

APPENDICES

GROUNDWATER HYDROLOGY AND WATER QUALITY ANALYSIS REPORT FOR THE IDAHO-MARYLAND MINE PROJECT NEVADA COUNTY, CALIFORNIA

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Appendix A – Analytical Model Output

August 2019 Beaver Dr Area - Most Vulnerable Well Assessment

Beaver Area most vulnerable well - when mine workings dewatered

r (FT)	r ² (FT ²)	t (D)	S	T1 (FT ² /D)	u	W(u)	Qw (FT ³ /D))	s (FT)	Qw (GPM)
10	100	3650	0.01	15	4.57E-06	11.71962	164	10.197	0.85
100	10000	3650	0.01	15	0.000457	7.114898	164	6.190	0.85
500	250000	3650	0.01	15	0.011416	3.906948	164	3.399	0.85
1000	1000000	3650	0.01	15	0.045662	2.554417	164	2.222	0.85
1160	1345600	3650	0.01	15	0.061443	2.272943	164	1.978	0.85
1750	3062500	3650	0.01	15	0.13984	1.525139	164	1.327	0.85

r (FT)	r ² (FT ²)	t (D)	S	T2 (FT ² /D)	u	W(u)	Qw (FT ³ /D))	s (FT)	Qw (GPM)
10	100	3650	0.01	0.7	9.78E-05	8.654984	130	127.909	0.68
100	10000	3650	0.01	0.7	0.009785	4.059477	130	59.994	0.68
500	250000	3650	0.01	0.7	0.244618	1.061276	130	15.684	0.68
1000	1000000	3650	0.01	0.7	0.978474	0.227477	130	3.362	0.68
1160	1345600	3650	0.01	0.7	1.316634	0.132029	130	1.951	0.68
1750	3062500	3650	0.01	0.7	2.996575	0.036736	130	0.543	0.68

Ratio (118/147)= 0.792683

Equivalent pumping rate (147*0.6)= 99

Effective shallow pumping rate ratio:

0.603659

(effective rate defined by the incremental additional fraction of flow that comes from above the mine tunnel due to depth variation in T)

r (FT)	r ² (FT ²)	10 years (D)	S	T1 (FT ² /D)	u	W(u)	Qw - Adj (FT ³ /D))	s (FT)	Qw - Adj (GPM)
10	100	9125	0.01	15	1.83E-06	12.6359	112	7.508	0.58
100	10000	9125	0.01	15	0.000183	8.030915	112	4.772	0.58
500	250000	9125	0.01	15	0.004566	4.816417	112	2.862	0.58
1000	1000000	9125	0.01	15	0.018265	3.443743	112	2.046	0.58
1160	1345600	9125	0.01	15	0.024577	3.153149	112	1.874	0.58
1750	3062500	9125	0.01	15	0.055936	2.361493	112	1.403	0.58

r (FT)	r ² (FT ²)	1 year (D)	S	T1 (FT ² /D)	u	W(u)	Qw - Adj (FT ³ /D))	s (FT)	Qw - Adj (GPM)
10	100	365	0.01	15	4.57E-05	9.417072	112	5.595	0.58
100	10000	365	0.01	15	0.004566	4.816417	112	2.862	0.58
500	250000	365	0.01	15	0.114155	1.703958	112	1.012	0.58
1000	1000000	365	0.01	15	0.456621	0.616049	112	0.366	0.58
1160	1345600	365	0.01	15	0.614429	0.441431	112	0.262	0.58
1750	3062500	365	0.01	15	1.398402	0.116532	112	0.069	0.58

Most vulnerable Well W-31

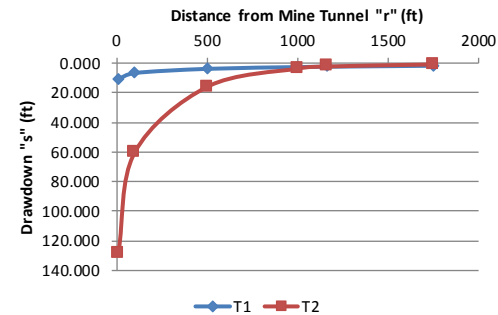
Depth: 295 ft bgs Mine Depth 1456 ft bgs Distance (mine to well bottom) 1160 ft

T1 = 15 ft²/d T2 = 0.7 ft²/d

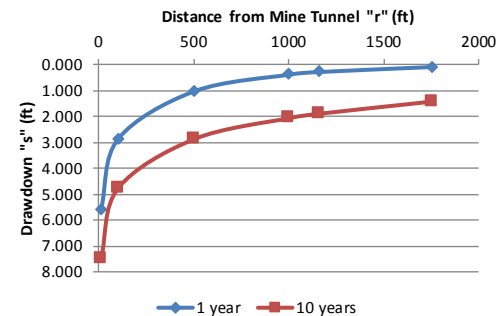
1% of mine workings and 10% of total water due to depth and T reduction (Fig 3.10).

Thus, only 0.001 fraction of total 750 gpm pumping rate = 0.75 gpm (147 ft²/d)

Beaver Area Most Vulnerable Well



Beaver Area Most Vulnerable Well



August 2019 Greenhorn Area - Most Vulnerable Well Assessment

Most vulnerable Well W-45

Depth: 140 ft bgs Mine Depth 1184 ft bg Distance (mine to well bottom) 1042 ft

T1 = 153 ft²/d T2 = 0.7 ft²/d

1% of mine workings and 10% of total water due to depth and T reduction (Fig 3.10).

Thus, only 0.001 fraction of total 750 gpm pumping rate = 0.75 gpm (147 ft²/d)

Brunswick Area Wells - when mine workings dewatered

r	r ²	t	S	T1	u	W(u)	Qw	s	Qw
(FT)	(FT ²)	(D)		(FT ² /D)			(FT ³ /D))	(FT)	(GPM)
10	100	3650	0.01	153	4.48E-07	14.042	164	1.198	0.85
100	10000	3650	0.01	153	4.48E-05	9.436874	164	0.805	0.85
500	250000	3650	0.01	153	0.001119	6.219072	164	0.530	0.85
1000	1000000	3650	0.01	153	0.004477	4.83613	164	0.413	0.85
1042	1085764	3650	0.01	153	0.004861	4.754229	164	0.406	0.85
1750	3062500	3650	0.01	153	0.01371	3.72609	164	0.318	0.85

r	r ²	t	S	T2	u	W(u)	Qw	s	Qw
(FT)	(FT ²)	(D)		(FT ² /D)			(FT ³ /D))	(FT)	(GPM)
10	100	3650	0.01	0.7	9.78E-05	8.654984	18	17.711	0.09
100	10000	3650	0.01	0.7	0.009785	4.059477	18	8.307	0.09
500	250000	3650	0.01	0.7	0.244618	1.061276	18	2.172	0.09
1000	1000000	3650	0.01	0.7	0.978474	0.227477	18	0.465	0.09
1042	1085764	3650	0.01	0.7	1.062391	0.197793	18	0.405	0.09
1750	3062500	3650	0.01	0.7	2.996575	0.036736	18	0.075	0.09

Ratio (16/147)= 0.109756

Effective shallow pumping rate ratio: 0.945122

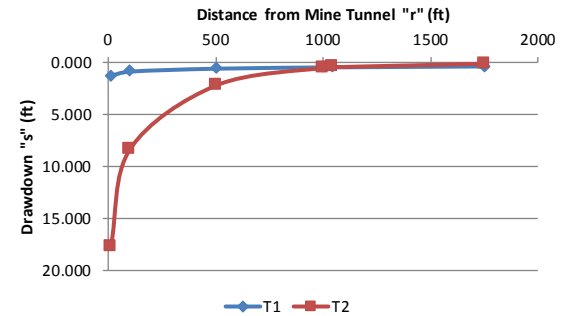
Equivalent pumping rate (147*0.95)= 155

(effective rate defined by the incremental additional fraction of flow that comes from above the mine tunnel due to depth variation in T)

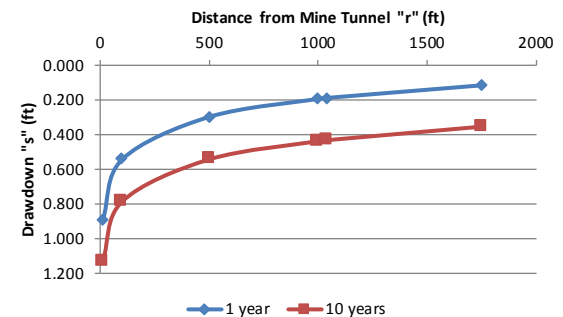
r	r ²	10 years	S	T1	u	W(u)	Qw	s	Qw
(FT)	(FT ²)	(D)		(FT ² /D)			(FT ³ /D))	(FT)	(GPM)
10	100	9125	0.01	153	1.79E-07	14.95829	146	1.136	0.76
100	10000	9125	0.01	153	1.79E-05	10.35314	146	0.786	0.76
500	250000	9125	0.01	153	0.000448	7.134691	146	0.542	0.76
1000	1000000	9125	0.01	153	0.001791	5.749739	146	0.437	0.76
1042	1085764	9125	0.01	153	0.001944	5.667609	146	0.430	0.76
1750	3062500	9125	0.01	153	0.005484	4.634194	146	0.352	0.76

r	r ²	1 year	S	T1	u	W(u)	Qw	s	Qw
(FT)	(FT ²)	(D)		(FT ² /D)			(FT ³ /D))	(FT)	(GPM)
10	100	365	0.01	153	4.48E-06	11.73942	146	0.891	0.76
100	10000	365	0.01	153	0.000448	7.134691	146	0.542	0.76
500	250000	365	0.01	153	0.011192	3.926528	146	0.298	0.76
1000	1000000	365	0.01	153	0.044767	2.573344	146	0.195	0.76
1042	1085764	365	0.01	153	0.048606	2.494811	146	0.189	0.76
1750	3062500	365	0.01	153	0.137098	1.542381	146	0.117	0.76

Greenhorn Area Most Vulnerable Well



Greenhorn Area Most Vulnerable Well



August 2019 Mitchell Cross-Cut Area - Most Vulnerable Well Assessment

Mithcell Cross-Cut most vulnerable well - when mine workings dewatered

r (FT)	r ² (FT ²)	t (D)	S	T1 (FT ² /D)	u	W(u)	Qw (FT ³ /D))	s (FT)	Qw (GPM)
10	100	3650	0.01	153	4.48E-07	14.042	147	1.074	0.76
100	10000	3650	0.01	153	4.48E-05	9.436874	147	0.722	0.76
500	250000	3650	0.01	153	0.001119	6.219072	147	0.475	0.76
965	931225	3650	0.01	153	0.004169	4.907077	147	0.375	0.76
1000	1000000	3650	0.01	153	0.004477	4.83613	147	0.370	0.76
1750	3062500	3650	0.01	153	0.01371	3.72609	147	0.285	0.76

r (FT)	r ² (FT ²)	t (D)	S	T2 (FT ² /D)	u	W(u)	Qw (FT ³ /D))	s (FT)	Qw (GPM)
10	100	3650	0.01	0.7	9.78E-05	8.654984	14	13.775	0.07
100	10000	3650	0.01	0.7	0.009785	4.059477	14	6.461	0.07
500	250000	3650	0.01	0.7	0.244618	1.061276	14	1.689	0.07
965	931225	3650	0.01	0.7	0.911179	0.255193	14	0.406	0.07
1000	1000000	3650	0.01	0.7	0.978474	0.227477	14	0.362	0.07
1750	3062500	3650	0.01	0.7	2.996575	0.036736	14	0.058	0.07

Ratio (14/147)= 0.095238

Equivalent pumping rate (147*0.95)=

Effective shallow pumping rate ratio:

0.952381

(effective rate defined by the incremental additional fraction of flow that comes from above the mine tunnel due to depth variation in T)

r (FT)	r ² (FT ²)	10 years (D)	S	T1 (FT ² /D)	u	W(u)	Qw (FT ³ /D))	s (FT)	Qw (GPM)
10	100	3650	0.01	153	4.48E-07	14.042	140	1.022	0.73
100	10000	3650	0.01	153	4.48E-05	9.436874	140	0.687	0.73
500	250000	3650	0.01	153	0.001119	6.219072	140	0.453	0.73
965	931225	3650	0.01	153	0.004169	4.907077	140	0.357	0.73
1000	1000000	3650	0.01	153	0.004477	4.83613	140	0.352	0.73
1750	3062500	3650	0.01	153	0.01371	3.72609	140	0.271	0.73

r (FT)	r ² (FT ²)	1 year (D)	S	T1 (FT ² /D)	u	W(u)	Qw (FT ³ /D))	s (FT)	Qw (GPM)
10	100	365	0.01	153	4.48E-06	11.73942	140	0.855	0.73
100	10000	365	0.01	153	0.000448	7.134691	140	0.520	0.73
500	250000	365	0.01	153	0.011192	3.926528	140	0.286	0.73
965	931225	365	0.01	153	0.041688	2.641585	140	0.192	0.73
1000	1000000	365	0.01	153	0.044767	2.573344	140	0.187	0.73
1750	3062500	365	0.01	153	0.137098	1.542381	140	0.112	0.73

Most vulnerable We W-20

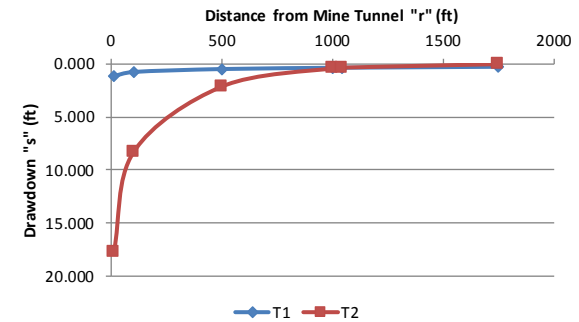
Depth: 100 Mine Depth 1028 Distance (mine to well bottom) 965

T1 = 153 ft²/d T2 = 0.7 ft²/d

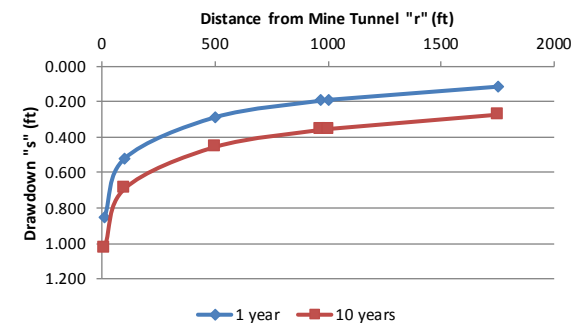
1% of mine workings and 10% of total water due to depth and T reduction (Fig 3.10).

Thus, only 0.001 fraction of total 750 gpm pumping rate = 0.75 gpm (147 ft²/d)

Mitchell Cross-Cut Area Most Vulnerable Well

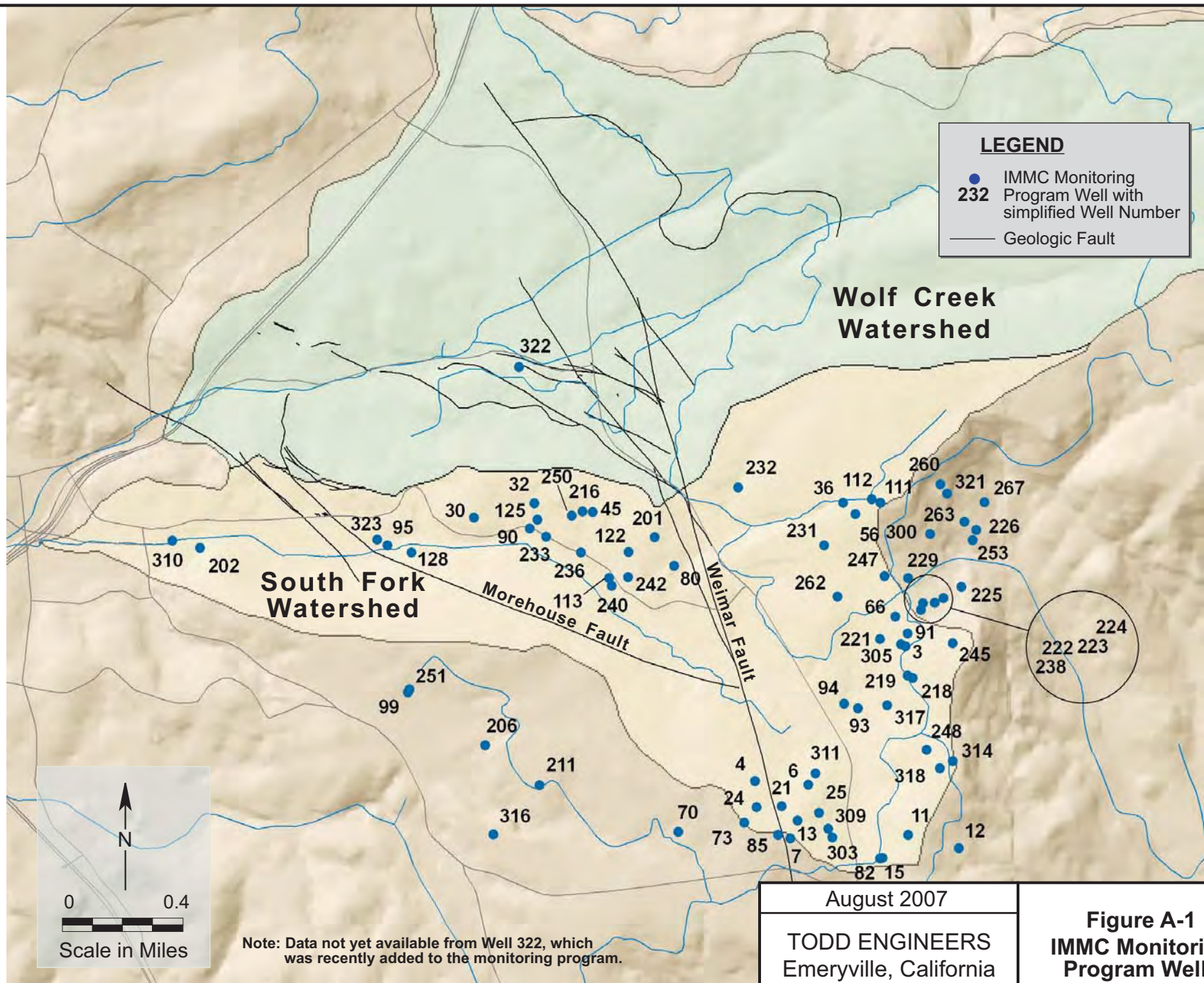


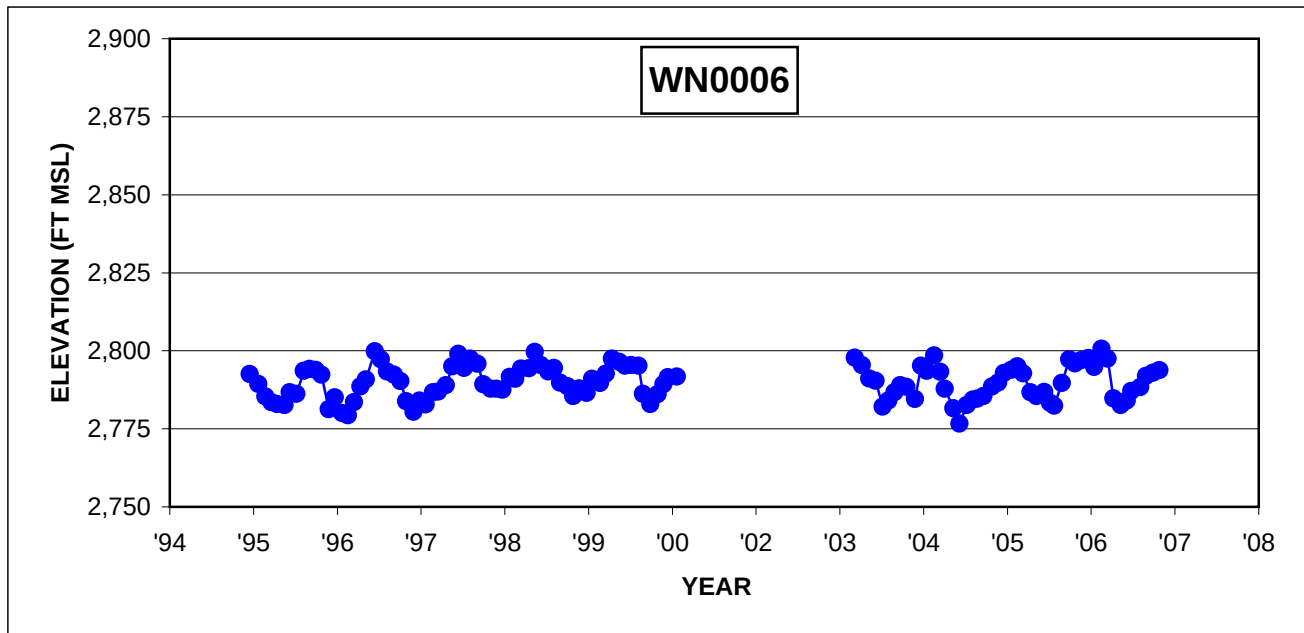
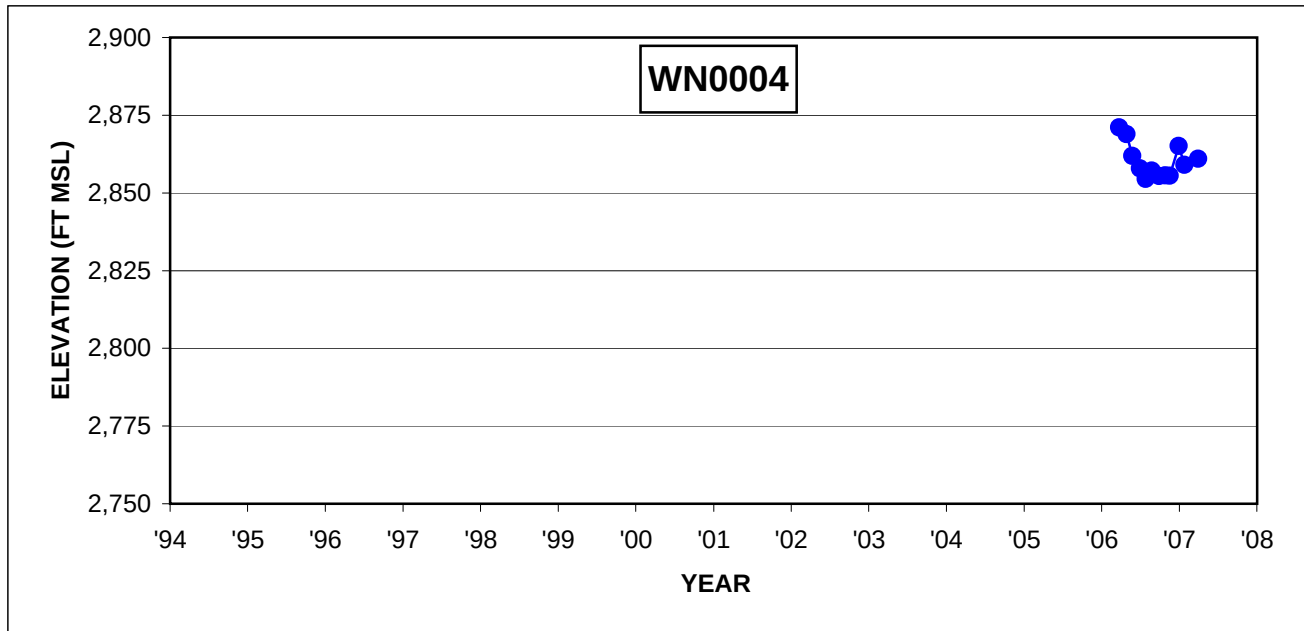
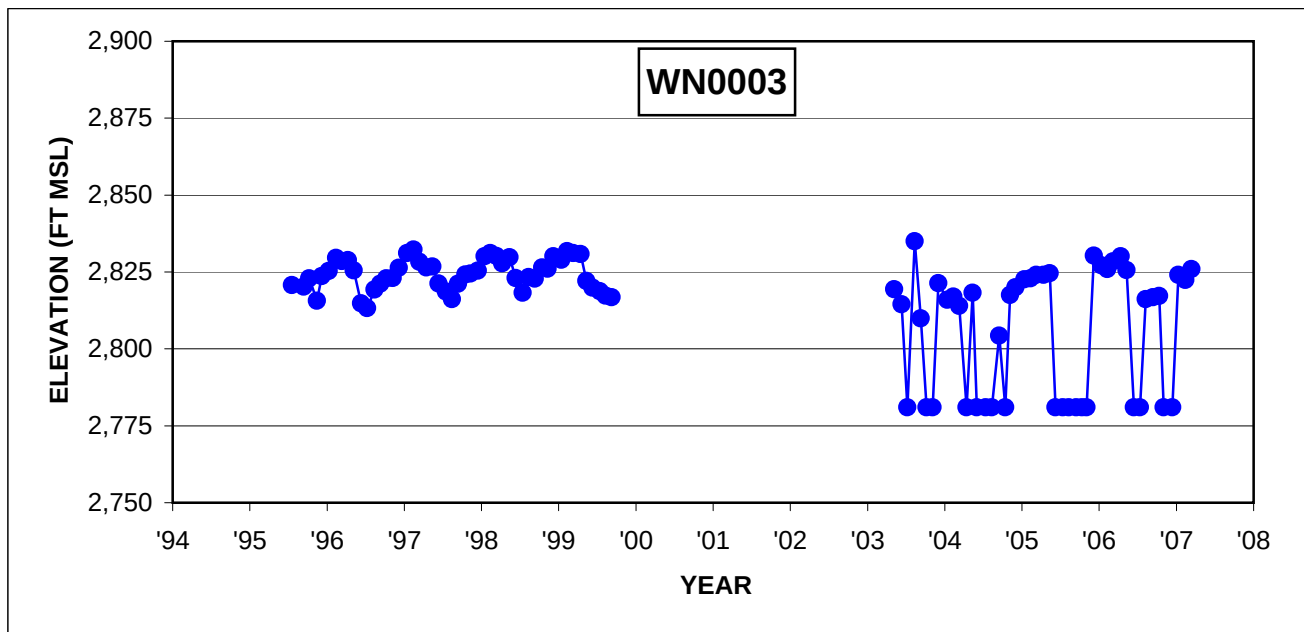
Mitchell Cross-Cut Area Most Vulnerable Well

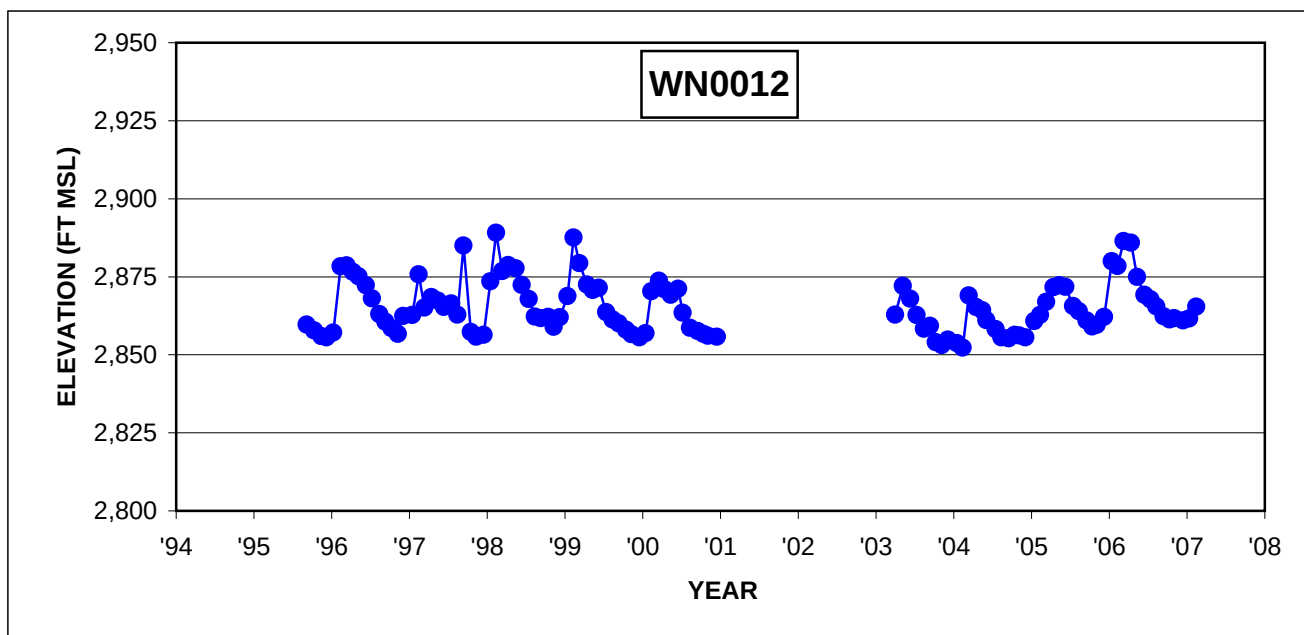
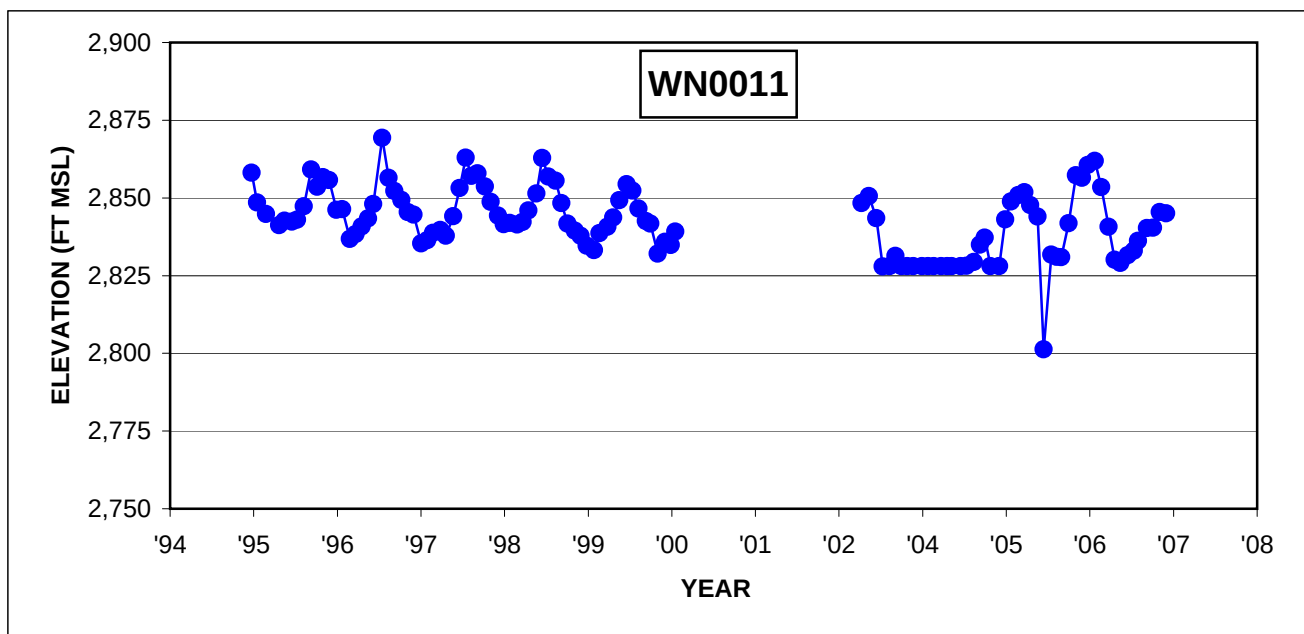
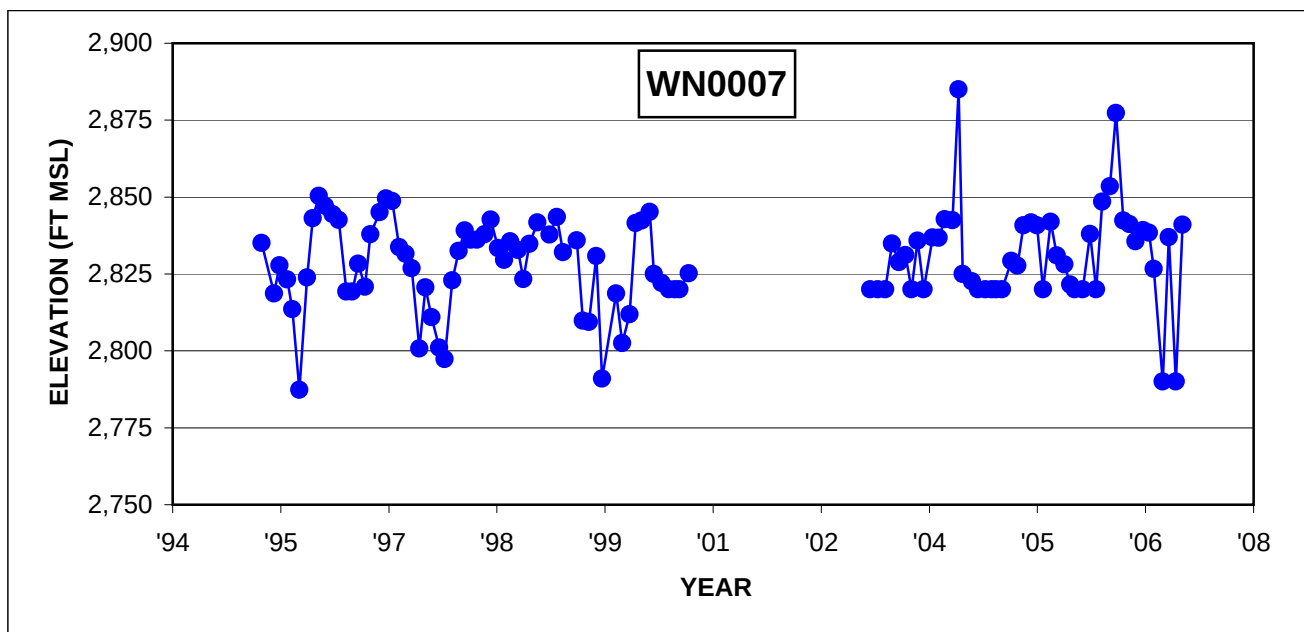


