018-10-09	1025h	
	04-010	2018-10-09	0900h	
	04-014	2018-10-09	1145h	
	04-021	2018-10-09	0954h	
	04-022	2018-10-09	1120h	√

Special Instructions / Regulations with water or land use (CCME-Freshwater Aquatic Life/BC CSR - Commercial/AB Tier 1 - Natural, etc) / Hazardous Details

Failure to complete all portions of this form may delay analysis. Please fill in this form LEGIBLY.

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SHIPMENT RELEASE (client use)			SHIPMENT RECEPTION (lab use only)			SHIPMENT VERIFICATION (lab use only)				
Released by:	Date (dd-mm-yy)	Time (hh-mm)	Received by:	Date	Time	Temperature:	Verified by:	Date:	Time:	Observations: Yes / No ? If Yes add SIF
			<i>[Signature]</i>	OCT 10 2018	<i>[Signature]</i>	3 °C				



Environmental Operations
ATTN: YVONNE HAWRYLIUK
1007 Century Street
Winnipeg MB R3H 0W4

Date Received: 10-OCT-18
Report Date: 26-NOV-18 07:16 (MT)
Version: FINAL

Client Phone: 204-945-5305

Certificate of Analysis

Lab Work Order #: L2177919
Project P.O. #: Contract#: 5648 (MICROCHEM)
Job Reference: LEAD IN SOIL SURVEY
C of C Numbers:
Legal Site Desc:

Hua Wo
Chemistry Laboratory Manager

[This report shall not be reproduced except in full without the written authority of the Laboratory.]

ADDRESS: 1329 Niakwa Road East, Unit 12, Winnipeg, MB R2J 3T4 Canada | Phone: +1 204 255 9720 | Fax: +1 204 255 9721
ALS CANADA LTD Part of the ALS Group An ALS Limited Company

ALS ENVIRONMENTAL ANALYTICAL REPORT

		Sample ID	L2177919-1	L2177919-2	L2177919-3	L2177919-4	L2177919-5
		Description	SOIL	SOIL	SOIL	SOIL	SOIL
		Sampled Date	09-OCT-18	09-OCT-18	09-OCT-18	09-OCT-18	09-OCT-18
		Sampled Time	09:15	10:25	11:50	13:36	13:45
		Client ID	05-001	05-002	05-004	05-011	05-012
Grouping	Analyte						
SOIL							
Metals	Lead (Pb) (mg/kg)	58.6	30.2	72.1	82.0	91.9	

ALS ENVIRONMENTAL ANALYTICAL REPORT

	Sample ID Description Sampled Date Sampled Time Client ID				
Grouping	Analyte				
SOIL					
Metals	Lead (Pb) (mg/kg)	85.8			

Reference Information

Test Method References:

ALS Test Code	Matrix	Test Description	Method Reference**
---------------	--------	------------------	--------------------

MET-200.2-MS-WP	Soil	Metals	EPA 200.2/6020A
------------------------	------	--------	-----------------

Soil/sediment is dried, disaggregated, and sieved (2 mm). Strong Acid Leachable Metals in the <2mm fraction are solubilized by heated digestion with nitric and hydrochloric acids. Instrumental analysis is by Collision / Reaction Cell ICPMS.

Limitations: This method is intended to liberate environmentally available metals. Silicate minerals are not solubilized. Some metals may be only partially recovered (matrix dependent), including Al, Ba, Be, Cr, S, Sr, Ti, Tl, V, W, and Zr. Elemental Sulfur may be poorly recovered by this method. Volatile forms of sulfur (e.g. sulfide, H₂S) may be excluded if lost during sampling, storage, or digestion.

** 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

Chain of Custody Numbers:

GLOSSARY OF REPORT TERMS

Surrogate - A compound that is similar in behaviour to target analyte(s), but that does not occur naturally in environmental samples. For applicable tests, surrogates are added to samples prior to analysis as a check on recovery.

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 of sample.

mg/L - milligrams per litre.

< - Less than.

D.L. - The reported Detection Limit, also known as the Limit of Reporting (LOR).

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.

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Quality Control Report

Workorder: L2177919

Report Date: 26-NOV-18

Page 1 of 2

Client: Environmental Operations
 1007 Century Street
 Winnipeg MB R3H 0W4

Contact: YVONNE HAWRYLIUK

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
MET-200.2-MS-WP	Soil							
Batch	R4325448							
WG2924284-4	CRM	CANMET TILL-1						
Lead (Pb)			107.8		%		70-130	06-NOV-18
WG2924284-2	LCS							
Lead (Pb)			100.2		%		80-120	06-NOV-18
WG2924284-1	MB							
Lead (Pb)			<0.20		mg/kg		0.2	06-NOV-18

Quality Control Report

Workorder: L2177919

Report Date: 26-NOV-18

Page 2 of 2

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

Hold Time Exceedances:

All test results reported with this submission were conducted within ALS recommended hold times.

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.



L2177919-COFC

Report To		Report Format / Distribution			Select Service Level Below - Please confirm all E&P TATs with your AM - surcharges will apply			
Company: SUSTAINABLE DEVELOPMENT		Select Report Format: <input checked="" type="checkbox"/> PDF <input type="checkbox"/> EXCEL <input type="checkbox"/> EDD (DIGITAL)			Regular [R] <input checked="" type="checkbox"/> Standard TAT if received by 3 pm - business days - no surcharges apply			
Contact: Yvonne Hauri-Luk		Quality Control (QC) Report with Report <input type="checkbox"/> YES <input type="checkbox"/> NO			PROXIMITY (Business Days) 4 day [P4] <input type="checkbox"/> 3 day [P3] <input type="checkbox"/> 2 day [P2] <input type="checkbox"/>	EMERGENCY 1 Business day [E1] <input type="checkbox"/> Same Day, Weekend or Statutory holiday [E0] <input type="checkbox"/>		
Phone: 945-5305		<input type="checkbox"/> Compare Results to Criteria on Report - provide details below if box checked						
Street: 1007 CENTURY ST		Select Distribution: <input checked="" type="checkbox"/> EMAIL <input type="checkbox"/> MAIL <input type="checkbox"/> FAX			Date and Time Required for all E&P TATs: dd-mm-yy hh:mm			
City/Province: WPA MB		Email 1 or Fax: yvonne.hauri-luk@gsdmb.ca			For tests that can not be performed according to the service level selected, you will be contacted.			
Postal Code: R3H 0W4		Email 2: gsdmb.ca			Analysis Request			
Invoice To: Same as Report To <input checked="" type="checkbox"/> YES <input type="checkbox"/> NO		Select Invoice Distribution: <input checked="" type="checkbox"/> EMAIL <input type="checkbox"/> MAIL <input type="checkbox"/> FAX			Indicate Filtered (F); Preserved (P) or Filtered and Preserved (F/P) below			
Copy of Invoice with Report <input checked="" type="checkbox"/> YES <input type="checkbox"/> NO		Email 1 or Fax: yvonne.hauri-luk@gsdmb.ca			LEAD	Number of Containers		
Company:		Email 2: gsdmb.ca						
Contact:		Oil and Gas Required Fields (client use)						
Project Information		AFE/Cost Center:						
ALS Account # / Quote #: Q70175 ver 2		PO#:						
Job #:		Major/Minor Code:						
PO / AFE:		Routing Code:						
LSD:		Requisitioner:						
ALS Lab Work Order # (lab use only)		Location:						
ALS Contact:		Sampler:						
ALS Sample # (lab use only)	Sample Identification and/or Coordinates (This description will appear on the report)	Date (dd-mm-yy)	Time (hh:mm)	Sample Type				
	05-001	09-OCT-18	09:15	soil	X			
	05-002	09-OCT-18	10:25	"	X			
	05-004	09-OCT-18	11:50	"	X			
	05-011	09-OCT-18	13:36	"	X			
	05-012	09-OCT-18	13:45	"	X			
	05-014	09-OCT-18	14:41	"	X			
Drinking Water (DW) Samples ¹ (client use)		Special Instructions / Specify Criteria to add on report by clicking on the drop-down list below (electronic COC only)			SAMPLE CONDITION AS RECEIVED (lab use only)			
Are samples taken from a Regulated DW System? <input type="checkbox"/> YES <input type="checkbox"/> NO					Frozen <input type="checkbox"/> SIF Observations Yes <input type="checkbox"/> No <input type="checkbox"/>			
Are samples for human drinking water use? <input type="checkbox"/> YES <input type="checkbox"/> NO					Ice Packs <input type="checkbox"/> Ice Cubes <input type="checkbox"/> Custody seal intact Yes <input type="checkbox"/> No <input type="checkbox"/>			
					Cooling Initiated <input type="checkbox"/>			
SHIPMENT RELEASE (client use)		INITIAL SHIPMENT RECEPTION (lab use only)			FINAL SHIPMENT RECEPTION (lab use only)			
Released by: _____ Date: _____ Time: _____		Received by: [Signature] Date: OCT 10 2018 Time: 13:00			Received by: _____ Date: _____ Time: _____			

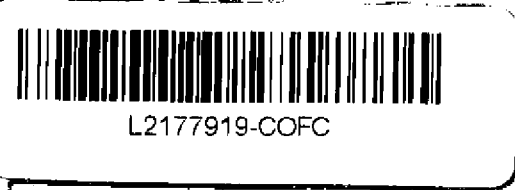
REFER TO BACK PAGE FOR ALS LOCATIONS AND SAMPLING INFORMATION

WHITE - LABORATORY COPY YELLOW - CLIENT COPY

OCTOBER 2015 FORM

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 back page of the white - report copy.

1. If any water samples are taken from a Regulated Drinking Water (DW) System, please submit using an Authorized DW COC form.



Report To Contact and company name below will appear on the final report		Report Format / Distribution			Select Service Level Below - Please confirm all E&P TATs with your AM - surcharges will apply					
Company:	SUSTAINABLE DEVELOPMENT	Select Report Format:	<input checked="" type="checkbox"/> PDF <input checked="" type="checkbox"/> EXCEL <input type="checkbox"/> EDD (DIGITAL)	Regular [R] <input checked="" type="checkbox"/> Standard TAT if received by 3 pm - business days - no surcharges apply						
Contact:	Yvonne Hauriuk	Quality Control (QC) Report with Report	<input type="checkbox"/> YES <input type="checkbox"/> NO	PROXIMITY (Business Days)	4 day [P4]	<input type="checkbox"/>	EMERGENCY	1 Business day [E1]	<input type="checkbox"/>	
Phone:	945-5305	<input type="checkbox"/> Compare Results to Criteria on Report - provide details below if box checked			3 day [P3]	<input type="checkbox"/>		Same Day, Weekend or Statutory holiday [E0]	<input type="checkbox"/>	
Company address below will appear on the final report		Select Distribution:	<input checked="" type="checkbox"/> EMAIL <input type="checkbox"/> MAIL <input type="checkbox"/> FAX	Date and Time Required for all E&P TATs:		dd/mm/yyyy hh:mm				
Street:	1007 CENTURY ST	Email 1 or Fax:	yvonne.hauriuk@	For tests that can not be performed according to the service level selected, you will be contacted.						
City/Province:	WPA MB	Email 2:	gais@b.cu	Analysis Request						
Postal Code:	R3H 0W4	Email 3:		Indicate Filtered (F), Preserved (P) or Filtered and Preserved (FP) below						
Invoice To	Same as Report To <input checked="" type="checkbox"/> YES <input type="checkbox"/> NO	Invoice Distribution			LEAD					Number of Containers
Copy of Invoice with Report	<input checked="" type="checkbox"/> YES <input type="checkbox"/> NO	Select Invoice Distribution:	<input checked="" type="checkbox"/> EMAIL <input type="checkbox"/> MAIL <input type="checkbox"/> FAX							
Company:		Email 1 or Fax:	yvonne.hauriuk@							
Contact:		Email 2:	gais@b.cu							
Project Information		Oil and Gas Required Fields (client use)								
ALS Account # / Quote #:	Q70175 ver 2	AFE/Cost Center:	PO#							
Job #:		Major/Minor Code:	Routing Code:							
PO / AFE:		Requisitioner:								
LSD:		Location:								
ALS Lab Work Order # (lab use only)		ALS Contact:		Sampler:						
ALS Sample # (lab use only)	Sample Identification and/or Coordinates (This description will appear on the report)	Date (dd-mmm-yy)	Time (hh:mm)	Sample Type						
	05-001	09-OCT-18	09:15	soil	X					
	05-002	09-OCT-18	10:25	"	X					
	05-004	09-OCT-18	11:50	"	X					
	05-011	09-OCT-18	13:36	"	X					
	05-012	09-OCT-18	13:45	"	X					
	05-014	09-OCT-18	14:41	"	X					
Drinking Water (DW) Samples¹ (client use)		Special Instructions / Specify Criteria to add on report by clicking on the drop-down list below (electronic COC only)			SAMPLE CONDITION AS RECEIVED (lab use only)					
Are samples taken from a Regulated DW System? <input type="checkbox"/> YES <input type="checkbox"/> NO					Frozen <input type="checkbox"/> SIF Observations Yes <input type="checkbox"/> No <input type="checkbox"/>					
Are samples for human drinking water use? <input type="checkbox"/> YES <input type="checkbox"/> NO					Ice Packs <input type="checkbox"/> Ice Cubes <input type="checkbox"/> Custody seal intact Yes <input type="checkbox"/> No <input type="checkbox"/>					
					Cooling Initiated <input type="checkbox"/>		INITIAL COOLER TEMPERATURES °C		FINAL COOLER TEMPERATURES °C	
									3	
SHIPMENT RELEASE (client use)		INITIAL SHIPMENT RECEPTION (lab use only)			FINAL SHIPMENT RECEPTION (lab use only)					
Released by:	Date:	Time:	Received by:	Date:	Time:	Received by:	Date:	Time:		
				OCT 10 2018						

