



Quality Control Report

Workorder: L2078181

Report Date: 13-APR-18

Page 1 of 5

Client: AMEC Foster Wheeler Inc. - Earth&Environmental (Winnipeg)
 440 Dovercourt Drive
 Winnipeg MB R3Y 1G4

Contact: ROBERT HOCHKIEVICH

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
HG-200.2-CVAF-WP		Soil						
Batch	R4010749							
WG2750026-4	CRM	CANMET TILL-1						
Mercury (Hg)			107.0		%		70-130	13-APR-18
WG2750026-2	LCS							
Mercury (Hg)			99.0		%		80-120	13-APR-18
WG2750026-1	MB							
Mercury (Hg)			<0.0050		mg/kg		0.005	13-APR-18
MET-200.2-CCMS-WP		Soil						
Batch	R4009452							
WG2749996-9	CRM	CANMET TILL-1						
Aluminum (Al)			97.5		%		70-130	12-APR-18
Antimony (Sb)			111.6		%		70-130	12-APR-18
Arsenic (As)			98.4		%		70-130	12-APR-18
Barium (Ba)			97.8		%		70-130	12-APR-18
Beryllium (Be)			108.1		%		70-130	12-APR-18
Boron (B)			3.9		mg/kg		0-8.2	12-APR-18
Bismuth (Bi)			97.0		%		70-130	12-APR-18
Cadmium (Cd)			103.2		%		70-130	12-APR-18
Calcium (Ca)			93.4		%		70-130	12-APR-18
Chromium (Cr)			94.6		%		70-130	12-APR-18
Cobalt (Co)			99.0		%		70-130	12-APR-18
Copper (Cu)			101.8		%		70-130	12-APR-18
Iron (Fe)			97.8		%		70-130	12-APR-18
Lead (Pb)			100.1		%		70-130	12-APR-18
Lithium (Li)			102.0		%		70-130	12-APR-18
Magnesium (Mg)			97.8		%		70-130	12-APR-18
Manganese (Mn)			99.8		%		70-130	12-APR-18
Molybdenum (Mo)			100.9		%		70-130	12-APR-18
Nickel (Ni)			97.5		%		70-130	12-APR-18
Phosphorus (P)			99.7		%		70-130	12-APR-18
Potassium (K)			85.1		%		70-130	12-APR-18
Selenium (Se)			0.31		mg/kg		0.12-0.52	12-APR-18
Silver (Ag)			0.23		mg/kg		0.12-0.32	12-APR-18
Sodium (Na)			90.5		%		70-130	12-APR-18
Strontium (Sr)			93.1		%		70-130	12-APR-18
Thallium (Tl)			0.143		mg/kg		0.075-0.175	12-APR-18
Tin (Sn)			1.0		mg/kg		0-3.1	12-APR-18

Quality Control Report

Workorder: L2078181

Report Date: 13-APR-18

Page 2 of 5

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
MET-200.2-CCMS-WP								
	Soil							
Batch	R4009452							
WG2749996-9	CRM	CANMET TILL-1						
Titanium (Ti)			77.9		%		70-130	12-APR-18
Tungsten (W)			0.14		mg/kg		0-0.66	12-APR-18
Uranium (U)			94.8		%		70-130	12-APR-18
Vanadium (V)			95.6		%		70-130	12-APR-18
Zinc (Zn)			101.0		%		70-130	12-APR-18
Zirconium (Zr)			0.8		mg/kg		0-1.8	12-APR-18
WG2749996-8	LCS							
Aluminum (Al)			98.6		%		80-120	12-APR-18
Antimony (Sb)			107.4		%		80-120	12-APR-18
Arsenic (As)			99.3		%		80-120	12-APR-18
Barium (Ba)			100.8		%		80-120	12-APR-18
Beryllium (Be)			111.5		%		80-120	12-APR-18
Boron (B)			109.9		%		80-120	12-APR-18
Bismuth (Bi)			100.3		%		80-120	12-APR-18
Cadmium (Cd)			101.9		%		80-120	12-APR-18
Calcium (Ca)			106.2		%		80-120	12-APR-18
Chromium (Cr)			99.3		%		80-120	12-APR-18
Cobalt (Co)			100.4		%		80-120	12-APR-18
Copper (Cu)			100.9		%		80-120	12-APR-18
Iron (Fe)			99.97		%		80-120	12-APR-18
Lead (Pb)			102.4		%		80-120	12-APR-18
Lithium (Li)			107.3		%		80-120	12-APR-18
Magnesium (Mg)			103.6		%		80-120	12-APR-18
Manganese (Mn)			99.9		%		80-120	12-APR-18
Molybdenum (Mo)			104.9		%		80-120	12-APR-18
Nickel (Ni)			99.95		%		80-120	12-APR-18
Phosphorus (P)			99.1		%		80-120	12-APR-18
Potassium (K)			100.9		%		80-120	12-APR-18
Selenium (Se)			101.8		%		80-120	12-APR-18
Silver (Ag)			103.8		%		80-120	12-APR-18
Sodium (Na)			101.5		%		80-120	12-APR-18
Strontium (Sr)			104.9		%		80-120	12-APR-18
Sulfur (S)			108.7		%		70-130	12-APR-18
Thallium (Tl)			98.7		%		80-120	12-APR-18