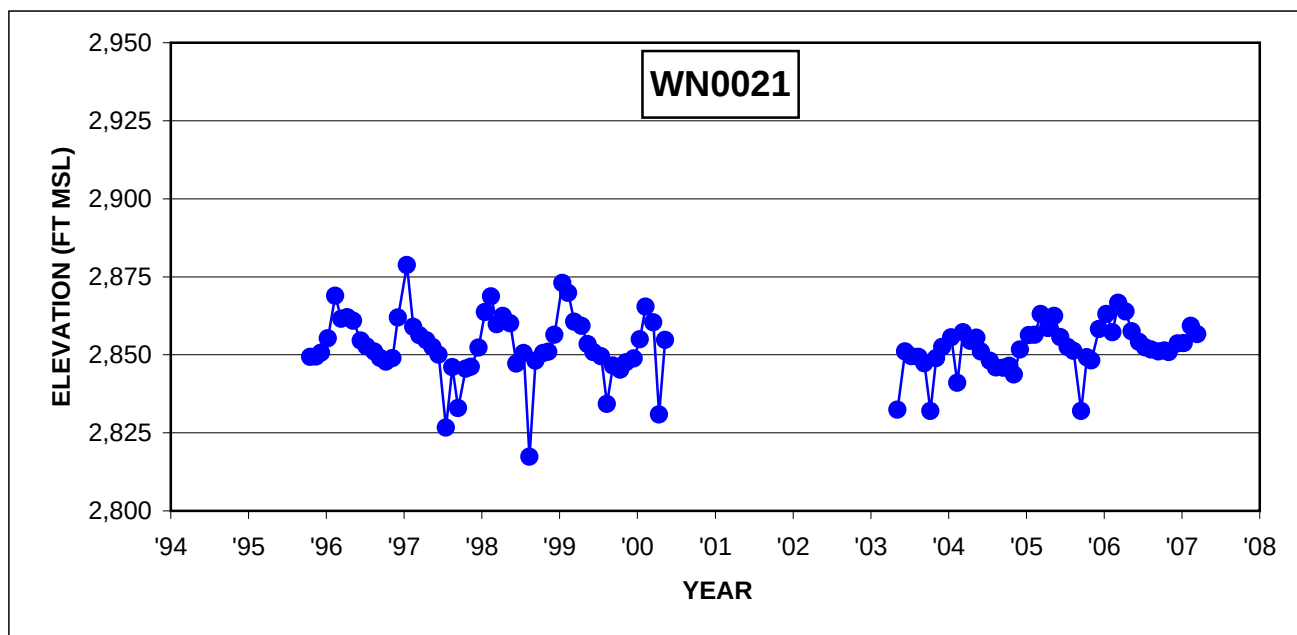
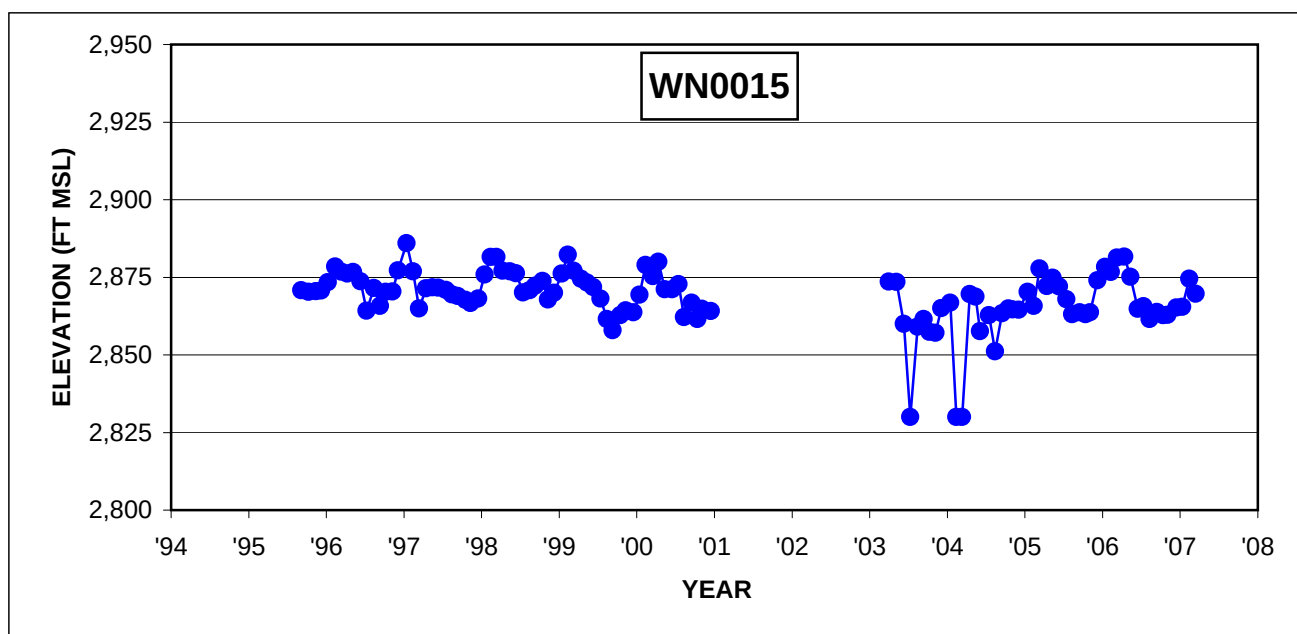
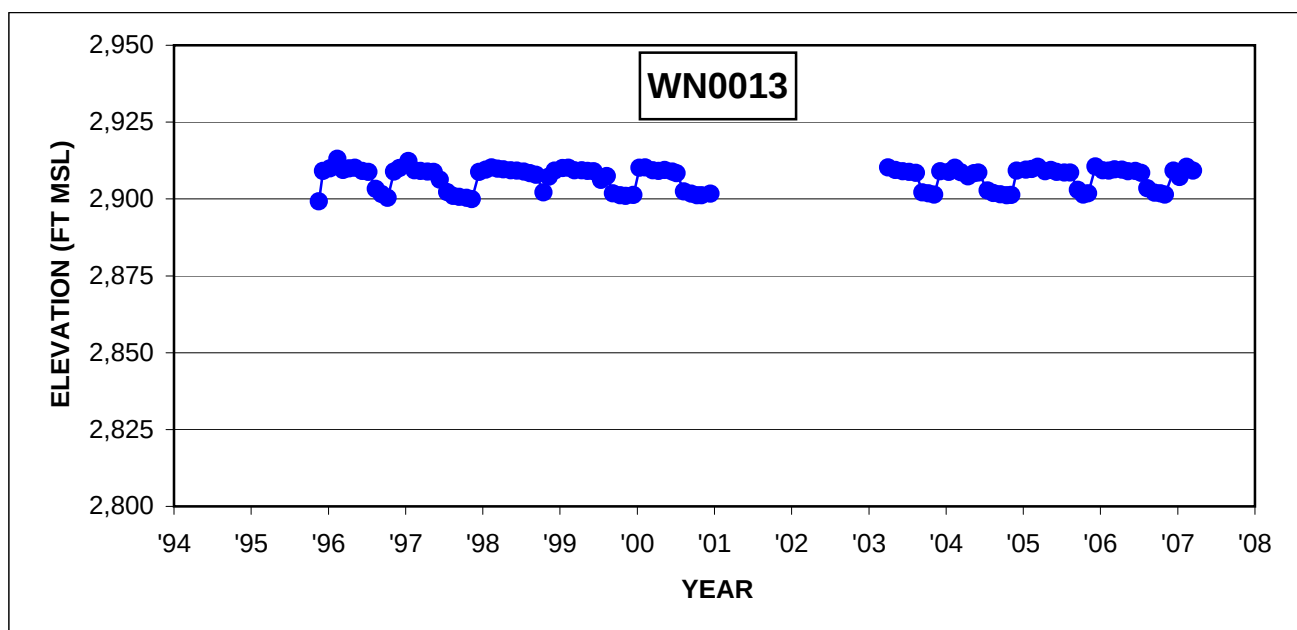
Appendix B – Idaho-Maryland Mining Corporation (IMMC) Hydrographs

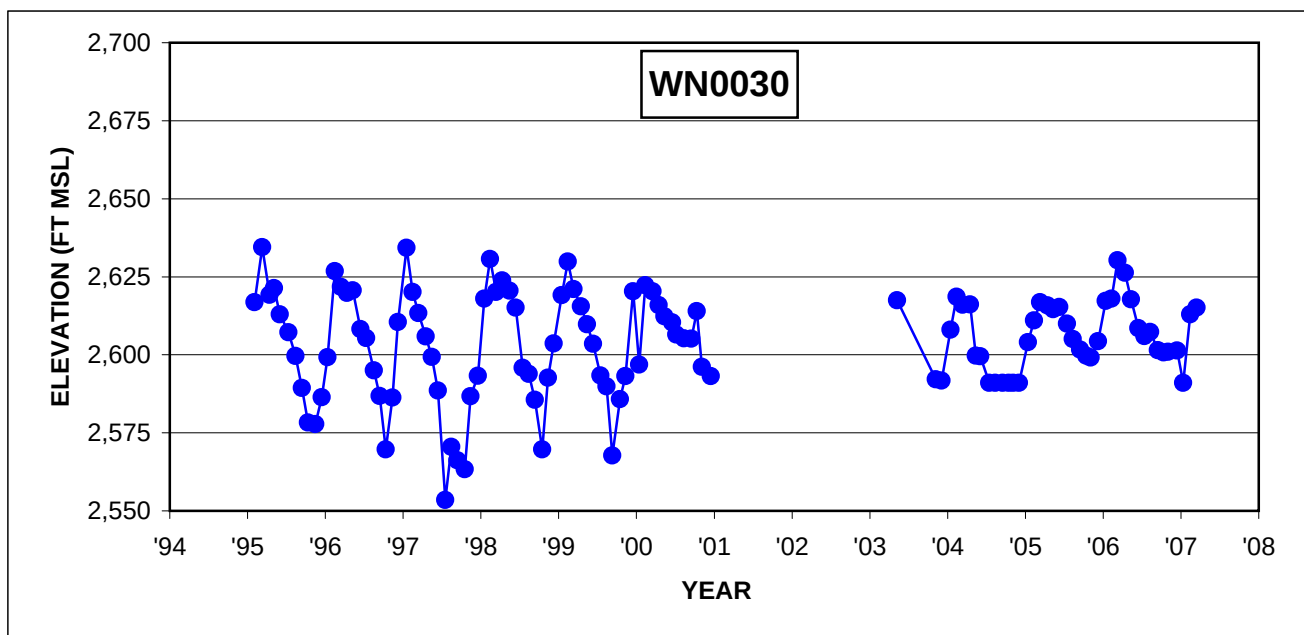
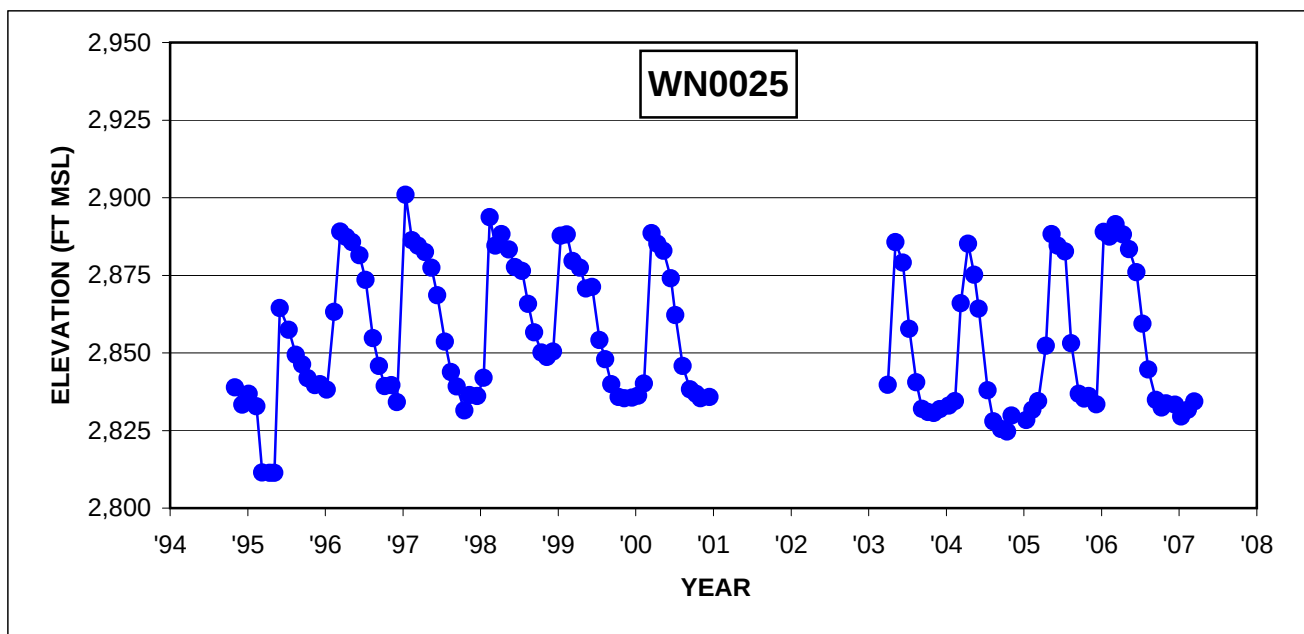
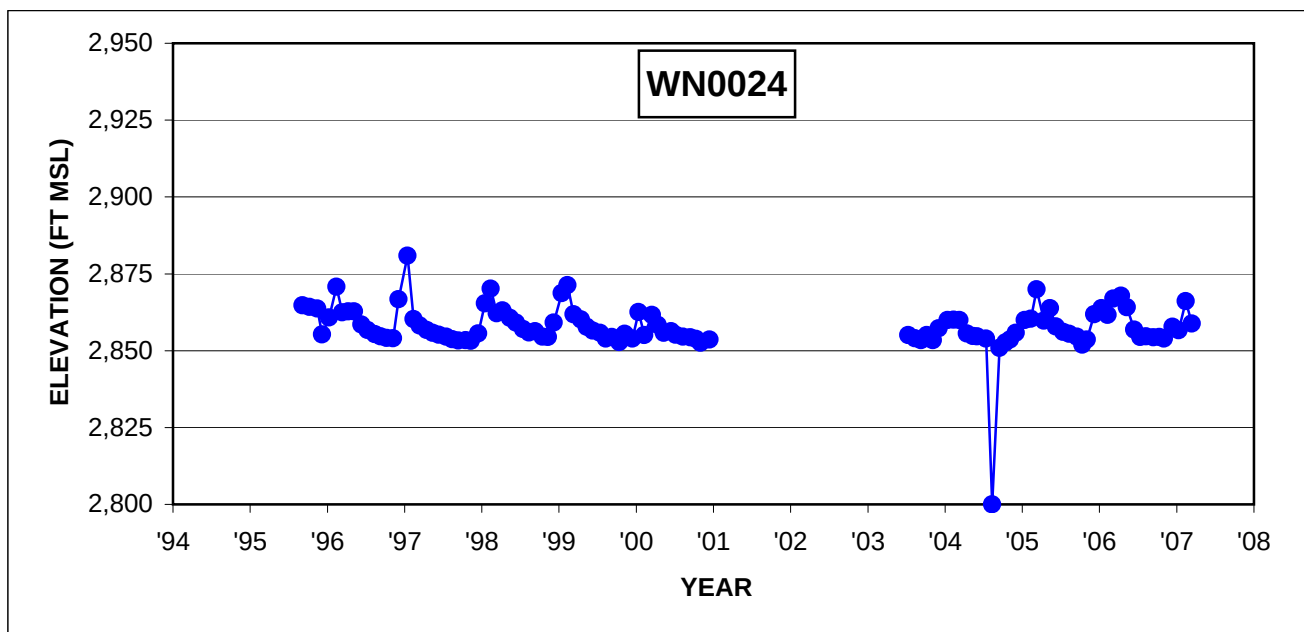
Source: Todd Engineers. August 2007. Hydrogeologic Assessment Idaho-Maryland Mine - Appendix A.

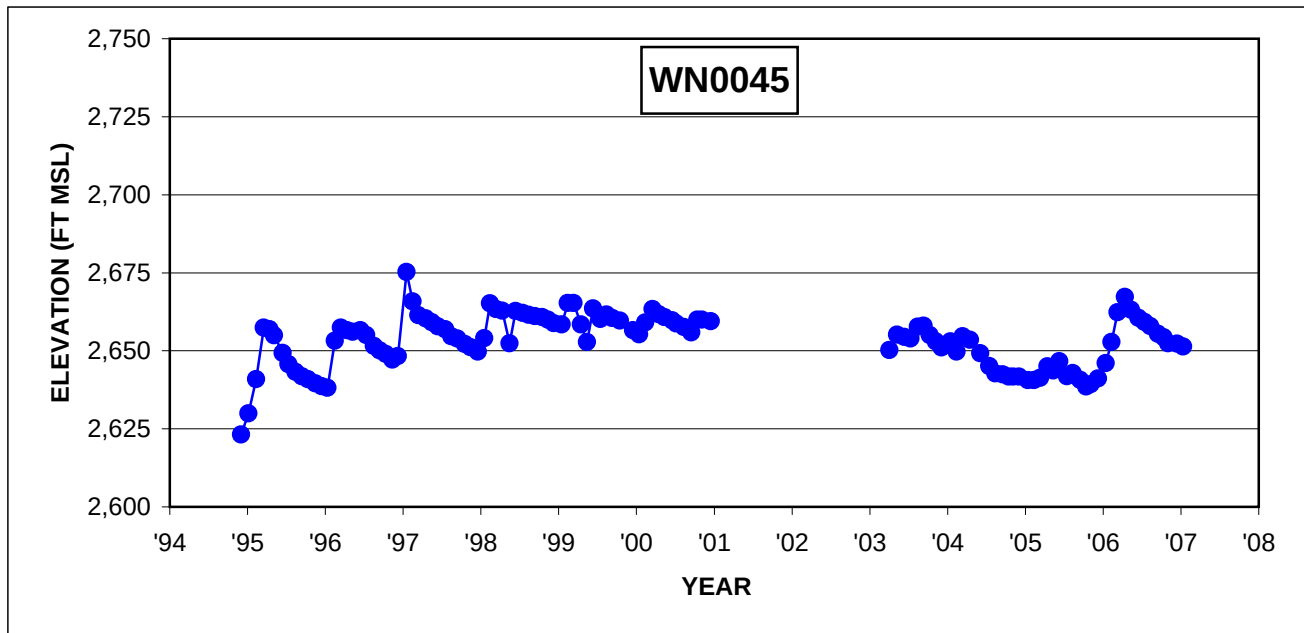
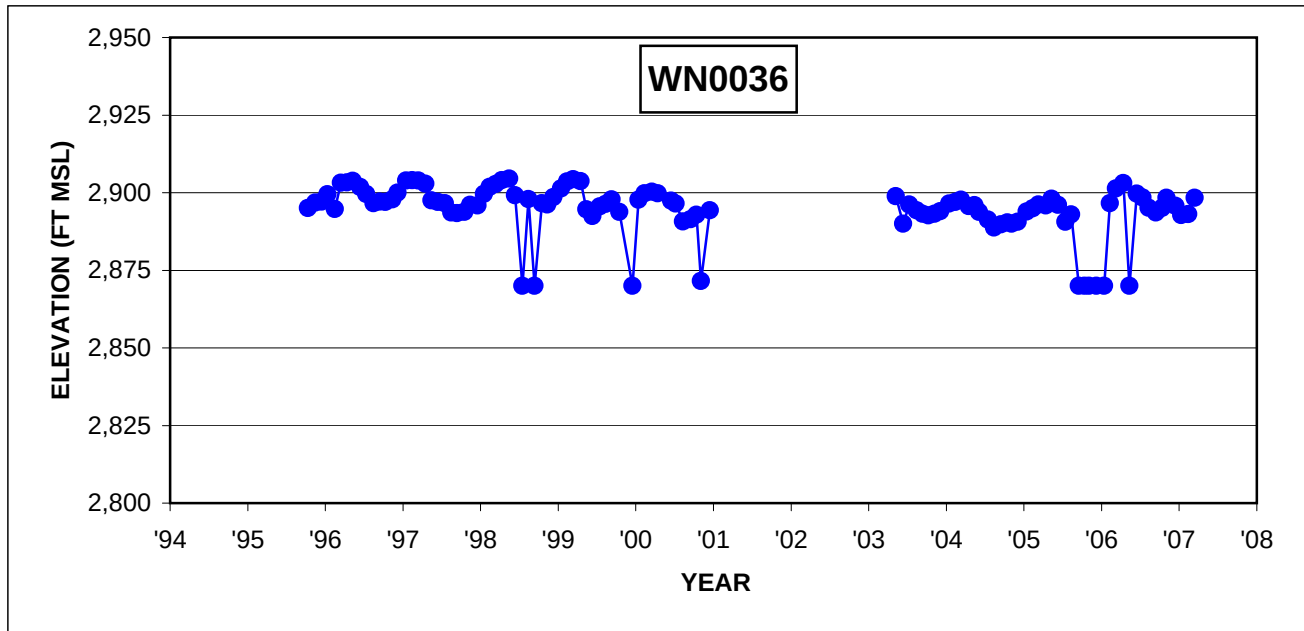
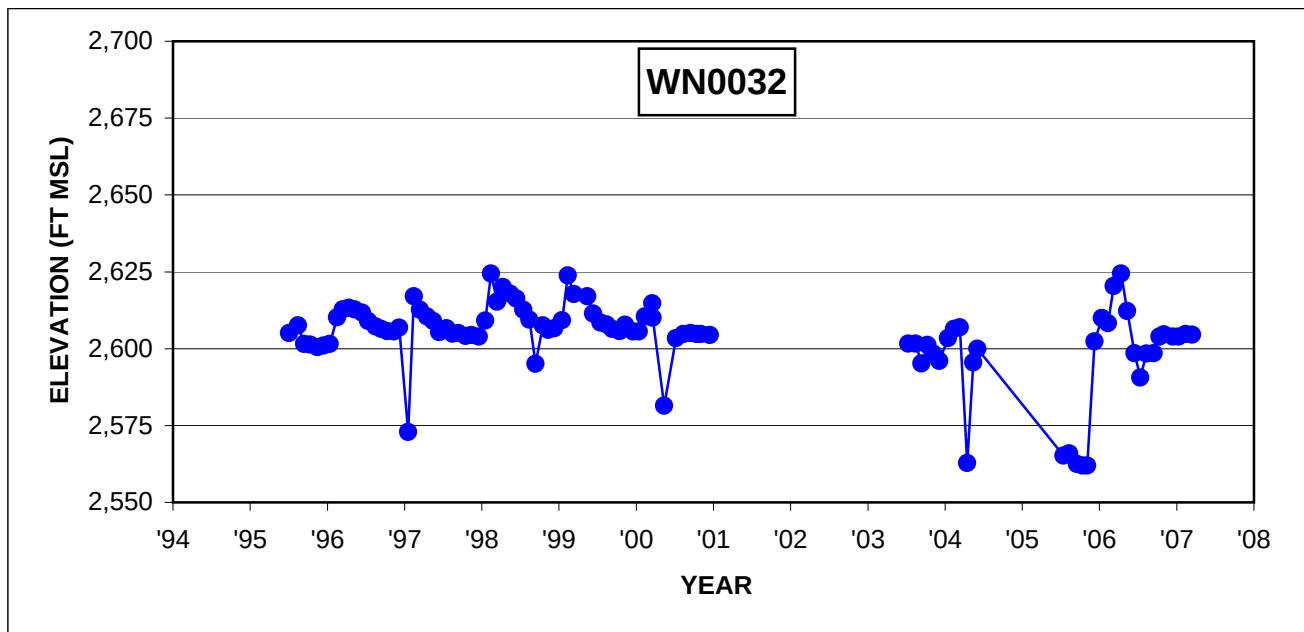


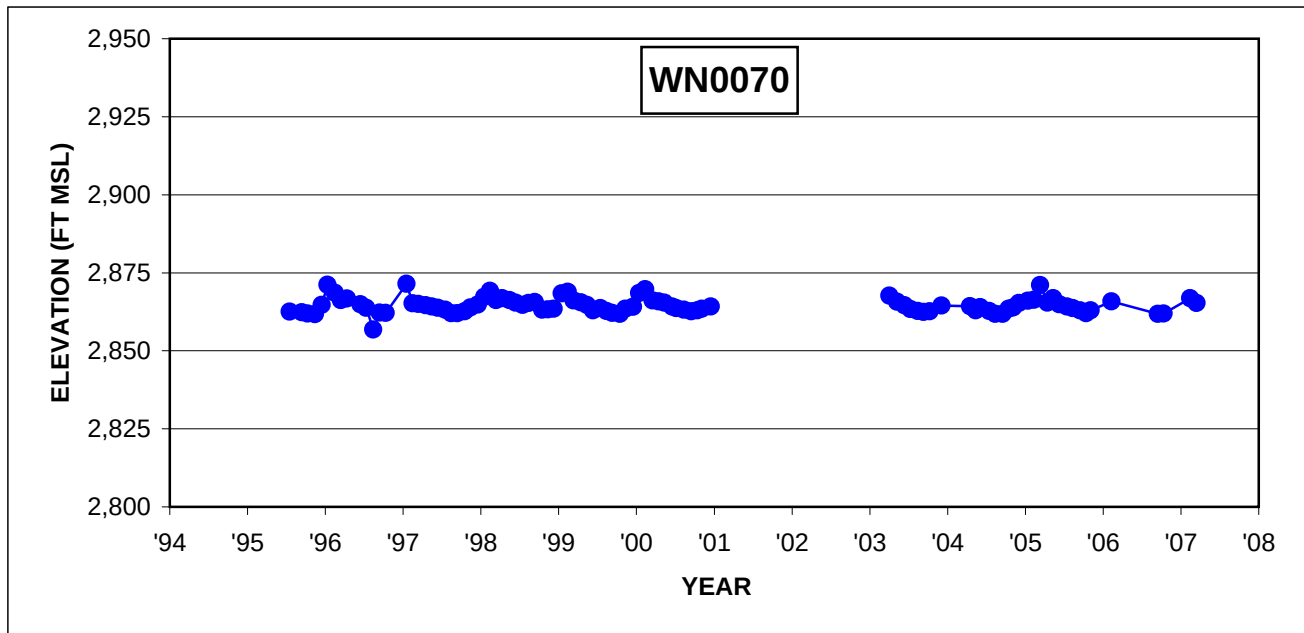
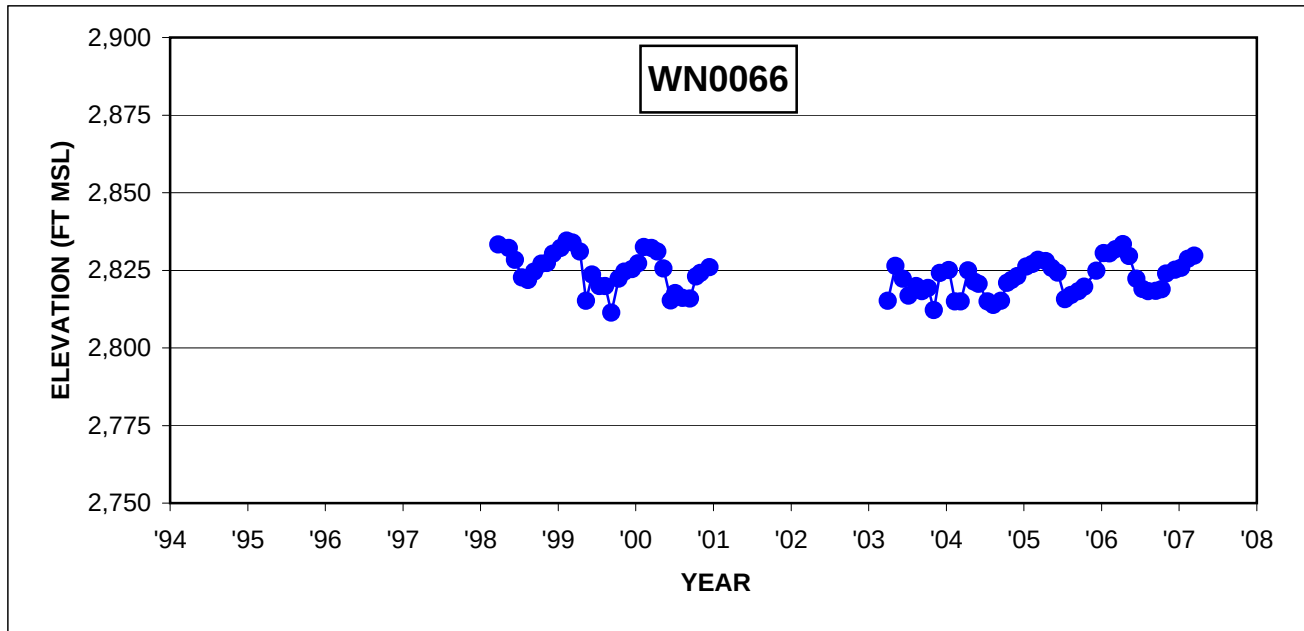
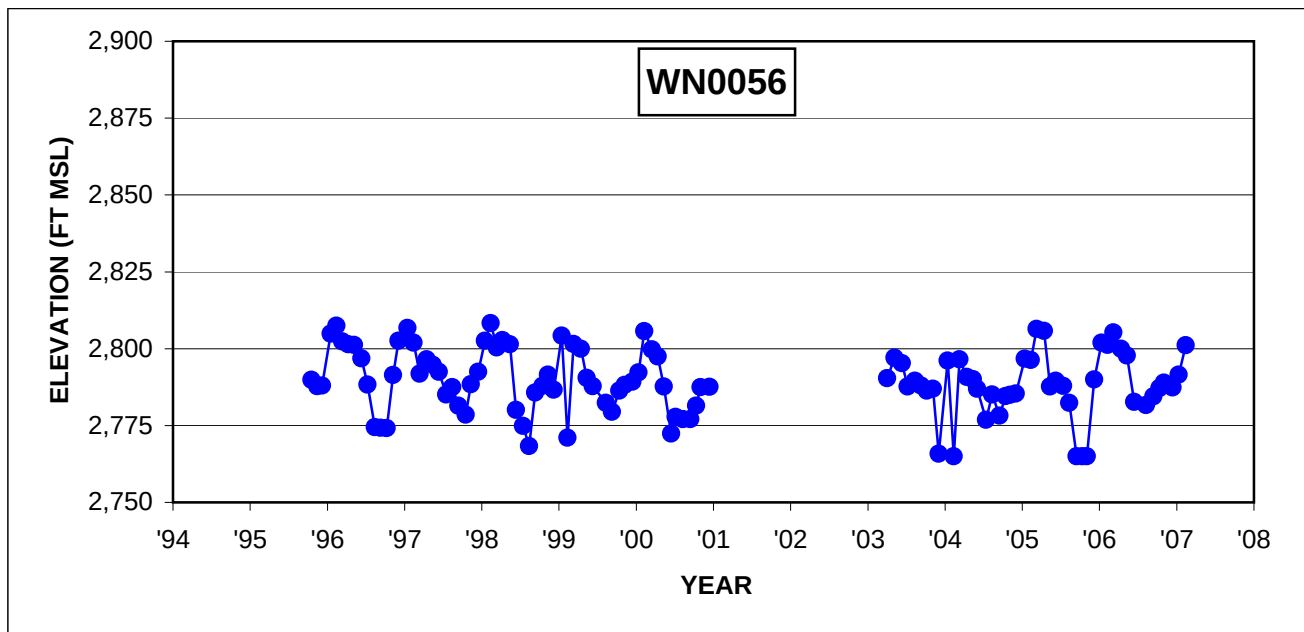