REFER TO BACK PAGE FOR ALS LOCATIONS AND SAMPLING INFORMATION

WHITE - LABORATORY COPY YELLOW - CLIENT COPY

OCTOBER 2018 FORM 1

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 back page of the white - report copy.

1. If any water samples are taken from a Regulated Drinking Water (DW) System, please submit using an Authorized DW COC form.



Environmental Operations
ATTN: YVONNE HAWRYLIUK
1007 Century Street
Winnipeg MB R3H 0W4

Date Received: 10-OCT-18
Report Date: 26-NOV-18 07:20 (MT)
Version: FINAL

Client Phone: 204-945-5305

Certificate of Analysis

Lab Work Order #: L2177921
Project P.O. #: Contract#: 5648 (MICROCHEM)
Job Reference: LEAD IN SOIL SURVEY
C of C Numbers:
Legal Site Desc:

Hua Wo
Chemistry Laboratory Manager

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ADDRESS: 1329 Niakwa Road East, Unit 12, Winnipeg, MB R2J 3T4 Canada | Phone: +1 204 255 9720 | Fax: +1 204 255 9721
ALS CANADA LTD Part of the ALS Group An ALS Limited Company

ALS ENVIRONMENTAL ANALYTICAL REPORT

		Sample ID	L2177921-1	L2177921-2	L2177921-3	L2177921-4	L2177921-5
		Description	SOIL	SOIL	SOIL	SOIL	SOIL
		Sampled Date	09-OCT-18	09-OCT-18	09-OCT-18	09-OCT-18	09-OCT-18
		Sampled Time	11:09	12:11	11:41	13:34	14:41
		Client ID	01-001	01-002	01-003	01-004	01-005
Grouping	Analyte						
SOIL							
Metals	Lead (Pb) (mg/kg)	61.7	22.3	45.0	28.0	50.7	

ALS ENVIRONMENTAL ANALYTICAL REPORT

		Sample ID	L2177921-6	L2177921-7	L2177921-8	L2177921-9
		Description	SOIL	SOIL	SOIL	SOIL
		Sampled Date	09-OCT-18	09-OCT-18	09-OCT-18	09-OCT-18
		Sampled Time	14:09	08:57	10:04	09:26
		Client ID	01-006	01-011	01-012	01-015
Grouping	Analyte					
SOIL						
Metals	Lead (Pb) (mg/kg)		46.4	19.6	14.5	11.3

Reference Information

Test Method References:

ALS Test Code	Matrix	Test Description	Method Reference**
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MET-200.2-MS-WP	Soil	Metals	EPA 200.2/6020A
------------------------	------	--------	-----------------

Soil/sediment is dried, disaggregated, and sieved (2 mm). Strong Acid Leachable Metals in the <2mm fraction are solubilized by heated digestion with nitric and hydrochloric acids. Instrumental analysis is by Collision / Reaction Cell ICPMS.

Limitations: This method is intended to liberate environmentally available metals. Silicate minerals are not solubilized. Some metals may be only partially recovered (matrix dependent), including Al, Ba, Be, Cr, S, Sr, Ti, Tl, V, W, and Zr. Elemental Sulfur may be poorly recovered by this method. Volatile forms of sulfur (e.g. sulfide, H₂S) may be excluded if lost during sampling, storage, or digestion.

** 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

Chain of Custody Numbers:

GLOSSARY OF REPORT TERMS

Surrogate - A compound that is similar in behaviour to target analyte(s), but that does not occur naturally in environmental samples. For applicable tests, surrogates are added to samples prior to analysis as a check on recovery.

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 of sample.

mg/L - milligrams per litre.

< - Less than.

D.L. - The reported Detection Limit, also known as the Limit of Reporting (LOR).

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: L2177921

Report Date: 26-NOV-18

Page 1 of 2

Client: Environmental Operations
 1007 Century Street
 Winnipeg MB R3H 0W4

Contact: YVONNE HAWRYLIUK

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
MET-200.2-MS-WP	Soil							
Batch	R4308933							
WG2918093-4	CRM	CANMET TILL-1						
Lead (Pb)			103.7		%		70-130	30-OCT-18
WG2918093-2	LCS							
Lead (Pb)			101.8		%		80-120	30-OCT-18
WG2918093-1	MB							
Lead (Pb)			<0.20		mg/kg		0.2	30-OCT-18

Quality Control Report

Workorder: L2177921

Report Date: 26-NOV-18

Page 2 of 2

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

Hold Time Exceedances:

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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.

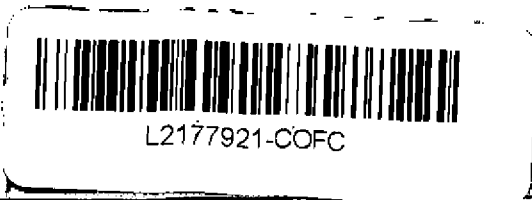
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L2177921-COFC

Report To Contact and company name below will appear on the final report		Report Format / Distribution		Select Service Level Below - Please confirm all E&P TATs with your AM - surcharges will apply					
Company: <u>SUSTAINABLE DEVELOPMENT</u>		Select Report Format: <input checked="" type="checkbox"/> PDF <input checked="" type="checkbox"/> EXCEL <input type="checkbox"/> EOD (DIGITAL)		Regular [R] <input checked="" type="checkbox"/> Standard TAT if received by 3 pm - business days - no surcharges apply		4 day [P4] <input type="checkbox"/>		1 Business day [E1] <input type="checkbox"/>	
Contact: <u>Yvonne Hourylius</u>		Quality Control (QC) Report with Report <input type="checkbox"/> YES <input type="checkbox"/> NO		EMERGENCY		3 day [P3] <input type="checkbox"/>		Same Day, Weekend or Statutory holiday [E0] <input type="checkbox"/>	
Phone: <u>945-6352</u>		<input type="checkbox"/> Compare Results to Criteria on Report - provide details below if box checked		Date and Time Required for all E&P TATs:		2 day [P2] <input type="checkbox"/>		dd-mm-yy hh:mm	
Company address below will appear on the final report		Select Distribution: <input checked="" type="checkbox"/> EMAIL <input type="checkbox"/> MAIL <input type="checkbox"/> FAX		For tests that can not be performed according to the service level selected, you will be contacted					
Street: <u>1007 CENTURY ST</u>		Email 1 or Fax: <u>Yvonne.Hourylius@gamco</u>		Analysis Request					
City/Province: <u>Windsor, ON</u>		Email 2: <u>garnib-a</u>		Indicate Filtered (F), Preserved (P) or Filtered and Preserved (F/P) below					
Postal Code: <u>R3A 0G4</u>		Email 3:		Number of Containers					
Invoice To		Invoice Distribution		<p>(2) MET-200.2 MS-1-P (REP) RP-FB-200.2 (K) Special pay-6-17 (for drying x manager)</p>					
Same as Report To <input checked="" type="checkbox"/> YES <input type="checkbox"/> NO		Select Invoice Distribution: <input checked="" type="checkbox"/> EMAIL <input type="checkbox"/> MAIL <input type="checkbox"/> FAX							
Copy of Invoice with Report <input checked="" type="checkbox"/> YES <input type="checkbox"/> NO		Email 1 or Fax: <u>Yvonne.Hourylius@gamco</u>							
Company:		Email 2:							
Project Information		Oil and Gas Required Fields (client use)							
ALS Account # / Quote #: <u>070175 ver 2</u>		AFE/Cost Center: PO#							
Job #:		Major/Minor Code: Routing Code:							
PO / AFE:		Requisitioner:							
LSD:		Location:							
ALS Lab Work Order # (lab use only)		ALS Contact:							
ALS Sample # (lab use only)	Sample Identification and/or Coordinates (This description will appear on the report)	Date (dd-mm-yy)	Time (hh:mm)	Sample Type					
	01-001	09-01-18	11:09am	Soil	X	X	X		
	01-002	09-01-18	12:11pm	Soil	X	X	X		
	01-003	09-01-18	11:41am	Soil	X	X	X		
	01-004	09-01-18	1:39pm	Soil	X	X	X		
	01-005	09-01-18	2:41pm	Soil	X	X	X		
	01-006	09-01-18	2:09pm	Soil	X	X	X		
	01-011	09-01-18	8:57am	Soil	X	X	X		
	01-012	09-01-18	10:01am	Soil	X	X	X		
	01-015	09-01-18	9:26am	Soil	X	X	X		
Drinking Water (DW) Samples¹ (client use)		Special Instructions / Specify Criteria to add on report by clicking on the drop-down list below (electronic COC only)		SAMPLE CONDITION AS RECEIVED (lab use only)					
Are samples taken from a Regulated DW System? <input type="checkbox"/> YES <input type="checkbox"/> NO				Frozen <input type="checkbox"/> SIF Observations Yes <input type="checkbox"/> No <input type="checkbox"/>					
Are samples for human drinking water use? <input type="checkbox"/> YES <input type="checkbox"/> NO				Ice Packs <input type="checkbox"/> Ice Cubes <input type="checkbox"/> Custody seal intact Yes <input type="checkbox"/> No <input type="checkbox"/>					
				Cooling Initiated <input type="checkbox"/>					
				INITIAL COOLER TEMPERATURES °C					
				FINAL COOLER TEMPERATURES °C					
SHIPMENT RELEASE (client use)		INITIAL SHIPMENT RECEPTION (lab use only)		FINAL SHIPMENT RECEPTION (lab use only)					
Released by:	Date:	Time:	Received by:	Date:	Time:	Received by:	Date:	Time:	



