



McC Campbell Analytical, Inc.

"When Quality Counts"

Analytical Report

WorkOrder: 1609B53

Report Created for: Patrick Roddie

1935 Franklin Street #603
San Francisco, CA 94109

Project Contact: Patrick Roddie

Project P.O.:

Project Name: Chiloquin Rain 9-22-16

Project Received: 09/26/2016

Analytical Report reviewed & approved for release on 10/03/2016 by:

Angela Rydelius,
Laboratory Manager

The report shall not be reproduced except in full, without the written approval of the laboratory. The analytical results relate only to the items tested. Results reported conform to the most current NELAP standards, where applicable, unless otherwise stated in the case narrative.





Glossary of Terms & Qualifier Definitions

Client: Patrick Roddie
Project: Chiloquin Rain 9-22-16
WorkOrder: 1609B53

Glossary Abbreviation

%D	Serial Dilution Percent Difference
95% Interval	95% Confident Interval
DF	Dilution Factor
DI WET	(DISTLC) Waste Extraction Test using DI water
DISS	Dissolved (direct analysis of 0.45 µm filtered and acidified water sample)
DLT	Dilution Test (Serial Dilution)
DUP	Duplicate
EDL	Estimated Detection Limit
ITEF	International Toxicity Equivalence Factor
LCS	Laboratory Control Sample
MB	Method Blank
MB % Rec	% Recovery of Surrogate in Method Blank, if applicable
MDL	Method Detection Limit
ML	Minimum Level of Quantitation
MS	Matrix Spike
MSD	Matrix Spike Duplicate
N/A	Not Applicable
ND	Not detected at or above the indicated MDL or RL
NR	Data Not Reported due to matrix interference or insufficient sample amount.
PDS	Post Digestion Spike
PDSD	Post Digestion Spike Duplicate
PF	Prep Factor
RD	Relative Difference
RL	Reporting Limit (The RL is the lowest calibration standard in a multipoint calibration.)
RPD	Relative Percent Deviation
RRT	Relative Retention Time
SPK Val	Spike Value
SPKRef Val	Spike Reference Value
SPLP	Synthetic Precipitation Leachate Procedure
ST	Sorbent Tube
TCLP	Toxicity Characteristic Leachate Procedure
TEQ	Toxicity Equivalents
WET (STLC)	Waste Extraction Test (Soluble Threshold Limit Concentration)



Glossary of Terms & Qualifier Definitions

Client: Patrick Roddie
Project: Chiloquin Rain 9-22-16
WorkOrder: 1609B53

Quality Control Qualifiers

F10 MS/MSD outside control limits. Physical or chemical interferences exist due to sample matrix.
F11 DLT outside control limits. Physical or chemical interferences exist due to sample matrix. Sample results may be estimates.
F13 Indigenous sample results too high for a representative matrix spike analysis.



Analytical Report

Client: Patrick Roddie
Date Received: 9/26/16 10:40
Date Prepared: 9/28/16
Project: Chiloquin Rain 9-22-16

WorkOrder: 1609B53
Extraction Method: E200.8
Analytical Method: E200.8
Unit: µg/L

Metals

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
Chiloquin, OR	1609B53-001A	Water	09/22/2016 10:00	ICP-MS2	127301

Analytes	Result	RL	DF	Date Analyzed
Aluminum	460	50	1	09/29/2016 17:49
Arsenic	1.4	0.50	1	09/29/2016 17:49
Barium	34	5.0	1	09/29/2016 17:49
Cadmium	ND	0.25	1	09/29/2016 17:49
Lead	5.8	0.50	1	09/29/2016 17:49
Lithium	ND	5.0	1	09/29/2016 17:49
Strontium	20	20	1	09/29/2016 17:49
Titanium	23	0.50	1	09/29/2016 17:49

Surrogates	REC (%)	Limits	Date Analyzed
Terbium	103	70-130	09/29/2016 17:49

Analyst(s): BBO



Quality Control Report

Client: Patrick Roddie
Date Prepared: 9/28/16
Date Analyzed: 9/29/16
Instrument: ICP-MS3
Matrix: Water
Project: Chiloquin Rain 9-22-16

WorkOrder: 1609B53
BatchID: 127301
Extraction Method: E200.8
Analytical Method: E200.8
Unit: µg/L
Sample ID: MB/LCS-127301
 1609C67-001DMS/MSD

QC Summary Report for Metals

Analyte	MB Result	LCS Result	RL	SPK Val	MB SS %REC	LCS %REC	LCS Limits
Aluminum	ND	500	50	500	-	100	85-115
Arsenic	ND	50.7	0.50	50	-	101	85-115
Barium	ND	514	5.0	500	-	103	85-115
Cadmium	ND	52.0	0.25	50	-	104	85-115
Lead	ND	49.0	0.50	50	-	98	85-115
Lithium	ND	50.4	5.0	50	-	101	85-115
Strontium	ND	498	20	500	-	100	85-115
Titanium	ND	50.2	0.50	50	-	100	85-115
Surrogate Recovery							
Terbium	745	757		750	99	101	70-130