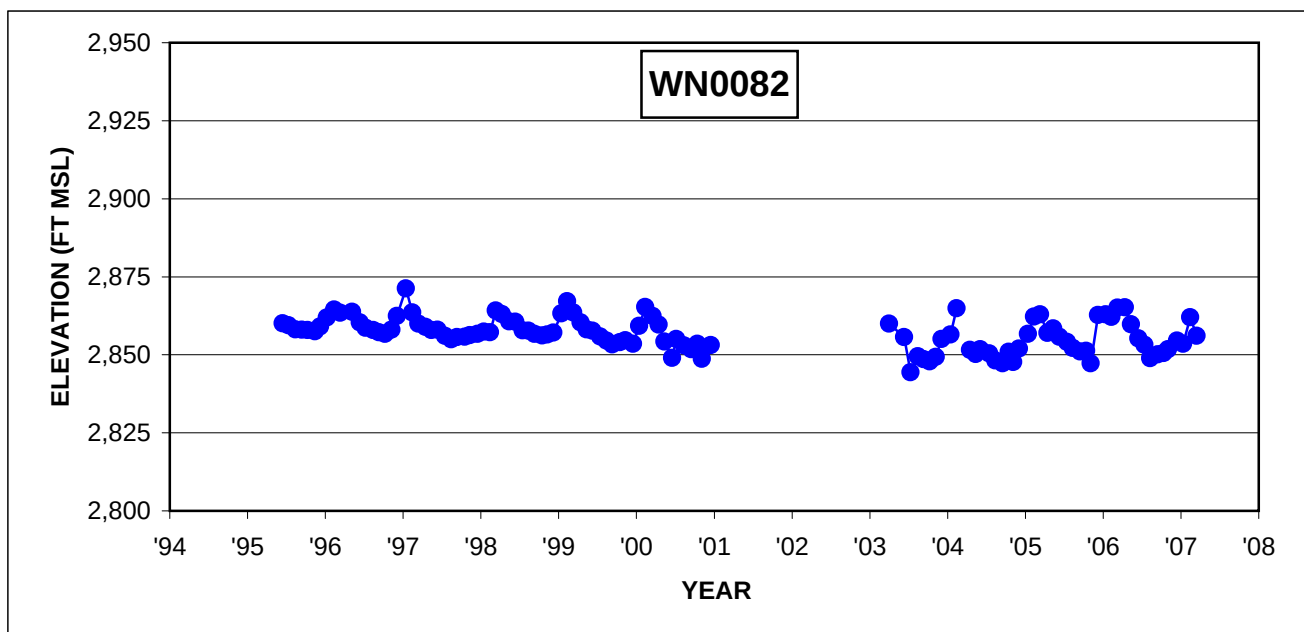
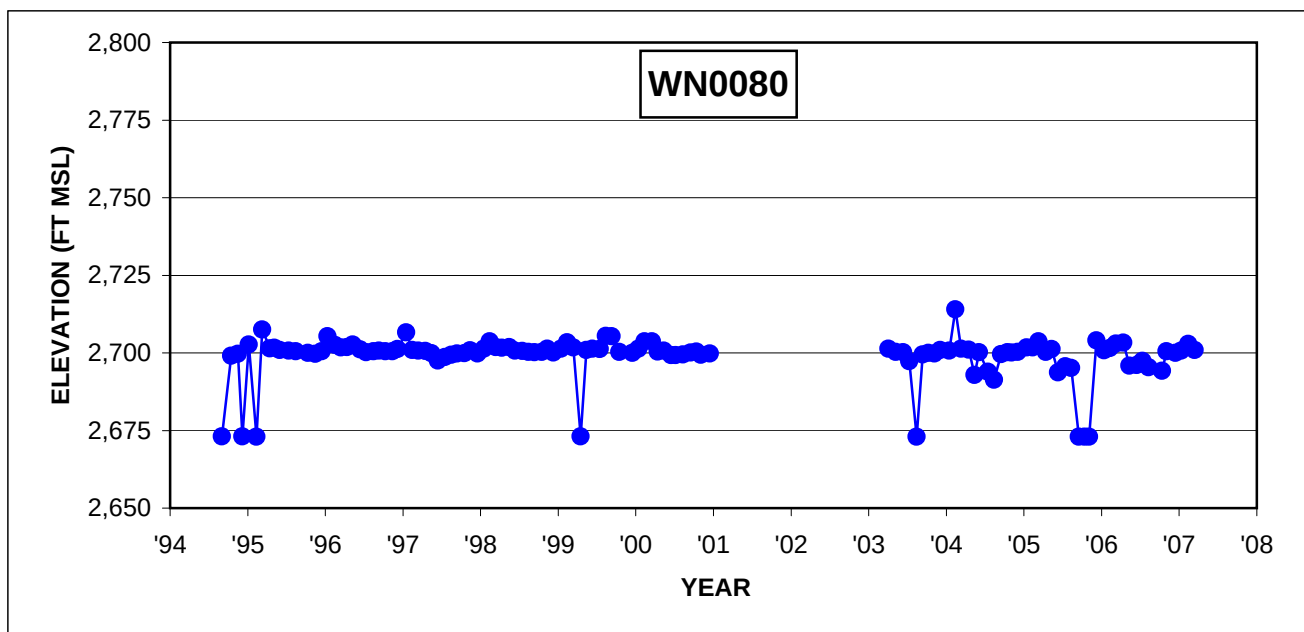
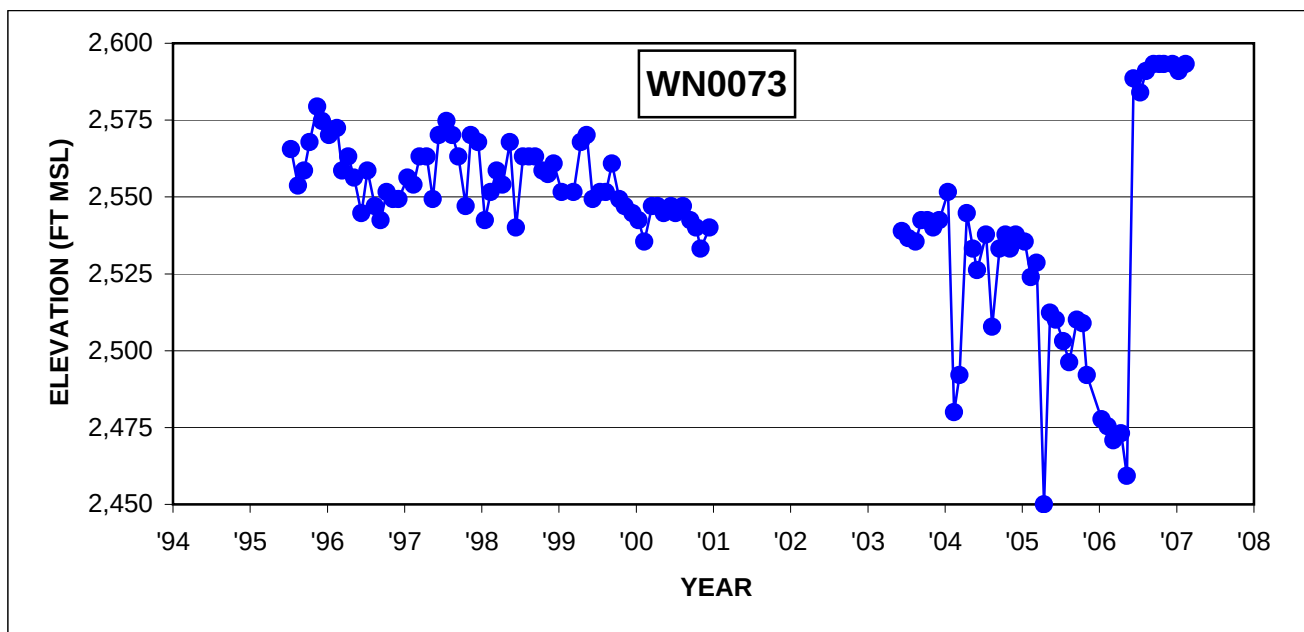


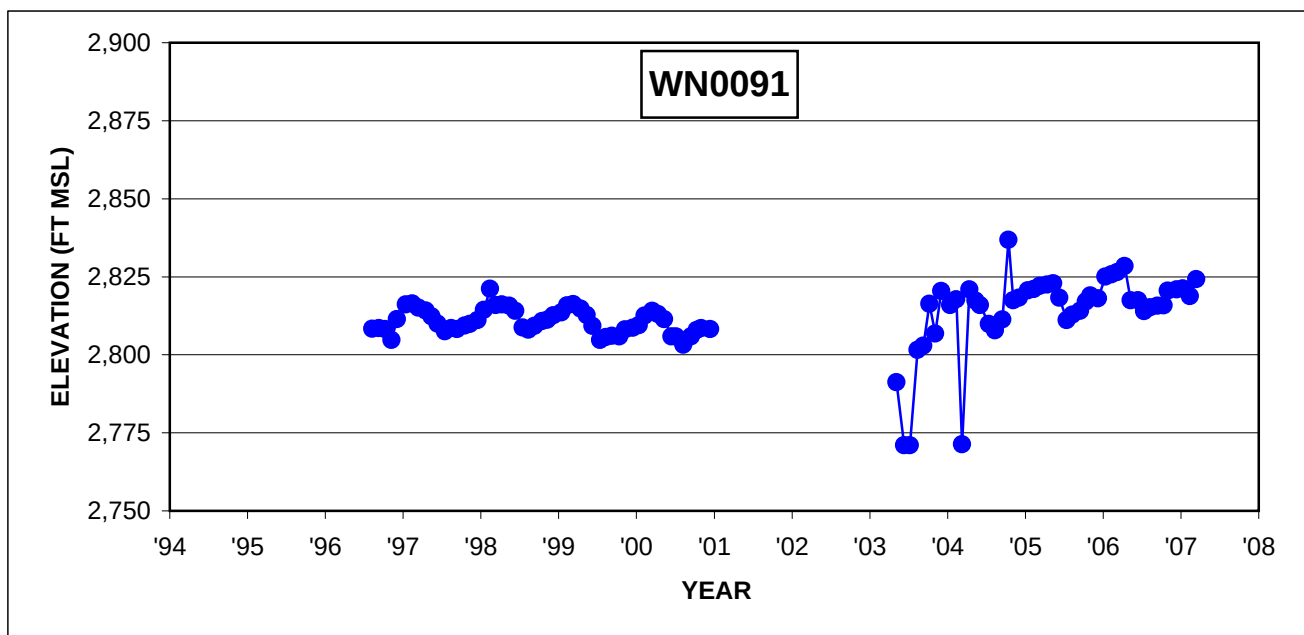
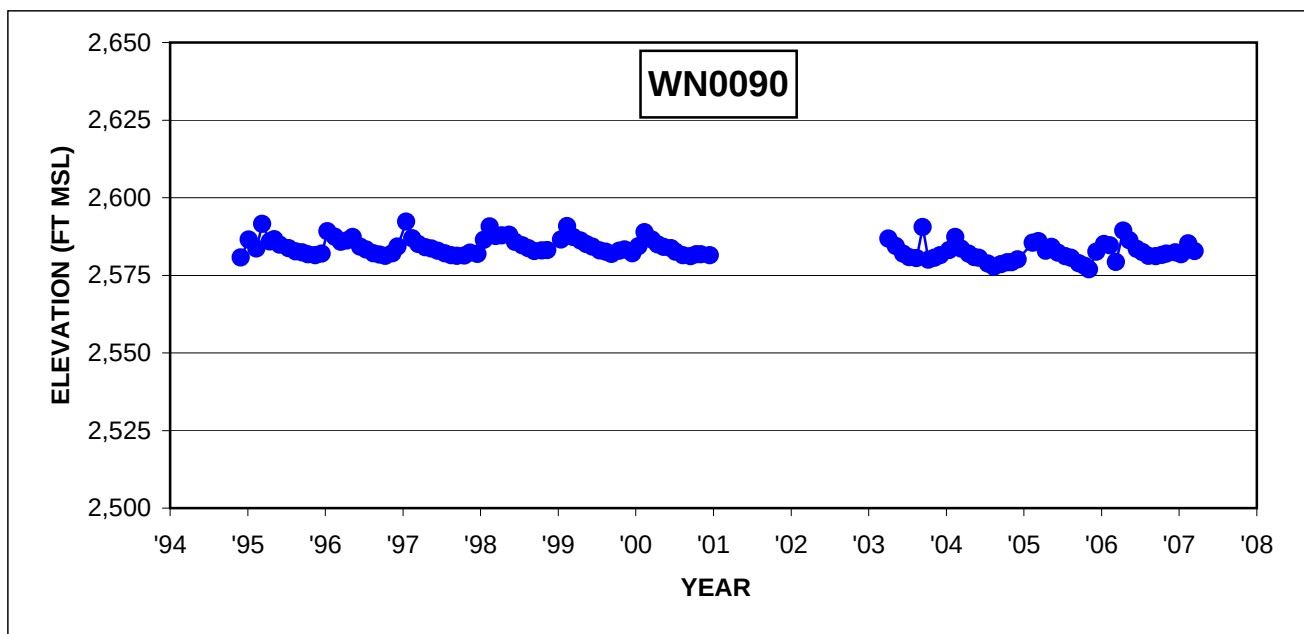
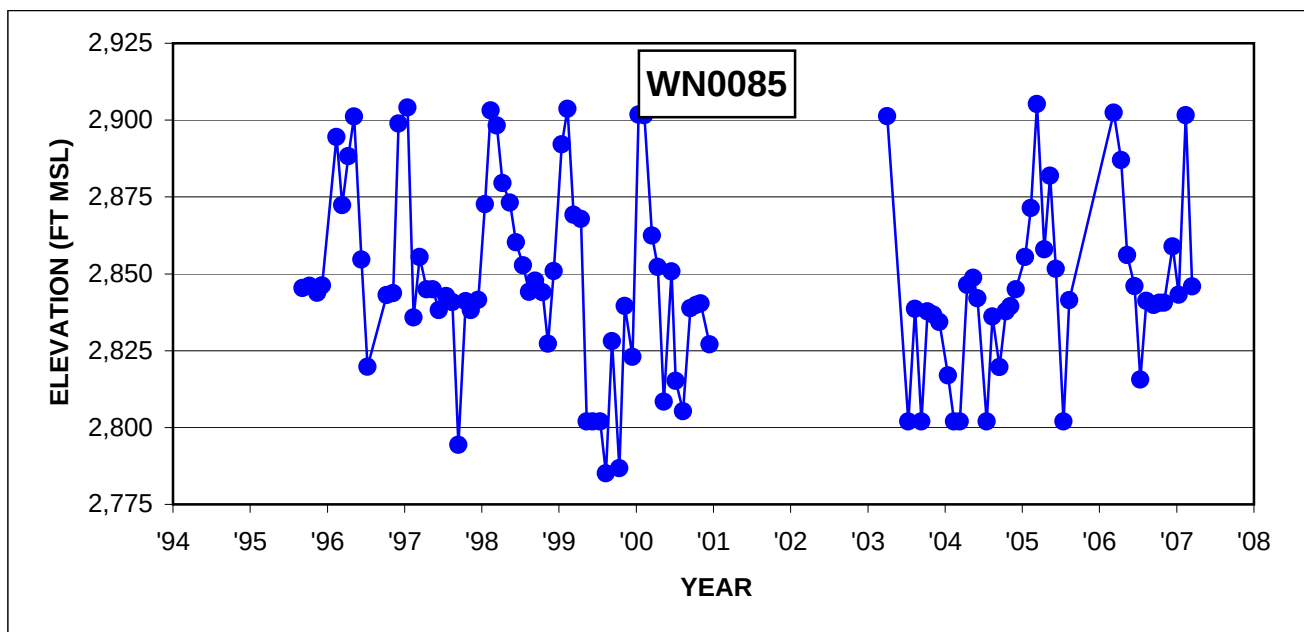


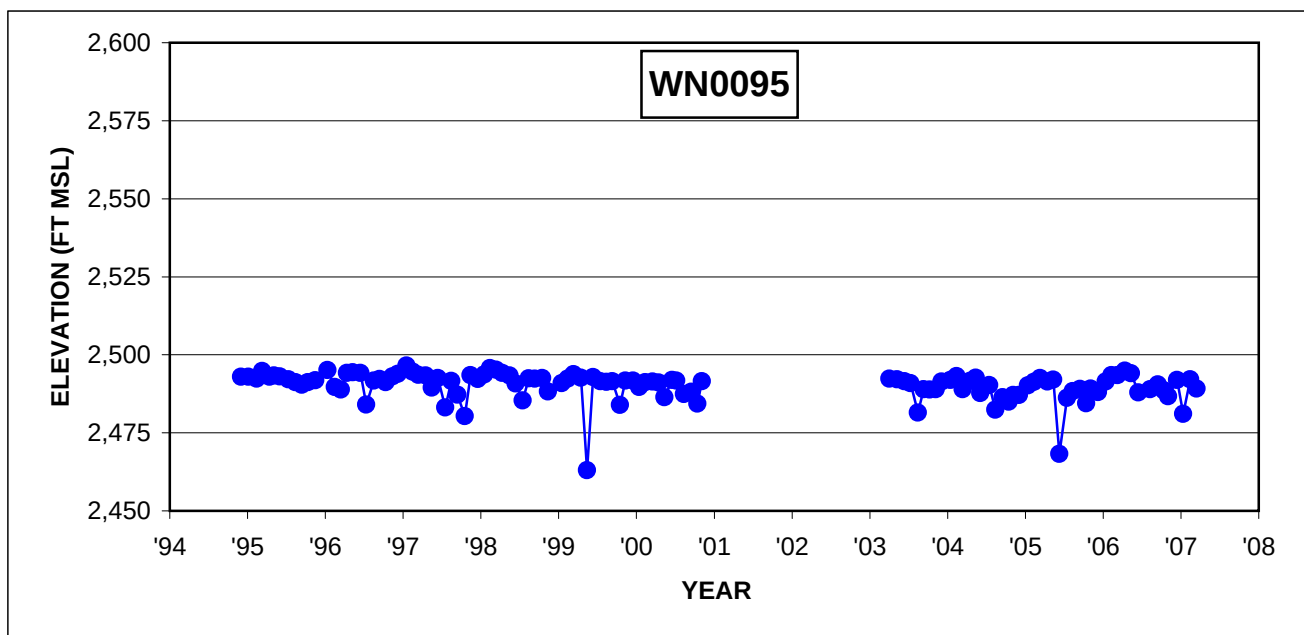
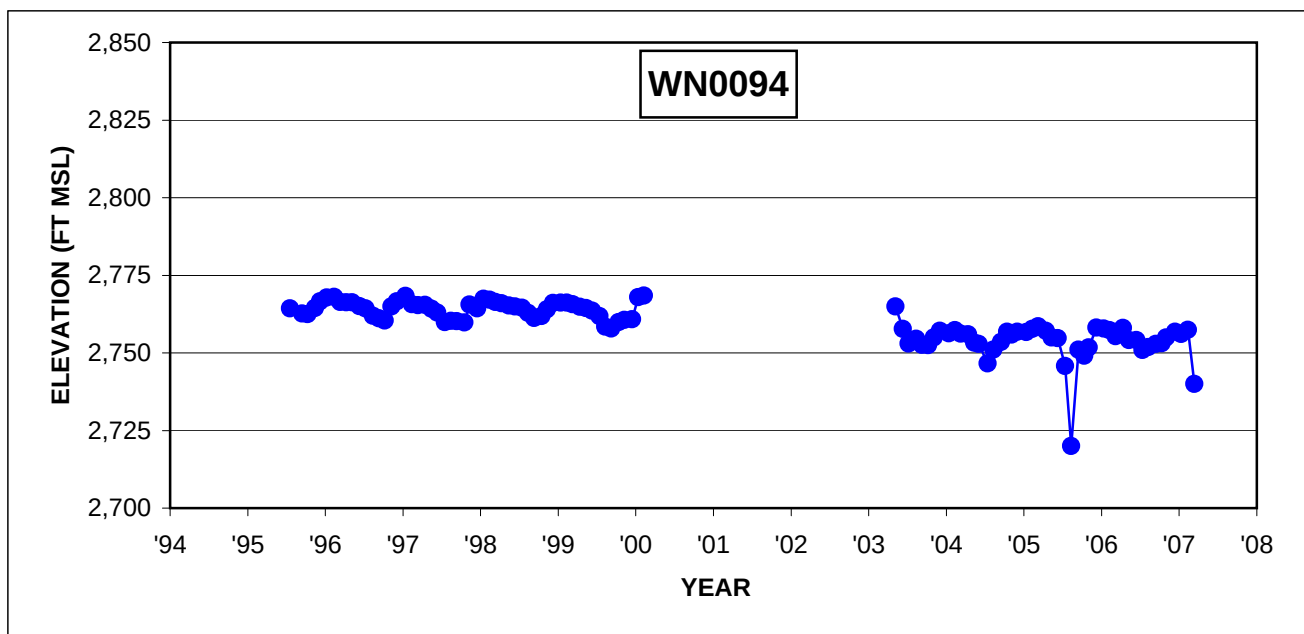
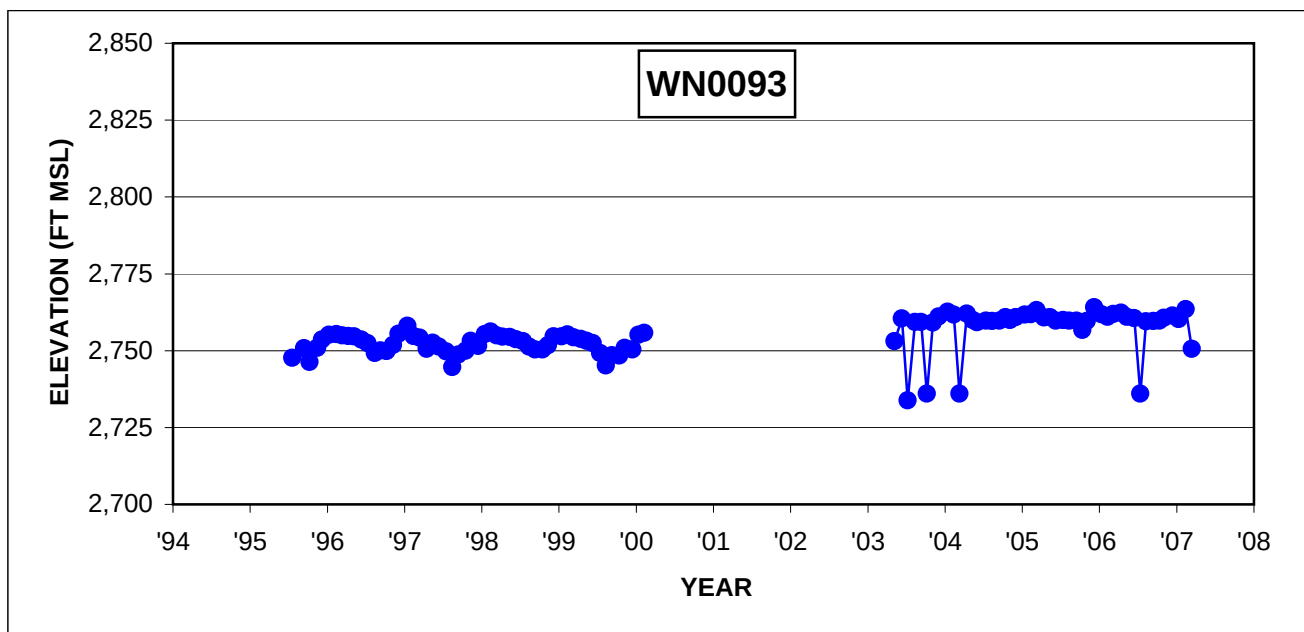


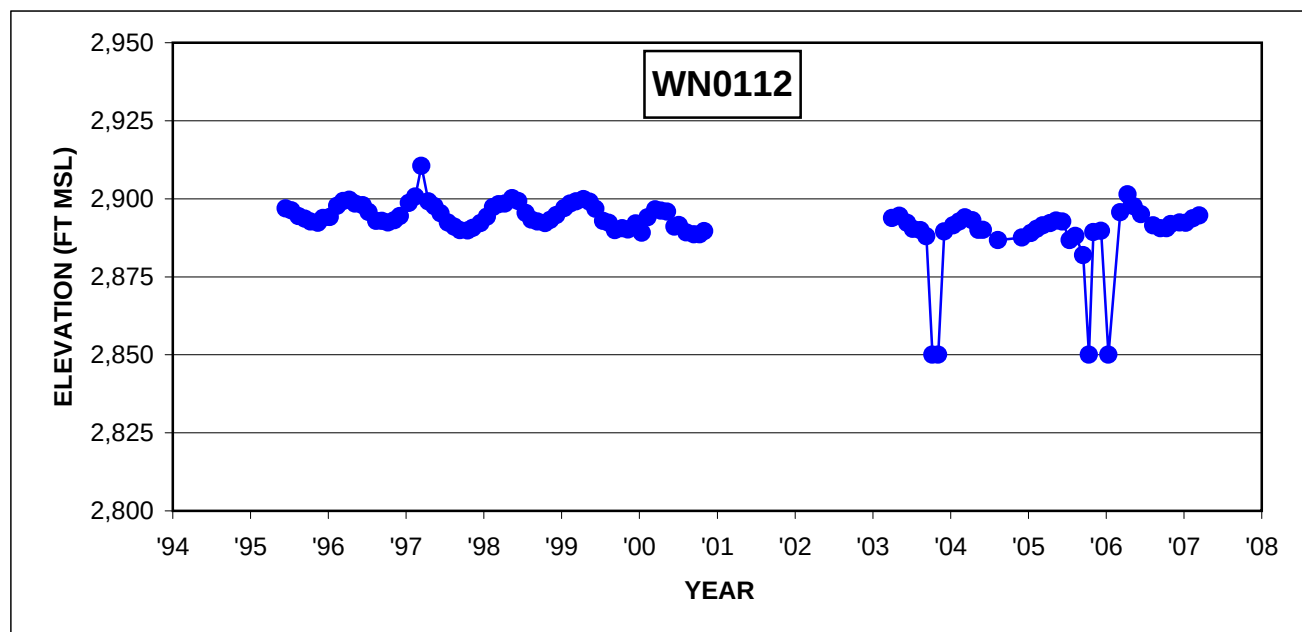
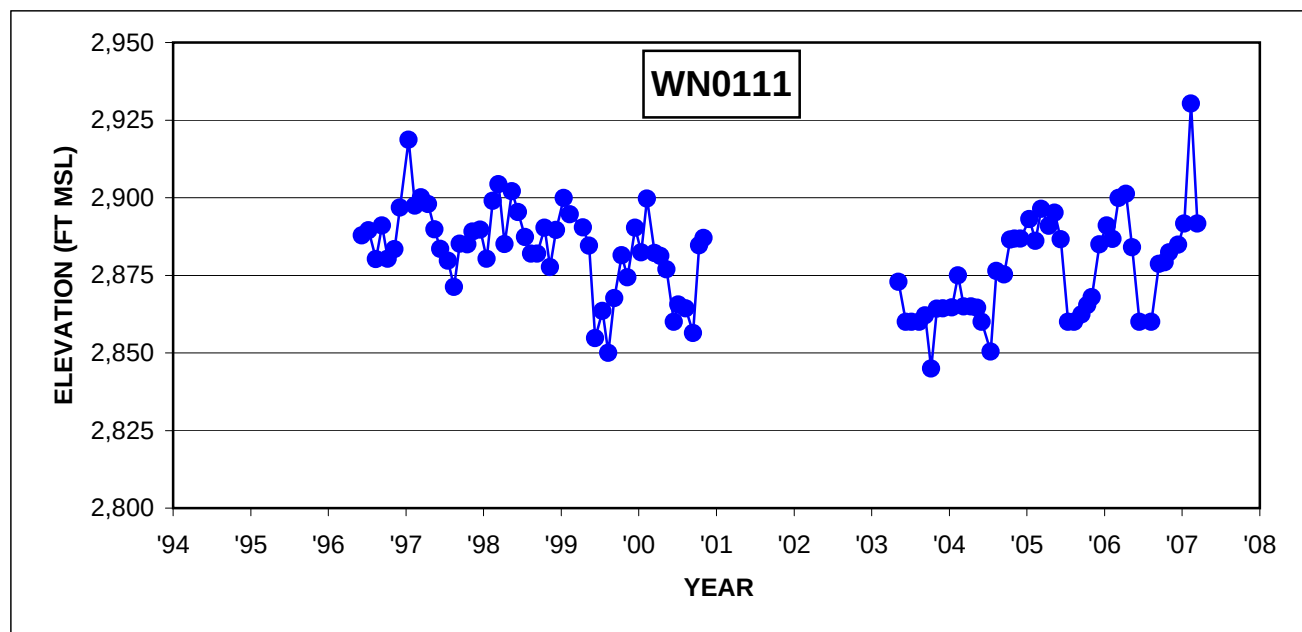
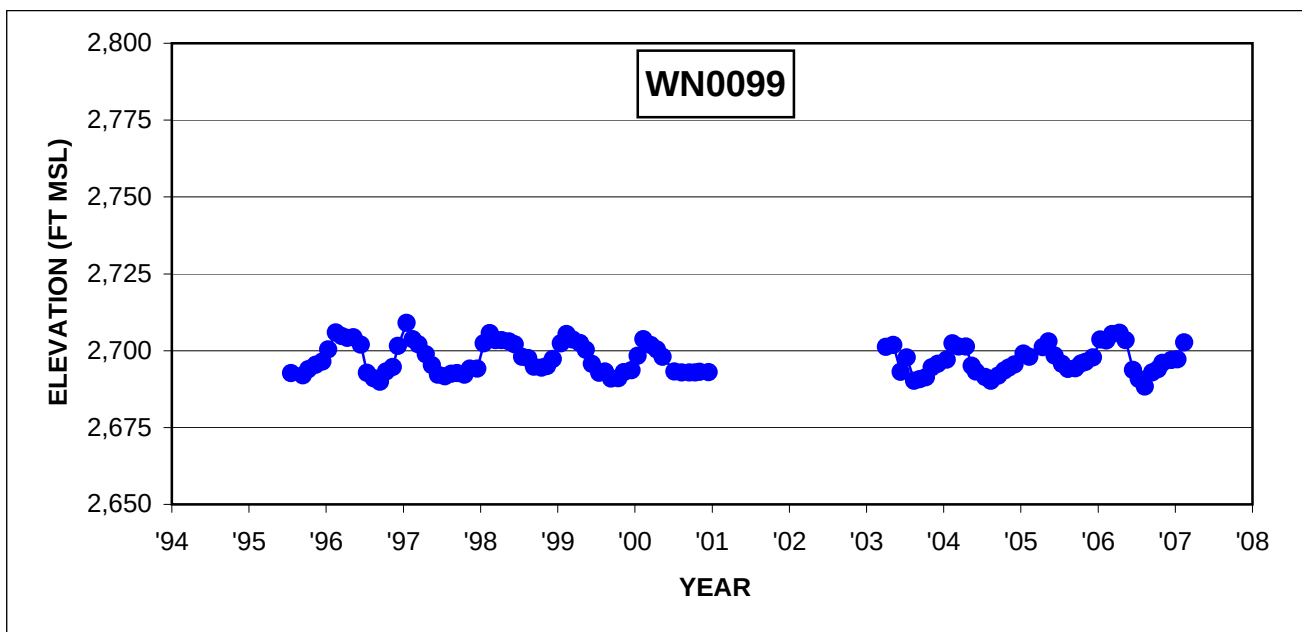


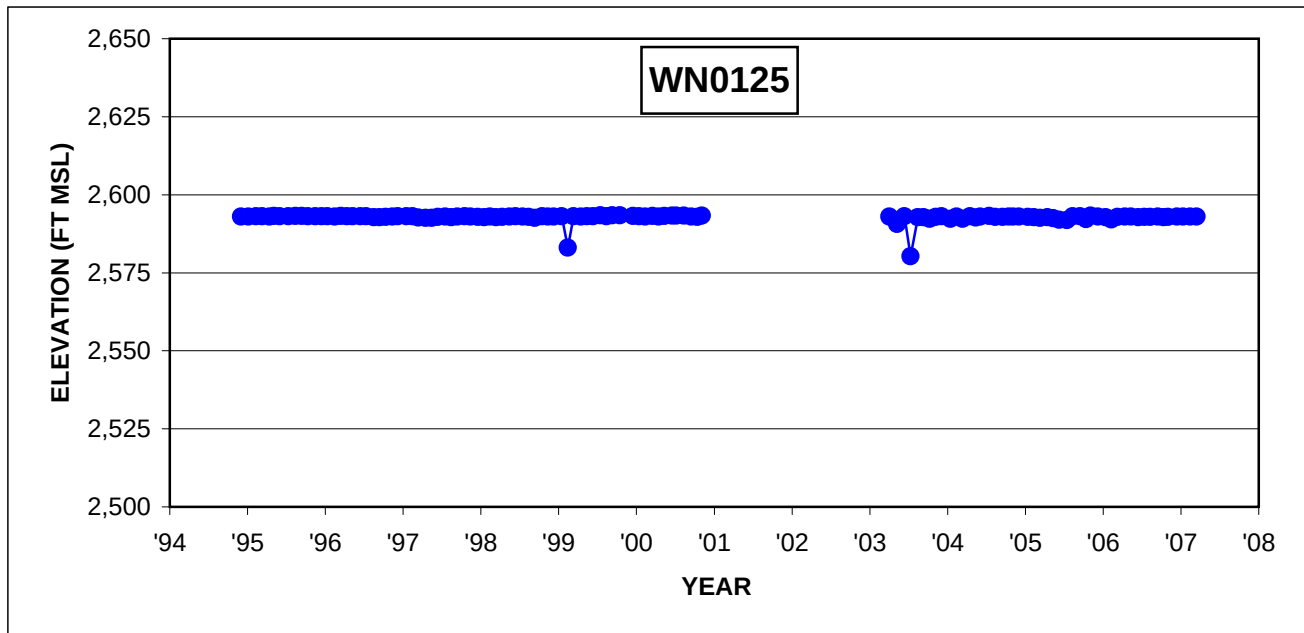
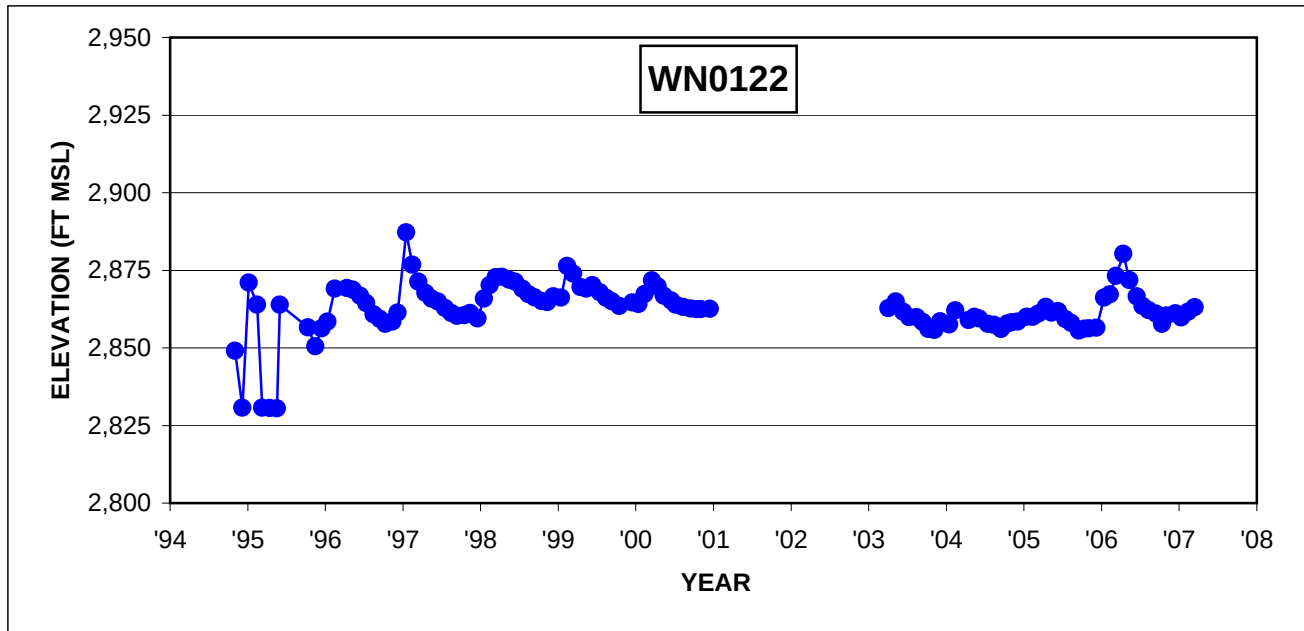
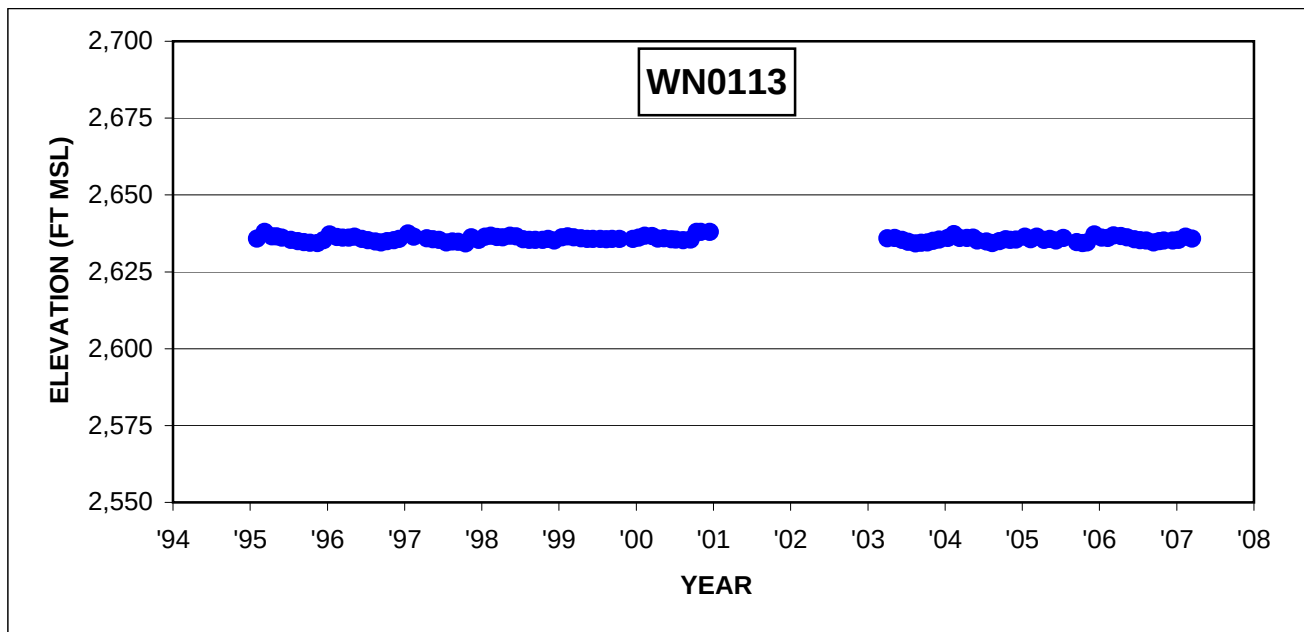