Report To Contact and company name below will appear on the final report		Report Format / Distribution			Select Service Level Below - Please confirm all E&P TATs with your AM - surcharges will apply													
Company: <u>SUSTAINABLE DEVELOPMENT</u>		Select Report Format: <input checked="" type="checkbox"/> PDF <input checked="" type="checkbox"/> EXCEL <input type="checkbox"/> EDD (DIGITAL)			Regular [R] <input checked="" type="checkbox"/> Standard TAT if received by 3 pm - business days - no surcharges apply													
Contact: <u>Yvonne Hourylius</u>		Quality Control (QC) Report with Report <input type="checkbox"/> YES <input type="checkbox"/> NO			4 day [P4] <input type="checkbox"/>				EMERGENCY <input type="checkbox"/> 1 Business day [E1] <input type="checkbox"/>									
Phone: <u>945-6300</u>		<input type="checkbox"/> Compare Results to Criteria on Report - provide details below if box checked			3 day [P3] <input type="checkbox"/>				Same Day, Weekend or Statutory holiday [E0] <input type="checkbox"/>									
Company address below will appear on the final report		Select Distribution: <input checked="" type="checkbox"/> EMAIL <input type="checkbox"/> MAIL <input type="checkbox"/> FAX			2 day [P2] <input type="checkbox"/>													
Street: <u>1007 CENTURY ST</u>		Email 1 or Fax: <u>Yvonne.Hourylius@garrb.ca</u>			Date and Time Required for all E&P TATs: dd-mmm-yy hh:mm													
City/Province: <u>WILLOWBUR</u>		Email 2: <u>garrb-ca</u>			For tests that can not be performed according to the service level selected, you will be contacted.													
Postal Code: <u>R3A 0W4</u>		Email 3:			Analysis Request													
Invoice To: Same as Report To <input checked="" type="checkbox"/> YES <input type="checkbox"/> NO		Invoice Distribution			Indicate Filtered (F), Preserved (P) or Filtered and Preserved (F/P) below													
Copy of Invoice with Report <input checked="" type="checkbox"/> YES <input type="checkbox"/> NO		Select Invoice Distribution: <input checked="" type="checkbox"/> EMAIL <input type="checkbox"/> MAIL <input type="checkbox"/> FAX																
Company:		Email 1 or Fax: <u>Yvonne.Hourylius@garrb.ca</u>			<div style="display: flex; justify-content: space-between;"> <div style="writing-mode: vertical-rl; transform: rotate(180deg);"> (2) MET-200.2 MS-1 DP (P/P) PL-PB-200.2 (H) Special pay-6-18 (for drying x sample) </div> <div style="writing-mode: vertical-rl; transform: rotate(180deg);"> Number of Containers </div> </div>													
Contact:		Email 2:																
Project Information		Oil and Gas Required Fields (client use)																
ALS Account # / Quote #: <u>Q 30176 ver 2</u>		AFE/Cost Center: PO#																
Job #:		Major/Minor Code: Routing Code:																
PO / AFE:		Requisitioner:																
LSD:		Location:																
ALS Lab Work Order # (lab use only)		ALS Contact:			Sampler:													
ALS Sample # (lab use only)	Sample Identification and/or Coordinates (This description will appear on the report)			Date (dd-mmm-yy)	Time (hh:mm)	Sample Type												
	<u>01-001</u>			<u>09-01-18</u>	<u>11:09am</u>	<u>Sa1</u>	X	X	X									
	<u>01-002</u>			<u>09-01-18</u>	<u>12:11pm</u>	<u>Sa1</u>	X	X	X									
	<u>01-003</u>			<u>09-01-18</u>	<u>11:41am</u>	<u>Sa1</u>	X	X	X									
	<u>01-004</u>			<u>09-01-18</u>	<u>1:39pm</u>	<u>Sa1</u>	X	X	X									
	<u>01-005</u>			<u>09-01-18</u>	<u>2:41pm</u>	<u>Sa1</u>	X	X	X									
	<u>01-006</u>			<u>09-01-18</u>	<u>2:04pm</u>	<u>Sa1</u>	X	X	X									
	<u>01-011</u>			<u>09-01-18</u>	<u>8:57am</u>	<u>Sa1</u>	X	X	X									
	<u>01-012</u>			<u>09-01-18</u>	<u>10:04am</u>	<u>Sa1</u>	X	X	X									
	<u>01-015</u>			<u>09-01-18</u>	<u>9:20am</u>	<u>Sa1</u>	X	X	X									
Drinking Water (DW) Samples¹ (client use)		Special Instructions / Specify Criteria to add on report by clicking on the drop-down list below (electronic COC only)			SAMPLE CONDITION AS RECEIVED (lab use only)													
Are samples taken from a Regulated DW System? <input type="checkbox"/> YES <input type="checkbox"/> NO					Frozen <input type="checkbox"/> SIF Observations Yes <input type="checkbox"/> No <input type="checkbox"/>													
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					Cooling Initiated <input type="checkbox"/>													
					INITIAL COOLER TEMPERATURES °C: FINAL COOLER TEMPERATURES °C: <u>4</u>													
SHIPMENT RELEASE (client use)				INITIAL SHIPMENT RECEPTION (lab use only)				FINAL SHIPMENT RECEPTION (lab use only)										
Released by:		Date:		Time:		Received by: <u>W</u>		Date: <u>OCT 10 2018</u>		Time: <u>11:50</u>		Received by:		Date:		Time:		



Environmental Operations
ATTN: YVONNE HAWRYLIUK
1007 Century Street
Winnipeg MB R3H 0W4

Date Received: 11-OCT-18
Report Date: 23-NOV-18 15:19 (MT)
Version: FINAL

Client Phone: 204-945-5305

Certificate of Analysis

Lab Work Order #: L2178855
Project P.O. #: Contract#: 5648 (MICROCHEM)
Job Reference: LEAD IN SOIL SURVEY
C of C Numbers:
Legal Site Desc:

Hua Wo
Chemistry Laboratory Manager

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ADDRESS: 1329 Niakwa Road East, Unit 12, Winnipeg, MB R2J 3T4 Canada | Phone: +1 204 255 9720 | Fax: +1 204 255 9721
ALS CANADA LTD Part of the ALS Group An ALS Limited Company

ALS ENVIRONMENTAL ANALYTICAL REPORT

		Sample ID	L2178855-1	L2178855-2	L2178855-3	L2178855-4	L2178855-5
		Description	SOIL	SOIL	SOIL	SOIL	SOIL
		Sampled Date	10-OCT-18	10-OCT-18	10-OCT-18	10-OCT-18	10-OCT-18
		Sampled Time	08:50	09:32	10:00	11:11	11:39
		Client ID	01-016	01-018	01-017	01-014	01-013
Grouping	Analyte						
SOIL							
Metals	Lead (Pb) (mg/kg)	32.4	105	37.9	33.1	43.2	

* Please refer to the Reference Information section for an explanation of any qualifiers detected.

ALS ENVIRONMENTAL ANALYTICAL REPORT

		Sample ID	L2178855-6	L2178855-7	L2178855-8	L2178855-9	L2178855-10
		Description	SOIL	SOIL	SOIL	SOIL	SOIL
		Sampled Date	10-OCT-18	10-OCT-18	10-OCT-18	10-OCT-18	10-OCT-18
		Sampled Time	12:12	13:45	14:12	14:36	08:50
		Client ID	01-010	01-008	01-009	01-007	01-016D
Grouping	Analyte						
SOIL							
Metals	Lead (Pb) (mg/kg)	48.8	24.3	33.5	18.1	26.3	

* Please refer to the Reference Information section for an explanation of any qualifiers detected.

Reference Information

QC Samples with Qualifiers & Comments:

QC Type Description	Parameter	Qualifier	Applies to Sample Number(s)
Duplicate	Lead (Pb)	DUP-H	L2178855-1, -10, -2, -3, -4, -5, -6, -7, -8, -9

Qualifiers for Individual Parameters Listed:

Qualifier	Description
DUP-H	Duplicate results outside ALS DQO, due to sample heterogeneity.

Test Method References:

ALS Test Code	Matrix	Test Description	Method Reference**
MET-200.2-MS-WP	Soil	Metals	EPA 200.2/6020A

Soil/sediment is dried, disaggregated, and sieved (2 mm). Strong Acid Leachable Metals in the <2mm fraction are solubilized by heated digestion with nitric and hydrochloric acids. Instrumental analysis is by Collision / Reaction Cell ICPMS.

Limitations: This method is intended to liberate environmentally available metals. Silicate minerals are not solubilized. Some metals may be only partially recovered (matrix dependent), including Al, Ba, Be, Cr, S, Sr, Ti, Tl, V, W, and Zr. Elemental Sulfur may be poorly recovered by this method. Volatile forms of sulfur (e.g. sulfide, H₂S) may be excluded if lost during sampling, storage, or digestion.

** 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

Chain of Custody Numbers:

GLOSSARY OF REPORT TERMS

Surrogate - A compound that is similar in behaviour to target analyte(s), but that does not occur naturally in environmental samples. For applicable tests, surrogates are added to samples prior to analysis as a check on recovery.

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 of sample.

mg/L - milligrams per litre.

< - Less than.

D.L. - The reported Detection Limit, also known as the Limit of Reporting (LOR).

N/A - Result not available. Refer to qualifier code and definition for explanation.

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Quality Control Report

Workorder: L2178855

Report Date: 23-NOV-18

Page 1 of 2

Client: Environmental Operations
1007 Century Street
Winnipeg MB R3H 0W4
Contact: YVONNE HAWRYLIUK

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
MET-200.2-MS-WP	Soil							
Batch	R4355740							
WG2925425-4	CRM	CANMET TILL-1						
Lead (Pb)			105.9		%		70-130	22-NOV-18
WG2925425-2	LCS							
Lead (Pb)			97.4		%		80-120	22-NOV-18
WG2925425-1	MB							
Lead (Pb)			<0.20		mg/kg		0.2	22-NOV-18

Quality Control Report

Workorder: L2178855

Report Date: 23-NOV-18

Page 2 of 2

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

Hold Time Exceedances:

All test results reported with this submission were conducted within ALS recommended hold times.

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.



L2178855-COFC

COC Number: 15 - 552843

Page of

Report To Contact and company name below will appear on the final report Company: SUSTAINABLE DEVELOPMENT Contact: 1007 CENTURY ST Phone: 945-5305 Company address below will appear on the final report Street: 1007 CENTURY ST City/Province: WINDSOR ONT Postal Code: R3H 2N4		Report Format / Distribution Select Report Format: <input checked="" type="checkbox"/> PDF <input checked="" type="checkbox"/> EXCEL <input type="checkbox"/> EDD (DIGITAL) Quality Control (QC) Report with Report <input type="checkbox"/> YES <input type="checkbox"/> NO <input type="checkbox"/> Compare Results to Criteria on Report - provide details below if box checked Select Distribution: <input checked="" type="checkbox"/> EMAIL <input type="checkbox"/> MAIL <input type="checkbox"/> FAX Email 1 or Fax: wmonne.hawrylyk@ga.com Email 2: ga.com Email 3:		Confirm all E&P TATs with your AM - surcharges will apply Regular [R] <input checked="" type="checkbox"/> Standard TAT if received by 3 pm - business days - no surcharges apply Priority (Business Days): 4 day [P4] <input type="checkbox"/> 3 day [P3] <input type="checkbox"/> 2 day [P2] <input type="checkbox"/> Emergency: 1 Business day [E1] <input type="checkbox"/> Same Day, Weekend or Statutory holiday [E0] <input type="checkbox"/> Date and Time Required for all E&P TATs: 10-11-2018	
Invoice To Same as Report To <input checked="" type="checkbox"/> YES <input type="checkbox"/> NO Copy of Invoice with Report <input checked="" type="checkbox"/> YES <input type="checkbox"/> NO Company: Contact:		Invoice Distribution Select Invoice Distribution: <input checked="" type="checkbox"/> EMAIL <input type="checkbox"/> MAIL <input type="checkbox"/> FAX Email 1 or Fax: wmonne.hawrylyk@ga.com Email 2: ga.com		Analysis Request Indicate Filtered (F), Preserved (P) or Filtered and Preserved (F/P) below: (2) MET-20D-2-MS-1-WP (PFP) WP-10-20D-2 (14) 5 year old log. 01-18 (for 2017 & 2018)	
Project Information ALS Account # / Quote #: Q70175 ver 2 Job #: PO / AFE: LSD:		Oil and Gas Required Fields (client use) AFE/Cost Center: PO# Major/Minor Code: Routing Code: Requisitioner: Location:		Number of Containers	
ALS Lab Work Order # (lab use only)		ALS Contact:		Sampler:	
ALS Sample # (lab use only)	Sample Identification and/or Coordinates (This description will appear on the report)	Date (dd-mmm-yy)	Time (hh:mm)	Sample Type	
	01-016	10-02-18	08:50am	SOI	X X X
	01-018	10-02-18	09:30am	SOI	X X X
	01-017	10-02-18	10:00am	SOI	X X X
	01-014	10-02-18	11:11am	SOI	X X X
	01-013	10-02-18	11:30am	SOI	X X X
	01-010	10-02-18	12:12 pm	SOI	X X X
	01-008	10-02-18	01:45 pm	SOI	X X X
	01-009	10-02-18	02:12 pm	SOI	X X X
	01-007	10-02-18	02:30 pm	SOI	X X X
	01-016D	10-02-18	08:50am	SOI	X X X
Drinking Water (DW) Samples (client use) Are samples taken from a Regulated DW System? <input type="checkbox"/> YES <input type="checkbox"/> NO Are samples for human drinking water use? <input type="checkbox"/> YES <input type="checkbox"/> NO		Special Instructions / Specify Criteria to add on report by clicking on the drop-down list below (electronic COC only)		SAMPLE CONDITION AS RECEIVED (lab use only) Frozen <input type="checkbox"/> SIF Observations Yes <input type="checkbox"/> No <input type="checkbox"/> Ice Packs <input type="checkbox"/> Ice Cubes <input type="checkbox"/> Custody seal intact Yes <input type="checkbox"/> No <input type="checkbox"/> Cooling Initiated <input type="checkbox"/> INITIAL COOLER TEMPERATURES °C: _____ FINAL COOLER TEMPERATURES °C: 90	
SHIPMENT RELEASE (client use) Released by: Made Sarah Date: 10/10/2018 Time: 17:15		INITIAL SHIPMENT RECEPTION (lab use only) Received by: R Date: OCT 11 2018 Time: 13:00		FINAL SHIPMENT RECEPTION (lab use only) Received by: _____ Date: _____ Time: _____	