Quality Control Report

Workorder: L2078181

Report Date: 13-APR-18

Page 3 of 5

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
MET-200.2-CCMS-WP	Soil							
Batch	R4009452							
WG2749996-8	LCS							
Tin (Sn)			102.6		%		80-120	12-APR-18
Titanium (Ti)			96.3		%		80-120	12-APR-18
Tungsten (W)			104.1		%		70-130	12-APR-18
Uranium (U)			105.6		%		80-120	12-APR-18
Vanadium (V)			102.2		%		80-120	12-APR-18
Zinc (Zn)			101.9		%		80-120	12-APR-18
Zirconium (Zr)			104.9		%		80-120	12-APR-18
WG2749996-6	MB							
Aluminum (Al)			<50		mg/kg		50	12-APR-18
Antimony (Sb)			<0.10		mg/kg		0.1	12-APR-18
Arsenic (As)			<0.10		mg/kg		0.1	12-APR-18
Barium (Ba)			<0.50		mg/kg		0.5	12-APR-18
Beryllium (Be)			<0.10		mg/kg		0.1	12-APR-18
Boron (B)			<5.0		mg/kg		5	12-APR-18
Bismuth (Bi)			<0.20		mg/kg		0.2	12-APR-18
Cadmium (Cd)			<0.020		mg/kg		0.02	12-APR-18
Calcium (Ca)			<50		mg/kg		50	12-APR-18
Chromium (Cr)			<0.50		mg/kg		0.5	12-APR-18
Cobalt (Co)			<0.10		mg/kg		0.1	12-APR-18
Copper (Cu)			<0.50		mg/kg		0.5	12-APR-18
Iron (Fe)			<50		mg/kg		50	12-APR-18
Lead (Pb)			<0.50		mg/kg		0.5	12-APR-18
Lithium (Li)			<2.0		mg/kg		2	12-APR-18
Magnesium (Mg)			<20		mg/kg		20	12-APR-18
Manganese (Mn)			<1.0		mg/kg		1	12-APR-18
Molybdenum (Mo)			<0.10		mg/kg		0.1	12-APR-18
Nickel (Ni)			<0.50		mg/kg		0.5	12-APR-18
Phosphorus (P)			<50		mg/kg		50	12-APR-18
Potassium (K)			<100		mg/kg		100	12-APR-18
Selenium (Se)			<0.20		mg/kg		0.2	12-APR-18
Silver (Ag)			<0.10		mg/kg		0.1	12-APR-18
Sodium (Na)			<50		mg/kg		50	12-APR-18
Strontium (Sr)			<0.50		mg/kg		0.5	12-APR-18
Sulfur (S)			<1000		mg/kg		1000	12-APR-18



Quality Control Report

Workorder: L2078181

Report Date: 13-APR-18

Page 4 of 5

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
MET-200.2-CCMS-WP	Soil							
Batch	R4009452							
WG2749996-6	MB							
Thallium (Tl)			<0.050		mg/kg		0.05	12-APR-18
Tin (Sn)			<2.0		mg/kg		2	12-APR-18
Titanium (Ti)			<1.0		mg/kg		1	12-APR-18
Tungsten (W)			<0.50		mg/kg		0.5	12-APR-18
Uranium (U)			<0.050		mg/kg		0.05	12-APR-18
Vanadium (V)			<0.20		mg/kg		0.2	12-APR-18
Zinc (Zn)			<2.0		mg/kg		2	12-APR-18
Zirconium (Zr)			<1.0		mg/kg		1	12-APR-18