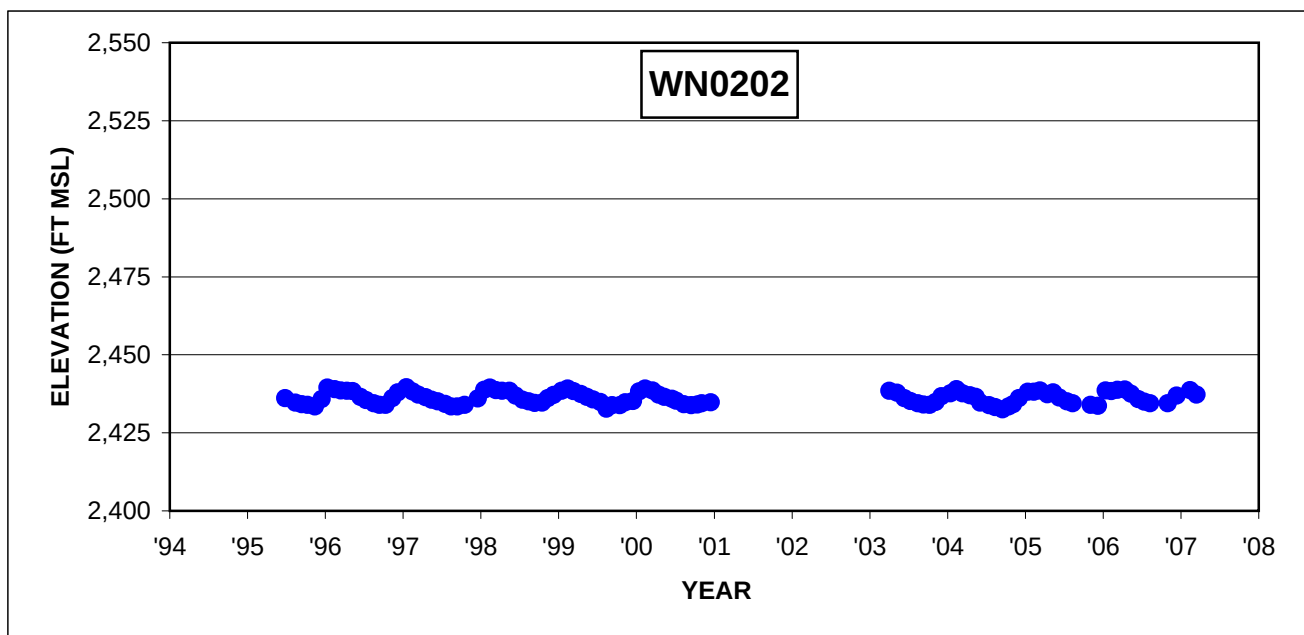
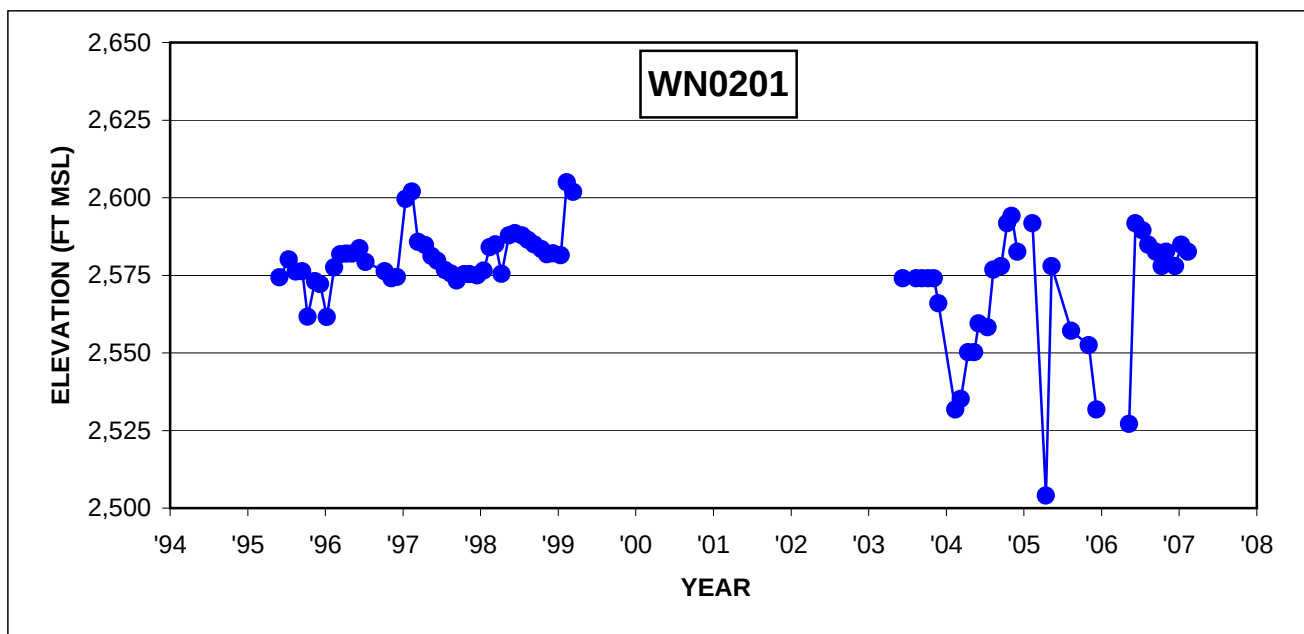
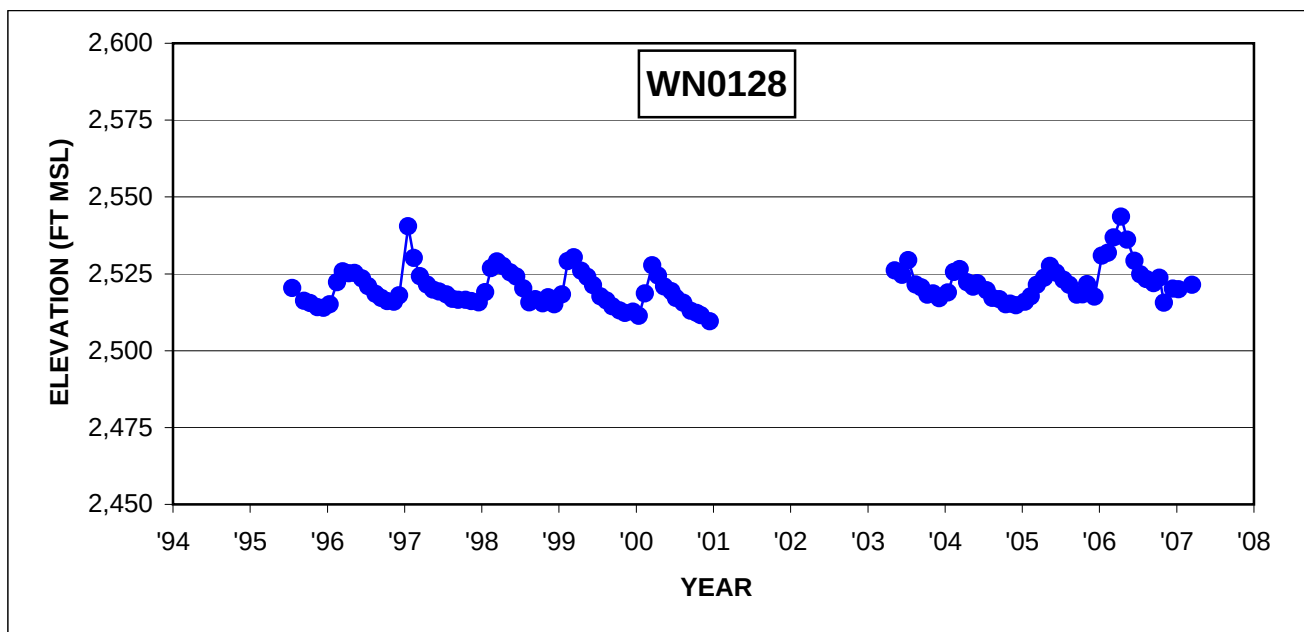


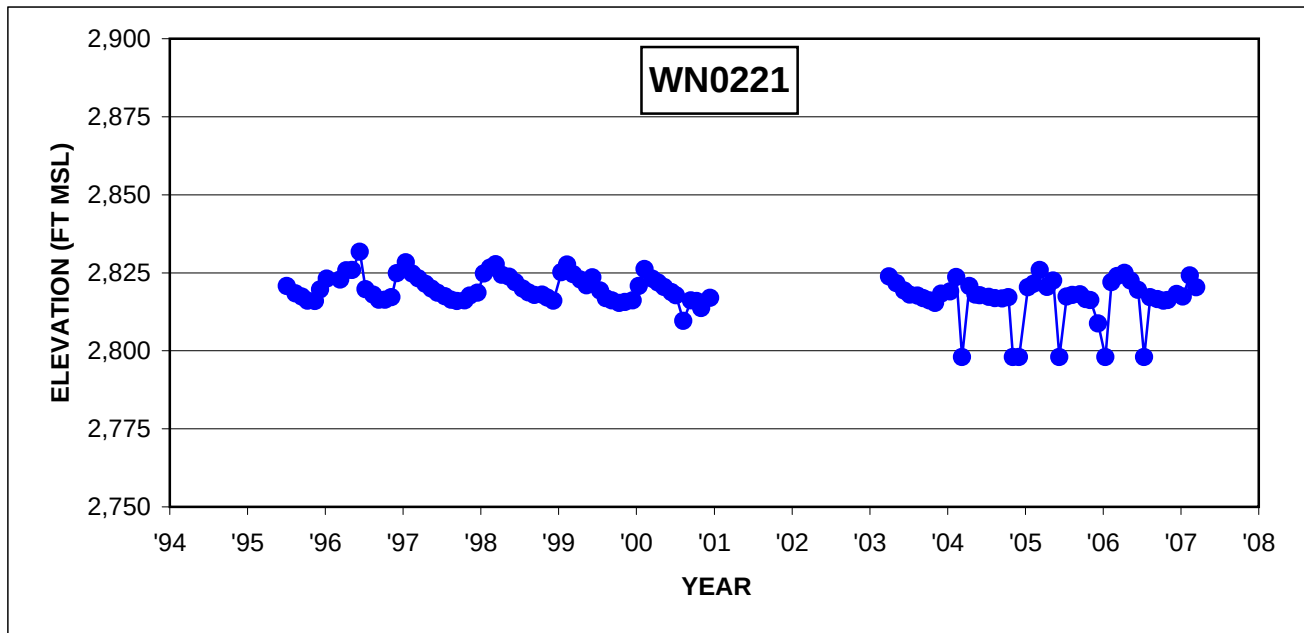
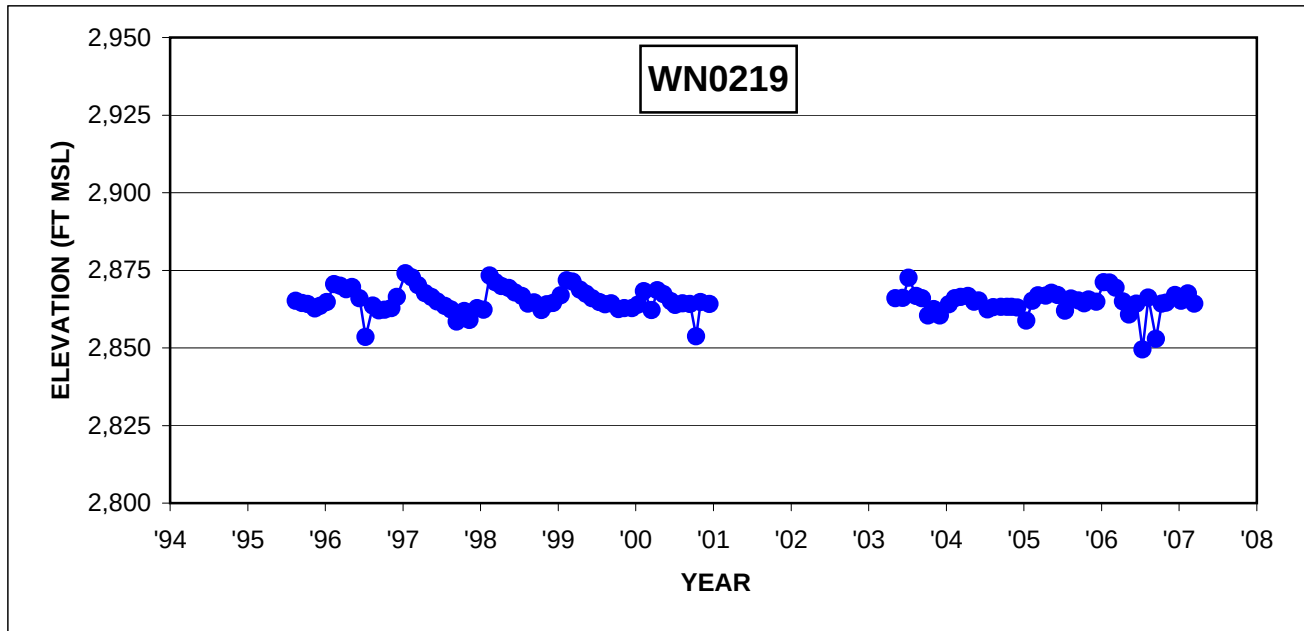
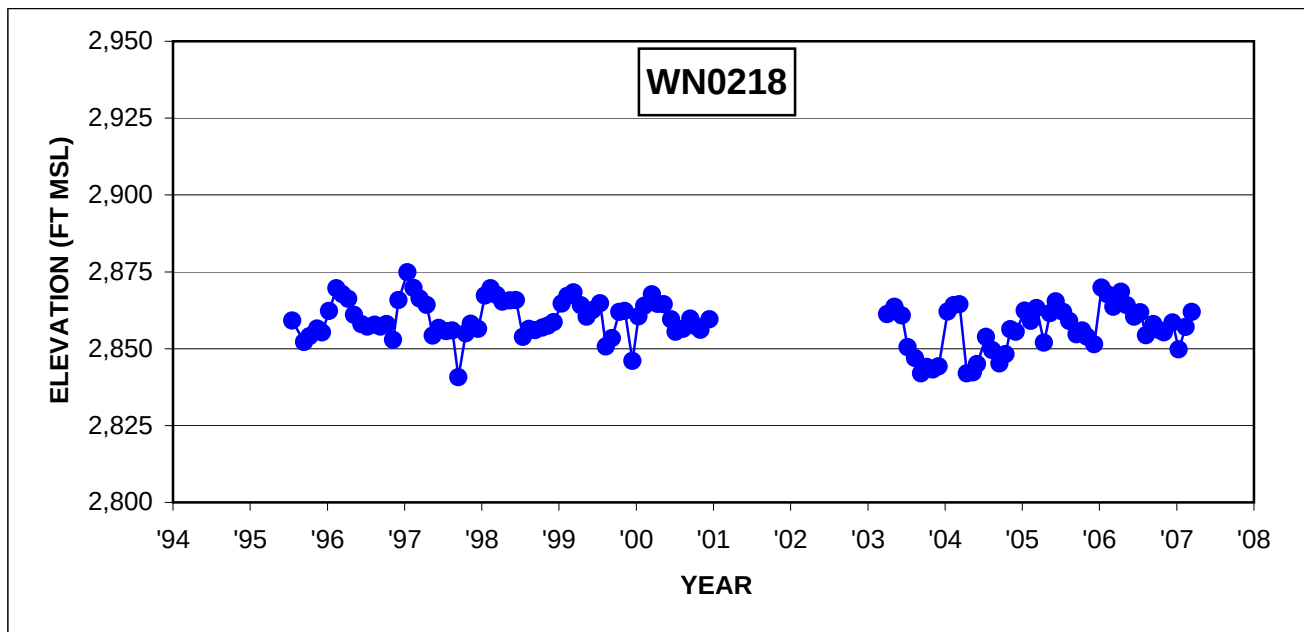


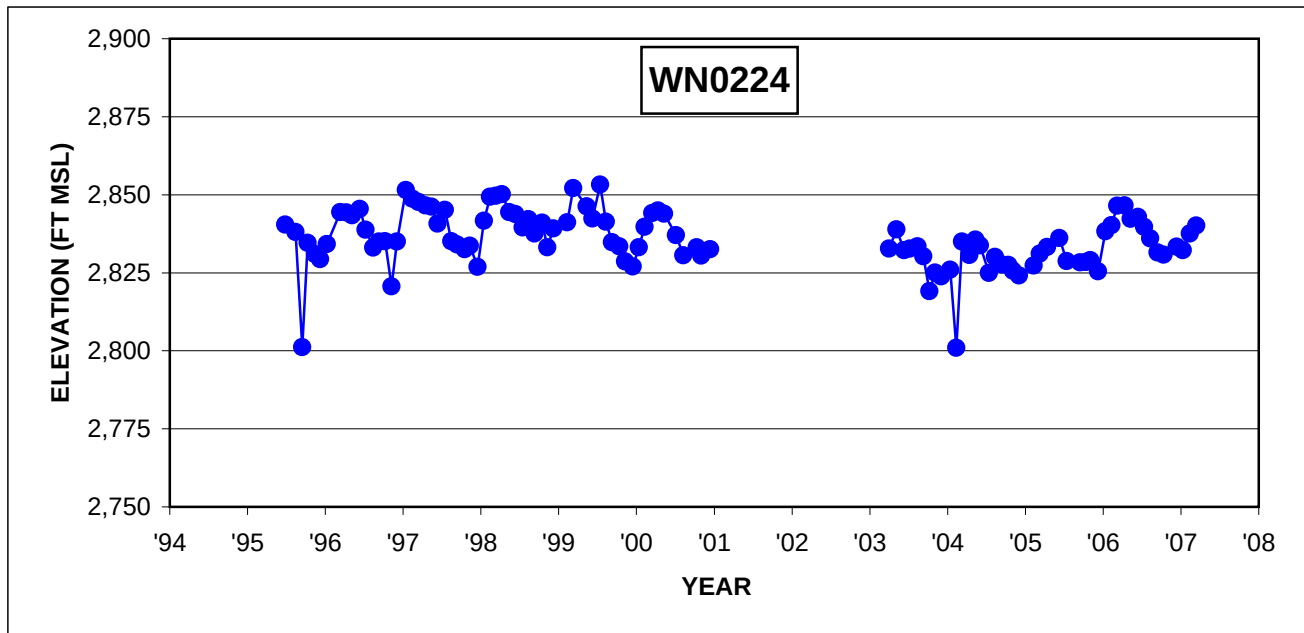
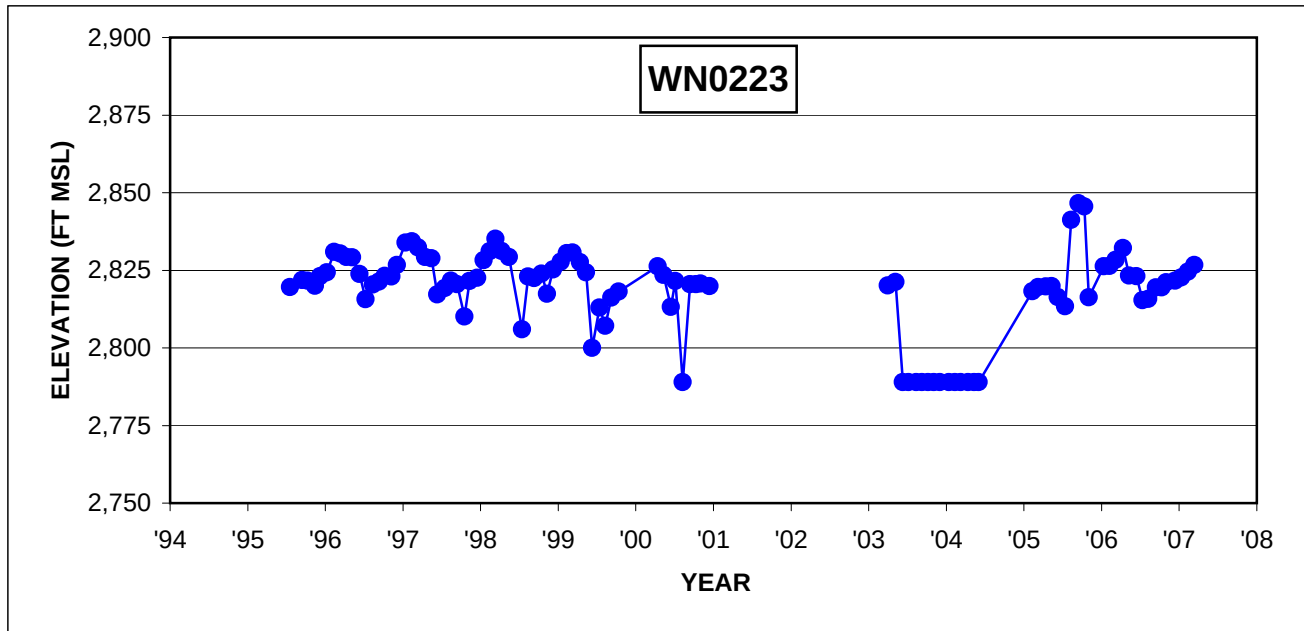
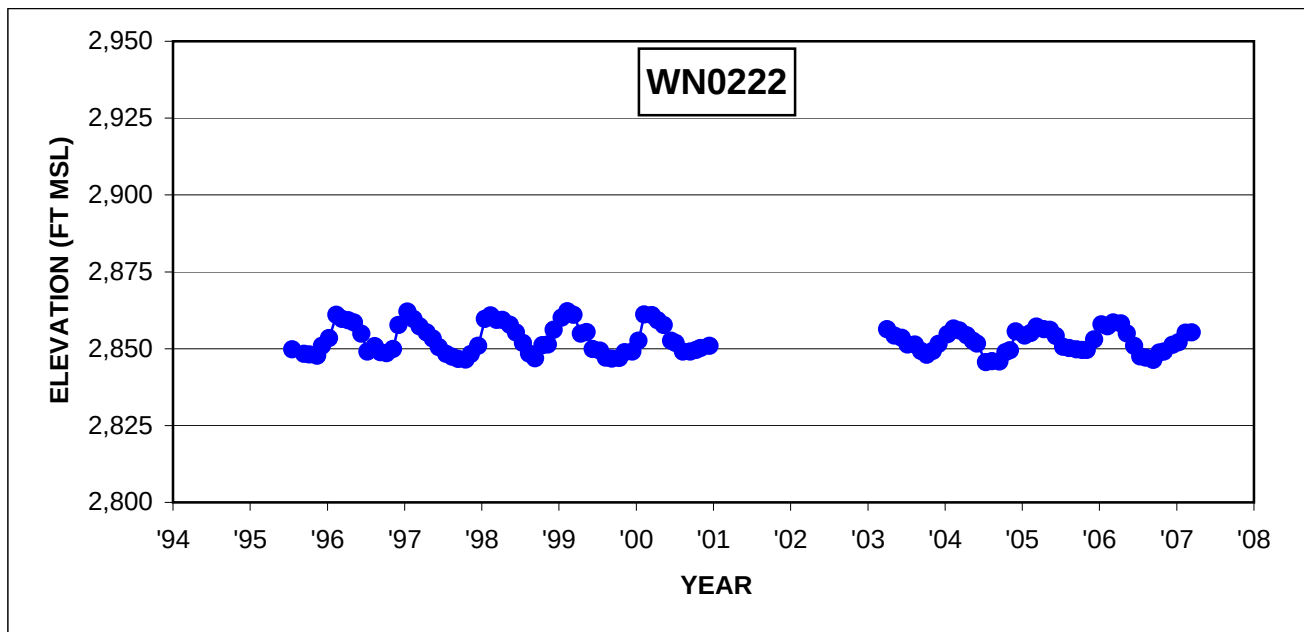


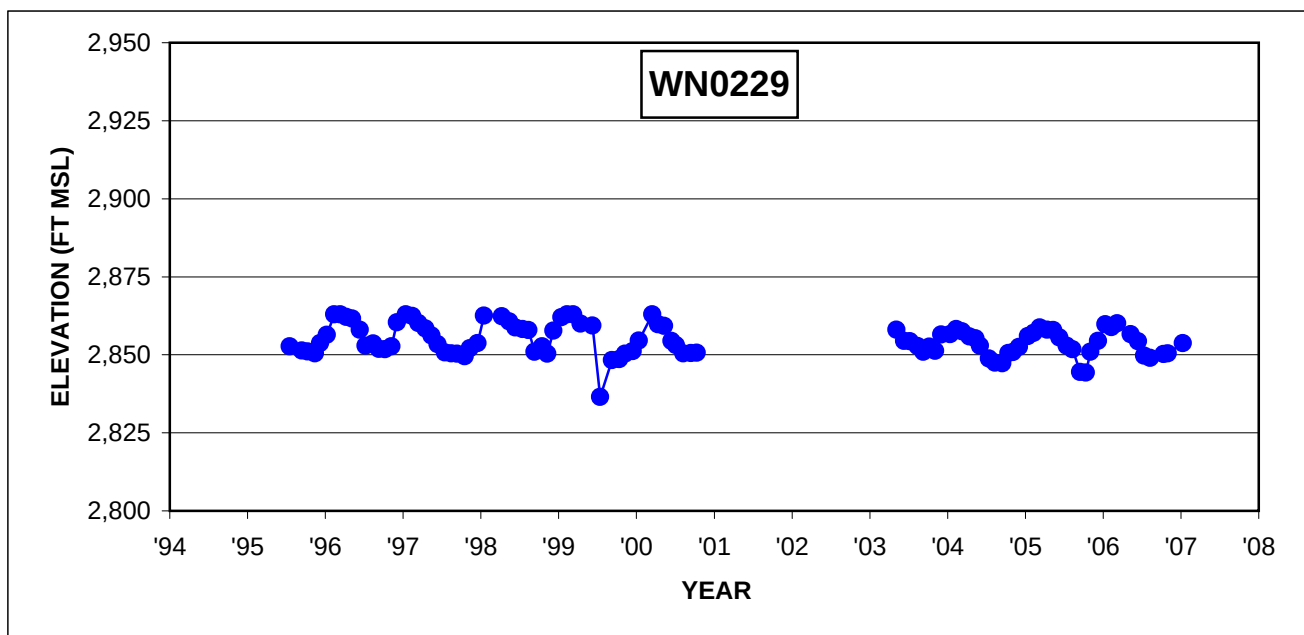
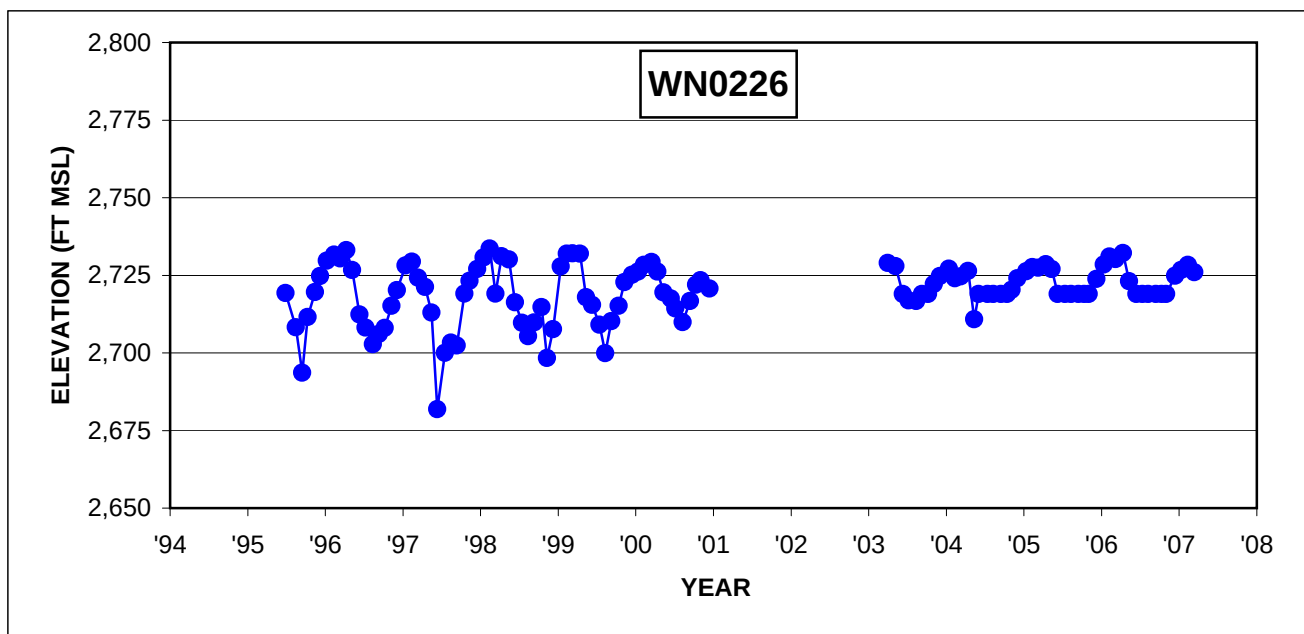
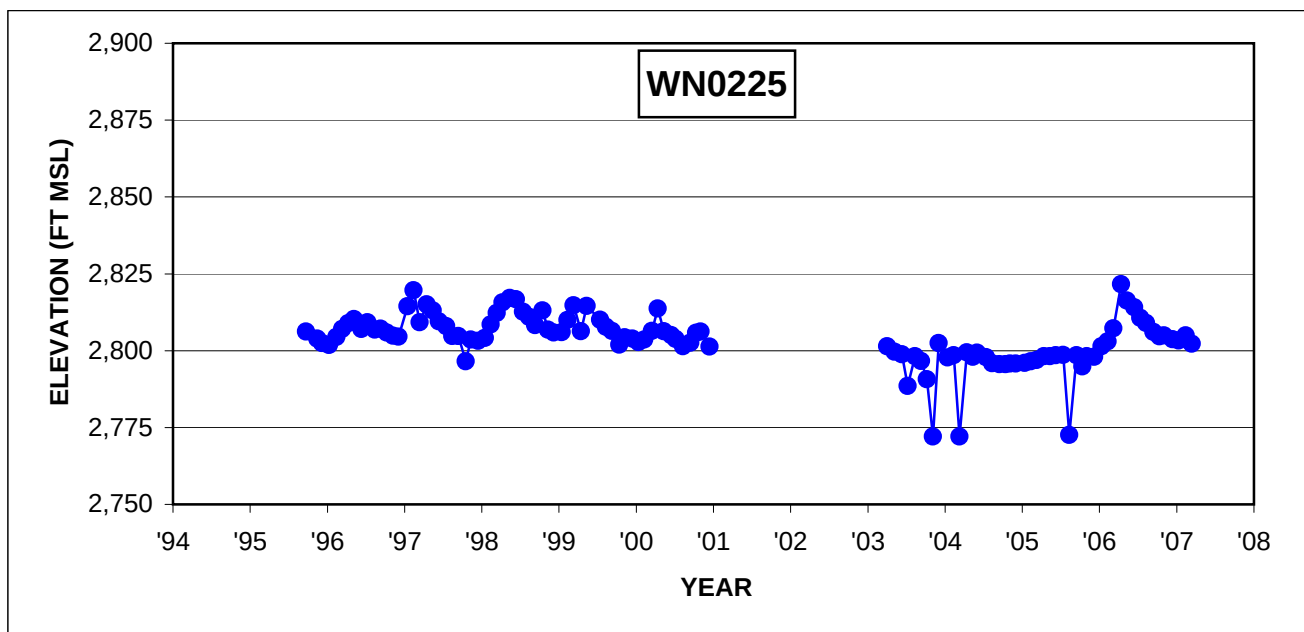