Environmental Operations
ATTN: YVONNE HAWRYLIUK
1007 Century Street
Winnipeg MB R3H 0W4

Date Received: 11-OCT-18
Report Date: 23-NOV-18 15:19 (MT)
Version: FINAL

Client Phone: 204-945-5305

Certificate of Analysis

Lab Work Order #: L2178858
Project P.O. #: Contract#: 5648 (MICROCHEM)
Job Reference: LEAD IN SOIL SURVEY
C of C Numbers:
Legal Site Desc:

Hua Wo
Chemistry Laboratory Manager

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ALS ENVIRONMENTAL ANALYTICAL REPORT

		Sample ID	L2178858-1	L2178858-2	L2178858-3	L2178858-4	L2178858-5
		Description	SOIL	SOIL	SOIL	SOIL	SOIL
		Sampled Date	10-OCT-18	10-OCT-18	10-OCT-18	10-OCT-18	10-OCT-18
		Sampled Time	13:55	11:00	10:10	09:07	12:36
		Client ID	05-008	05-009	05-010	05-013	05-019
Grouping	Analyte						
SOIL							
Metals	Lead (Pb) (mg/kg)	19.2	95.0	32.0	53.2	45.6	

* Please refer to the Reference Information section for an explanation of any qualifiers detected.

ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample ID Description Sampled Date Sampled Time Client ID		L2178858-6 SOIL 10-OCT-18 12:36 05-019D				
Grouping	Analyte					
SOIL						
Metals	Lead (Pb) (mg/kg)	52.0				

* Please refer to the Reference Information section for an explanation of any qualifiers detected.

Reference Information

QC Samples with Qualifiers & Comments:

QC Type Description	Parameter	Qualifier	Applies to Sample Number(s)
Duplicate	Lead (Pb)	DUP-H	L2178858-1, -2, -3

Qualifiers for Individual Parameters Listed:

Qualifier	Description
DUP-H	Duplicate results outside ALS DQO, due to sample heterogeneity.

Test Method References:

ALS Test Code	Matrix	Test Description	Method Reference**
MET-200.2-MS-WP	Soil	Metals	EPA 200.2/6020A

Soil/sediment is dried, disaggregated, and sieved (2 mm). Strong Acid Leachable Metals in the <2mm fraction are solubilized by heated digestion with nitric and hydrochloric acids. Instrumental analysis is by Collision / Reaction Cell ICPMS.

Limitations: This method is intended to liberate environmentally available metals. Silicate minerals are not solubilized. Some metals may be only partially recovered (matrix dependent), including Al, Ba, Be, Cr, S, Sr, Ti, Tl, V, W, and Zr. Elemental Sulfur may be poorly recovered by this method. Volatile forms of sulfur (e.g. sulfide, H₂S) may be excluded if lost during sampling, storage, or digestion.

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

Chain of Custody Numbers:

GLOSSARY OF REPORT TERMS

Surrogate - A compound that is similar in behaviour to target analyte(s), but that does not occur naturally in environmental samples. For applicable tests, surrogates are added to samples prior to analysis as a check on recovery.

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

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

mg/L - milligrams per litre.

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N/A - Result not available. Refer to qualifier code and definition for explanation.

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Quality Control Report

Workorder: L2178858

Report Date: 23-NOV-18

Page 1 of 2

Client: Environmental Operations
 1007 Century Street
 Winnipeg MB R3H 0W4

Contact: YVONNE HAWRYLIUK

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
MET-200.2-MS-WP	Soil							
Batch R4326053								
WG2925574-4 CRM		CANMET TILL-1						
Lead (Pb)			100.1		%		70-130	07-NOV-18
WG2925574-2 LCS								
Lead (Pb)			98.4		%		80-120	07-NOV-18
WG2925574-1 MB								
Lead (Pb)			<0.20		mg/kg		0.2	07-NOV-18
Batch R4355740								
WG2925425-4 CRM		CANMET TILL-1						
Lead (Pb)			105.9		%		70-130	22-NOV-18
WG2925425-2 LCS								
Lead (Pb)			97.4		%		80-120	22-NOV-18
WG2925425-1 MB								
Lead (Pb)			<0.20		mg/kg		0.2	22-NOV-18

Quality Control Report

Workorder: L2178858

Report Date: 23-NOV-18

Page 2 of 2

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

Hold Time Exceedances:

All test results reported with this submission were conducted within ALS recommended hold times.

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

Chain of Custody (COC) / Analytical Request Form

Canada Toll Free: 1 800 668 9878



L2178858-COFC

COC Number: 15 - 552839

Page of

Report To: Contact and company name below will appear on the final report
Report Format / Distribution: Select Report Format: PDF EXCEL EDD (DIGITAL)
E&P TATs with your AM - surcharges will apply

Company: SUSTAINABLE DEVELOPMENT
Contact: Yvonne Harry Luck
Phone: 945 5302
Quality Control (QC) Report with Report: YES NO
Compare Results to Criteria on Report - provide details below if box checked:
Select Distribution: EMAIL MAIL FAX
Regular [R]: Standard TAT if received by 3 pm - business days - no surcharges apply
4 day [P4]: 1 Business day [E1]:
3 day [P3]: Same Day, Weekend or Statutory holiday [E0]:
2 day [P2]:

Street: 1007 Century St
City/Province: NPE MB
Postal Code: R3H 0W8
Email 1 or Fax: Yvonne.harryluck@go.mb.ca
Email 2:
Email 3:
Date and Time Required for all E&P TATs: add-in-time

Invoice To: Same as Report To YES NO
Copy of Invoice with Report: YES NO
Invoice Distribution: Select Invoice Distribution: EMAIL MAIL FAX
Email 1 or Fax: Yvonne.h
Email 2:
Analysis Request: Indicate Filtered (F), Preserved (P) or Filtered and Preserved (F/P) below:

Project Information: ALS Account # / Quote #: Q 30 175 ver 2.0
Job #: LEAD
PO / AFE:
LSD:
Oil and Gas Required Fields (client use): AFE/Cost Center: PO#: Major/Minor Code: Routing Code: Requisitioner: Location:

ALS Lab Work Order # (lab use only)	ALS Sample # (lab use only)	Sample Identification and/or Coordinates (This description will appear on the report)	Date (dd-mmm-yy)	Time (hh:mm)	Sample Type	Number of Containers																	
		<u>05 - 008</u>	<u>10-OCT-18</u>	<u>13:55</u>	<u>SOIL</u>	<u>X</u>																	
		<u>05 - 009</u>	<u>"</u>	<u>11:00</u>	<u>"</u>	<u>X</u>																	
		<u>05 - 010</u>	<u>"</u>	<u>10:10</u>	<u>"</u>	<u>X</u>																	
		<u>05 - 013</u>	<u>"</u>	<u>09:07</u>	<u>"</u>	<u>X</u>																	
		<u>05 - 019</u>	<u>"</u>	<u>12:36</u>	<u>"</u>	<u>X</u>																	
		<u>05 - 019 D</u>	<u>"</u>	<u>"</u>	<u>"</u>	<u>X</u>																	

Drinking Water (DW) Samples (client use): Are samples taken from a Regulated DW System? YES NO
Are samples for human drinking water use? YES NO
Special Instructions / Specify Criteria to add on report by clicking on the drop-down list below (electronic COC only)
SAMPLE CONDITION AS RECEIVED (lab use only): Frozen: SIF Observations: Yes No
Ice Packs: Ice Cubes: Custody seal intact: Yes No
Cooling Initiated:
INITIAL COOLER TEMPERATURES °C: _____ FINAL COOLER TEMPERATURES °C: 7°C

SHIPMENT RELEASE (client use): Released by: Mahe Suresh Date: 10/01/2018 Time: 1715
INITIAL SHIPMENT RECEPTION (lab use only): Received by: [Signature] Date: OCT 1 1 2018
FINAL SHIPMENT RECEPTION (lab use only): Received by: [Signature] Date: _____ Time: _____



Environmental Operations
ATTN: YVONNE HAWRYLIUK
1007 Century Street
Winnipeg MB R3H 0W4

Date Received: 11-OCT-18
Report Date: 22-NOV-18 10:12 (MT)
Version: FINAL

Client Phone: 204-945-5305

Certificate of Analysis

Lab Work Order #: L2178859
Project P.O. #: Contract#: 5648 (MICROCHEM)
Job Reference: LEAD IN SOIL SURVEY
C of C Numbers:
Legal Site Desc:

Hua Wo
Chemistry Laboratory Manager

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ALS ENVIRONMENTAL ANALYTICAL REPORT

		Sample ID	L2178859-1	L2178859-2	L2178859-3	L2178859-4	L2178859-5
		Description	SOIL	SOIL	SOIL	SOIL	SOIL
		Sampled Date	10-OCT-18	10-OCT-18	10-OCT-18	10-OCT-18	10-OCT-18
		Sampled Time	09:00	09:15	09:30	09:45	10:00
		Client ID	02-019	02-020	02-010	02-011	06-003
Grouping	Analyte						
SOIL							
Metals	Lead (Pb) (mg/kg)	14.4	14.2	125	107	102	

ALS ENVIRONMENTAL ANALYTICAL REPORT

	Sample ID Description Sampled Date Sampled Time Client ID	L2178859-6 SOIL 10-OCT-18 11:00 06-005	L2178859-7 SOIL 10-OCT-18 11:45 06-004	L2178859-8 SOIL 10-OCT-18 13:30 06-013	L2178859-9 SOIL 10-OCT-18 14:30 06-015	L2178859-10 SOIL 10-OCT-18 09:45 02-011 D
Grouping	Analyte					
SOIL						
Metals	Lead (Pb) (mg/kg)	21.5	32.9	15.9	33.0	92.7

Reference Information

Test Method References:

ALS Test Code	Matrix	Test Description	Method Reference**
---------------	--------	------------------	--------------------

MET-200.2-MS-WP

Soil

Metals

EPA 200.2/6020A

Soil/sediment is dried, disaggregated, and sieved (2 mm). Strong Acid Leachable Metals in the <2mm fraction are solubilized by heated digestion with nitric and hydrochloric acids. Instrumental analysis is by Collision / Reaction Cell ICPMS.