Quality Control Report

Client: Patrick Roddie
Date Prepared: 9/28/16
Date Analyzed: 9/29/16
Instrument: ICP-MS3
Matrix: Water
Project: Chiloquin Rain 9-22-16

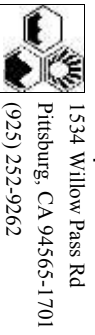
WorkOrder: 1609B53
BatchID: 127301
Extraction Method: E200.8
Analytical Method: E200.8
Unit: µg/L
Sample ID: MB/LCS-127301
1609C67-001DMS/MSD

QC Summary Report for Metals

Analyte	MS Result	MSD Result	SPK Val	SPKRef Val	MS %REC	MSD %REC	MS/MSD Limits	RPD	RPD Limit
Aluminum	3000	2900	500	2300	133,F13	114	75-125	3.19	20
Arsenic	55.2	52.8	50	ND	110	106	75-125	4.43	20
Barium	669	663	500	160	102	101	75-125	0.916	20
Cadmium	52.3	53.2	50	ND	105	106	75-125	1.65	20
Lead	51.7	51.9	50	ND	99	99	75-125	0	20
Lithium	60.8	59.7	50	ND	99	97	75-125	1.83	20
Strontium	1180	1150	500	650	107	102	75-125	2.15	20
Titanium	182	152	50	120	132,F10	71,F10	75-125	18.4	20
Surrogate Recovery									
Terbium	779	776	750		104	103	70-130	0.347	20

Analyte	DLT Result	DLTRef Val	%D	%D Limit
Aluminum	4510	2300	96.1,F11	20
Arsenic	ND<25	ND	-	-
Barium	ND<250	160	-	-
Cadmium	ND<12	ND	-	-
Lead	ND<25	ND	-	-
Lithium	ND<250	ND	-	-
Strontium	ND<1000	650	-	-
Titanium	93.8	120	21.8,F11	20

%D Control Limit applied to analytes with concentrations greater than 25 times the reporting limits.



1534 Willow Pass Rd
Pittsburg, CA 94565-1701
(925) 252-9262

CHAIN-OF-CUSTODY RECORD

Work Order: 1609B53

Client Code: PRSF

- WaterTrax
 WriteOn
 EDF
 Excel
 EQUIS
 Email
 HardCopy
 ThirdParty
 J-flag

Report to:

Patrick Roddle
Patrick Roddle
1935 Franklin Street #603
San Francisco, CA 94109
415 336-4728 FAX:

Email: patrick@webberry.com
co/3rd Party:
PO:

ProjectNo: Chiloquin Rain 9-22-16

Bill to:

Accounts Payable
Patrick Roddle
1935 Franklin Street #603
San Francisco, CA 94109

Requested TAT: 5 days;

Date Received: 09/26/2016

Date Logged: 09/26/2016

Lab ID	Client ID	Matrix	Collection Date	Hold	Requested Tests (See legend below)																			
					1	2	3	4	5	6	7	8	9	10	11	12								
1609B53-001	Chiloquin, OR	Water	9/22/2016 10:00	<input type="checkbox"/>	A																			

Test Legend:

1	METALSMS_TLCL_W	2		3		4	
5		6		7		8	
9		10		11		12	

Prepared by: Alexandra Iniguez

Comments: Credit card on file..ok to run automatically, please have accounting process payment prior to sending results.thks

NOTE: Soil samples are discarded 60 days after results are reported unless other arrangements are made (Water samples are 30 days). Hazardous samples will be returned to client or disposed of at client expense.



WORK ORDER SUMMARY

Client Name: PATRICK RODDIE Project: Chiloquin Rain 9-22-16 Work Order: 1609B53
 Client Contact: Patrick Roddie QC Level: LEVEL 2
 Contact's Email: patrick@webbery.com Date Logged: 9/26/2016

Comments: Credit card on file..ok to run automatically..please have accounting process payment prior to sending results.thks

- WaterTrax WriteOn EDF Excel Fax Email HardCopy ThirdParty J-flag

Lab ID	Client ID	Matrix	Test Name	Containers /Composites	Bottle & Preservative	De-chlorinated	Collection Date & Time	TAT	Sediment Content	Hold SubOut
1609B53-001A	Chiloquin, OR	Water	E200.8 (Metals) <Aluminum, Arsenic, Barium, Cadmium, Lead, Lithium, Strontium, Thallium>	1	8OZ Mason Jar	<input type="checkbox"/>	9/22/2016 10:00	5 days	Present	<input type="checkbox"/>

NOTES: - STLC and TCLP extractions require 2 days to complete; therefore, all TATs begin after the extraction is completed (i.e., One-day TAT yields results in 3 days from sample submission).