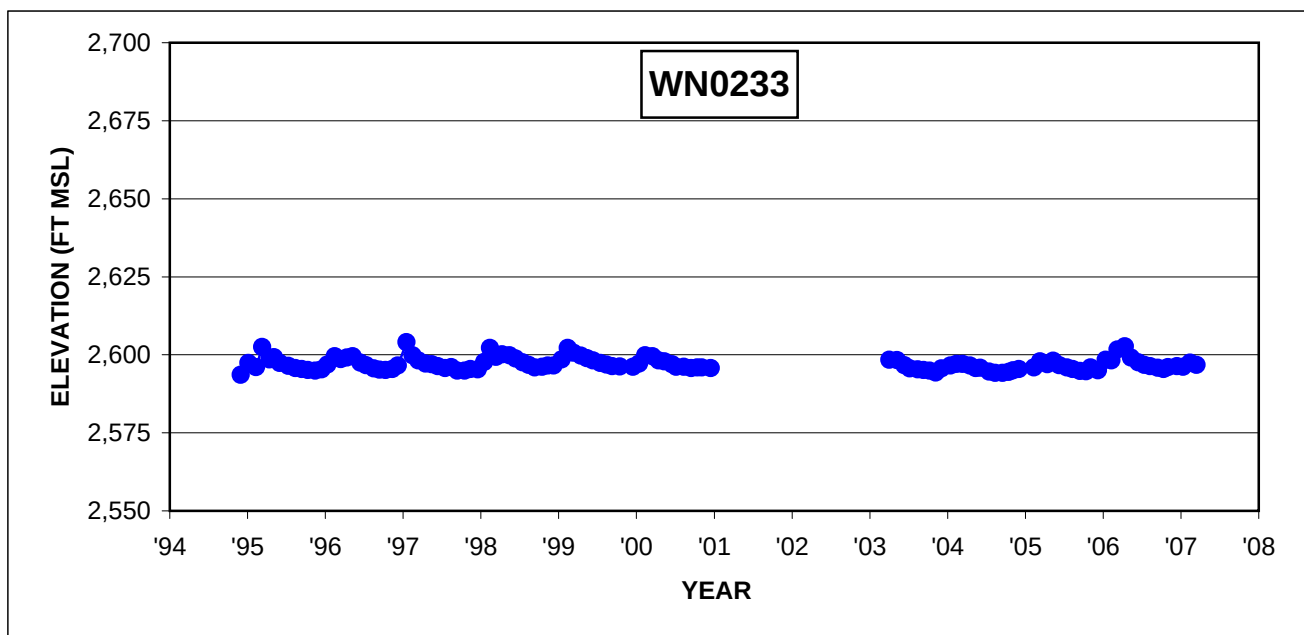
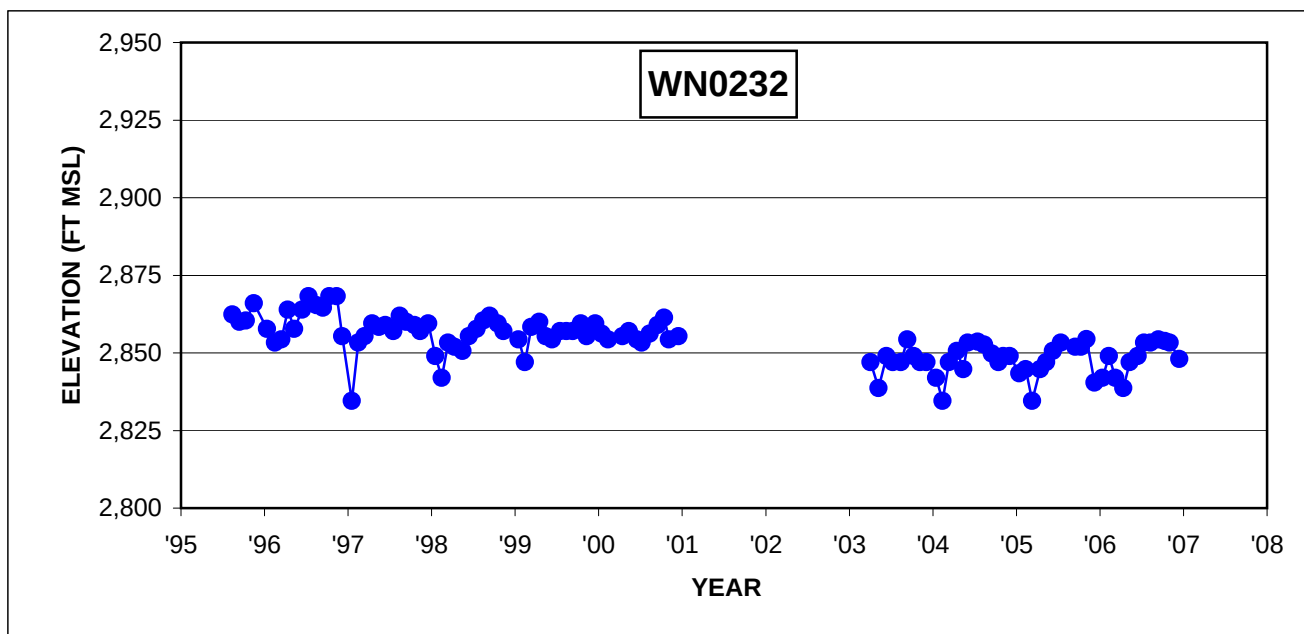
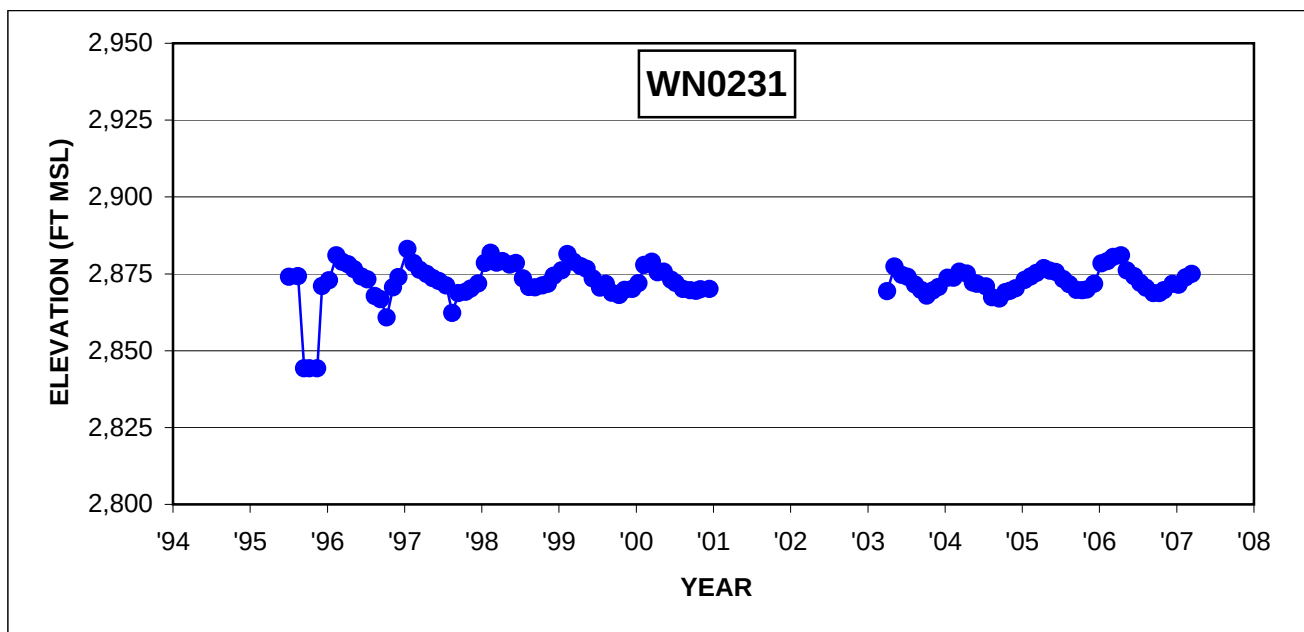


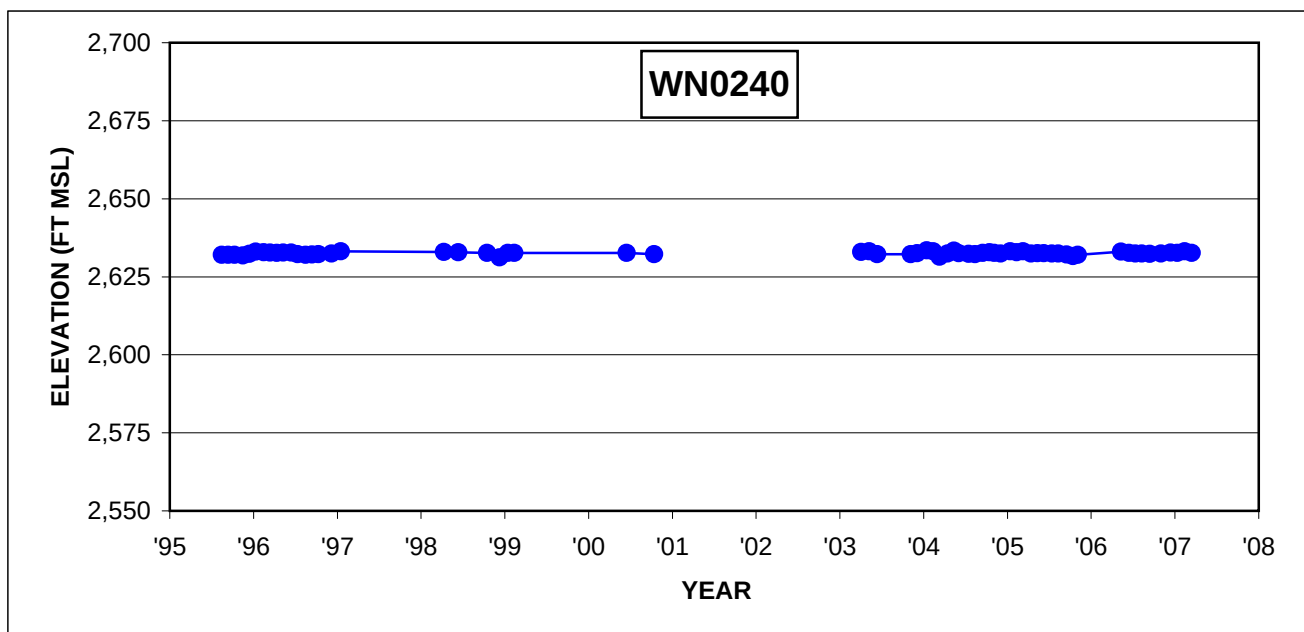
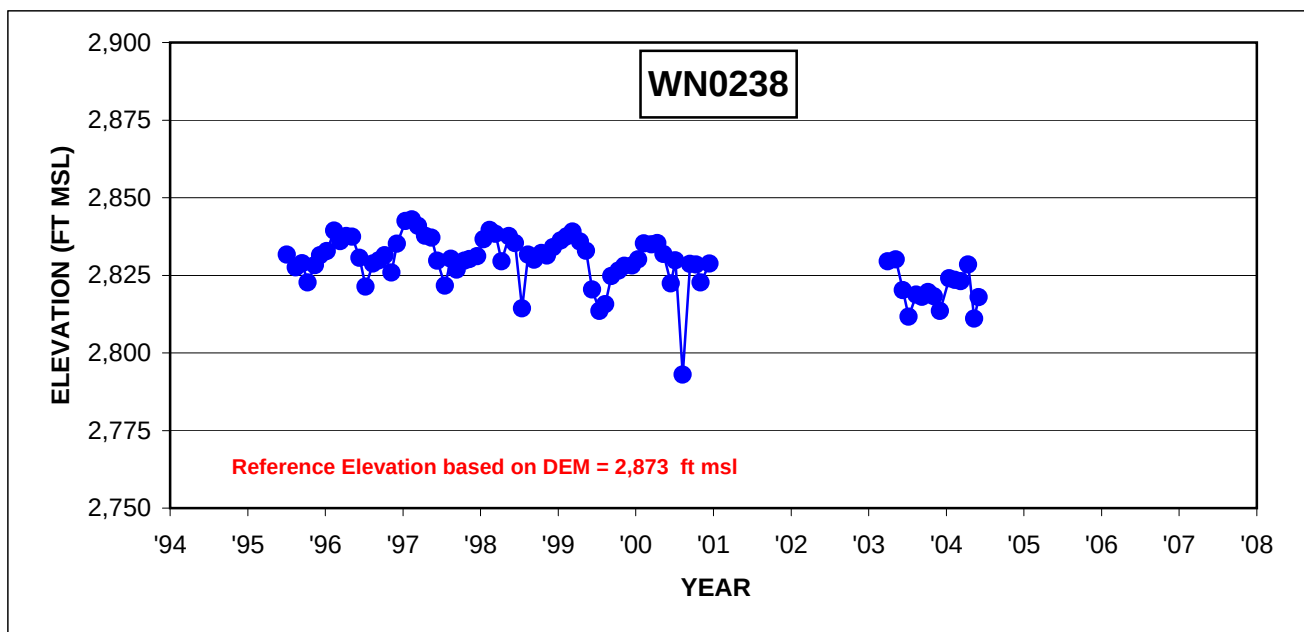
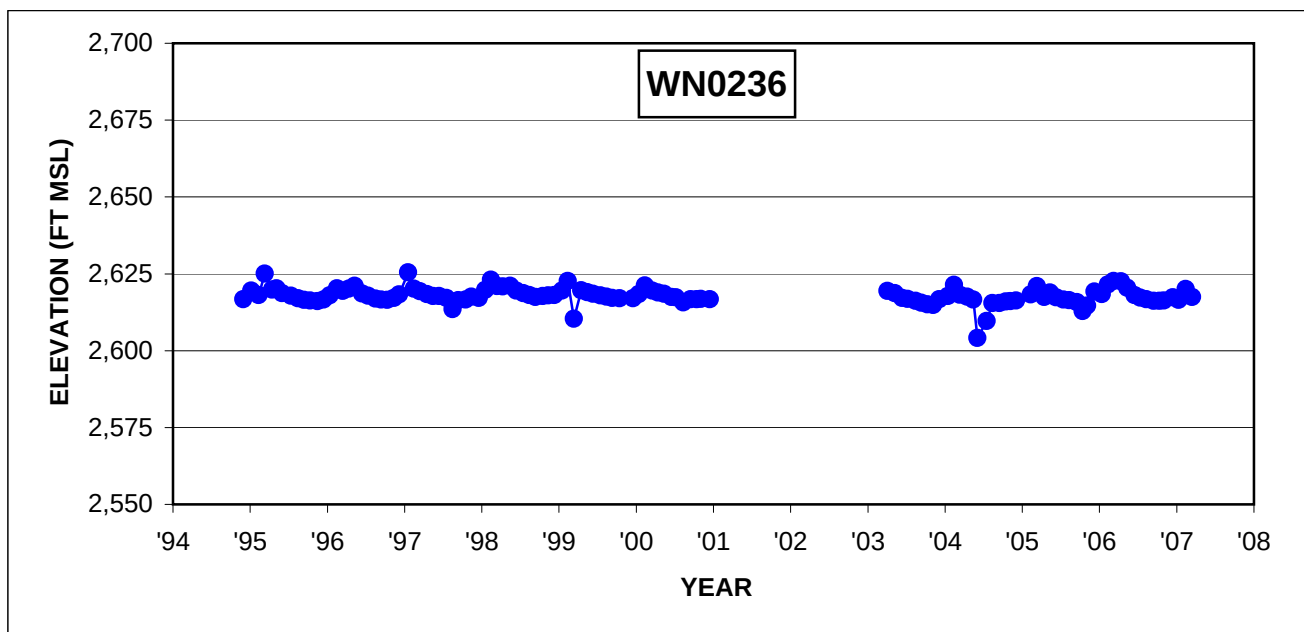


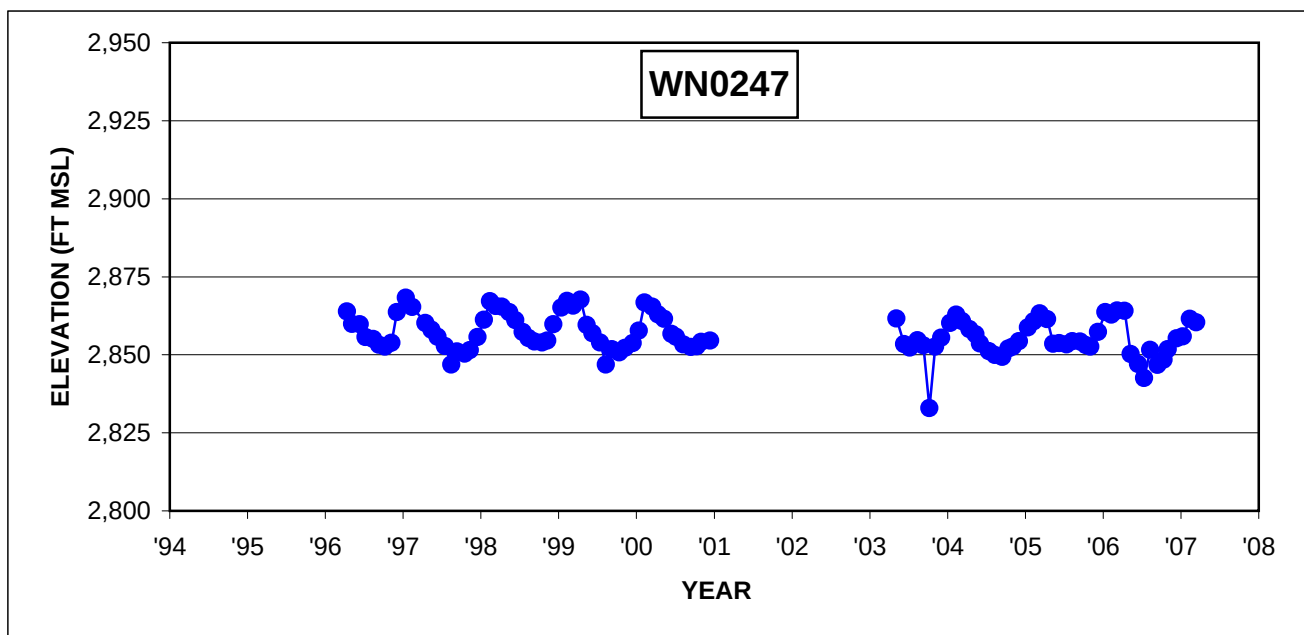
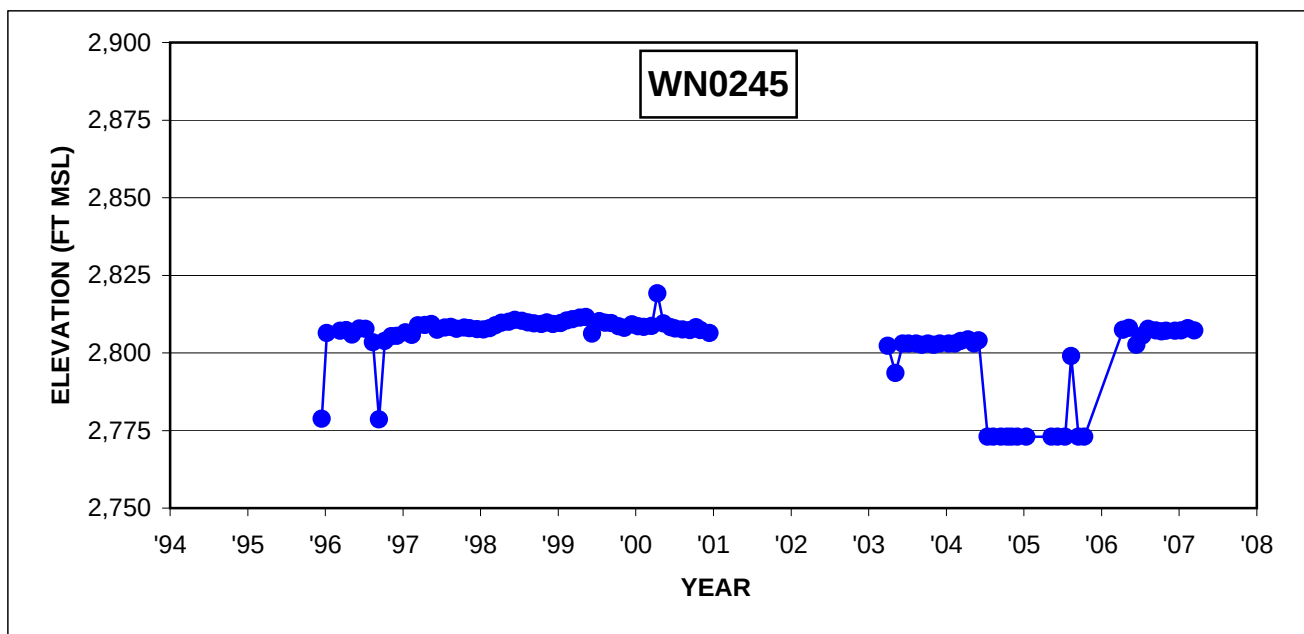
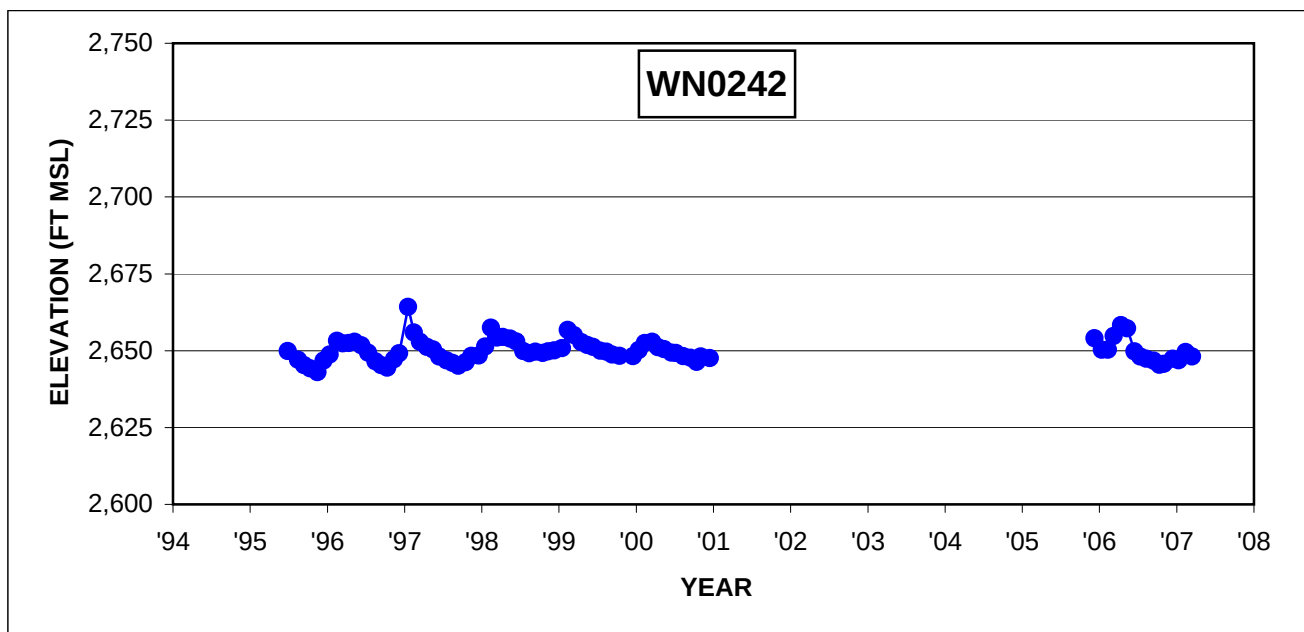


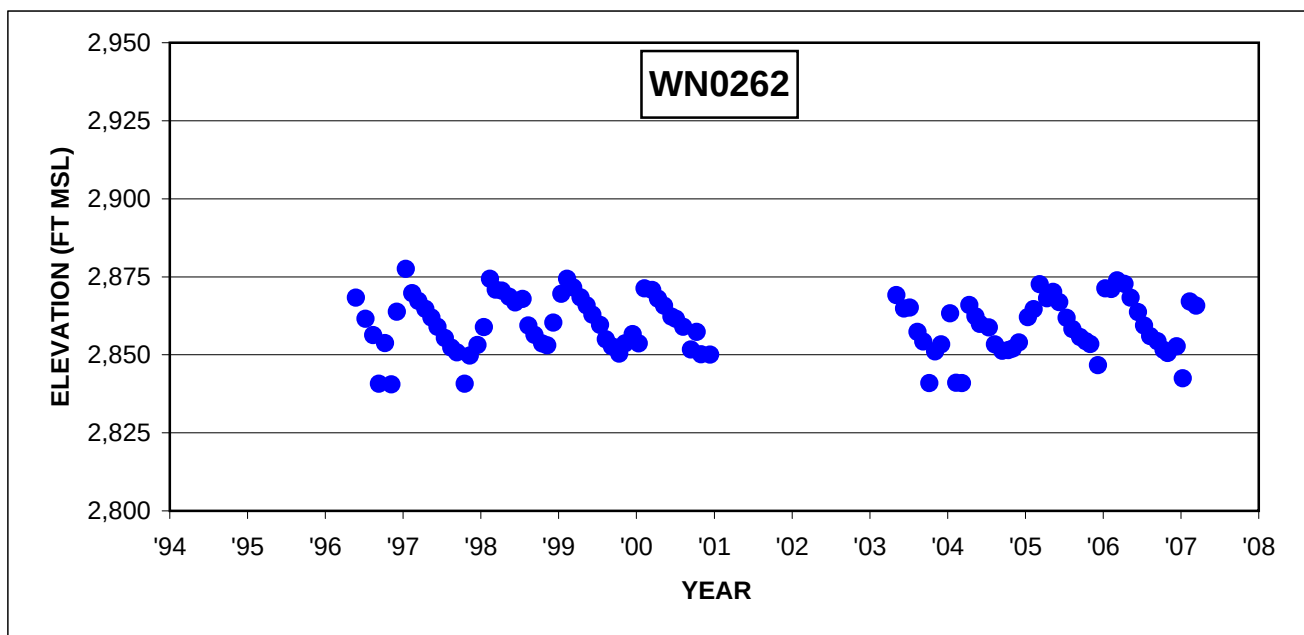
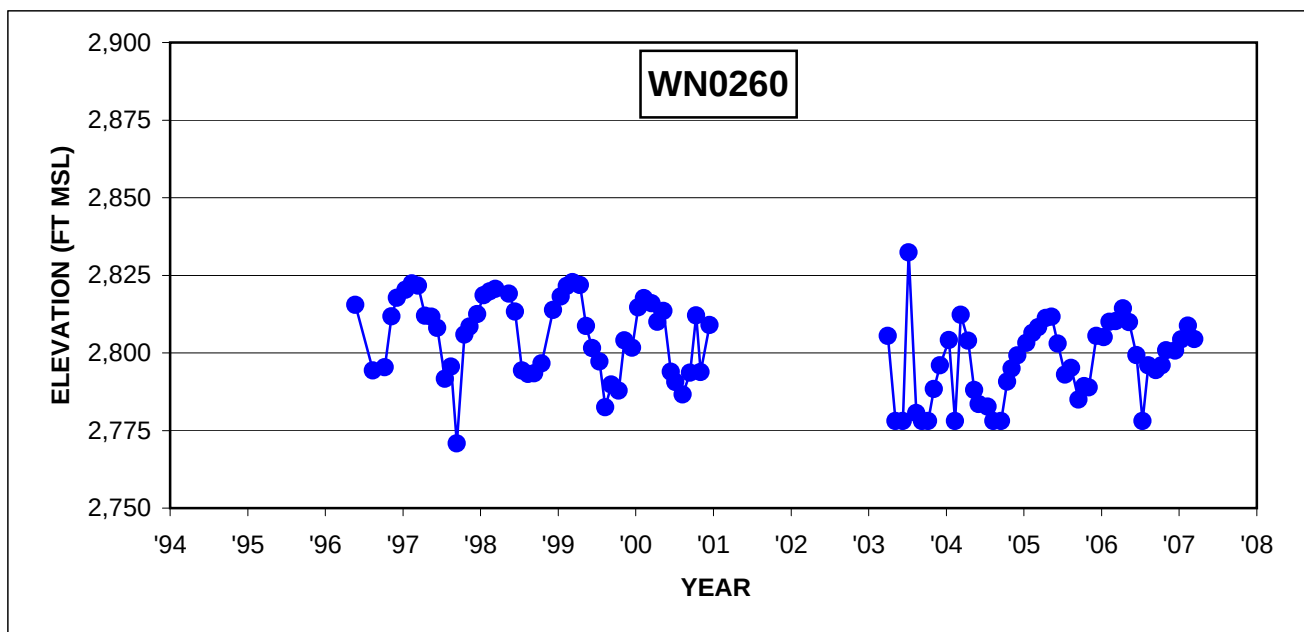
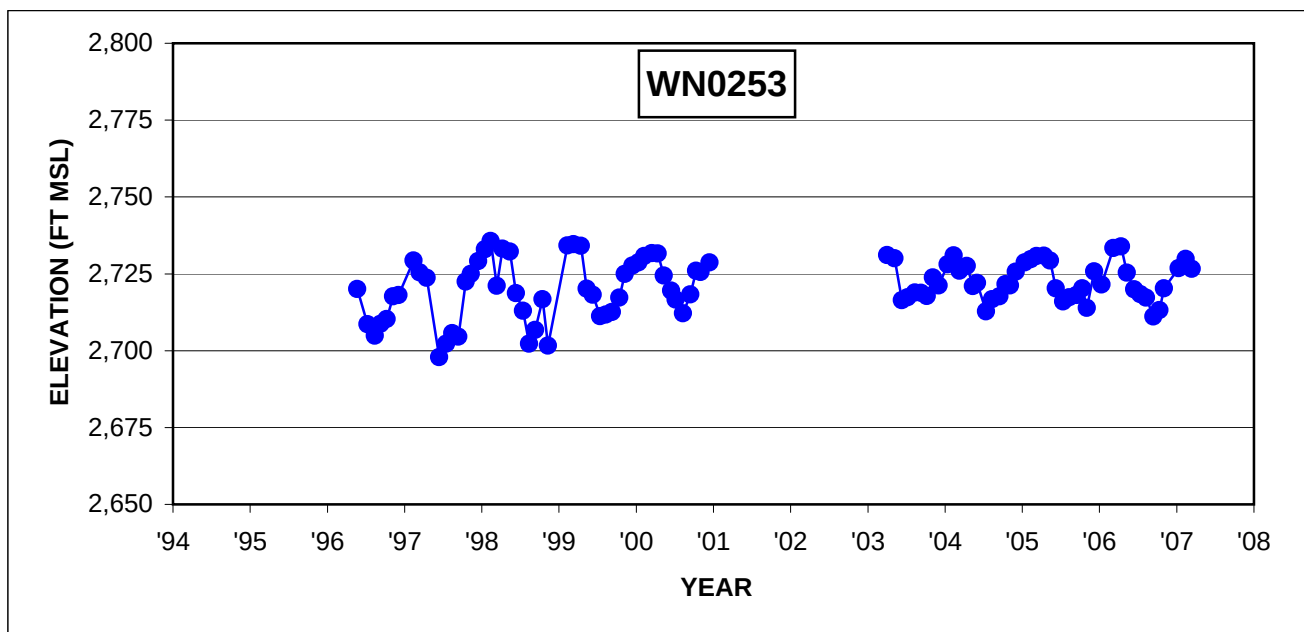


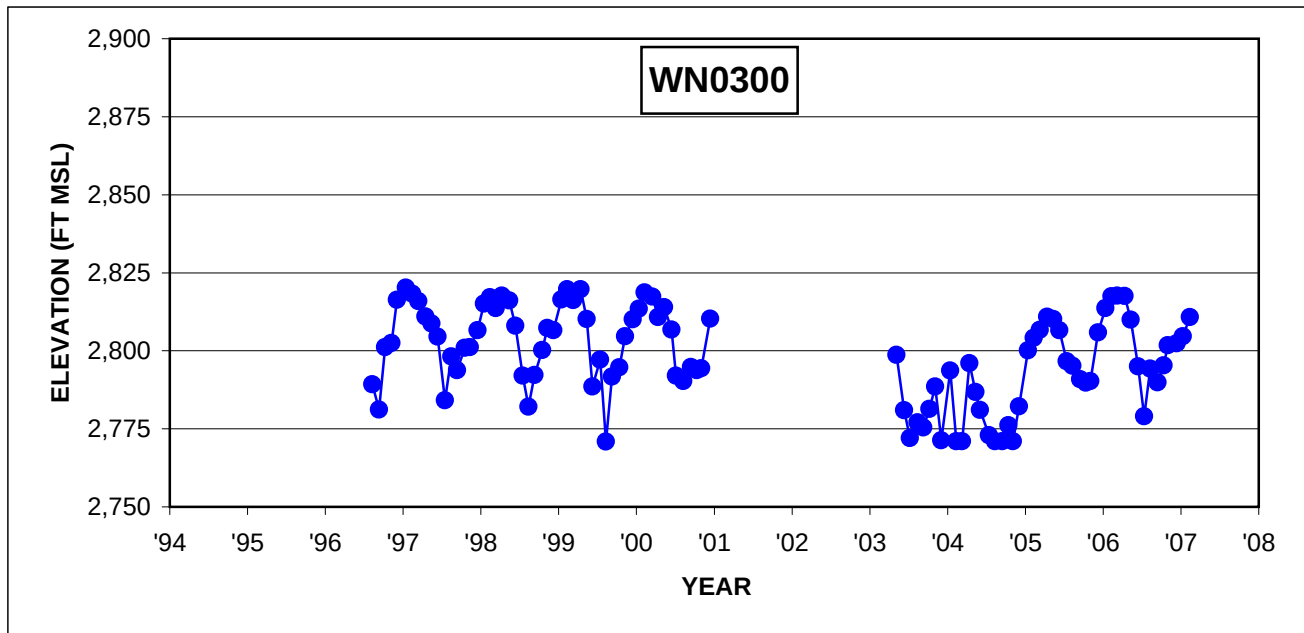
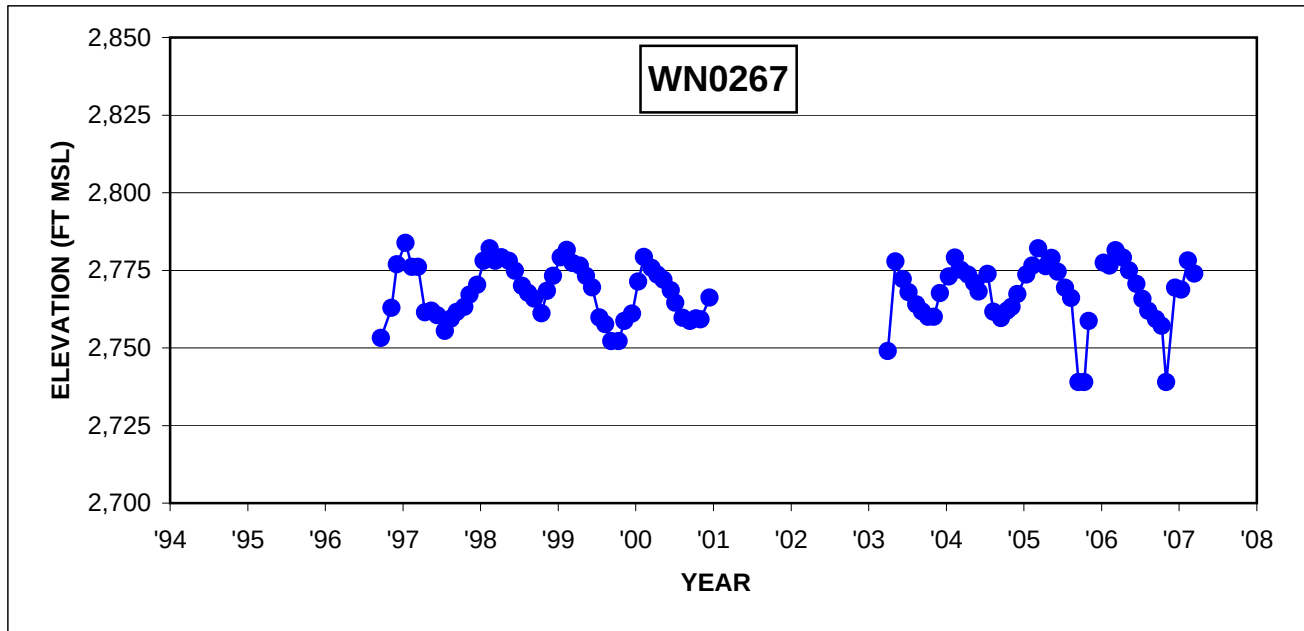
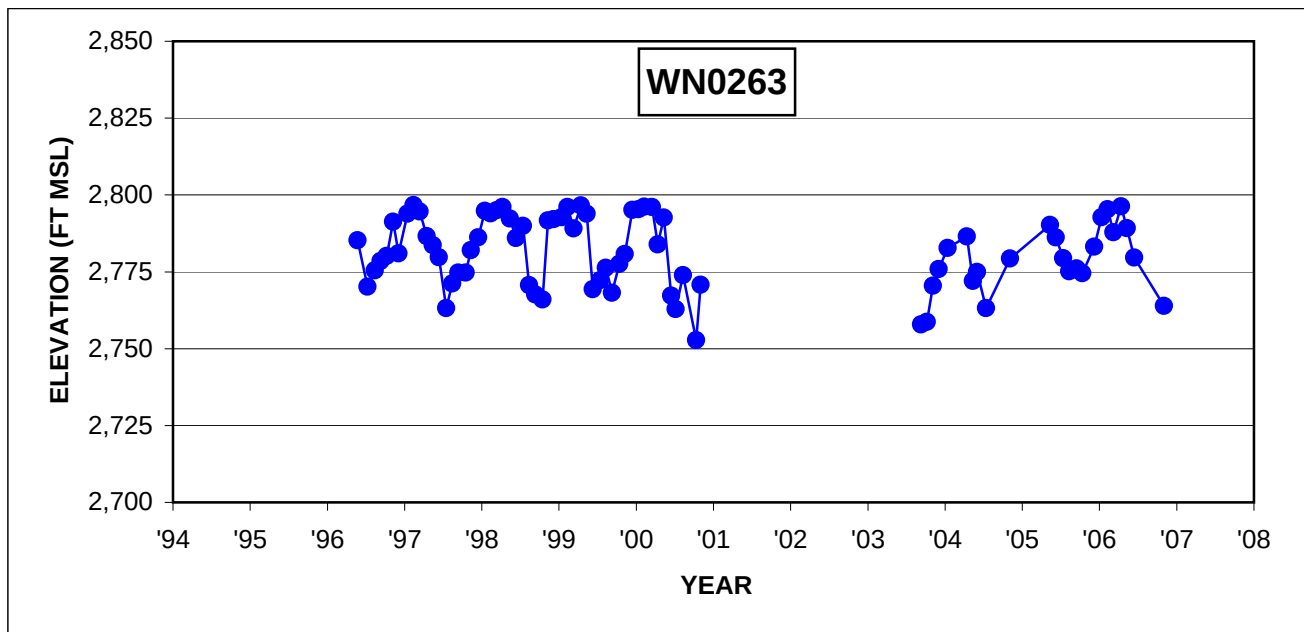