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Laboratory Definition Code	Laboratory Location
----------------------------	---------------------

WP

ALS ENVIRONMENTAL - WINNIPEG, MANITOBA, CANADA

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Quality Control Report

Workorder: L2178859

Report Date: 22-NOV-18

Page 1 of 2

Client: Environmental Operations
 1007 Century Street
 Winnipeg MB R3H 0W4
 Contact: YVONNE HAWRYLIUK

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
MET-200.2-MS-WP	Soil							
Batch	R4325448							
WG2924284-4	CRM	CANMET TILL-1						
Lead (Pb)			107.8		%		70-130	06-NOV-18
WG2924284-2	LCS							
Lead (Pb)			100.2		%		80-120	06-NOV-18
WG2924284-1	MB							
Lead (Pb)			<0.20		mg/kg		0.2	06-NOV-18

Quality Control Report

Workorder: L2178859

Report Date: 22-NOV-18

Page 2 of 2

Legend:

Limit	ALS Control Limit (Data Quality Objectives)
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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

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Environmental Operations
ATTN: YVONNE HAWRYLIUK
1007 Century Street
Winnipeg MB R3H 0W4

Date Received: 11-OCT-18
Report Date: 22-NOV-18 10:13 (MT)
Version: FINAL

Client Phone: 204-945-5305

Certificate of Analysis

Lab Work Order #: L2178862
Project P.O. #: Contract#: 5648 (MICROCHEM)
Job Reference: LEAD IN SOIL SURVEY
C of C Numbers:
Legal Site Desc:

Hua Wo
Chemistry Laboratory Manager

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ALS ENVIRONMENTAL ANALYTICAL REPORT

	Sample ID Description Sampled Date Sampled Time Client ID	L2178862-1 SOIL 10-OCT-18 09:00 03-008	L2178862-2 SOIL 10-OCT-18 09:50 03-010	L2178862-3 SOIL 10-OCT-18 09:15 03-011	L2178862-4 SOIL 10-OCT-18 10:25 03-014	L2178862-5 SOIL 10-OCT-18 11:29 03-015
Grouping	Analyte					
SOIL						
Metals	Lead (Pb) (mg/kg)	25.6	60.2	141	47.7	25.6

ALS ENVIRONMENTAL ANALYTICAL REPORT

		Sample ID	L2178862-6	L2178862-7	L2178862-8		
		Description	SOIL	SOIL	SOIL		
		Sampled Date	10-OCT-18	10-OCT-18	10-OCT-18		
		Sampled Time	11:02	12:39	13:58		
		Client ID	03-017	06-007	06-016		
Grouping	Analyte						
SOIL							
Metals	Lead (Pb) (mg/kg)	87.6	123	19.8			

Reference Information

Test Method References:

ALS Test Code	Matrix	Test Description	Method Reference**
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MET-200.2-MS-WP

Soil

Metals

EPA 200.2/6020A

Soil/sediment is dried, disaggregated, and sieved (2 mm). Strong Acid Leachable Metals in the <2mm fraction are solubilized by heated digestion with nitric and hydrochloric acids. Instrumental analysis is by Collision / Reaction Cell ICPMS.

Limitations: This method is intended to liberate environmentally available metals. Silicate minerals are not solubilized. Some metals may be only partially recovered (matrix dependent), including Al, Ba, Be, Cr, S, Sr, Ti, Tl, V, W, and Zr. Elemental Sulfur may be poorly recovered by this method. Volatile forms of sulfur (e.g. sulfide, H₂S) may be excluded if lost during sampling, storage, or digestion.

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Laboratory Definition Code	Laboratory Location
----------------------------	---------------------

WP

ALS ENVIRONMENTAL - WINNIPEG, MANITOBA, CANADA

Chain of Custody Numbers:

GLOSSARY OF REPORT TERMS

Surrogate - A compound that is similar in behaviour to target analyte(s), but that does not occur naturally in environmental samples. For applicable tests, surrogates are added to samples prior to analysis as a check on recovery.

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 of sample.

mg/L - milligrams per litre.

< - Less than.

D.L. - The reported Detection Limit, also known as the Limit of Reporting (LOR).

N/A - Result not available. Refer to qualifier code and definition for explanation.

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Quality Control Report

Workorder: L2178862

Report Date: 22-NOV-18

Page 1 of 2

Client: Environmental Operations
 1007 Century Street
 Winnipeg MB R3H 0W4
 Contact: YVONNE HAWRYLIUK

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
MET-200.2-MS-WP	Soil							
Batch	R4326053							
WG2925574-4	CRM	CANMET TILL-1						
Lead (Pb)			100.1		%		70-130	07-NOV-18
WG2925574-2	LCS							
Lead (Pb)			98.4		%		80-120	07-NOV-18
WG2925574-1	MB							
Lead (Pb)			<0.20		mg/kg		0.2	07-NOV-18

Quality Control Report

Workorder: L2178862

Report Date: 22-NOV-18

Page 2 of 2

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

Hold Time Exceedances:

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Environmental Operations
ATTN: YVONNE HAWRYLIUK
1007 Century Street
Winnipeg MB R3H 0W4

Date Received: 11-OCT-18
Report Date: 23-NOV-18 15:55 (MT)
Version: FINAL

Client Phone: 204-945-5305

Certificate of Analysis

Lab Work Order #: L2178864
Project P.O. #: Contract#: 5648 (MICROCHEM)
Job Reference: LEAD IN SOIL SURVEY
C of C Numbers:
Legal Site Desc:

Hua Wo
Chemistry Laboratory Manager

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ADDRESS: 1329 Niakwa Road East, Unit 12, Winnipeg, MB R2J 3T4 Canada | Phone: +1 204 255 9720 | Fax: +1 204 255 9721
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ALS ENVIRONMENTAL ANALYTICAL REPORT

	Sample ID Description Sampled Date Sampled Time Client ID	L2178864-1 COMPOSITE 10-OCT-18 09:50 06-009	L2178864-2 COMPOSITE 10-OCT-18 10:50 06-010	L2178864-3 COMPOSITE 10-OCT-18 12:20 04-007	L2178864-4 COMPOSITE 10-OCT-18 12:40 04-011	L2178864-5 COMPOSITE 10-OCT-18 12:55 04-003
Grouping	Analyte					
SOIL						
Metals	Lead (Pb) (mg/kg)	64.0	119	36.6	136	15.6

ALS ENVIRONMENTAL ANALYTICAL REPORT

		Sample ID	L2178864-6	L2178864-7	L2178864-8	L2178864-9
		Description	COMPOSITE	COMPOSITE	COMPOSITE	COMPOSITE
		Sampled Date	10-OCT-18	10-OCT-18	10-OCT-18	10-OCT-18
		Sampled Time	13:15	14:30	14:50	12:20
		Client ID	04-016	04-012	04-004	04-007D
Grouping	Analyte					
SOIL						
Metals	Lead (Pb) (mg/kg)	26.4	216	620	69.3	

Reference Information

Test Method References:

ALS Test Code	Matrix	Test Description	Method Reference**
---------------	--------	------------------	--------------------

MET-200.2-MS-WP

Soil

Metals

EPA 200.2/6020A

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Chain of Custody Numbers:

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Quality Control Report

Workorder: L2178864

Report Date: 23-NOV-18

Page 1 of 2

Client: Environmental Operations
 1007 Century Street
 Winnipeg MB R3H 0W4
 Contact: YVONNE HAWRYLIUK

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
MET-200.2-MS-WP	Soil							
Batch	R4326053							
WG2925574-4	CRM	CANMET TILL-1						
Lead (Pb)			100.1		%		70-130	07-NOV-18
WG2925574-2	LCS							
Lead (Pb)			98.4		%		80-120	07-NOV-18
WG2925574-1	MB							
Lead (Pb)			<0.20		mg/kg		0.2	07-NOV-18

Quality Control Report

Workorder: L2178864

Report Date: 23-NOV-18

Page 2 of 2

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

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Environmental Operations
ATTN: YVONNE HAWRYLIUK
1007 Century Street
Winnipeg MB R3H 0W4

Date Received: 11-OCT-18
Report Date: 26-NOV-18 07:21 (MT)
Version: FINAL

Client Phone: 204-945-5305

Certificate of Analysis

Lab Work Order #: L2179792
Project P.O. #: Contract#: 5648 (MICROCHEM)
Job Reference: LEAD IN SOIL SURVEY
C of C Numbers:
Legal Site Desc:

Hua Wo
Chemistry Laboratory Manager

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ALS ENVIRONMENTAL ANALYTICAL REPORT

		Sample ID	L2179792-1	L2179792-2	L2179792-3	L2179792-4	L2179792-5
		Description	COMPOSITE	COMPOSITE	COMPOSITE	COMPOSITE	COMPOSITE
		Sampled Date	11-OCT-18	11-OCT-18	11-OCT-18	11-OCT-18	11-OCT-18
		Sampled Time	09:20	09:45	10:30	11:00	12:25
		Client ID	04-015	04-008	04-018	04-013	04-001
Grouping	Analyte						
SOIL							
Metals	Lead (Pb) (mg/kg)	210	94.5	150	400	53.2	

ALS ENVIRONMENTAL ANALYTICAL REPORT

		Sample ID	L2179792-6	L2179792-7	L2179792-8	L2179792-9	L2179792-10
		Description	COMPOSITE	COMPOSITE	COMPOSITE	COMPOSITE	COMPOSITE
		Sampled Date	11-OCT-18	11-OCT-18	11-OCT-18	11-OCT-18	11-OCT-18
		Sampled Time	12:45	13:00	13:20	13:40	13:40
		Client ID	04-009	04-020	04-017	04-019	04-019D
Grouping	Analyte						
SOIL							
Metals	Lead (Pb) (mg/kg)	99.1	278	236	755	885	

ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample ID Description Sampled Date Sampled Time Client ID	L2179792-11 COMPOSITE 11-OCT-18 13:40 04-018D				
Grouping	Analyte				
SOIL					
Metals	Lead (Pb) (mg/kg)	168			

Reference Information

Test Method References:

ALS Test Code	Matrix	Test Description	Method Reference**
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MET-200.2-MS-WP

Soil

Metals

EPA 200.2/6020A

Soil/sediment is dried, disaggregated, and sieved (2 mm). Strong Acid Leachable Metals in the <2mm fraction are solubilized by heated digestion with nitric and hydrochloric acids. Instrumental analysis is by Collision / Reaction Cell ICPMS.

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WP

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Quality Control Report

Workorder: L2179792

Report Date: 26-NOV-18

Page 1 of 2

Client: Environmental Operations
 1007 Century Street
 Winnipeg MB R3H 0W4
 Contact: YVONNE HAWRYLIUK

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
MET-200.2-MS-WP	Soil							
Batch	R4340015							
WG2930599-4	CRM	CANMET TILL-1						
Lead (Pb)			101.1		%		70-130	15-NOV-18
WG2930599-2	LCS							
Lead (Pb)			97.7		%		80-120	15-NOV-18
WG2930599-1	MB							
Lead (Pb)			<0.20		mg/kg		0.2	15-NOV-18

Quality Control Report

Workorder: L2179792

Report Date: 26-NOV-18

Page 2 of 2

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

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Report To		Service Requested (Rush for routine analysis subject to availability)																																									
Company: Sustainable Development (W10410)		<input checked="" type="radio"/> Regular (Standard Turnaround Times - Business Days)																																									
Contact: YVONNE HAWRYLIUK		<input type="radio"/> Priority (2-4 Business Days) - 50% Surcharge - Contact ALS to Confirm TAT																																									
Address: 1007 Century Street		<input type="radio"/> Emergency (1-2 Bus. Days) - 100% Surcharge - Contact ALS to Confirm TAT																																									
Winnipeg, MB, R3H 0W4		<input type="radio"/> Same Day or Weekend Emergency - Contact ALS to Confirm TAT																																									
Phone: 204-945-5305 CELL #: _____		Analysis Request																																									
Invoice To Same as Report? <input checked="" type="checkbox"/> Yes <input checked="" type="checkbox"/> No																																											
Hardcopy of Invoice with Report? <input type="checkbox"/> Yes <input type="checkbox"/> No		Please indicate below Filtered, Preserved or both (F, P, F/P)																																									
Company: Sustainable Development (W10410)		<table border="1"> <tr> <td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td> </tr> <tr> <td>(2) MET-200.2-MS-1-WP</td><td>(REP) WP-PB-200.2</td><td>(14) Special Req-61-WP (for dly/grind & homogenization)</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td> </tr> </table>																						(2) MET-200.2-MS-1-WP	(REP) WP-PB-200.2	(14) Special Req-61-WP (for dly/grind & homogenization)																	
(2) MET-200.2-MS-1-WP	(REP) WP-PB-200.2			(14) Special Req-61-WP (for dly/grind & homogenization)																																							
Contact: _____				Client / Project Information																																							
Address: _____				Job #: Lead in Soil Survey																																							
Phone: _____ Fax: _____		PO / AFE: _____																																									
Lab Work Order # (lab use only)		Quote #: Q70175																																									
ALS Contact: Craig Riddell		Sampled By: <u>RD</u> <u>E013</u>																																									
Sample #	Sample Identification (This description will appear on the report)	Date Sampled	Time Sampled	Sample Type	(2) MET-200.2-MS-1-WP	(REP) WP-PB-200.2	(14) Special Req-61-WP (for dly/grind & homogenization)																																				
	04-015	2018-10-11	0920h	composite	x	x	x																																				
	04-008		0945																																								
	04-018		1030																																								
	04-013		1100																																								
	04-001		1225																																								
	04-009		1245																																								
	04-020		1300																																								
	04-017		1320																																								
	04-019		1340																																								
	04-019D	↓	1340	↓																																							
Special Instructions / Regulations with water or land use (CCME-Freshwater Aquatic Life/BC CSR - Commercial/AB Tier 1 - Natural, etc) / 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 provided on a separate Excel tab. Also provided on another Excel tab are the ALS location addresses, phone numbers and sample container / preservation / holding time table for common analyses.																																											
SHIPMENT RELEASE (client use)					SHIPMENT RECEPTION (lab use only)					SHIPMENT VERIFICATION (lab use only)																																	
Released by:	Date (dd-mm-yy)	Time (hh-mm)	Received by:	Date:	Time:	Temperature:	Verified by:	Date:	Time:	Observations: Yes / No ? If Yes add SIF																																	
			<u>MR</u>	11-10-17	4:30	9.4 °C																																					