- MAL assumes that all material present in the provided sampling container is considered part of the sample - MAL does not exclude any material from the sample prior to sample preparation unless requested in writing by the client.



MCCAMPBELL ANALYTICAL, INC.

1534 Willow Pass Rd. Pittsburg, Ca. 94565-1701
Telephone: (877) 252-9262 / Fax: (925) 252-9269
www.mccampbell.com main@mccampbell.com

CHAIN OF CUSTODY RECORD

Turn Around Time: 1 Day Rush	<input type="checkbox"/>	2 Day Rush	<input type="checkbox"/>	3 Day Rush	<input type="checkbox"/>	STD	<input checked="" type="checkbox"/>	Quote #	
J-Flag / MDL	<input type="checkbox"/>	ESL	<input type="checkbox"/>	Cleanup Approved	<input type="checkbox"/>	Bottle Order #			
Delivery Format: GeoTracker EDF	<input type="checkbox"/>	PDF	<input checked="" type="checkbox"/>	EDD	<input type="checkbox"/>	Write On (DW)		EQUIS	
	Analysis Requested								

Report To: PATRICK RODDIE Bill To: PATRICK RODDIE
Company:

Email: PATRICK@WEBBER-10M Tele: 415 336 4728
Alt Email:

Project Name/#: CHILOQUIN PAN 9-22-16 PO #
Project Location: CHILOQUIN OR

Sampler Signature: [Signature]

SAMPLE ID Location / Field Point	Sampling		#Containers	Matrix	Preservative	Analysis Requested				STD	<input checked="" type="checkbox"/>	Quote #	Bottle Order #	EQUIS	
	Date	Time				AC	BA	SR	TI						PB
<u>CHILOQUIN, OR</u>	<u>9/23/16</u>	<u>10AM</u>	<u>1</u>	<u>0</u>	<u>7</u>	<u>✓</u>	<u>✓</u>	<u>✓</u>	<u>✓</u>	<u>✓</u>	<u>✓</u>	<u>✓</u>	<u>✓</u>	<u>✓</u>	

* If metals are requested for water samples and the water type (Matrix) is not specified on the chain of custody, MAI will default to metals by E200.8.

Please provide an adequate volume of sample. If the volume is not sufficient for a MS/MSD a LCS/LCSD will be prepared in its place and noted in the report.

Relinquished By / Company Name	Date	Time	Received By / Company Name	Date	Time	Comments / Instructions
<u>PATRICK RODDIE</u>	<u>9/23/16</u>	<u>2pm</u>	<u>[Signature]</u>	<u>9/23/16</u>	<u>2pm</u>	
<u>[Signature]</u>	<u>9/23/16</u>	<u>10:40</u>				

Matrix Code: DW=Drinking Water, GW=Ground Water, WW=Waste Water, SW=Seawater, S=Soil, SL=Sludge, A=Air, WP=Wipe, O=Other
Preservative Code: 1=4°C 2=HCl 3=H₂SO₄ 4=HNO₃ 5=NaOH 6=ZnOAc/NaOH 7=None



Sample Receipt Checklist

Client Name: **Patrick Roddie**
 Project Name: **Chiloquin Rain 9-22-16**

Date and Time Received: **9/26/2016 10:40**
 Date Logged: **9/26/2016**
 Received by: **Alexandra Iniguez**
 Logged by: **Alexandra Iniguez**

WorkOrder No: **1609B53** Matrix: Water
 Carrier: USPS

Chain of Custody (COC) Information

Chain of custody present? Yes No
 Chain of custody signed when relinquished and received? Yes No
 Chain of custody agrees with sample labels? Yes No
 Sample IDs noted by Client on COC? Yes No
 Date and Time of collection noted by Client on COC? Yes No
 Sampler's name noted on COC? Yes No

Sample Receipt Information

Custody seals intact on shipping container/cooler? Yes No NA
 Shipping container/cooler in good condition? Yes No
 Samples in proper containers/bottles? Yes No
 Sample containers intact? Yes No
 Sufficient sample volume for indicated test? Yes No

Sample Preservation and Hold Time (HT) Information

All samples received within holding time? Yes No
 Sample/Temp Blank temperature Temp: NA
 Water - VOA vials have zero headspace / no bubbles? Yes No NA
 Sample labels checked for correct preservation? Yes No
 pH acceptable upon receipt (Metal: <2; 522: <4; 218.7: >8)? Yes No NA
 Samples Received on Ice? Yes No

UCMR3 Samples:

Total Chlorine tested and acceptable upon receipt for EPA 522? Yes No NA
 Free Chlorine tested and acceptable upon receipt for EPA 218.7, 300.1, 537, 539? Yes No NA

Comments: pH adjusted in Lab.