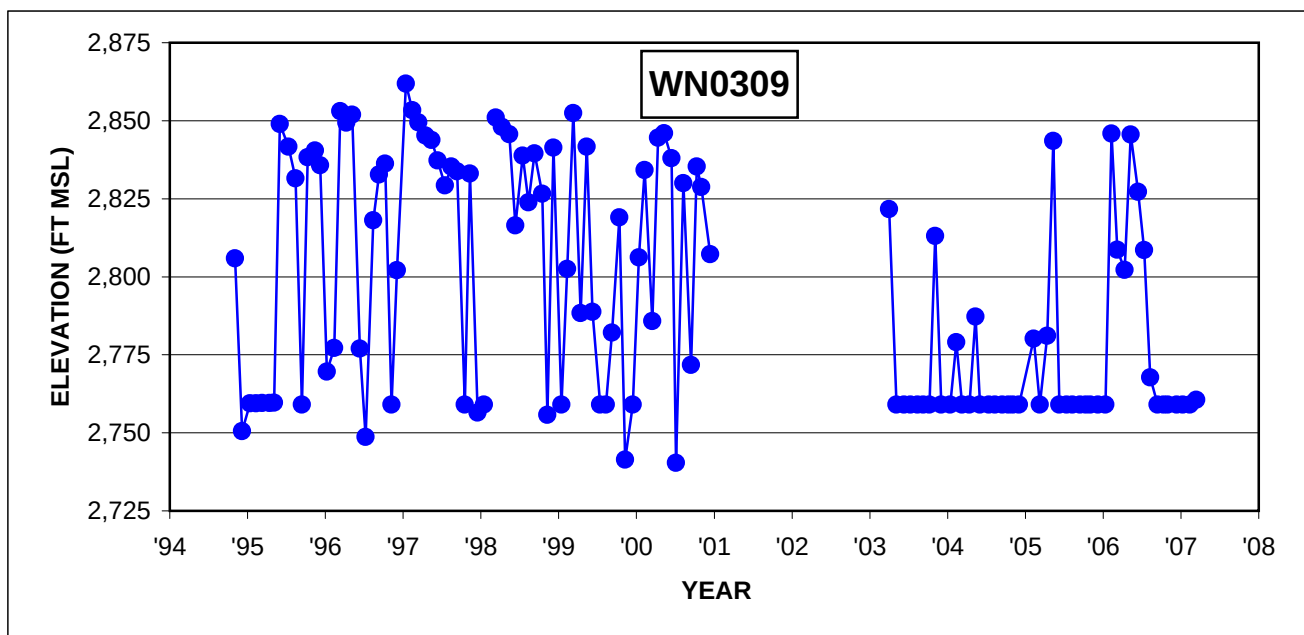
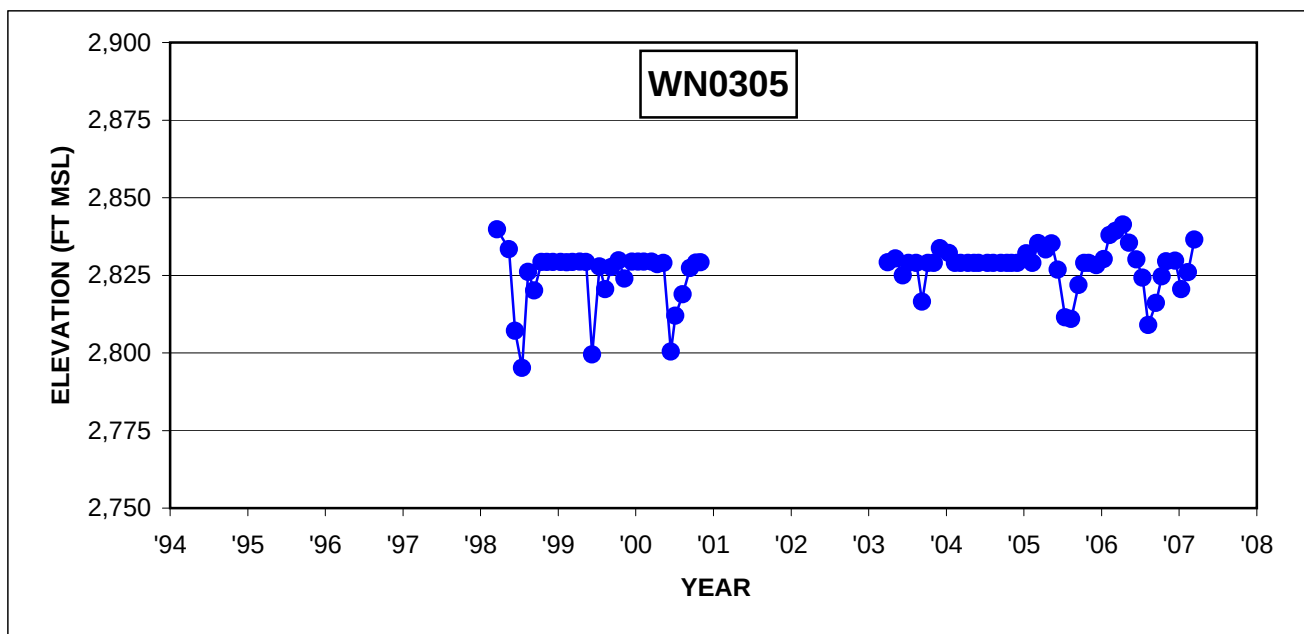
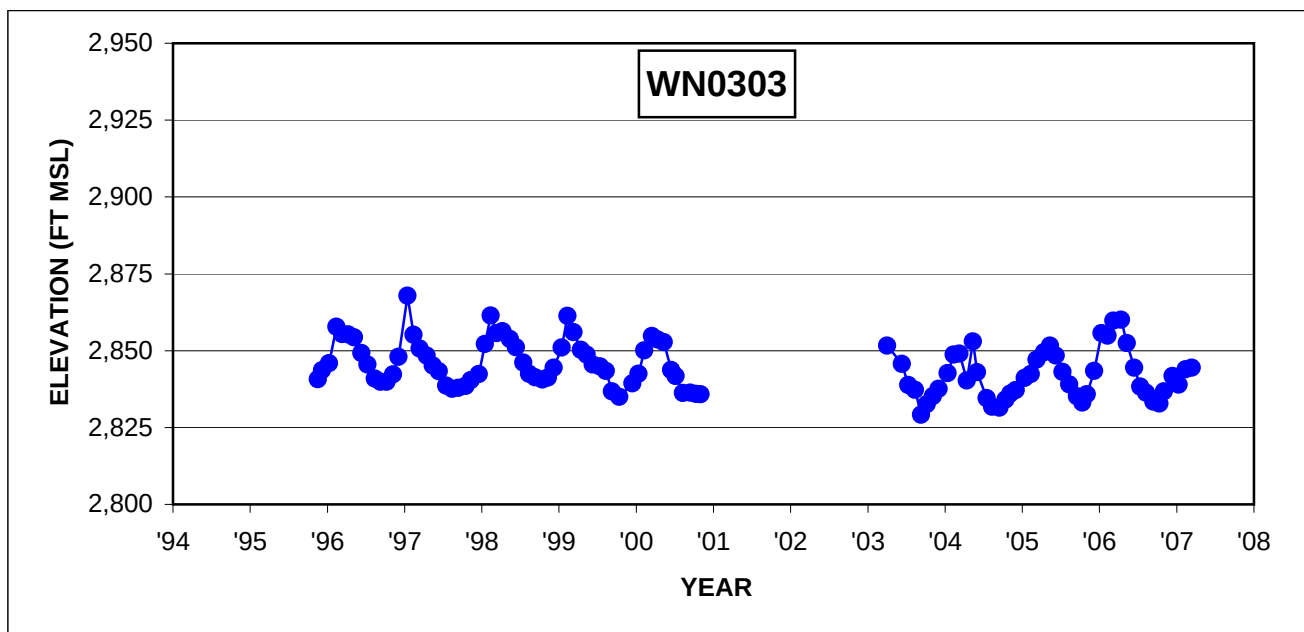


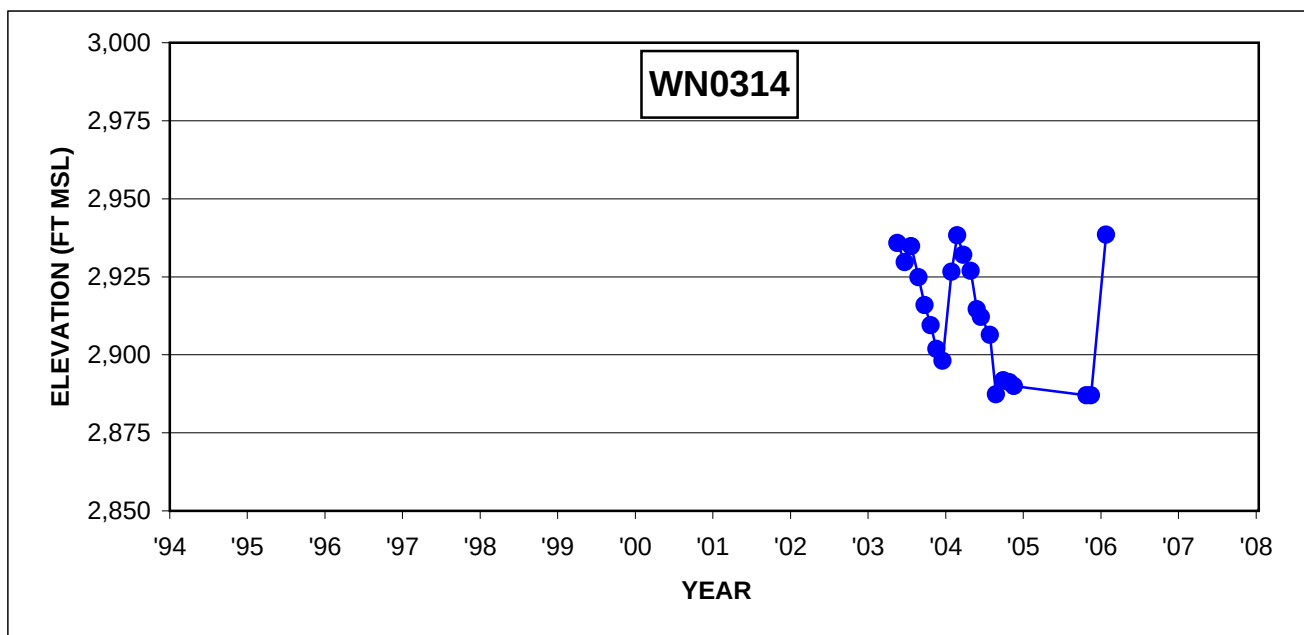
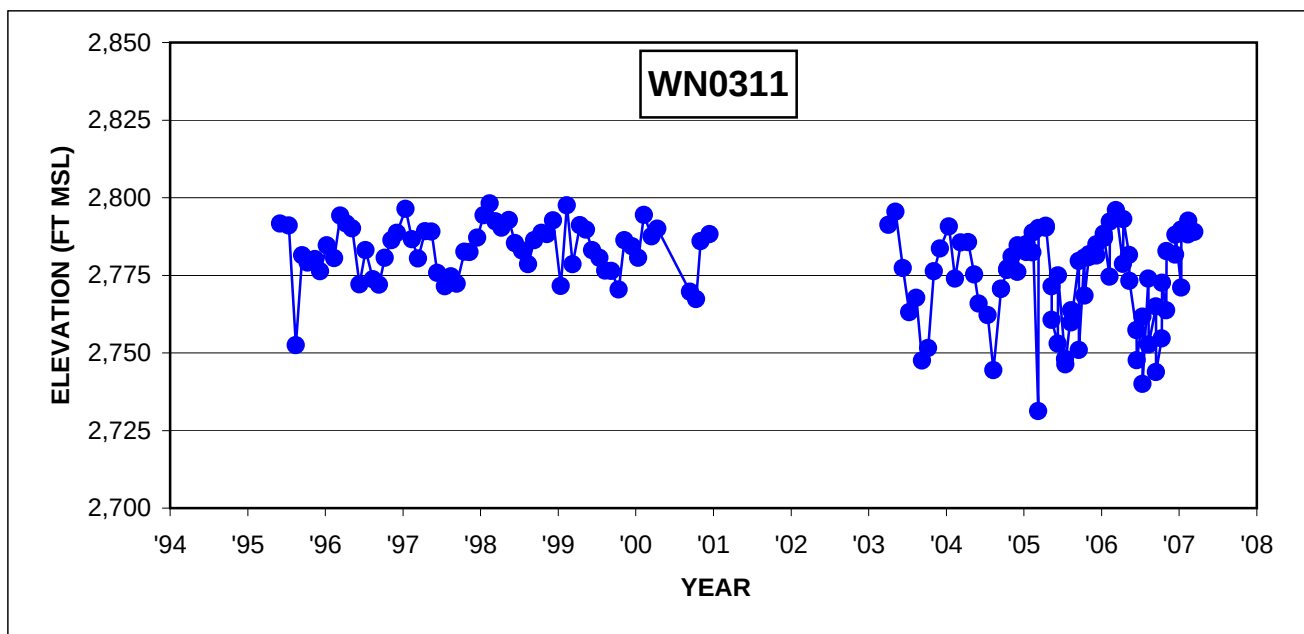
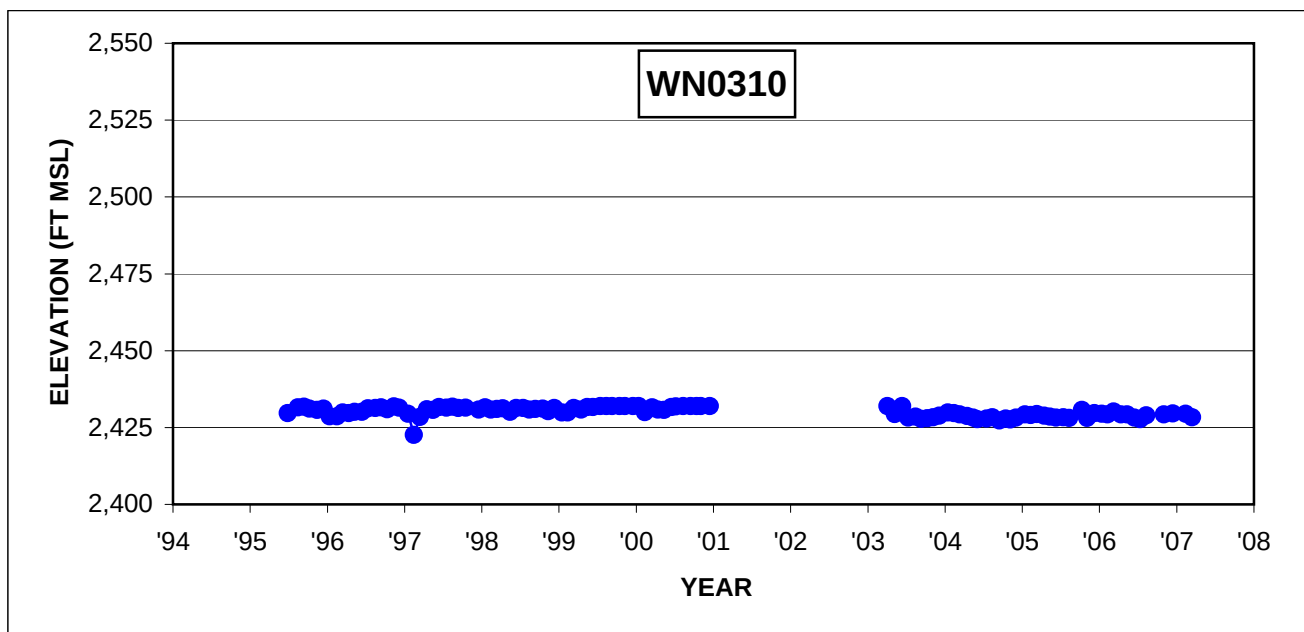


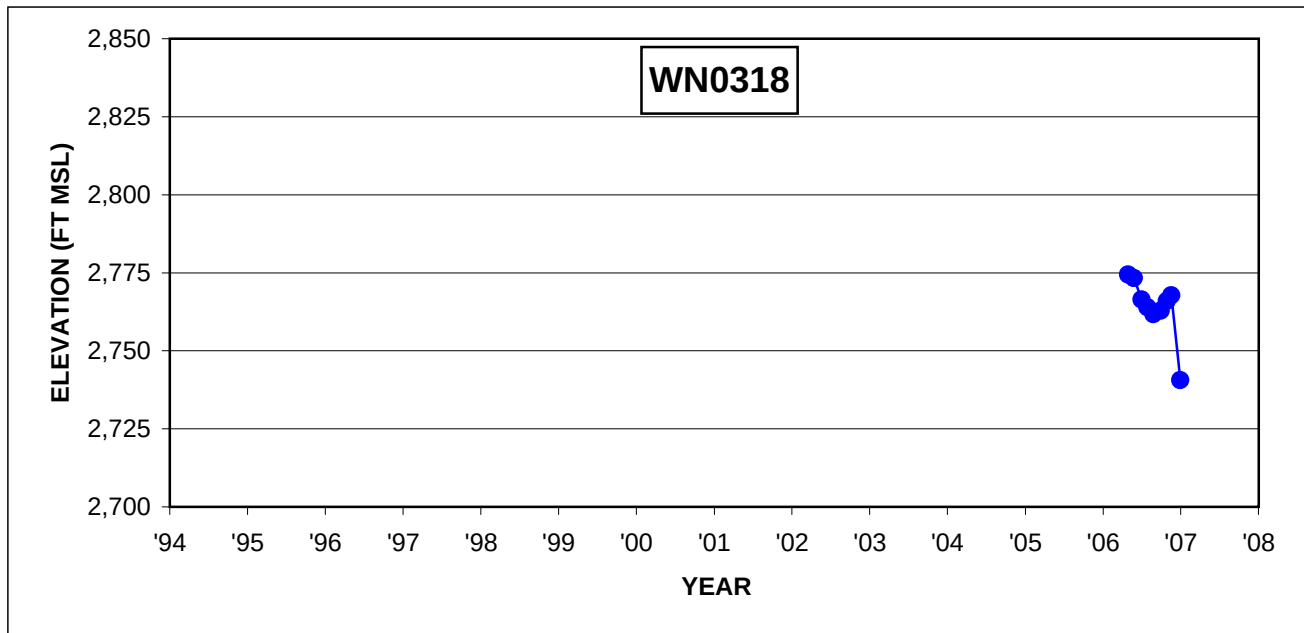
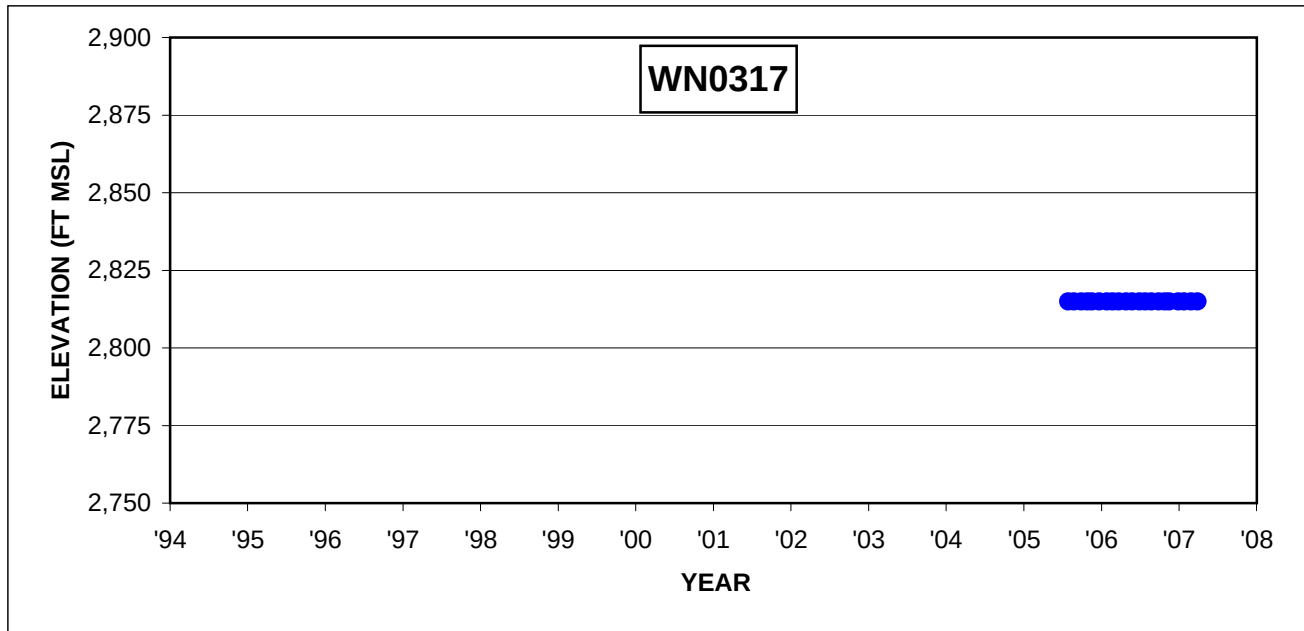
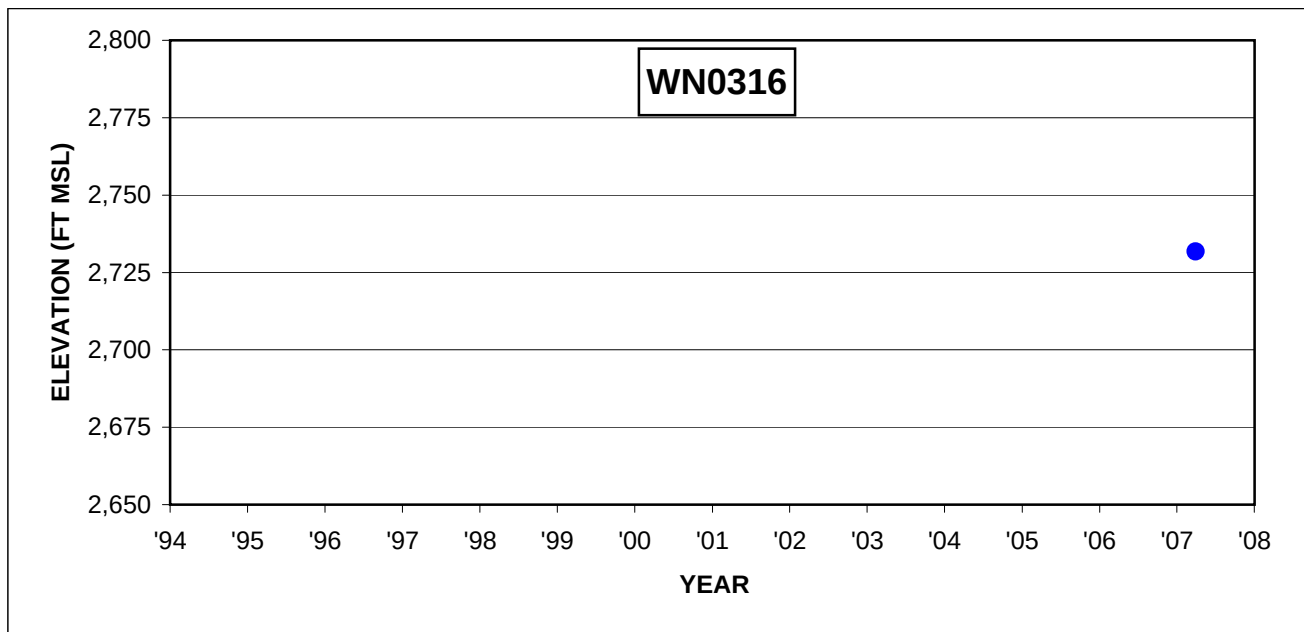


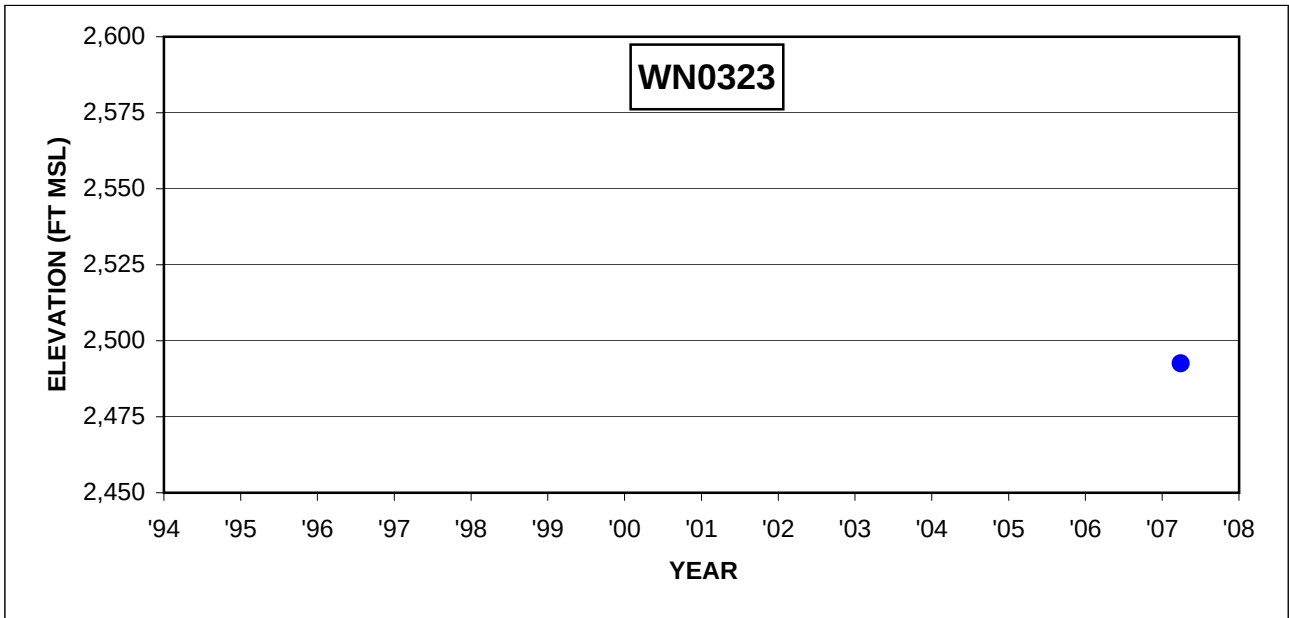
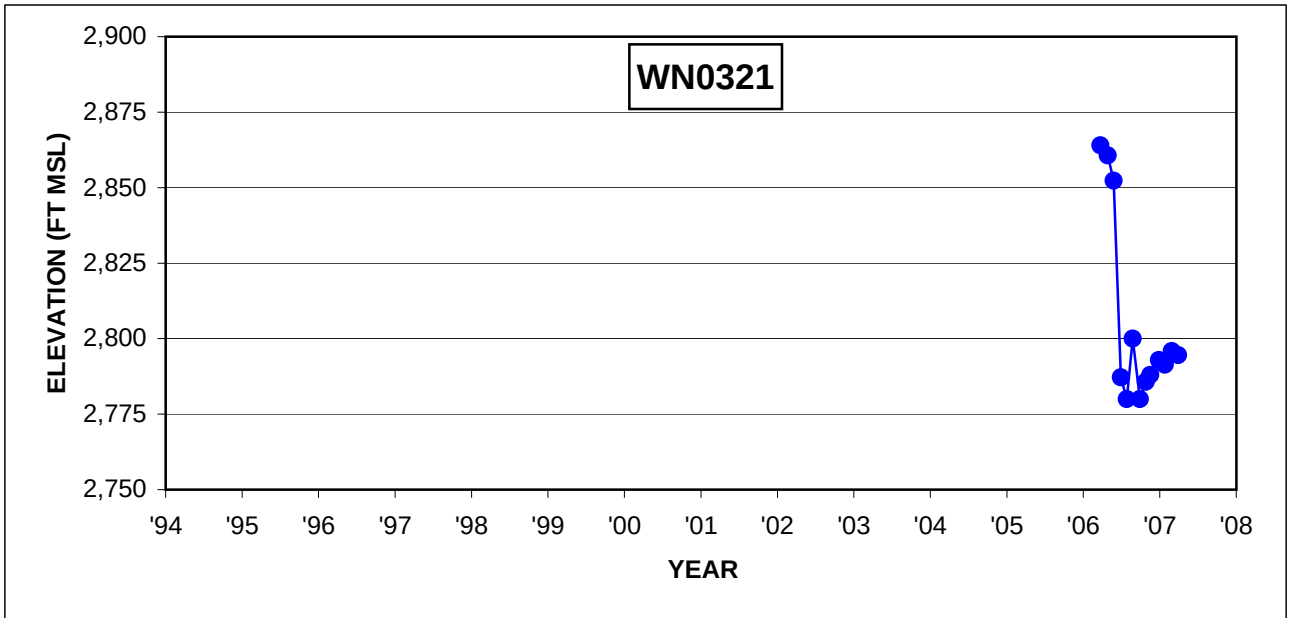












Appendix C – Laboratory Analytical Reports – Water Sampling

March 12, 2018

CLS Labs - Data Room
 3249 Fitzgerald Rd.
 Rancho Cordova, CA 95742

Lab ID : SP 1802199
 Customer : 2-19423

Laboratory Report

Introduction: This report package contains total of 10 pages divided into 3 sections:

Case Narrative	(2 pages) : An overview of the work performed at FGL.
Sample Results	(6 pages) : Results for each sample submitted.
Quality Control	(2 pages) : Supporting Quality Control (QC) results.

Case Narrative

This Case Narrative pertains to the following samples:

Sample Description	Date Sampled	Date Received	FGL Lab ID #	Matrix
D-1	02/13/2018	02/20/2018	SP 1802199-001	W
ED-1	02/13/2018	02/20/2018	SP 1802199-002	W
IMD-1	02/15/2018	02/20/2018	SP 1802199-003	W
IMD-2	02/15/2018	02/20/2018	SP 1802199-004	W
NBS-265	02/15/2018	02/20/2018	SP 1802199-005	W
NBS-2300	02/15/2018	02/20/2018	SP 1802199-006	W

Sampling and Receipt Information: All samples were received in acceptable condition and within temperature requirements, unless noted on the Condition Upon Receipt (CUR) form. All samples arrived at 3 °C. All samples were prepared and analyzed within the method specified hold time. All samples were checked for pH if acid or base preservation is required (except for VOAs). For details of sample receipt information, please see the attached Chain of Custody and Condition Upon Receipt Form.

Quality Control: All samples were prepared and analyzed according to the following tables:

Radio QC

900.0	02/27/2018:202830 All analysis quality controls are within established criteria.
	02/27/2018:202831 All analysis quality controls are within established criteria.
	02/27/2018:202832 All analysis quality controls are within established criteria.
	02/27/2018:202833 All analysis quality controls are within established criteria.
	02/26/2018:202214 All preparation quality controls are within established criteria.
903.0	03/02/2018:203001 All analysis quality controls are within established criteria.

March 12, 2018
CLS Labs - Data Room

Lab ID : SP 1802199
Customer : 2-19423

Radio QC

903.0	03/03/2018:203001 All analysis quality controls are within established criteria.
	02/26/2018:202232 All preparation quality controls are within established criteria, except: The following note applies to Total Alpha Radium (226): 435 Sample matrix may be affecting this analyte. Data was accepted based on the LCS or CCV recovery.
908.0	03/01/2018:202962 All analysis quality controls are within established criteria.
	02/26/2018:202224 All preparation quality controls are within established criteria.
Ra - 05	03/09/2018:203392 All analysis quality controls are within established criteria.
	03/09/2018:203393 All analysis quality controls are within established criteria.
	03/09/2018:203394 All analysis quality controls are within established criteria.
	03/05/2018:202045 All preparation quality controls are within established criteria.

Certification:: I certify that this data package is in compliance with ELAP standards, both technically and for completeness, except for any conditions listed above. Release of the data contained in this data package is authorized by the Laboratory Director or his designee, as verified by the following electronic signature.