Environmental Operations
ATTN: YVONNE HAWRYLIUK
1007 Century Street
Winnipeg MB R3H 0W4

Date Received: 12-OCT-18
Report Date: 22-NOV-18 10:13 (MT)
Version: FINAL

Client Phone: 204-945-5305

Certificate of Analysis

Lab Work Order #: L2179801
Project P.O. #: Contract#: 5648 (MICROCHEM)
Job Reference: LEAD IN SOIL SURVEY
C of C Numbers:
Legal Site Desc:

Hua Wo
Chemistry Laboratory Manager

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ALS ENVIRONMENTAL ANALYTICAL REPORT

		Sample ID	L2179801-1	L2179801-2	L2179801-3	L2179801-4	L2179801-5
		Description	SOIL	SOIL	SOIL	SOIL	SOIL
		Sampled Date	11-OCT-18	11-OCT-18	11-OCT-18	11-OCT-18	11-OCT-18
		Sampled Time	09:03	10:19	11:25	13:27	11:25
		Client ID	06-018	06-028	06-025	06-024	06-025-D
Grouping	Analyte						
SOIL							
Metals	Lead (Pb) (mg/kg)	53.0	56.6	39.2	136	36.1	

Reference Information

Test Method References:

ALS Test Code	Matrix	Test Description	Method Reference**
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MET-200.2-MS-WP	Soil	Metals	EPA 200.2/6020A
------------------------	------	--------	-----------------

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Quality Control Report

Workorder: L2179801

Report Date: 22-NOV-18

Page 1 of 2

Client: Environmental Operations
 1007 Century Street
 Winnipeg MB R3H 0W4

Contact: YVONNE HAWRYLIUK

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
MET-200.2-MS-WP	Soil							
Batch	R4328669							
WG2927273-4	CRM	CANMET TILL-1						
Lead (Pb)			103.1		%		70-130	09-NOV-18
WG2927273-2	LCS							
Lead (Pb)			98.6		%		80-120	09-NOV-18
WG2927273-1	MB							
Lead (Pb)			<0.20		mg/kg		0.2	09-NOV-18

Quality Control Report

Workorder: L2179801

Report Date: 22-NOV-18

Page 2 of 2

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
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IRM	Internal Reference Material
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Ch



L2179801-COFC

COC #

Page ___ of ___

Report To			Report			Service Requested (Rush for routine analysis subject to availability)														
Company: Sustainable Development (W10410)			<input checked="" type="checkbox"/> Stand.			<input checked="" type="radio"/> Regular (Standard Turnaround Times - Business Days)														
Contact: YVONNE HAWRYLIUK			<input checked="" type="checkbox"/> PDF <input checked="" type="checkbox"/> Excel <input type="checkbox"/> Digital <input type="checkbox"/> Fax			<input type="radio"/> Priority (2-4 Business Days) - 50% Surcharge - Contact ALS to Confirm TAT														
Address: 1007 Century Street Winnipeg, MB, R3H 0W4			Email 1: yvonne.hawryliuk@gov.mb.ca			<input type="radio"/> Emergency (1-2 Bus. Days) - 100% Surcharge - Contact ALS to Confirm TAT														
Phone: 204-945-5305 CELL #:			Email 2:			<input type="radio"/> Same Day or Weekend Emergency - Contact ALS to Confirm TAT														
Email 3:						Analysis Request														
Invoice To Same as Report? <input checked="" type="checkbox"/> Yes <input checked="" type="checkbox"/> No			Client / Project Information			Please indicate below Filtered, Preserved or both (F, P, F/P)														
Hardcopy of Invoice with Report? <input type="checkbox"/> Yes <input type="checkbox"/> No			Job #: Lead in Soil Survey																	
Company: Sustainable Development (W10410)			PO / AFE:																	
Contact:			LSD:																	
Address:																				
Phone: Fax:			Quote #: Q70175																	
Lab Work Order # (lab use only)			ALS Contact: Craig Riddell		Sampled By:															
Sample #	Sample Identification (This description will appear on the report)		Date Sampled	Time Sampled	Sample Type	(2) MET-200.2-MS-1-WP	(REP) WP-PB-200.2	(14) Special Req-61-WP (for dry/grind & homogenization)												Number of Containers
	06-018		11-06-18	09:03		X	X	X												1
	06-028		"	10:19		X	X	X												1
	06-025		"	11:25		X	X	X												1
	06-024		"	13:27		X	X	X												1
	06-025-D		"	11:25		X	X	X												1
Special Instructions / Regulations with water or land use (CCME-Freshwater Aquatic Life/BC CSR - Commercial/AB Tier 1 - Natural, etc) / Hazardous Details																				
<p>Failure to complete all portions of this form may delay analysis. Please fill in this form LEGIBLY.</p> <p>By the use of this form the user acknowledges and agrees with the Terms and Conditions as provided on a separate Excel tab.</p> <p>Also provided on another Excel tab are the ALS location addresses, phone numbers and sample container / preservation / holding time table for common analyses.</p>																				
SHIPMENT RELEASE (client use)						SHIPMENT RECEPTION (lab use only)						SHIPMENT VERIFICATION (lab use only)								
Released by:	Date (dd-mm-yy)	Time (hh-mm)	Received by:	Date:	Time:	Temperature:	Verified by:	Date:	Time:	Observations: Yes / No ? If Yes add SIF										
			MH	11-10-18	4:30	9.4 °C														



Environmental Operations
ATTN: YVONNE HAWRYLIUK
1007 Century Street
Winnipeg MB R3H 0W4

Date Received: 11-OCT-18
Report Date: 22-NOV-18 10:14 (MT)
Version: FINAL

Client Phone: 204-945-5305

Certificate of Analysis

Lab Work Order #: L2179809
Project P.O. #: Contract#: 5648 (MICROCHEM)
Job Reference: LEAD IN SOIL SURVEY
C of C Numbers:
Legal Site Desc:

Hua Wo
Chemistry Laboratory Manager

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ADDRESS: 1329 Niakwa Road East, Unit 12, Winnipeg, MB R2J 3T4 Canada | Phone: +1 204 255 9720 | Fax: +1 204 255 9721
ALS CANADA LTD Part of the ALS Group An ALS Limited Company

ALS ENVIRONMENTAL ANALYTICAL REPORT

		Sample ID	L2179809-1	L2179809-2	L2179809-3	L2179809-4	L2179809-5
		Description	SOIL	SOIL	SOIL	SOIL	SOIL
		Sampled Date	11-OCT-18	11-OCT-18	11-OCT-18	11-OCT-18	11-OCT-18
		Sampled Time	09:00	10:16	10:16	11:16	12:23
		Client ID	06-02	06-21	06-21D	06-22	06-23
Grouping	Analyte						
SOIL							
Metals	Lead (Pb) (mg/kg)	48.1	22.7	26.6	54.4	83.1	

Reference Information

Test Method References:

ALS Test Code	Matrix	Test Description	Method Reference**
---------------	--------	------------------	--------------------

MET-200.2-MS-WP	Soil	Metals	EPA 200.2/6020A
------------------------	------	--------	-----------------

Soil/sediment is dried, disaggregated, and sieved (2 mm). Strong Acid Leachable Metals in the <2mm fraction are solubilized by heated digestion with nitric and hydrochloric acids. Instrumental analysis is by Collision / Reaction Cell ICPMS.

Limitations: This method is intended to liberate environmentally available metals. Silicate minerals are not solubilized. Some metals may be only partially recovered (matrix dependent), including Al, Ba, Be, Cr, S, Sr, Ti, Tl, V, W, and Zr. Elemental Sulfur may be poorly recovered by this method. Volatile forms of sulfur (e.g. sulfide, H₂S) may be excluded if lost during sampling, storage, or digestion.

** 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

Chain of Custody Numbers:

GLOSSARY OF REPORT TERMS

Surrogate - A compound that is similar in behaviour to target analyte(s), but that does not occur naturally in environmental samples. For applicable tests, surrogates are added to samples prior to analysis as a check on recovery.

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 of sample.

mg/L - milligrams per litre.

< - Less than.

D.L. - The reported Detection Limit, also known as the Limit of Reporting (LOR).

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: L2179809

Report Date: 22-NOV-18

Page 1 of 2

Client: Environmental Operations
 1007 Century Street
 Winnipeg MB R3H 0W4

Contact: YVONNE HAWRYLIUK

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
MET-200.2-MS-WP	Soil							
Batch	R4328669							
WG2927273-4	CRM	CANMET TILL-1						
Lead (Pb)			103.1		%		70-130	09-NOV-18
WG2927273-2	LCS							
Lead (Pb)			98.6		%		80-120	09-NOV-18
WG2927273-1	MB							
Lead (Pb)			<0.20		mg/kg		0.2	09-NOV-18

Quality Control Report

Workorder: L2179809

Report Date: 22-NOV-18

Page 2 of 2

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

Hold Time Exceedances:

All test results reported with this submission were conducted within ALS recommended hold times.

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.



Report To			Service Requested (Rush for routine analysis subject to availability)								
Company: Sustainable Development (W10410)			<input checked="" type="checkbox"/> Regular (Standard Turnaround Times - Business Days)								
Contact: YVONNE HAWRYLIUK			<input type="checkbox"/> Priority (2-4 Business Days) - 50% Surcharge - Contact ALS to Confirm TAT								
Address: 1007 Century Street			<input type="checkbox"/> Emergency (1-2 Bus. Days) - 100% Surcharge - Contact ALS to Confirm TAT								
Winnipeg, MB, R3H 0W4			<input type="checkbox"/> Same Day or Weekend Emergency - Contact ALS to Confirm TAT								
Phone: 204-945-5305 CELL #: _____			Analysis Request								
Invoice To Same as Report? <input checked="" type="checkbox"/> Yes <input checked="" type="checkbox"/> No			Please indicate below Filtered, Preserved or both (F, P, F/P)								
Hardcopy of Invoice with Report? <input type="checkbox"/> Yes <input type="checkbox"/> No											
Company: Sustainable Development (W10410)											
Contact: _____											
Address: _____											
Phone: _____ Fax: _____											
Quote #: Q70175											
Lab Work Order # _____ (lab use only)											
ALS Contact: Craig Riddell			Sampled By: <i>MSR</i>								
Sample #	Sample Identification (This description will appear on the report)	Date Sampled	Time Sampled	Sample Type	(2) MET-200.2-MS-1-WP	(REP) WP-PB-200.2	(14) Special Req-61-WP (for dry/grind & homogenization)	Number of Containers			
					X	X	X				
	06-02	11-01-2018	9:02am	Soil	X	X	X				
	06-21	11-01-2018	10:16am	Soil	X	X	X				
	06-21D	11-01-2018	10:16am	Soil	X	X	X				
	06-22	11-01-2018	11:16 am	Soil	X	X	X				
	06-23	11-01-2018	12:23pm	Soil	X	X	X				
Special Instructions / Regulations with water or land use (CCME-Freshwater Aquatic Life/BC CSR - Commercial/AB Tier 1 - Natural, etc) / 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 provided on a separate Excel tab. Also provided on another Excel tab are the ALS location addresses, phone numbers and sample container / preservation / holding time table for common analyses.											
SHIPMENT RELEASE (client use)			SHIPMENT RECEPTION (lab use only)			SHIPMENT VERIFICATION (lab use only)					
Released by: _____	Date (dd-mm-yy)	Time (hh-mm)	Received by: <i>MSR</i>	Date: 11-20-18	Time: 4:30	Temperature: 9.1 °C	Verified by: _____	Date: _____	Time: _____	Observations: Yes / No? If Yes add SIF	