Quality Control Report

Workorder: L2078181

Report Date: 13-APR-18

Page 5 of 5

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

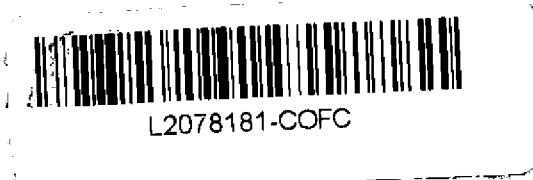
Hold Time Exceedances:

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.



L2078181-COFC

COC # L2078181

Report to:		Report Format / Distribution			Service Requested:																																																																																																																														
Company: Amec Foster Wheeler		<input checked="" type="checkbox"/> Standard <input type="checkbox"/> Other			<input type="checkbox"/> Regular Service (Default)																																																																																																																														
Contact: Rob Hochkievich		<input checked="" type="checkbox"/> PDF <input type="checkbox"/> Excel <input type="checkbox"/> Fax			<input checked="" type="checkbox"/> Rush Service (2-3 Days) FRIDAY 13 Apr.																																																																																																																														
Address: 440 Dovercourt Drive, Winnipeg, MB		Email 1: rob.hochkievich@woodplc.com			<input type="checkbox"/> Priority Service (1 Day or ASAP)																																																																																																																														
Phone: 204-594-3039 Fax:		Email 2:			<input type="checkbox"/> Emergency Service (<1 Day / Wkend) - Contact ALS																																																																																																																														
Invoice To: <input checked="" type="checkbox"/> Same as Report		Indicate Bottles: Filtered / Preserved (F/P) →→																																																																																																																																	
Company:		Client / Project Information:			<table border="1"> <tr><td>ICP/MS Metals</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></td><td></td><td></td></tr> <tr><td>Mercury</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></td><td></td><td></td><td></td></tr> <tr><td>Hazardous?</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></td><td></td><td></td><td></td></tr> <tr><td>Highly Contaminated?</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></td><td></td><td></td><td></td></tr> <tr><td>Number of Containers</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></td><td></td><td></td><td></td></tr> </table>								ICP/MS Metals																							Mercury																								Hazardous?																								Highly Contaminated?																								Number of Containers																							
ICP/MS Metals																																																																																																																																			
Mercury																																																																																																																																			
Hazardous?																																																																																																																																			
Highly Contaminated?																																																																																																																																			
Number of Containers																																																																																																																																			
Contact:		Job #: WX18410.075																																																																																																																																	
Address:		PO/AFE: WX18410.075																																																																																																																																	
Sample:		Legal Site Description: T-33																																																																																																																																	
Phone: Fax:		Quote #: Amec Foster Whe																																																																																																																																	
Lab Work Order # (lab use only)		ALS		Sampler		Client																																																																																																																													
		Judy		(Initials):																																																																																																																															
		Contact:																																																																																																																																	
Sample #	Sample Identification (This description will appear on the report)	Date dd-mmm-yy	Time hh:mm	Sample Type (Select from drop-down list)	ICP/MS Metals	Mercury																																																																																																																													
	Sample 1 - red paint	05-Apr-18		Other	x	x																																																																																																																													
	Sample 3 - black paint	05-Apr-18		Other	x	x																																																																																																																													
	Sample 4 - white paint	06-Apr-18		Other	x	x																																																																																																																													
	Sample 5 - white paint	06-Apr-18		Other	x	x																																																																																																																													
	Sample 6 - white paint	06-Apr-18		Other	x	x																																																																																																																													
Guidelines / Regulations				Special Instructions / Hazardous Details																																																																																																																															
				PROCEED WITH SAMPLE VOLUME PROVIDED - ROBT																																																																																																																															
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 adjacent worksheet.																																																																																																																																			
Relinquished By:	<i>[Signature]</i>	Date & Time:	10-Apr-18	Received By:	<i>ADL</i>	Date & Time:	10/04/18 3:50	Sample Condition (lab use only)																																																																																																																											
Relinquished By:		Date & Time:		Received By:		Date & Time:		Temperature	Samples Received in Good Condition? Y / N (if no provided details)																																																																																																																										
								18.1																																																																																																																											