KD:CEA

Approved By **David Terz, B.A., M.B.A.**



Digitally signed by David Terz, B.A., M.B.A.
Title: QA Director
Date: 2018-03-12

March 12, 2018

Lab ID : SP 1802199-001

Customer ID : 2-19423

CLS Labs - Data Room

3249 Fitzgerald Rd.

Rancho Cordova, CA 95742

Sampled On : February 13, 2018-13:30

Sampled By : Not Available

Received On : February 20, 2018-09:50

Matrix : Water

Description : D-1

Project : 18B0794

Sample Result - Radio

Constituent	Result ± Error	MDA	Units	MCL/AL	Sample Preparation		Sample Analysis	
					Method	Date/ID	Method	Date/ID
Radio Chemistry								
Gross Alpha	0.057 ± 0.936	1.53	pCi/L	15/5	900.0	02/26/18-09:50 2P1802214	900.0	02/27/18-12:55 2A1802831
Total Alpha Radium (226)	0.000 ± 0.047	0.304	pCi/L	3	903.0	02/26/18-18:45 2P1802232	903.0	03/02/18-18:34 2A1803001
Uranium	0.229 ± 0.450	0.342	pCi/L	20	908.0	02/26/18-13:40 2P1802224	908.0	03/01/18-19:51 2A1802962
Ra 228	0.000 ± 0.584	0.400	pCi/L	2	Ra - 05	03/05/18-18:45 2P1802045	Ra - 05	03/09/18-19:00 2A1803392

ND=Non-Detected. PQL=Practical Quantitation Limit. * PQL adjusted for dilution.

MDA = Minimum Detectable Activity (Calculated at the 95% confidence level) = Data utilized by DHS to determine matrix interference.

MCL / AL = Maximum Contamination Level / Action Level. Alpha's Action Level of 5 pCi/L is based on the Assigned Value (AV).

AV = Assigned Value(Gross Alpha Result + (0.84 x Error)). CCR Section 64442: Drinking Water Compliance Note: Do the following

If Gross Alpha's (AV) exceeds 5 pCi/L run Uranium. If Gross Alpha's (AV) minus Uranium exceeds 5 pCi/L run Radium 226.

Drinking Water Compliance:

Gross Alpha (AV) minus Uranium is less than or equal to 15 pCi/L

Uranium is less than or equal to 20 pCi/L

Radium 226 + Radium 228 is less than or equal to 5 pCi/L

Note: Samples are held for 3-6 months prior to disposal.

March 12, 2018

Lab ID : SP 1802199-002
Customer ID : 2-19423

CLS Labs - Data Room

3249 Fitzgerald Rd.
Rancho Cordova, CA 95742

Sampled On : February 13, 2018-12:50
Sampled By : Not Available
Received On : February 20, 2018-09:50
Matrix : Water

Description : ED-1
Project : 18B0794

Sample Result - Radio

Constituent	Result $\pm$ Error	MDA	Units	MCL/AL	Sample Preparation		Sample Analysis	
					Method	Date/ID	Method	Date/ID
Radio Chemistry								
Gross Alpha	0.784 $\pm$ 1.20	1.49	pCi/L	15/5	900.0	02/26/18-09:50 2P1802214	900.0	02/27/18-13:00 2A1802832
Total Alpha Radium (226)	0.096 $\pm$ 0.115	0.304	pCi/L	3	903.0	02/26/18-18:45 2P1802232	903.0	03/02/18-18:59 2A1803001
Uranium	0.000 $\pm$ 0.329	0.342	pCi/L	20	908.0	02/26/18-13:40 2P1802224	908.0	03/01/18-19:51 2A1802962
Ra 228	0.143 $\pm$ 0.654	0.506	pCi/L	2	Ra - 05	03/05/18-18:45 2P1802045	Ra - 05	03/09/18-18:40 2A1803393

ND=Non-Detected. PQL=Practical Quantitation Limit. * PQL adjusted for dilution.

MDA = Minimum Detectable Activity (Calculated at the 95% confidence level) = Data utilized by DHS to determine matrix interference.
MCL / AL = Maximum Contamination Level / Action Level. Alpha's Action Level of 5 pCi/L is based on the Assigned Value (AV).
AV = Assigned Value(Gross Alpha Result + (0.84 x Error)). CCR Section 64442: Drinking Water Compliance Note: Do the following
If Gross Alpha's (AV) exceeds 5 pCi/L run Uranium. If Gross Alpha's (AV) minus Uranium exceeds 5 pCi/L run Radium 226.

Drinking Water Compliance:

Gross Alpha (AV) minus Uranium is less than or equal to 15 pCi/L
Uranium is less than or equal to 20 pCi/L
Radium 226 + Radium 228 is less than or equal to 5 pCi/L

Note: Samples are held for 3-6 months prior to disposal.

March 12, 2018

Lab ID : SP 1802199-003
Customer ID : 2-19423

CLS Labs - Data Room

3249 Fitzgerald Rd.
Rancho Cordova, CA 95742

Sampled On : February 15, 2018-10:40
Sampled By : Not Available
Received On : February 20, 2018-09:50
Matrix : Water

Description : IMD-1
Project : 18B0794

Sample Result - Radio

Constituent	Result ± Error	MDA	Units	MCL/AL	Sample Preparation		Sample Analysis	
					Method	Date/ID	Method	Date/ID
Radio Chemistry								
Gross Alpha	0.980 ± 1.27	1.58	pCi/L	15/5	900.0	02/26/18-09:50 2P1802214	900.0	02/27/18-13:05 2A1802833
Total Alpha Radium (226)	0.000 ± 0.046	0.304	pCi/L	3	903.0	02/26/18-18:45 2P1802232	903.0	03/02/18-23:07 2A1803001
Uranium	0.459 ± 0.551	0.342	pCi/L	20	908.0	02/26/18-13:40 2P1802224	908.0	03/01/18-19:51 2A1802962
Ra 228	0.000 ± 0.588	0.506	pCi/L	2	Ra - 05	03/05/18-18:45 2P1802045	Ra - 05	03/09/18-19:00 2A1803393

ND=Non-Detected. PQL=Practical Quantitation Limit. * PQL adjusted for dilution.

MDA = Minimum Detectable Activity (Calculated at the 95% confidence level) = Data utilized by DHS to determine matrix interference.
MCL / AL = Maximum Contamination Level / Action Level. Alpha's Action Level of 5 pCi/L is based on the Assigned Value (AV).
AV = Assigned Value(Gross Alpha Result + (0.84 x Error)). CCR Section 64442: Drinking Water Compliance Note: Do the following
If Gross Alpha's (AV) exceeds 5 pCi/L run Uranium. If Gross Alpha's (AV) minus Uranium exceeds 5 pCi/L run Radium 226.

Drinking Water Compliance:

Gross Alpha (AV) minus Uranium is less than or equal to 15 pCi/L
Uranium is less than or equal to 20 pCi/L
Radium 226 + Radium 228 is less than or equal to 5 pCi/L

Note: Samples are held for 3-6 months prior to disposal.

March 12, 2018

Lab ID : SP 1802199-004
Customer ID : 2-19423

CLS Labs - Data Room

3249 Fitzgerald Rd.
Rancho Cordova, CA 95742

Sampled On : February 15, 2018-09:45
Sampled By : Not Available
Received On : February 20, 2018-09:50
Matrix : Water

Description : IMD-2
Project : 18B0794

Sample Result - Radio

Constituent	Result ± Error	MDA	Units	MCL/AL	Sample Preparation		Sample Analysis	
					Method	Date/ID	Method	Date/ID
Radio Chemistry								
Gross Alpha	1.78 ± 0.810	0.803	pCi/L	15/5	900.0	02/26/18-09:50 2P1802214	900.0	02/27/18-12:50 2A1802830
Total Alpha Radium (226)	0.094 ± 0.113	0.304	pCi/L	3	903.0	02/26/18-18:45 2P1802232	903.0	03/02/18-23:32 2A1803001
Uranium	0.000 ± 0.329	0.342	pCi/L	20	908.0	02/26/18-13:40 2P1802224	908.0	03/01/18-19:51 2A1802962
Ra 228	0.113 ± 0.645	0.383	pCi/L	2	Ra - 05	03/05/18-18:45 2P1802045	Ra - 05	03/09/18-19:20 2A1803394

ND=Non-Detected. PQL=Practical Quantitation Limit. * PQL adjusted for dilution.

MDA = Minimum Detectable Activity (Calculated at the 95% confidence level) = Data utilized by DHS to determine matrix interference.
MCL / AL = Maximum Contamination Level / Action Level. Alpha's Action Level of 5 pCi/L is based on the Assigned Value (AV).
AV = Assigned Value(Gross Alpha Result + (0.84 x Error)). CCR Section 64442: Drinking Water Compliance Note: Do the following
If Gross Alpha's (AV) exceeds 5 pCi/L run Uranium. If Gross Alpha's (AV) minus Uranium exceeds 5 pCi/L run Radium 226.

Drinking Water Compliance:

Gross Alpha (AV) minus Uranium is less than or equal to 15 pCi/L
Uranium is less than or equal to 20 pCi/L
Radium 226 + Radium 228 is less than or equal to 5 pCi/L

Note: Samples are held for 3-6 months prior to disposal.

March 12, 2018

Lab ID : SP 1802199-005
Customer ID : 2-19423

CLS Labs - Data Room

3249 Fitzgerald Rd.
Rancho Cordova, CA 95742

Sampled On : February 15, 2018-15:33
Sampled By : Not Available
Received On : February 20, 2018-09:50
Matrix : Water

Description : NBS-265
Project : 18B0794

Sample Result - Radio

Constituent	Result ± Error	MDA	Units	MCL/AL	Sample Preparation		Sample Analysis	
					Method	Date/ID	Method	Date/ID
Radio Chemistry								
Gross Alpha	1.02 ± 1.24	1.49	pCi/L	15/5	900.0	02/26/18-09:50 2P1802214	900.0	02/27/18-12:55 2A1802831
Total Alpha Radium (226)	0.047 ± 0.092	0.304	pCi/L	3	903.0	02/26/18-18:45 2P1802232	903.0	03/02/18-23:56 2A1803001
Uranium	0.229 ± 0.450	0.342	pCi/L	20	908.0	02/26/18-13:40 2P1802224	908.0	03/01/18-19:51 2A1802962
Ra 228	0.000 ± 0.546	0.400	pCi/L	2	Ra - 05	03/05/18-18:45 2P1802045	Ra - 05	03/09/18-19:40 2A1803392

ND=Non-Detected. PQL=Practical Quantitation Limit. * PQL adjusted for dilution.

MDA = Minimum Detectable Activity (Calculated at the 95% confidence level) = Data utilized by DHS to determine matrix interference.
MCL / AL = Maximum Contamination Level / Action Level. Alpha's Action Level of 5 pCi/L is based on the Assigned Value (AV).
AV = Assigned Value(Gross Alpha Result + (0.84 x Error)). CCR Section 64442: Drinking Water Compliance Note: Do the following
If Gross Alpha's (AV) exceeds 5 pCi/L run Uranium. If Gross Alpha's (AV) minus Uranium exceeds 5 pCi/L run Radium 226.

Drinking Water Compliance:

Gross Alpha (AV) minus Uranium is less than or equal to 15 pCi/L
Uranium is less than or equal to 20 pCi/L
Radium 226 + Radium 228 is less than or equal to 5 pCi/L

Note: Samples are held for 3-6 months prior to disposal.

March 12, 2018

Lab ID : SP 1802199-006

Customer ID : 2-19423

CLS Labs - Data Room

3249 Fitzgerald Rd.

Rancho Cordova, CA 95742

Sampled On : February 15, 2018-18:10

Sampled By : Not Available

Received On : February 20, 2018-09:50

Matrix : Water

Description : NBS-2300

Project : 18B0794

Sample Result - Radio

Constituent	Result ± Error	MDA	Units	MCL/AL	Sample Preparation		Sample Analysis	
					Method	Date/ID	Method	Date/ID
Radio Chemistry								
Gross Alpha	0.986 ± 1.25	1.48	pCi/L	15/5	900.0	02/26/18-09:50 2P1802214	900.0	02/27/18-13:00 2A1802832
Total Alpha Radium (226)	0.117 ± 0.122	0.304	pCi/L	3	903.0	02/26/18-18:45 2P1802232	903.0	03/03/18-00:21 2A1803001
Uranium	0.229 ± 0.450	0.342	pCi/L	20	908.0	02/26/18-13:40 2P1802224	908.0	03/01/18-19:51 2A1802962
Ra 228	0.001 ± 0.672	0.506	pCi/L	2	Ra - 05	03/05/18-18:45 2P1802045	Ra - 05	03/09/18-19:20 2A1803393

ND=Non-Detected. PQL=Practical Quantitation Limit. * PQL adjusted for dilution.

MDA = Minimum Detectable Activity (Calculated at the 95% confidence level) = Data utilized by DHS to determine matrix interference.

MCL / AL = Maximum Contamination Level / Action Level. Alpha's Action Level of 5 pCi/L is based on the Assigned Value (AV).

AV = Assigned Value(Gross Alpha Result + (0.84 x Error)). CCR Section 64442: Drinking Water Compliance Note: Do the following

If Gross Alpha's (AV) exceeds 5 pCi/L run Uranium. If Gross Alpha's (AV) minus Uranium exceeds 5 pCi/L run Radium 226.

Drinking Water Compliance:

Gross Alpha (AV) minus Uranium is less than or equal to 15 pCi/L

Uranium is less than or equal to 20 pCi/L

Radium 226 + Radium 228 is less than or equal to 5 pCi/L

Note: Samples are held for 3-6 months prior to disposal.

March 12, 2018
CLS Labs - Data Room

Lab ID : SP 1802199
 Customer : 2-19423

Quality Control - Radio

Constituent	Method	Date/ID	Type	Units	Conc.	QC Data	DQO	Note
Radio Alpha	900.0	02/27/18:202830aat	CCV CCB	cpm cpm	8203	41.0 % 0.10	35-47 0.2	
	900.0	02/27/18:202831aat	CCV CCB	cpm cpm	8203	42.4 % 0.100	35-47 0.14	
	900.0	02/27/18:202832aat	CCV CCB	cpm cpm	8203	40.2 % 0.0800	35-47 0.13	
	900.0	02/27/18:202833aat	CCV CCB	cpm cpm	8203	41.3 % 0.1200	35-47 0.17	
Gross Alpha	900.0	02/26/18:202214aat	Blank LCS BS BSD BSRPD	pCi/L pCi/L pCi/L pCi/L pCi/L	107.8 107.8 107.8 107.8	0.41 118 % 108 % 122 % 12.1%	3 75-125 60-140 60-140 ≤30	
Alpha	903.0	03/03/18:203001aat	CCV CCB	cpm cpm	8571	41.2 % 0.100	37-46 0.12	
Total Alpha Radium (226)	903.0	02/26/18:202232aat (SP 1802099-001) (SP 1802138-005)	RgBlk LCS MS MSD MSRPD MS MSD MSRPD	pCi/L pCi/L pCi/L pCi/L pCi/L pCi/L pCi/L pCi/L	24.21 24.21 24.21 24.21 24.21 24.21 24.21 24.21	-0.003 104 % 108 % 112 % 3.0% 94.6 % 109 % 13.9%	2 52-107 43-111 43-111 ≤35.5 43-111 43-111 ≤35.5	435
Alpha	908.0	03/01/18:202962aat	CCV CCB	cpm cpm	8571	40.8 % 0.0600	36-45 0.12	
Uranium	908.0	02/26/18:202224aat	RgBlk LRS BS BSD BSRPD	pCi/L pCi/L pCi/L pCi/L pCi/L	26.84 26.84 26.84 26.84 26.84	-0.02 59.8 % 112 % 119 % 5.5%	1 54-105 75-125 75-125 ≤20	
Beta	Ra - 05	03/09/18:203392emv	CCV CCB	cpm cpm	8565	88.9 % 0.4000	84-94 0.48	
	Ra - 05	03/09/18:203393emv	CCV CCB	cpm cpm	8565	88.9 % 0.4000	84-94 0.58	
	Ra - 05	03/09/18:203394emv	CCV CCB	cpm cpm	8565	88.8 % 0.4000	84-94 0.51	
Ra 228	Ra - 05	03/05/18:202045emv	RgBlk LRS BS BSD BSRPD	pCi/L pCi/L pCi/L pCi/L pCi/L	33.60 33.60 33.60 33.60 33.60	0.03 79.8 % 93.8 % 97.2 % 3.5%	3 65-108 75-125 75-125 ≤25	
Definition CCV : Continuing Calibration Verification - Analyzed to verify the instrument calibration is within criteria. CCB : Continuing Calibration Blank - Analyzed to verify the instrument baseline is within criteria. Blank : Method Blank - Prepared to verify that the preparation process is not contributing contamination to the samples. RgBlk : Method Reagent Blank - Prepared to correct for any reagent contributions to sample result. LCS : Laboratory Control Standard/Sample - Prepared to verify that the preparation process is not affecting analyte recovery. LRS : Laboratory Recovery Standard - Prepared to establish the batch recovery factor used in result calculations. MS : Matrix Spikes - A random sample is spiked with a known amount of analyte. The recoveries are an indication of how that sample matrix affects analyte recovery. MSD : Matrix Spike Duplicate of MS/MSD pair - A random sample duplicate is spiked with a known amount of analyte. The recoveries are an indication of how that sample matrix affects analyte recovery. BS : Blank Spikes - A blank is spiked with a known amount of analyte. It is prepared to verify that the preparation process is not affecting analyte recovery. BSD : Blank Spike Duplicate of BS/BSD pair - A blank duplicate is spiked with a known amount of analyte. It is prepared to verify that the preparation process is not affecting analyte recovery.								

March 12, 2018
CLS Labs - Data Room

Lab ID : SP 1802199
Customer : 2-19423

Quality Control - Radio

Definition	
MSRPD	: MS/MSD Relative Percent Difference (RPD) - The MS relative percent difference is an indication of precision for the preparation and analysis.
BSRPD	: BS/BSD Relative Percent Difference (RPD) - The BS relative percent difference is an indication of precision for the preparation and analysis.
DQO	: Data Quality Objective - This is the criteria against which the quality control data is compared.
Explanation	
435	: Sample matrix may be affecting this analyte. Data was accepted based on the LCS or CCV recovery.

SUBCONTRACT ORDER

18B0794

1802199

SENDING LABORATORY:

CLS Labs
 3249 Fitzgerald Rd.
 Rancho Cordova, CA 95742
 Phone: 916-638-7301
 Fax: 916-638-4510
 Project Manager: Mark Smith
 Project: Rise

RECEIVING LABORATORY:

FGL Labs - Santa Paula
 853 Corporation Street
 Santa Paula, CA 93060
 Phone: (805) 392-2000
 Fax: (805) 525-4172

REVISED
 2/20/18

Analysis	TAT	Due	Expires	Laboratory ID	Sample Date	Received	Matrix
Radium-226 (SUB)	10	03/05/18 12:00	03/15/18 13:30	18B0794-01	02/13/18 13:30	02/16/18 14:40	Water

Client sample ID: D-1

Sampler:

Laboratory sample ID: 18B0794-01

Please use client sample ID on all reports

Containers Supplied:

1L Poly - HNO3 (A)	1L Poly - HNO3 (B)	1L Poly - HNO3 (C)	1L Poly - HNO3 (D)	1L Poly - Unpres (E)
Radium-228 (SUB)	10	03/05/18 12:00	03/15/18 13:30	18B0794-01

Client sample ID: D-1

Sampler:

Laboratory sample ID: 18B0794-01

Please use client sample ID on all reports

Containers Supplied:

1L Poly - HNO3 (A)	1L Poly - HNO3 (B)	1L Poly - HNO3 (C)	1L Poly - HNO3 (D)	1L Poly - Unpres (E)
Uranium (SUB)	10	03/05/18 12:00	03/15/18 13:30	18B0794-01

Client sample ID: D-1

Sampler:

Laboratory sample ID: 18B0794-01

Please use client sample ID on all reports

Containers Supplied:

1L Poly - HNO3 (A)	1L Poly - HNO3 (B)	1L Poly - HNO3 (C)	1L Poly - HNO3 (D)	1L Poly - Unpres (E)

Relinquished By

Date

Received By

Date

Relinquished By

Date

Received By

Date

Shipped By

Airbill Number

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SUBCONTRACT ORDER

18B0794

1802199

Analysis	TAT	Due	Expires	Laboratory ID	Sample Date	Received	Matrix
Gross alpha SUB	10	03/05/18 12:00	03/15/18 13:30	18B0794-01	02/13/18 13:30	02/16/18 14:40	Water

Client sample ID: D-1

Sampler:

Laboratory sample ID: 18B0794-01

Please use client sample ID on all reports

REVISED
2/20/18

Containers Supplied:

1L Poly - HNO3 (A)	1L Poly - HNO3 (B)	1L Poly - HNO3 (C)	1L Poly - HNO3 (D)	1L Poly - Unpres (E)

Relinquished By	Date	Received By	Date
WPS	2/20/18 0950	CMC	2/20/18 0950
Relinquished By	Date	Received By	Date

Shipped By

Airbill Number

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SUBCONTRACT ORDER

18B0794

1802199

Analysis	TAT	Due	Expires	Laboratory ID	Sample Date	Received	Matrix
Gross alpha SUB	10	03/05/18 12:00	03/15/18 12:50	18B0794-02	02/13/18 12:50	02/16/18 14:40	Water

Client sample ID: ED-1

Sampler:

Laboratory sample ID: 18B0794-02

Please use client sample ID on all reports

REVISED
2/20/18

Containers Supplied:

1L Poly - HNO3 (A)	1L Poly - HNO3 (B)	1L Poly - HNO3 (C)	1L Poly - HNO3 (D)	1L Poly - Unpres (E)
Radium-226 (SUB)	10	03/05/18 12:00	03/15/18 12:50	18B0794-02

Client sample ID: ED-1

Sampler:

Laboratory sample ID: 18B0794-02

Please use client sample ID on all reports

Containers Supplied:

1L Poly - HNO3 (A)	1L Poly - HNO3 (B)	1L Poly - HNO3 (C)	1L Poly - HNO3 (D)	1L Poly - Unpres (E)
Radium-228 (SUB)	10	03/05/18 12:00	03/15/18 12:50	18B0794-02

Client sample ID: ED-1

Sampler:

Laboratory sample ID: 18B0794-02

Please use client sample ID on all reports

Containers Supplied:

1L Poly - HNO3 (A)	1L Poly - HNO3 (B)	1L Poly - HNO3 (C)	1L Poly - HNO3 (D)	1L Poly - Unpres (E)
Uranium (SUB)	10	03/05/18 12:00	03/15/18 12:50	18B0794-02

Client sample ID: ED-1

Sampler:

Laboratory sample ID: 18B0794-02

Please use client sample ID on all reports

Containers Supplied:

1L Poly - HNO3 (A)	1L Poly - HNO3 (B)	1L Poly - HNO3 (C)	1L Poly - HNO3 (D)	1L Poly - Unpres (E)

Relinquished By

Date

Received By

Date

Relinquished By

Date

Received By

Date

Shipped By

Airbill Number

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SUBCONTRACT ORDER

18B0794

1802199

Analysis	TAT	Due	Expires	Laboratory ID	Sample Date	Received	Matrix
Uranium (SUB)	10	03/05/18 12:00	03/17/18 10:40	18B0794-03	02/15/18 10:40	02/16/18 14:40	Water

Client sample ID: IMD-1

Sampler:

Laboratory sample ID: 18B0794-03

Please use client sample ID on all reports

REVISED
2/20/18

Containers Supplied:

1L Poly - HNO3 (A)	1L Poly - HNO3 (B)	1L Poly - HNO3 (C)	1L Poly - HNO3 (D)	1L Poly - Unpres (E)
Gross alpha SUB	10	03/05/18 12:00	03/17/18 10:40	18B0794-03

Client sample ID: IMD-1

Sampler:

Laboratory sample ID: 18B0794-03

Please use client sample ID on all reports

Containers Supplied:

1L Poly - HNO3 (A)	1L Poly - HNO3 (B)	1L Poly - HNO3 (C)	1L Poly - HNO3 (D)	1L Poly - Unpres (E)
Radium-226 (SUB)	10	03/05/18 12:00	03/17/18 10:40	18B0794-03

Client sample ID: IMD-1

Sampler:

Laboratory sample ID: 18B0794-03

Please use client sample ID on all reports

Containers Supplied:

1L Poly - HNO3 (A)	1L Poly - HNO3 (B)	1L Poly - HNO3 (C)	1L Poly - HNO3 (D)	1L Poly - Unpres (E)
Radium-228 (SUB)	10	03/05/18 12:00	03/17/18 10:40	18B0794-03

Client sample ID: IMD-1

Sampler:

Laboratory sample ID: 18B0794-03

Please use client sample ID on all reports

Containers Supplied:

1L Poly - HNO3 (A)	1L Poly - HNO3 (B)	1L Poly - HNO3 (C)	1L Poly - HNO3 (D)	1L Poly - Unpres (E)

Relinquished By

Date

Received By

Date

WPS 2/20/18 0950

Curtis 2/20/18 0950

Relinquished By

Date

Received By

Date

Shipped By

Airbill Number

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SUBCONTRACT ORDER

18B0794

1802199

Analysis	TAT	Due	Expires	Laboratory ID	Sample Date	Received	Matrix
Radium-226 (SUB)	10	03/05/18 12:00	03/17/18 09:45	18B0794-04	02/15/18 09:45	02/16/18 14:40	Water

Client sample ID: IMD-2

Sampler:

Laboratory sample ID: 18B0794-04

Please use client sample ID on all reports

REVISED
2/20/18

Containers Supplied:

1L Poly - HNO3 (A)	1L Poly - HNO3 (B)	1L Poly - HNO3 (C)	1L Poly - HNO3 (D)	1L Poly - Unpres (E)			
Radium-228 (SUB)	10	03/05/18 12:00	03/17/18 09:45	18B0794-04	02/15/18 09:45	02/16/18 14:40	Water

Client sample ID: IMD-2

Sampler:

Laboratory sample ID: 18B0794-04

Please use client sample ID on all reports

Containers Supplied:

1L Poly - HNO3 (A)	1L Poly - HNO3 (B)	1L Poly - HNO3 (C)	1L Poly - HNO3 (D)	1L Poly - Unpres (E)			
Uranium (SUB)	10	03/05/18 12:00	03/17/18 09:45	18B0794-04	02/15/18 09:45	02/16/18 14:40	Water

Client sample ID: IMD-2

Sampler:

Laboratory sample ID: 18B0794-04

Please use client sample ID on all reports

Containers Supplied:

1L Poly - HNO3 (A)	1L Poly - HNO3 (B)	1L Poly - HNO3 (C)	1L Poly - HNO3 (D)	1L Poly - Unpres (E)			
Gross alpha SUB	10	03/05/18 12:00	03/17/18 09:45	18B0794-04	02/15/18 09:45	02/16/18 14:40	Water

Client sample ID: IMD-2

Sampler:

Laboratory sample ID: 18B0794-04

Please use client sample ID on all reports

Containers Supplied:

1L Poly - HNO3 (A)	1L Poly - HNO3 (B)	1L Poly - HNO3 (C)	1L Poly - HNO3 (D)	1L Poly - Unpres (E)

Relinquished By	Date	Received By	Date
WPS	2/20/18 0950	Cumt	2/20/18 0950
Relinquished By	Date	Received By	Date

Shipped By

Airbill Number

SUBCONTRACT ORDER

18B0794

1802199

Analysis	TAT	Due	Expires	Laboratory ID	Sample Date	Received	Matrix
Gross alpha SUB	10	03/05/18 12:00	03/17/18 15:33	18B0794-05	02/15/18 15:33	02/16/18 14:40	Water

Client sample ID: NBS-265

Sampler:

Laboratory sample ID: 18B0794-05

Please use client sample ID on all reports

REVISED
2/20/18

Containers Supplied:

1L Poly - HNO3 (A)	1L Poly - HNO3 (B)	1L Poly - HNO3 (C)	1L Poly - HNO3 (D)	1L Poly - Unpres (E)
Radium-226 (SUB)	10	03/05/18 12:00	03/17/18 15:33	18B0794-05

Client sample ID: NBS-265

Sampler:

Laboratory sample ID: 18B0794-05

Please use client sample ID on all reports

Containers Supplied:

1L Poly - HNO3 (A)	1L Poly - HNO3 (B)	1L Poly - HNO3 (C)	1L Poly - HNO3 (D)	1L Poly - Unpres (E)
Radium-228 (SUB)	10	03/05/18 12:00	03/17/18 15:33	18B0794-05

Client sample ID: NBS-265

Sampler:

Laboratory sample ID: 18B0794-05

Please use client sample ID on all reports

Containers Supplied:

1L Poly - HNO3 (A)	1L Poly - HNO3 (B)	1L Poly - HNO3 (C)	1L Poly - HNO3 (D)	1L Poly - Unpres (E)
Uranium (SUB)	10	03/05/18 12:00	03/17/18 15:33	18B0794-05

Client sample ID: NBS-265

Sampler:

Laboratory sample ID: 18B0794-05

Please use client sample ID on all reports

Containers Supplied:

1L Poly - HNO3 (A)	1L Poly - HNO3 (B)	1L Poly - HNO3 (C)	1L Poly - HNO3 (D)	1L Poly - Unpres (E)

Relinquished By

Date

Received By

Date

WPS	2/20/18 0950	Curtis	2/20/18 0950

Relinquished By

Date

Received By

Date

Shipped By

Airbill Number

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SUBCONTRACT ORDER

18B0794

1802199

Analysis	TAT	Due	Expires	Laboratory ID	Sample Date	Received	Matrix
Uranium (SUB)	10	03/05/18 12:00	03/17/18 18:10	18B0794-08	02/15/18 18:10	02/16/18 14:40	Water

Client sample ID: NBS-2300

Sampler:

Laboratory sample ID: 18B0794-08

Please use client sample ID on all reports

REVISED
2/20/18

Containers Supplied:

1L Poly - HNO3 (A)	1L Poly - HNO3 (B)	1L Poly - HNO3 (C)	1L Poly - HNO3 (D)	1L Poly - Unpres (E)
Gross alpha SUB	10	03/05/18 12:00	03/17/18 18:10	18B0794-08

Client sample ID: NBS-2300

Sampler:

Laboratory sample ID: 18B0794-08

Please use client sample ID on all reports

Containers Supplied:

1L Poly - HNO3 (A)	1L Poly - HNO3 (B)	1L Poly - HNO3 (C)	1L Poly - HNO3 (D)	1L Poly - Unpres (E)
Radium-226 (SUB)	10	03/05/18 12:00	03/17/18 18:10	18B0794-08

Client sample ID: NBS-2300

Sampler:

Laboratory sample ID: 18B0794-08

Please use client sample ID on all reports

Containers Supplied:

1L Poly - HNO3 (A)	1L Poly - HNO3 (B)	1L Poly - HNO3 (C)	1L Poly - HNO3 (D)	1L Poly - Unpres (E)
Radium-228 (SUB)	10	03/05/18 12:00	03/17/18 18:10	18B0794-08

Client sample ID: NBS-2300

Sampler:

Laboratory sample ID: 18B0794-08

Please use client sample ID on all reports

Containers Supplied:

1L Poly - HNO3 (A)	1L Poly - HNO3 (B)	1L Poly - HNO3 (C)	1L Poly - HNO3 (D)	1L Poly - Unpres (E)

Relinquished By

Date

Received By

Date

WPS	2/20/18	0950	Cumt	2/20/18	0950

Relinquished By

Date

Received By

Date

Shipped By

Airbill Number

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SUBCONTRACT ORDER

18B0794

1802199

10f8

#1 = 50/bs #2 51/bs

SENDING LABORATORY:

CLS Labs
3249 Fitzgerald Rd.
Rancho Cordova, CA 95742
Phone: 916-638-7301
Fax: 916-638-4510
Project Manager: Mark Smith

RECEIVING LABORATORY:

FGL Labs - Santa Paula
853 Corporation Street
Santa Paula, CA 93060
Phone : (805) 392-2000
Fax: (805) 525-4172

Analysis	TAT	Due	Expires	Laboratory ID	Sample Date	Received	Matrix
Radium-226 (SUB)	10	03/05/18 12:00	03/15/18 13:30	18B0794-01	02/13/18 13:30	02/16/18 14:40	Water

Client sample ID: D-1

Laboratory sample ID: 18B0794-01

Please use client sample ID on all reports

Containers Supplied:

1L Poly - HNO3 (A) 1L Poly - HNO3 (B) 1L Poly - HNO3 (C) 1L Poly - HNO3 (D) 1L Poly - Unpres (E)

Radium-228 (SUB)	10	03/05/18 12:00	03/15/18 13:30	18B0794-01	02/13/18 13:30	02/16/18 14:40	Water

Client sample ID: D-1

Laboratory sample ID: 18B0794-01

Please use client sample ID on all reports

Containers Supplied:

1L Poly - HNO3 (A) 1L Poly - HNO3 (B) 1L Poly - HNO3 (C) 1L Poly - HNO3 (D) 1L Poly - Unpres (E)

Uranium (SUB)	10	03/05/18 12:00	03/15/18 13:30	18B0794-01	02/13/18 13:30	02/16/18 14:40	Water

Client sample ID: D-1

Laboratory sample ID: 18B0794-01

Please use client sample ID on all reports

Containers Supplied:

1L Poly - HNO3 (A) 1L Poly - HNO3 (B) 1L Poly - HNO3 (C) 1L Poly - HNO3 (D) 1L Poly - Unpres (E)

Relinquished By

Date

Received By

Date

Relinquished By

Date

Received By

Date

Shipped By

Airbill Number

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1. TRACKING #: 1Z 2A8 49X 13 9276 2133

4. TRACKING #: 1Z 2A8 49X 13 9428 8125

SUBCONTRACT ORDER

18B0794

1802199

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Analysis	TAT	Due	Expires	Laboratory ID	Sample Date	Received	Matrix
Gross alpha SUB	10	03/05/18 12:00	03/15/18 13:30	18B0794-01	02/13/18 13:30	02/16/18 14:40	Water

Client sample ID: D-1

Laboratory sample ID: 18B0794-01

Please use client sample ID on all reports

Containers Supplied:

1L Poly - HNO3 (A)	1L Poly - HNO3 (B)	1L Poly - HNO3 (C)	1L Poly - HNO3 (D)	1L Poly - Unpres (E)

Relinquished By

Date

Received By

Date

Relinquished By

Date

Received By

Date

Shipped By

Airbill Number

Page 2 of 8

1. 122A849X1392762133

4. 122A849X1394288125

SUBCONTRACT ORDER
18B0794

1802199

3 of 8

Analysis	TAT	Due	Expires	Laboratory ID	Sample Date	Received	Matrix
Gross alpha SUB	10	03/05/18 12:00	03/15/18 12:50	18B0794-02	02/13/18 12:50	02/16/18 14:40	Water

Client sample ID: ED-1

Laboratory sample ID: 18B0794-02

Please use client sample ID on all reports

Containers Supplied:

1L Poly - HNO3 (A) 1L Poly - HNO3 (B) 1L Poly - HNO3 (C) 1L Poly - HNO3 (D) 1L Poly - Unpres (E)

Radium-226 (SUB)	10	03/05/18 12:00	03/15/18 12:50	18B0794-02	02/13/18 12:50	02/16/18 14:40	Water