Environmental Operations
ATTN: YVONNE HAWRYLIUK
1007 Century Street
Winnipeg MB R3H 0W4

Date Received: 11-OCT-18
Report Date: 19-NOV-18 07:00 (MT)
Version: FINAL

Client Phone: 204-785-5305

Certificate of Analysis

Lab Work Order #: L2179814
Project P.O. #: Contract#: 5648 (MICROCHEM)
Job Reference: LEAD IN SOIL SURVEY
C of C Numbers:
Legal Site Desc:

Hua Wo
Chemistry Laboratory Manager

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ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters	Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L2179814-1 05-006 Sampled By: MR on 11-OCT-18 @ 10:37 Matrix: SOIL Single Metal in Soil by ICPMS Metals Lead (Pb)	57.4		0.20	mg/kg	22-OCT-18	22-OCT-18	R4294048
L2179814-2 05-017 Sampled By: MR on 11-OCT-18 @ 12:44 Matrix: SOIL Single Metal in Soil by ICPMS Metals Lead (Pb)	81.7		0.20	mg/kg	22-OCT-18	22-OCT-18	R4294048
L2179814-3 05-018 Sampled By: MR on 11-OCT-18 @ 08:57 Matrix: SOIL Single Metal in Soil by ICPMS Metals Lead (Pb)	439		0.20	mg/kg	22-OCT-18	22-OCT-18	R4294048

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

Reference Information

Test Method References:

ALS Test Code	Matrix	Test Description	Method Reference**
MET-200.2-MS-WP	Soil	Metals	EPA 200.2/6020A

Soil/sediment is dried, disaggregated, and sieved (2 mm). Strong Acid Leachable Metals in the <2mm fraction are solubilized by heated digestion with nitric and hydrochloric acids. Instrumental analysis is by Collision / Reaction Cell ICPMS.

Limitations: This method is intended to liberate environmentally available metals. Silicate minerals are not solubilized. Some metals may be only partially recovered (matrix dependent), including Al, Ba, Be, Cr, S, Sr, Ti, Tl, V, W, and Zr. Elemental Sulfur may be poorly recovered by this method. Volatile forms of sulfur (e.g. sulfide, H₂S) may be excluded if lost during sampling, storage, or digestion.

** 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

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: L2179814

Report Date: 19-NOV-18

Page 1 of 2

Client: Environmental Operations
 1007 Century Street
 Winnipeg MB R3H 0W4
 Contact: YVONNE HAWRYLIUK

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
MET-200.2-MS-WP	Soil							
Batch	R4294048							
WG2910802-4	CRM	CANMET TILL-1						
Lead (Pb)			100.9		%		70-130	22-OCT-18
WG2910802-2	LCS							
Lead (Pb)			99.3		%		80-120	22-OCT-18
WG2910802-1	MB							
Lead (Pb)			<0.20		mg/kg		0.2	22-OCT-18

Quality Control Report

Workorder: L2179814

Report Date: 19-NOV-18

Page 2 of 2

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

Hold Time Exceedances:

All test results reported with this submission were conducted within ALS recommended hold times.

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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 Operations
ATTN: YVONNE HAWRYLIUK
1007 Century Street
Winnipeg MB R3H 0W4

Date Received: 12-OCT-18
Report Date: 22-NOV-18 10:14 (MT)
Version: FINAL

Client Phone: 204-945-5305

Certificate of Analysis

Lab Work Order #: L2179985
Project P.O. #: Contract#: 5648 (MICROCHEM)
Job Reference: LEAD IN SOIL SURVEY
C of C Numbers:
Legal Site Desc:

Hua Wo
Chemistry Laboratory Manager

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ALS ENVIRONMENTAL ANALYTICAL REPORT

Grouping	Analyte	Sample ID	L2179985-1			
SOIL		Description	SOIL			
Metals		Sampled Date	12-OCT-18			
		Sampled Time	11:00			
		Client ID	04-006			
	Lead (Pb) (mg/kg)	87.8				

Reference Information

Test Method References:

ALS Test Code	Matrix	Test Description	Method Reference**
---------------	--------	------------------	--------------------

MET-200.2-MS-WP	Soil	Metals	EPA 200.2/6020A
------------------------	------	--------	-----------------

Soil/sediment is dried, disaggregated, and sieved (2 mm). Strong Acid Leachable Metals in the <2mm fraction are solubilized by heated digestion with nitric and hydrochloric acids. Instrumental analysis is by Collision / Reaction Cell ICPMS.

Limitations: This method is intended to liberate environmentally available metals. Silicate minerals are not solubilized. Some metals may be only partially recovered (matrix dependent), including Al, Ba, Be, Cr, S, Sr, Ti, Tl, V, W, and Zr. Elemental Sulfur may be poorly recovered by this method. Volatile forms of sulfur (e.g. sulfide, H₂S) may be excluded if lost during sampling, storage, or digestion.

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Chain of Custody Numbers:

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

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

mg/L - milligrams per litre.

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D.L. - The reported Detection Limit, also known as the Limit of Reporting (LOR).

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Quality Control Report

Workorder: L2179985

Report Date: 22-NOV-18

Page 1 of 2

Client: Environmental Operations
 1007 Century Street
 Winnipeg MB R3H 0W4

Contact: YVONNE HAWRYLIUK

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
MET-200.2-MS-WP	Soil							
Batch	R4328669							
WG2927273-4	CRM	CANMET TILL-1						
Lead (Pb)			103.1		%		70-130	09-NOV-18
WG2927273-2	LCS							
Lead (Pb)			98.6		%		80-120	09-NOV-18
WG2927273-1	MB							
Lead (Pb)			<0.20		mg/kg		0.2	09-NOV-18

Quality Control Report

Workorder: L2179985

Report Date: 22-NOV-18

Page 2 of 2

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

Hold Time Exceedances:

All test results reported with this submission were conducted within ALS recommended hold times.

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



Report To Contact and company name below will appear on the final report		Report Format / Distribution			Select Service Level Below - Please confirm all E&P TATs with your AM - surcharges will apply						
Company: <u>SUSTAINABLE DEVELOPMENT</u>		Select Report Format: <input checked="" type="checkbox"/> PDF <input type="checkbox"/> EXCEL <input type="checkbox"/> EDD (DIGITAL)			Regular [R] <input checked="" type="checkbox"/> Standard TAT if received by 3 pm - business days - no surcharges apply						
Contact: <u>Yvonne Hauryluk</u>		Quality Control (QC) Report with Report <input type="checkbox"/> YES <input type="checkbox"/> NO			Priority (Business Days)		EMERGENCY				
Phone: <u>905.5305</u>		<input type="checkbox"/> Compare Results to Criteria on Report - provide details below if box checked			4 day [P4] <input type="checkbox"/>		1 Business day [E1] <input type="checkbox"/>				
Company address below will appear on the final report		Select Distribution: <input checked="" type="checkbox"/> EMAIL <input type="checkbox"/> MAIL <input type="checkbox"/> FAX			3 day [P3] <input type="checkbox"/>		Same Day, Weekend or Statutory holiday [E0] <input type="checkbox"/>				
Street: <u>1007 CENTURY ST</u>		Email 1 or Fax: <u>yvonne.hauryluk@alsmb.ca</u>			Date and Time Required for all E&P TATs: _____						
City/Province: <u>WPA MB</u>		Email 2: _____			For tests that can not be performed according to the service level selected, you will be contacted.						
Postal Code: <u>R3H 0W4</u>		Email 3: _____			Analysis Request						
Invoice To		Invoice Distribution			Indicate Filtered (F), Preserved (P) or Filtered and Preserved (FP) below						
Same as Report To <input checked="" type="checkbox"/> YES <input type="checkbox"/> NO		Select Invoice Distribution: <input checked="" type="checkbox"/> EMAIL <input type="checkbox"/> MAIL <input type="checkbox"/> FAX									
Copy of Invoice with Report <input checked="" type="checkbox"/> YES <input type="checkbox"/> NO		Email 1 or Fax: <u>yvonne.hauryluk@alsmb.ca</u>			<div style="display: flex; justify-content: space-between;"> <div style="writing-mode: vertical-rl; transform: rotate(180deg);"> X (REP) - 200.7 ms-wf X (REP) - WP: B-B-200.2 X (14) special leg-61uf (for dry/grad + home) </div> <div style="writing-mode: vertical-rl; transform: rotate(180deg);"> Number of Containers </div> </div>						
Company:		Email 2: _____									
Contact:		Oil and Gas Required Fields (client use)									
Project Information		AFE/Cost Center: _____ PO# _____									
ALS Account # / Quote #: <u>070175 ver 2</u>		Major/Minor Code: _____ Routing Code: _____									
Job #: <u>Lead in Sal Survey</u>		Requisitioner: _____									
PO / AFE: _____		Location: _____									
LSD: _____		ALS Lab Work Order # (lab use only)			ALS Contact:			Sampler:			
ALS Sample # (lab use only)		Sample Identification and/or Coordinates (This description will appear on the report)			Date (dd-mmm-yy)		Time (hh:mm)		Sample Type		
<u>04-006</u>					<u>12-oct-18</u>		<u>11:00</u>		<u>soil</u>		
Drinking Water (DW) Samples ¹ (client use)		Special Instructions / Specify Criteria to add on report by clicking on the drop-down list below (electronic COC only)			SAMPLE CONDITION AS RECEIVED (lab use only)						
Are samples taken from a Regulated DW System? <input type="checkbox"/> YES <input type="checkbox"/> NO					Frozen <input type="checkbox"/> SIF Observations Yes <input type="checkbox"/> No <input type="checkbox"/>						
Are samples for human drinking water use? <input type="checkbox"/> YES <input type="checkbox"/> NO					Ice Packs <input type="checkbox"/> Ice Cubes <input type="checkbox"/> Custody seal intact Yes <input type="checkbox"/> No <input type="checkbox"/>						
					INITIAL COOLER TEMPERATURES °C			FINAL COOLER TEMPERATURES °C			
					<u>11.3</u>						
SHIPMENT RELEASE (client use)			INITIAL SHIPMENT RECEPTION (lab use only)			FINAL SHIPMENT RECEPTION (lab use only)					
Released by: _____		Date: _____		Time: _____		Received by: <u>JD</u>		Date: <u>01 12/18</u>		Time: <u>11:45</u>	



Environmental Operations
ATTN: YVONNE HAWRYLIUK
1007 Century Street
Winnipeg MB R3H 0W4

Date Received: 19-OCT-18
Report Date: 22-NOV-18 10:15 (MT)
Version: FINAL

Client Phone: 204-945-5305

Certificate of Analysis

Lab Work Order #: L2184284
Project P.O. #: Contract#: 5648 (MICROCHEM)
Job Reference: LEAD IN SOIL SURVEY
C of C Numbers:
Legal Site Desc:

Hua Wo
Chemistry Laboratory Manager

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ALS ENVIRONMENTAL ANALYTICAL REPORT

		Sample ID	L2184284-1	L2184284-2	L2184284-3	L2184284-4	L2184284-5
		Description	SOIL	SOIL	SOIL	SOIL	SOIL
		Sampled Date	19-OCT-18	19-OCT-18	19-OCT-18	19-OCT-18	19-OCT-18
		Sampled Time	09:29	10:13	11:08	09:27	10:39
		Client ID	06-026	06-030	06-001	06-029	06-002D
Grouping	Analyte						
SOIL							
Metals	Lead (Pb) (mg/kg)	38.7	59.8	58.9	79.0	19.3	

* Please refer to the Reference Information section for an explanation of any qualifiers detected.

ALS ENVIRONMENTAL ANALYTICAL REPORT

		Sample ID	L2184284-6	L2184284-7	L2184284-8	L2184284-9	L2184284-10
		Description	SOIL	SOIL	SOIL	SOIL	SOIL
		Sampled Date	19-OCT-18	19-OCT-18	19-OCT-18	19-OCT-18	19-OCT-18
		Sampled Time	10:39	09:15	09:55	10:44	09:46
		Client ID	06-002	05-007	05-013	05-015	06-019
Grouping	Analyte						
SOIL							
Metals	Lead (Pb) (mg/kg)	18.0	90.3	52.4	55.3	30.4	

* Please refer to the Reference Information section for an explanation of any qualifiers detected.

ALS ENVIRONMENTAL ANALYTICAL REPORT

		Sample ID	L2184284-11	L2184284-12	L2184284-13	L2184284-14	L2184284-15
		Description	SOIL	SOIL	SOIL	SOIL	SOIL
		Sampled Date	19-OCT-18	19-OCT-18	19-OCT-18	19-OCT-18	19-OCT-18
		Sampled Time	10:41	11:00	09:15	09:15	11:47
		Client ID	06-020	06-027	05-005	05-005D	05-003
Grouping	Analyte						
SOIL							
Metals	Lead (Pb) (mg/kg)	75.1	97.5	86.9	85.0	34.6	

* Please refer to the Reference Information section for an explanation of any qualifiers detected.

ALS ENVIRONMENTAL ANALYTICAL REPORT

		Sample ID	L2184284-16	L2184284-17	L2184284-18	L2184284-19
		Description	SOIL	SOIL	SOIL	SOIL
		Sampled Date	19-OCT-18	19-OCT-18	19-OCT-18	19-OCT-18
		Sampled Time	10:36	13:12	12:30	09:20
		Client ID	05-006 (BAG LABELED 06-006)	06-017	06-012	06-014
Grouping	Analyte					
SOIL						
Metals	Lead (Pb) (mg/kg)	14.6	36.3	15.1	11.5	

* Please refer to the Reference Information section for an explanation of any qualifiers detected.

Reference Information

QC Samples with Qualifiers & Comments:

QC Type Description	Parameter	Qualifier	Applies to Sample Number(s)
Duplicate	Lead (Pb)	DUP-H	L2184284-1, -10, -11, -12, -13, -14, -15, -16, -17, -18, -2, -3, -4, -5, -6, -7, -8, -9

Qualifiers for Individual Parameters Listed:

Qualifier	Description
DUP-H	Duplicate results outside ALS DQO, due to sample heterogeneity.

Test Method References:

ALS Test Code	Matrix	Test Description	Method Reference**
MET-200.2-MS-WP	Soil	Metals	EPA 200.2/6020A

Soil/sediment is dried, disaggregated, and sieved (2 mm). Strong Acid Leachable Metals in the <2mm fraction are solubilized by heated digestion with nitric and hydrochloric acids. Instrumental analysis is by Collision / Reaction Cell ICPMS.

Limitations: This method is intended to liberate environmentally available metals. Silicate minerals are not solubilized. Some metals may be only partially recovered (matrix dependent), including Al, Ba, Be, Cr, S, Sr, Ti, Tl, V, W, and Zr. Elemental Sulfur may be poorly recovered by this method. Volatile forms of sulfur (e.g. sulfide, H₂S) may be excluded if lost during sampling, storage, or digestion.

** 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

Chain of Custody Numbers:

GLOSSARY OF REPORT TERMS

Surrogate - A compound that is similar in behaviour to target analyte(s), but that does not occur naturally in environmental samples. For applicable tests, surrogates are added to samples prior to analysis as a check on recovery.

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 of sample.

mg/L - milligrams per litre.

< - Less than.

D.L. - The reported Detection Limit, also known as the Limit of Reporting (LOR).

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: L2184284

Report Date: 22-NOV-18

Page 1 of 2

Client: Environmental Operations
 1007 Century Street
 Winnipeg MB R3H 0W4
 Contact: YVONNE HAWRYLIUK

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
MET-200.2-MS-WP		Soil						
Batch	R4340015							
WG2930599-4	CRM	CANMET TILL-1						
Lead (Pb)			101.1		%		70-130	15-NOV-18
WG2930599-2	LCS							
Lead (Pb)			97.7		%		80-120	15-NOV-18
WG2930599-1	MB							
Lead (Pb)			<0.20		mg/kg		0.2	15-NOV-18
Batch	R4341016							
WG2929475-4	CRM	CANMET TILL-1						
Lead (Pb)			105.5		%		70-130	15-NOV-18
WG2929475-2	LCS							
Lead (Pb)			103.3		%		80-120	15-NOV-18
WG2929475-1	MB							
Lead (Pb)			<0.20		mg/kg		0.2	15-NOV-18

Quality Control Report

Workorder: L2184284

Report Date: 22-NOV-18

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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

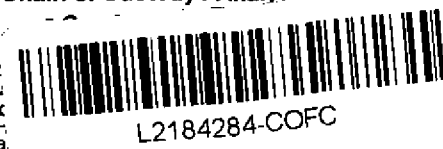
Hold Time Exceedances:

All test results reported with this submission were conducted within ALS recommended hold times.

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.



Report To	Company: Sustainable Development (W10410)	Report: <input checked="" type="checkbox"/> Station <input checked="" type="checkbox"/> PDF <input type="checkbox"/> Digital <input type="checkbox"/> Fax	Service Requested (Rush for routine analysis subject to availability)
Contact: YVONNE HAWRYLIUK	Address: 1007 Century Street Winnipeg, MB, R3H 0W4	Email 1: yvonne.hawryliuk@gov.mb.ca	<input checked="" type="radio"/> Regular (Standard Turnaround Times - Business Days)
Phone: 204-945-5305 CELL #: _____		Email 2: _____	<input type="radio"/> Priority (2-4 Business Days) - 50% Surcharge - Contact ALS to Confirm TAT
		Email 3: _____	<input type="radio"/> Emergency (1-2 Bus. Days) - 100% Surcharge - Contact ALS to Confirm TAT
			<input type="radio"/> Same Day or Weekend Emergency - Contact ALS to Confirm TAT

Invoice To Same as Report? <input checked="" type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Client / Project Information	Analysis Request																		
Hardcopy of Invoice with Report? <input type="checkbox"/> Yes <input type="checkbox"/> No	Job #: Lead in Soil Survey	Please indicate below Filtered, Preserved or both (F, P, F/P)																		
Company: Sustainable Development (W10410)	PO / AFE: _____	(2) MET-200.2-MS-1-WP	(REP) WP-PB-200.2	(14) Special Req-61-WP	(for dry/grind & homogenization)															
Contact: _____	LSD: _____																			
Address: _____	Quote #: Q70175																			
Phone: _____ Fax: _____																				

Lab Work Order # (lab use only)	ALS Contact: Craig Riddell	Sampled By: _____
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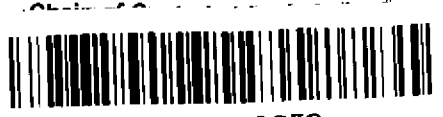
Sample #	Sample Identification (This description will appear on the report)	Date Sampled	Time Sampled	Sample Type	(2) MET-200.2-MS-1-WP	(REP) WP-PB-200.2	(14) Special Req-61-WP	(for dry/grind & homogenization)													Number of Containers
05-005		19-Oct-18	9:15	Soil	X	X	X														1
05-005D		19-Oct-18	9:15	Soil	X	X	X														1
05-003		19-Oct-18	11:47	Soil	X	X	X														1
05-006	<i>*bag labelled 06-006*</i>	19-Oct-18	10:36	Soil	X	X	X														1
06-017		19-Oct-18	13:12	Soil	X	X	X														1
06-012		19-Oct-18	12:30	Soil	X	X	X														1
06-014		19-Oct-18	9:20	Soil	X	X	X														1

Special Instructions / Regulations with water or land use (CCME-Freshwater Aquatic Life/BC CSR - Commercial/AB Tier 1 - Natural, etc) / 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 provided on a separate Excel tab.
 Also provided on another Excel tab are the ALS location addresses, phone numbers and sample container / preservation / holding time table for common analyses.

SHIPMENT RELEASE (client use)			SHIPMENT RECEPTION (lab use only)				SHIPMENT VERIFICATION (lab use only)			
Released by: _____	Date (dd-mmm-yy): _____	Time (hh-mm): _____	Received by: _____	Date: _____	Time: _____	Temperature: _____	Verified by: _____	Date: _____	Time: _____	Observations: Yes / No ? If Yes add SIF

MLH



L2184284-COFC

Report To							Service Requested (Rush for routine analysis subject to availability)																	
Company: Sustainable Development (W10410)		<input checked="" type="checkbox"/> PDF <input checked="" type="checkbox"/> Excel <input type="checkbox"/> Digital <input type="checkbox"/> Fax					<input checked="" type="radio"/> Regular (Standard Turnaround Times - Business Days)																	
Contact: YVONNE HAWRYLIUK		Email 1: yvonne.hawryliuk@gov.mb.ca					<input type="radio"/> Priority (2-4 Business Days) - 50% Surcharge - Contact ALS to Confirm TAT																	
Address: 1007 Century Street Winnipeg, MB, R3H 0W4		Email 2:					<input type="radio"/> Emergency (1-2 Bus. Days) - 100% Surcharge - Contact ALS to Confirm TAT																	
Phone: 204-945-5305 CELL # :		Email 3:					<input checked="" type="radio"/> Same Day or Weekend Emergency - Contact ALS to Confirm TAT																	
Invoice To Same as Report? <input checked="" type="checkbox"/> Yes <input checked="" type="checkbox"/> No		Client / Project Information					Analysis Request																	
Hardcopy of Invoice with Report? <input type="checkbox"/> Yes <input type="checkbox"/> No		Job #: Lead in Soil Survey					Please indicate below Filtered, Preserved or both (F, P, F/P)																	
Company: Sustainable Development (W10410)		PO / AFE:					(2) MET-200.2-MS-1-WP	(REP) WP-PB-200.2	(14) Special Req-61-WP	(for dry/grind & homogenization)												Number of Containers		
Contact:		LSD:																						
Address:																								
Phone: Fax:		Quote #: Q70175																						
Lab Work Order # (lab use only)		ALS Contact: Craig Riddell			Sampled By:																			
Sample #	Sample Identification (This description will appear on the report)	Date Sampled	Time Sampled	Sample Type	(2) MET-200.2-MS-1-WP	(REP) WP-PB-200.2	(14) Special Req-61-WP	(for dry/grind & homogenization)														Number of Containers		
06-026		19-Oct-18	9:29	Soil	X	X	X															1		
06-030		19-Oct-18	10:13	Soil	X	X	X															1		
06-001		19-Oct-18	11:08	Soil	X	X	X															1		
06-029		19-Oct-18	9:27	Soil	X	X	X															1		
06-002D		19-Oct-18	10:39	Soil	X	X	X															1		
06-002		19-Oct-18	10:39	Soil	X	X	X															1		
05-007		19-Oct-18	9:15	Soil	X	X	X															1		
05-013		19-Oct-18	9:55	Soil	X	X	X															1		
05-015		19-Oct-18	10:44	Soil	X	X	X															1		
06-019		19-Oct-18	9:46	Soil	X	X	X															1		
06-020		19-Oct-18	10:41	Soil	X	X	X															1		
06-027		19-Oct-18	11:00	Soil	X	X	X															1		
Special Instructions / Regulations with water or land use (CCME-Freshwater Aquatic Life/BC CSR - Commercial/AB Tier 1 - Natural, etc) / Hazardous Details																								
<p>Failure to complete all portions of this form may delay analysis. Please fill in this form LEGIBLY.</p> <p>By the use of this form the user acknowledges and agrees with the Terms and Conditions as provided on a separate Excel tab.</p> <p>Also provided on another Excel tab are the ALS location addresses, phone numbers and sample container / preservation / holding time table for common analyses.</p>																								
SHIPMENT RELEASE (client use)						SHIPMENT RECEPTION (lab use only)						SHIPMENT VERIFICATION (lab use only)												
Released by:		Date (dd-mmm-yy)		Time (hh-mm)		Received by:		Date:		Time:		Temperature:		Verified by:			Date:		Time:		Observations: Yes / No ? If Yes add SIF			
						<i>[Signature]</i>		19-10-08		3:40		15.4 °C												