Client sample ID: ED-1

Laboratory sample ID: 18B0794-02

Please use client sample ID on all reports

Containers Supplied:

1L Poly - HNO3 (A) 1L Poly - HNO3 (B) 1L Poly - HNO3 (C) 1L Poly - HNO3 (D) 1L Poly - Unpres (E)

Radium-228 (SUB)	10	03/05/18 12:00	03/15/18 12:50	18B0794-02	02/13/18 12:50	02/16/18 14:40	Water

Client sample ID: ED-1

Laboratory sample ID: 18B0794-02

Please use client sample ID on all reports

Containers Supplied:

1L Poly - HNO3 (A) 1L Poly - HNO3 (B) 1L Poly - HNO3 (C) 1L Poly - HNO3 (D) 1L Poly - Unpres (E)

Uranium (SUB)	10	03/05/18 12:00	03/15/18 12:50	18B0794-02	02/13/18 12:50	02/16/18 14:40	Water

Client sample ID: ED-1

Laboratory sample ID: 18B0794-02

Please use client sample ID on all reports

Containers Supplied:

1L Poly - HNO3 (A) 1L Poly - HNO3 (B) 1L Poly - HNO3 (C) 1L Poly - HNO3 (D) 1L Poly - Unpres (E)

Relinquished By

Date

Received By

Date

Relinquished By

Date

Received By

Date

Shipped By

Airbill Number

Page 3 of 8

1. 122A849X1392702133

4. 122A849X1394288125

SUBCONTRACT ORDER

18B0794

1802199

Analysis	TAT	Due	Expires	Laboratory ID	Sample Date	Received	Matrix
Uranium (SUB)	10	03/05/18 12:00	03/17/18 10:40	18B0794-03	02/15/18 10:40	02/16/18 14:40	Water

Client sample ID: IMD-1

Laboratory sample ID: 18B0794-03

Please use client sample ID on all reports

Containers Supplied:

1L Poly - HNO3 (A)	1L Poly - HNO3 (B)	1L Poly - HNO3 (C)	1L Poly - HNO3 (D)	1L Poly - Unpres (E)

Gross alpha SUB	10	03/05/18 12:00	03/17/18 10:40	18B0794-03	02/15/18 10:40	02/16/18 14:40	Water

Client sample ID: IMD-1

Laboratory sample ID: 18B0794-03

Please use client sample ID on all reports

Containers Supplied:

1L Poly - HNO3 (A)	1L Poly - HNO3 (B)	1L Poly - HNO3 (C)	1L Poly - HNO3 (D)	1L Poly - Unpres (E)

Radium-226 (SUB)	10	03/05/18 12:00	03/17/18 10:40	18B0794-03	02/15/18 10:40	02/16/18 14:40	Water

Client sample ID: IMD-1

Laboratory sample ID: 18B0794-03

Please use client sample ID on all reports

Containers Supplied:

1L Poly - HNO3 (A)	1L Poly - HNO3 (B)	1L Poly - HNO3 (C)	1L Poly - HNO3 (D)	1L Poly - Unpres (E)

Radium-228 (SUB)	10	03/05/18 12:00	03/17/18 10:40	18B0794-03	02/15/18 10:40	02/16/18 14:40	Water

Client sample ID: IMD-1

Laboratory sample ID: 18B0794-03

Please use client sample ID on all reports

Containers Supplied:

1L Poly - HNO3 (A)	1L Poly - HNO3 (B)	1L Poly - HNO3 (C)	1L Poly - HNO3 (D)	1L Poly - Unpres (E)

Relinquished By

Date

Received By

Date

Relinquished By

Date

Received By

Date

Shipped By

Airbill Number

1. 122A849X1392762133

4. 122A849X1394288129

SUBCONTRACT ORDER

18B0794

1802199

Analysis	TAT	Due	Expires	Laboratory ID	Sample Date	Received	Matrix
Radium-226 (SUB)	10	03/05/18 12:00	03/17/18 09:45	18B0794-04	02/15/18 09:45	02/16/18 14:40	Water

Client sample ID: IMD-2

Laboratory sample ID: 18B0794-04

Please use client sample ID on all reports

Containers Supplied:

1L Poly - HNO3 (A)	1L Poly - HNO3 (B)	1L Poly - HNO3 (C)	1L Poly - HNO3 (D)	1L Poly - Unpres (E)			
Radium-228 (SUB)	10	03/05/18 12:00	03/17/18 09:45	18B0794-04	02/15/18 09:45	02/16/18 14:40	Water

Client sample ID: IMD-2

Laboratory sample ID: 18B0794-04

Please use client sample ID on all reports

Containers Supplied:

1L Poly - HNO3 (A)	1L Poly - HNO3 (B)	1L Poly - HNO3 (C)	1L Poly - HNO3 (D)	1L Poly - Unpres (E)			
Uranium (SUB)	10	03/05/18 12:00	03/17/18 09:45	18B0794-04	02/15/18 09:45	02/16/18 14:40	Water

Client sample ID: IMD-2

Laboratory sample ID: 18B0794-04

Please use client sample ID on all reports

Containers Supplied:

1L Poly - HNO3 (A)	1L Poly - HNO3 (B)	1L Poly - HNO3 (C)	1L Poly - HNO3 (D)	1L Poly - Unpres (E)			
Gross alpha SUB	10	03/05/18 12:00	03/17/18 09:45	18B0794-04	02/15/18 09:45	02/16/18 14:40	Water

Client sample ID: IMD-2

Laboratory sample ID: 18B0794-04

Please use client sample ID on all reports

Containers Supplied:

1L Poly - HNO3 (A)	1L Poly - HNO3 (B)	1L Poly - HNO3 (C)	1L Poly - HNO3 (D)	1L Poly - Unpres (E)

Relinquished By

Date

Received By

Date

Relinquished By

Date

Received By

Date

Shipped By

Airbill Number

1. 122A849X1392762133

4. 122A849X1394288125

SUBCONTRACT ORDER

18B0794

1802199

6 of 8

Analysis	TAT	Due	Expires	Laboratory ID	Sample Date	Received	Matrix
Gross alpha SUB	10	03/05/18 12:00	03/17/18 15:33	18B0794-05	02/15/18 15:33	02/16/18 14:40	Water

Client sample ID: NBS-265

Laboratory sample ID: 18B0794-05

Please use client sample ID on all reports

Containers Supplied:

1L Poly - HNO3 (A) 1L Poly - HNO3 (B) 1L Poly - HNO3 (C) 1L Poly - HNO3 (D) 1L Poly - Unpres (E)

Radium-226 (SUB)	10	03/05/18 12:00	03/17/18 15:33	18B0794-05	02/15/18 15:33	02/16/18 14:40	Water

Client sample ID: NBS-265

Laboratory sample ID: 18B0794-05

Please use client sample ID on all reports

Containers Supplied:

1L Poly - HNO3 (A) 1L Poly - HNO3 (B) 1L Poly - HNO3 (C) 1L Poly - HNO3 (D) 1L Poly - Unpres (E)

Radium-228 (SUB)	10	03/05/18 12:00	03/17/18 15:33	18B0794-05	02/15/18 15:33	02/16/18 14:40	Water

Client sample ID: NBS-265

Laboratory sample ID: 18B0794-05

Please use client sample ID on all reports

Containers Supplied:

1L Poly - HNO3 (A) 1L Poly - HNO3 (B) 1L Poly - HNO3 (C) 1L Poly - HNO3 (D) 1L Poly - Unpres (E)

Uranium (SUB)	10	03/05/18 12:00	03/17/18 15:33	18B0794-05	02/15/18 15:33	02/16/18 14:40	Water

Client sample ID: NBS-265

Laboratory sample ID: 18B0794-05

Please use client sample ID on all reports

Containers Supplied:

1L Poly - HNO3 (A) 1L Poly - HNO3 (B) 1L Poly - HNO3 (C) 1L Poly - HNO3 (D) 1L Poly - Unpres (E)

Relinquished By

Date

Received By

Date

Relinquished By

Date

Received By

Date

Shipped By

Airbill Number

Page 6 of 8

1. 122A849X1392702133

4. 122A849X1394288125

SUBCONTRACT ORDER

18B0794

1802199

Analysis	TAT	Due	Expires	Laboratory ID	Sample Date	Received	Matrix
Gross alpha SUB	10	03/05/18 12:00	03/17/18 18:10	18B0794-08	02/15/18 18:10	02/16/18 14:40	Water

Client sample ID: NBS-2300

Laboratory sample ID: 18B0794-08

Please use client sample ID on all reports

Containers Supplied:

1L Poly - HNO3 (A)	1L Poly - HNO3 (B)	1L Poly - HNO3 (C)	1L Poly - HNO3 (D)	1L Poly - Unpres (E)			
Radium-226 (SUB)	10	03/05/18 12:00	03/17/18 18:10	18B0794-08	02/15/18 18:10	02/16/18 14:40	Water

Client sample ID: NBS-2300

Laboratory sample ID: 18B0794-08

Please use client sample ID on all reports

Containers Supplied:

1L Poly - HNO3 (A)	1L Poly - HNO3 (B)	1L Poly - HNO3 (C)	1L Poly - HNO3 (D)	1L Poly - Unpres (E)			
Radium-228 (SUB)	10	03/05/18 12:00	03/17/18 18:10	18B0794-08	02/15/18 18:10	02/16/18 14:40	Water

Client sample ID: NBS-2300

Laboratory sample ID: 18B0794-08

Please use client sample ID on all reports

Containers Supplied:

1L Poly - HNO3 (A)	1L Poly - HNO3 (B)	1L Poly - HNO3 (C)	1L Poly - HNO3 (D)	1L Poly - Unpres (E)			
Uranium (SUB)	10	03/05/18 12:00	03/17/18 18:10	18B0794-08	02/15/18 18:10	02/16/18 14:40	Water

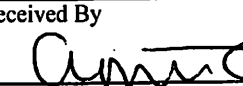
Client sample ID: NBS-2300

Laboratory sample ID: 18B0794-08

Please use client sample ID on all reports

Containers Supplied:

1L Poly - HNO3 (A)	1L Poly - HNO3 (B)	1L Poly - HNO3 (C)	1L Poly - HNO3 (D)	1L Poly - Unpres (E)

Relinquished By	Date	Received By	Date
	2-19-18		2/20/18
Relinquished By	Date	Received By	Date
ups	2/20/18	ups	2/20/18
Shipped By	Airbill Number		
	122A849X1392762133		
	122A849X1394288125		

SUBCONTRACT ORDER

18B0794

1802199

Analysis	TAT	Due	Expires	Laboratory ID	Sample Date	Received	Matrix
Gross alpha SUB	10	03/05/18 12:00	03/17/18 17:20	18B0794-09	02/15/18 17:20	02/16/18 14:40	Water

Client sample ID: NBS-1600

Laboratory sample ID: 18B0794-09

Please use client sample ID on all reports

Containers Supplied:

Relinquished By

Date

Received By

Date

Relinquished By

Date

Received By

Date

Shipped By

Airbill Number

Page 8 of 8

1. 122A849X1392762133

4. 122A849X1394288125

Subcontract Sample Receipt Checklist

CLS Work Order Number: 19B0794

Chain of Custody (COC) Information

Carrier Name <u>UPS</u>	Yes	☒	No	☐
Chain of custody present?	Yes	☒	No	☐
Chain of custody signed when relinquished and received?	Yes	☒	No	☐
Chain of custody agrees with sample labels?	Yes	☒	Non-Compliant	☐

Sample Receipt Information

Shipping container/cooler in good condition?	Yes	☒	No	☐	Not Present	☐
Samples in proper container/bottle?	Yes	☒	Non-Compliant	☐		
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	☐
Temperature upon receipt: _____ C				
Wet Ice present in Cooler?	Yes	☒	No	☐
Blue Ice present in Cooler?	Yes	☒	No	☐

Analytical Requirement Information

Are non-Standard or Modified methods requested?	Yes	☒	No	☐
Subcontract Lab CERTIFIED for the various methods requested?	Yes	☒	No	☐
Will Subcontract Lab be able to meet the turn-around time (TAT) requirements?	Yes	☒	No	☐

Subcontract Lab Information

Work Order Number assigned by Subcontract Lab _____

Date received at Subcontract Lab _____

If any items are check marked NO or are non-compliant, a phone call back to California Laboratory Services is required immediately. If all items are acceptable, a faxed copy of the signed sub chain of custody (COC) and the completed sample receipt check list is required within 24 hours of sample receipt.

To All Subcontract Labs:
(Effective 1/14/13)

Please provide PDF of Final Results
and Invoices to:

dataroom@californialab.com

Please send Hard Copies + Invoices
to:

CLS Labs
3249 Fitzgerald Road
Rancho Cordova, CA 95742
Attn: Data Room

Subject: RE: 18B0794
From: "Mark Smith" <marks@californialab.com>
Date: 02/20/2018 11:00
To: "Cynthia Casarez" <cynthiac@fglinc.com>
CC: "Shellie Furnas" <shellief@californialab.com>

Hi Cynthia

You are correct, I saw the discrepancy yesterday during our review, however, we failed to send the revised COC - please see attached. Should you have any questions, please do not hesitate to give us a call. Take care and enjoy your day.

Mark G. Smith
Operations Manager
California Laboratory Services
3249 Fitzgerald Rd
Rancho Cordova, CA 95742
(800) 638-7301 Ext. 105 (Office)
916.638.4510 (FAX)
916.216.3516 (Mobile)
marks@californialab.com
www.californialab.com

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-----Original Message-----

From: Cynthia Casarez [<mailto:cynthiac@fglinc.com>]
Sent: Tuesday, February 20, 2018 10:51 AM
To: Mark Smith <marks@californialab.com>
Subject: Re: 18B0794

Thank You Mark.

I Also did not receive a sample container for Lab ID: 18B0794-09.

On 02/20/2018 10:47, Mark Smith wrote:

Hello Cynthia:

No these samples do not require state reporting - thank you for checking - enjoy your day.

Condition Upon Receipt (Attach to COC)

Sample Receipt at SP:

1. Number of ice chests/packages received: 1
2. Shipper tracking numbers 1Z2A849X1392762133,1Z2A849X1394288125
3. Were samples received in a chilled condition?
Temps: 1 / 4 / / / / /
4. Surface water (SWTR) bact samples: A sample that has a temperature upon receipt of >10C, whether iced or not, should be flagged unless the time since sample collection has been less than two hours.
5. Do the number of bottles received agree with the COC?
6. Verify sample date, time, sampler
7. Were the samples received intact? (i.e. no broken bottles, leaks, etc.)
8. Were sample custody seals intact?

Sample Verification, Labeling and Distribution:

1. Were all requested analyses understood and acceptable?
2. Did bottle labels correspond with the client's ID's?
3. Were all bottles requiring sample preservation properly preserved? FGL
[Exception: Oil & Grease, VOA and CrVI verified in lab]
4. VOAs checked for Headspace?
5. Were all analyses within holding times at time of receipt?
6. Have rush or project due dates been checked and accepted?

Include a copy of the COC for lab delivery. (Bacti. Inorganics and Radio)

Sample Receipt, Login and Verification completed by:

Reviewed and
Approved By

Cynthia T Casarez



Digitally signed by Cynthia T Casarez
Title: Sample Receiving
Date: 02/20/2018-11:59:20

Discrepancy Documentation:

Any items above which are "No" or do not meet specifications (i.e. temps) must be resolved.

1. Person Contacted: _____ Phone Number: _____
Initiated By: _____ Date: _____
Problem: _____

Resolution: _____

2. Person Contacted: _____ Phone Number: _____
Initiated By: _____ Date: _____
Problem: _____

Resolution: _____

(2019423)
CLS Labs
SP 1802199
CTC-02/20/2018-11:59:20



CALIFORNIA LABORATORY SERVICES

Committed. Responsive. Flexible.

February 27, 2018

CLS Work Order #: 18B0794

COC #:

Dr. Andrew Kopania
EMKO Environmental, Inc.
551 Lakecrest Dr.
El Dorado Hills, CA 95762

Project Name: Rise

Enclosed are the results of analyses for samples received by the laboratory on 02/16/18 14:40. Samples were analyzed pursuant to client request utilizing EPA or other ELAP approved methodologies. I certify that the results are in compliance both technically and for completeness.

Analytical results are attached to this letter. Please call if we can provide additional assistance.

Sincerely,

James Liang, Ph.D.
Laboratory Director

CA SWRCB ELAP Accreditation/Registration number 1233

CLS - Labs

CHAIN OF CUSTODY

CLS ID No.:

LOG No 187399

18B0794 cooler: NPDES #2

REPORT TO:			CLIENT JOB NUMBER		ANALYSIS REQUESTED							GEOTRACKER:				
NAME AND ADDRESS			DESTINATION LABORATORY		PRESERVATIVES							EDF REPORT ☐ YES ☐ NO				
PROJECT NAME			OTHER									GLOBAL ID:				
EMKO Environmental, Inc			CLS (916) 638-7301		Ammonia BOD & TSS Coliform 15T Gross Alpha Radium 226 Radium 228 Uranium							COMPOSITE:				
551 Lakeside Dr.			3249 FITZGERALD RD.									FIELD CONDITIONS:				
El Dorado Hills, CA 95762			RANCHO CORDOVA, CA 95742									TURN AROUND TIME				
PROJECT MANAGER												SPECIAL INSTRUCTIONS				
Andy Kopania										OR						
PHONE #										ALT. ID:						
PROJECT NAME										1 DAY						
Rise										2 DAY						
SAMPLED BY										3 DAY						
AK										4 DAY						
JOB DESCRIPTION										5 DAY						
email results to:																
akopania@sbcglobal.net																
SITE LOCATION																
DATE	TIME	SAMPLE IDENTIFICATION	MATRIX	CONTAINER NO.	TYPE											
2-13-18	13:30	D-1	W	2	1L poly	2										
				1	120mL	3										
				1	250mL	5	X									
				1	1L poly	2				X						
				1	1L poly	2					X					
				1	1L poly	3			X							
				1	1L poly	3	X									
2-13-18	12:50	ED-1		3	1L poly	2				X	X					
				1	120mL	3			X							
				1	1L poly	2					X					
				1	1L poly	3			X							
				1	1L poly	3	X									
				1	250mL	5	X									
SUSPECTED CONSTITUENTS						PRESERVATIVES: (1) HCL (2) HNO ₃ (3) = COLD (4) = NaOH (5) = H ₂ SO ₄ (6) = Na ₂ S ₂ O ₃ (7) =										
RELINQUISHED BY (SIGN)		PRINT NAME / COMPANY		DATE / TIME		RECEIVED BY (SIGN)		PRINT NAME / COMPANY								
		A. Kopania / EMKO		2/16/18 14:35												
REC'D AT LAB BY		DATE / TIME		CONDITIONS / COMMENTS												
SHIPPED BY:		FED X		UPS		OTHER		AIR BILL #								

Gold Project Mgr. Field Sample/Term and conditions

Print - Origin/Term and Conditions

Yellow - Lab file copy/Term and Conditions

White - Lab/Term and conditions

CLs - Labs

CHAIN OF CUSTODY

CLS ID No.:

LOG No 187398

REPORT TO:				CLIENT JOB NUMBER		ANALYSIS REQUESTED						GEOTRACKER:					
NAME AND ADDRESS				DESTINATION LABORATORY		PRESERVATIVES						EDF REPORT ☐ YES ☒ NO					
PROJECT MANAGER				PROJECT NAME								GLOBAL ID:					
SAMPLED BY				OTHER		COMPOSITE:						FIELD CONDITIONS:					
JOB DESCRIPTION						TURN AROUND TIME						SPECIAL INSTRUCTIONS					
SITE LOCATION						OR						ALT. ID:					
DATE	TIME	SAMPLE IDENTIFICATION	MATRIX	CONTAINER NO.	TYPE							1 DAY	2 DAY	3 DAY	5 DAY		
2-13-18	13:30	D-1	W	1	250ml Amber	3											see Shellie for specific METALS to be analyzed
				4	VOA	1				X							
				1	1L poly	3		X									
				1	500ml poly	2	X										
				1	250ml poly	4			X								
				1	1L amber	3					X						
				2	1L amber	3				X							
2-13-18	12:50	ED-1		1	250ml amber	3											INVOICE TO:
				4	VOA	1				X							
				1	1L poly	3		X									
				1	500ml poly	2	X										
				1	250ml poly	4			X								
				3	1L amber	3				X	X						QUOTE #
SUSPECTED CONSTITUENTS						PRESERVATIVES:						(1) HCL (2) HNO ₃ (3) = COLD (4) = NaOH (5) = H ₂ SO ₄ (6) = Na ₂ S ₂ O ₃ (7) =					
RELINQUISHED BY (SIGN)				PRINT NAME / COMPANY		DATE / TIME		RECEIVED BY (SIGN)				PRINT NAME / COMPANY					
				A. Kapania/Emko		2/16/18 14:35											
REC'D AT LAB BY				DATE / TIME		CONDITIONS / COMMENTS											
				2-16-18 1440						25.							
SHIPPED BY:				☒ FED X ☐ UPS ☐ OTHER		AIR BILL #											

18B0794

Coder: DRAIN 2

Gold-Project Mgr./Field Sampler/Terms and conditions

Pink- Origin/Terms and Conditions

Yellow- Lab file copy/Terms and Conditions

White- Lab/Terms and conditions

CLs - Labs

CHAIN OF CUSTODY

CLs ID No.:

LOG No 187401

18B0794

COOLER: NPDES #1

REPORT TO:			CLIENT JOB NUMBER		ANALYSIS REQUESTED		GEOTRACKER:		
NAME AND ADDRESS			DESTINATION LABORATORY		PRESERVATIVES		EDF REPORT ☐ YES ☒ NO		
PROJECT NAME			OTHER				GLOBAL ID:		
EMKO Environmental, Inc. 551 Lakeside Dr. El Dorado Hills, CA 95762			☒ CLS (916) 638-7301 3249 FITZGERALD RD. RANCHO CORDOVA, CA 95742		Ammonia BOD + TSS Coliform 1ST Gross Alpha Radium 226 Radium 228 Uranium		COMPOSITE:		
PROJECT MANAGER: Andy Kupanin 916-718-5511							FIELD CONDITIONS:		
SAMPLED BY: AK							TURN AROUND TIME		
JOB DESCRIPTION: email results to: akupanin@sbcglobal.net							SPECIAL INSTRUCTIONS		
SITE LOCATION:							OR		
DATE	TIME	SAMPLE IDENTIFICATION	MATRIX	CONTAINER NO.	TYPE	1 DAY	2 DAY	3 DAY	
2-15-18	10:40	IND-1	W	4	1L poly				
				2	1L poly				
				1	120mL poly				
				1	250mL poly				
2-15-18	9:45	IND-2		4	1L poly				
				2	1L poly				
				1	120mL poly				
				1	250mL poly				
2-15-18	15:33	NBS-265		4	1L poly				
	15:33			2	1L poly				
	13:40			1	120mL poly				
	15:33			1	250mL poly				
SUSPECTED CONSTITUENTS					PRESERVATIVES: (1) HCL (2) HNO ₃ (3) = COLD (4) = NaOH (5) = H ₂ SO ₄ (6) = Na ₂ S ₂ O ₃ (7) =				
RELINQUISHED BY (SIGN)		PRINT NAME / COMPANY		DATE / TIME		RECEIVED BY (SIGN)		PRINT NAME / COMPANY	
		A. Kupanin / EMKO		2/14/18 14:35					
REC'D AT LAB BY		DATE / TIME		CONDITIONS / COMMENTS					
		2-16-18 1440		2-S					
SHIPPED BY		☐ FED X ☐ UPS ☐ OTHER		AIR BILL #					

Gold-Project Mgr Field Sampler/Terms and conditions

Pink- Origin/Terms and Conditions

Yellow- Lab file copy/Terms and Conditions

White-Lab/Terms and conditions

CLs - Labs

CHAIN OF CUSTODY

CLS ID No.:

LOG No 187400

REPORT TO:			CLIENT JOB NUMBER		ANALYSIS REQUESTED		GEOTRACKER:		
NAME AND ADDRESS			DESTINATION LABORATORY		PRESERVATIVES		EDF REPORT ☐ YES ☐ NO		
PROJECT MANAGER			CLs (916) 638-7301				GLOBAL ID: _____		
PROJECT NAME			3249 FITZGERALD RD.		COMPOSITE:		FIELD CONDITIONS:		
SAMPLED BY			RANCHO CORDOVA, CA 95742		TURN AROUND TIME		SPECIAL INSTRUCTIONS		
JOB DESCRIPTION			OTHER ☐		1 DAY		OR		
SITE LOCATION					2 DAY		ALT. ID:		
					3 DAY				
					5 DAY				
2-15-18	10:40	1 MD-1	W	4	40ml VOA	1			see Shellie for specific METALS to be analyzed
				3	1L amber	3			
				1	250ml amber	3			
				1	1L poly	3	X		
				1	500ml poly	2	X		
2-15-18	9:45	1 MD-2		4	40ml VOA	1			INVOICE TO:
				3	2L amber	3			
				1	250ml amber	3			
				1	1L poly	3	X		
				1	500ml poly	2	X		
				1	250ml poly	4			QUOTE #
SUSPECTED CONSTITUENTS					PRESERVATIVES:		(1) HCL (2) HNO ₃ (3) = COLD (4) = NaOH (5) = H ₂ SO ₄ (6) = Na ₂ S ₂ O ₅ (7) =		
RELINQUISHED BY (SIGN)		PRINT NAME / COMPANY		DATE / TIME		RECEIVED BY (SIGN)		PRINT NAME / COMPANY	
		A. K. Kagan / Emko		2/16/18/14:35					
REC'D AT LAB BY:		DATE / TIME		CONDITIONS / COMMENTS					
		2/16/18		1440				25-	
SHIPPED BY:		☐ FED X ☐ UPS ☐ OTHER		AIR BILL #					

13B 0794

Cooler: DRAIN 1

Gold-Project Mgr./Field Sampler/Terms and conditions

Pink-Original Terms and Conditions

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White-Lab/Terms and conditions

13B0799

CC

SHAFT 1

CLS - Labs

CHAIN OF CUSTODY

CLS ID No.:

LOG No 186621

REPORT TO:			CLIENT JOB NUMBER		ANALYSIS REQUESTED					GEOTRACKER:				
NAME AND ADDRESS EMKO Environmental, Inc. 551 Lakeside Dr. El Dorado Hills, CA 95762			DESTINATION LABORATORY ☒ CLS (916) 638-7301 3249 FITZGERALD RD. RANCHO CORDOVA, CA 95742		PRESERVATIVES Metals - see List General Minerals Cyanide - Ammoniacal Lyso VOL/TPH-C SVOL PCB TPH D+MD					EDF REPORT ☐ YES ☒ NO				
PROJECT MANAGER Andie Kepania 916-718-5511			OTHER ☐							GLOBAL ID: _____				
SAMPLED BY AK										COMPOSITE:				
JOB DESCRIPTION email results to: akepania@shglobal.net										FIELD CONDITIONS:				
SITE LOCATION										TURN AROUND TIME				
										SPECIAL INSTRUCTIONS				
										OR				
										ALT. ID:				
DATE	TIME	SAMPLE IDENTIFICATION	MATRIX	CONTAINER NO.	TYPE	1	2	3	4	5	6	7	8	
2-15-18	13:40	NBS-265	W	4	40mL VIA				X					
	13:40			2	1L Amber					X				
	15:33			1	1L Amber						X			
	13:40			1	250mL poly			X						
	13:40			1	500mL poly	X								
	13:40			1	250mL amber						X			
	15:33			1	1L poly		X							
	14:05	NBS-900		4	40mL VIA				X					
	14:05			3	1L Amber					X	X			
	16:00			1	1L poly		X							
	16:00			1	250mL amber						X			
	16:00			1	500mL poly	X								
	16:00			1	250mL poly			X						
SUSPECTED CONSTITUENTS						PRESERVATIVES: (1) HCL (2) HNO ₃ (3) = COLD (4) = NaOH (5) = H ₂ SO ₄ (6) = Na ₂ S ₂ O ₃ (7) =								
RELINQUISHED BY (SIGN)			PRINT NAME / COMPANY		DATE / TIME		RECEIVED BY (SIGN)			PRINT NAME / COMPANY				
			A. Kepania / EMKO		2/16/18 14:35									
REC'D AT LAB BY			DATE / TIME		CONDITIONS / COMMENTS									
			2/16/18 14:00		2-5									
SHIPPED BY:			☐ FEDX ☐ UPS ☐ OTHER		AIR BILL #									

Gold-Project Mgr./Field Sampler/Terms and Conditions

Pink-Original Terms and Conditions

Yellow-Lab file copy/Terms and Conditions

White-Lab Terms and Conditions

LOG № 186636

1800794

cooler: SHAFT 2

CLS - Labs

CHAIN OF CUSTODY

CLS ID No.:

LOG No 186635

REPORT TO:			CLIENT JOB NUMBER		ANALYSIS REQUESTED							GEOTRACKER:							
NAME AND ADDRESS			DESTINATION LABORATORY		PRESERVATIVES							EDF REPORT ☐ YES ☒ NO							
PROJECT MANAGER			PHONE #									COMPOSITE:							
Emko Environmental, Inc.			CLS (916) 638-7301		Ammonia BOD + TSS Coliform BT Gross Alpha Radium 226 Radium 228 Uranium							GLOBAL ID: _____							
551 Lakecrest Dr El Dorado Hills CA 95762			3249 FITZGERALD RD. RANCHO CORDOVA, CA. 95742									FIELD CONDITIONS:							
PROJECT NAME			OTHER		TURN AROUND TIME							SPECIAL INSTRUCTIONS							
Kiser												OR							
SAMPLED BY					1 DAY 2 DAY 3 DAY 5 DAY							ALT. ID:							
AK																			
JOB DESCRIPTION					INVOICE TO:							PO #							
email results to:																			
SITE LOCATION					QUOTE #														
akopania@sbcglobal.net																			
DATE	TIME	SAMPLE IDENTIFICATION	MATRIX	CONTAINER NO	TYPE														
2-15-18	18:10	NBS-2300	W	1	1L poly	2													
				2	1L poly	2													
				1	1L poly	2													
				1	120 mL Coliform														
				1	250 mL poly	5	X												
				1	1L poly	3	X												
				1	1L poly	3		X											
SUSPECTED CONSTITUENTS						PRESERVATIVES:													
						(1) HCL (2) HNO ₃ (3) = COLD (4) = NaOH (5) = H ₂ SO ₄ (6) = Na ₂ S ₂ O ₃ (7) =													
RELINQUISHED BY (SIGN)			PRINT NAME / COMPANY		DATE / TIME		RECEIVED BY (SIGN)			PRINT NAME / COMPANY									
			AKopania / Emko		2/16/18 14:35														
REC'D AT LAB BY:			DATE / TIME		CONDITIONS / COMMENTS:														
			2-16-18 1440		2-16														
SHIPPED BY:			☐ FED X ☐ UPS ☐ OTHER		AIR BILL #														

Gold-Project Mgr Field Sampler/Terms and conditions
Pink- Origin/Terms and Conditions
Yellow- Lab file copy/Terms and Conditions
White-Lab/Terms and conditions

1860-794

Coiler: SHAFT 1

CLS - Labs

CHAIN OF CUSTODY

CLS ID No.:

LOG No 186634

REPORT TO:			CLIENT JOB NUMBER		ANALYSIS REQUESTED		GEOTRACKER:		
NAME AND ADDRESS			DESTINATION LABORATORY		PRESERVATIVES Metals - see List General Minerals Cyanide + Ammonia Cyanide VOC / TPHB SVOC PCB TPH & MD		EDF REPORT ☐ YES ☒ NO		
PROJECT MANAGER			☒ CLS (916) 638-7301 3249 FITZGERALD RD. RANCHO CORDOVA, CA 95742				GLOBAL ID: _____		
PROJECT NAME			☐ OTHER		COMPOSITE:		FIELD CONDITIONS:		
SAMPLED BY					TURN AROUND TIME		SPECIAL INSTRUCTIONS		
JOB DESCRIPTION					1 DAY 2 DAY 3 DAY 5 DAY		OR		
SITE LOCATION							ALT. ID:		
DATE	TIME	SAMPLE IDENTIFICATION	MATRIX	CONTAINER NO.	TYPE				
2-15-18	17:20	NBS-1600	W	1	1L amber	3			
	17:20			1	500mL poly	2	X		
	17:20			1	250mL poly	4		X	
	17:20			1	250mL amber	3		X	
2-15-18	17:40			1	1L poly	3	X		
2-16-18	~~11:44~~ 12:38			4	40mL VOA	1		X	
2-16-18	~~11:44~~ 12:38			2	1L amber		X		
						INVOICE TO:			
						PO #			
						QUOTE #			
SUSPECTED CONSTITUENTS						PRESERVATIVES: (1) HCL (2) HNO ₃ (3) = COLD (4) = NaOH (5) = H ₂ SO ₄ (6) = Na ₂ S ₂ O ₈ (7) =			
RELINQUISHED BY (SIGN)		PRINT NAME / COMPANY		DATE / TIME		RECEIVED BY (SIGN)		PRINT NAME / COMPANY	
		A. Kapania / EMKO		2/16/18 14:35					
REC'D AT LAB BY:		DATE / TIME		CONDITIONS / COMMENTS					
		2-16-18 1440		25					
SHIPPED BY:		☒ FED X ☐ UPS ☐ OTHER		AIR BILL #					

Gold-Project Mgr./Field Sampler/Terms and Conditions
Pink- Origin/Terms and Conditions
Yellow- Lab file copy/Terms and Conditions
White- Lab/Terms and Conditions

CLS LABS
SAMPLE RECEIVING EXCEPTION REPORTS

CLS Labs Job # 13B0794

Problem discovered by: D

Date: 2/16/13

Nature of problem

Sulfite

Chlorine, Total

Chlorine, Residual



Dissolved O2

BOD, 1ST, NO2, NO3, MBAS

(Circle analysis above) Received out of HOLD time.

Client contacted? Yes ☐ No ☐ Spoke With: _____

By whom: _____ Date: ____/____/____ Time: _____ HRS

Client instructions:

Resolution of problem:

Logged in regardless and will be ran for analysis requested.

CLS - Labs

CHAIN OF CUSTODY

CLS ID No.:

LOG No 187399

18B074 cooler: NPDES #2

REPORT TO:				CLIENT JOB NUMBER		ANALYSIS REQUESTED						GEOTRACKER:					
NAME AND ADDRESS				DESTINATION LABORATORY		PRESERVATIVES						EDF REPORT ☐ YES ☐ NO					
PROJECT MANAGER				PHONE #								GLOBAL ID:					
PROJECT NAME				OTHER		COMPOSITE:						FIELD CONDITIONS:					
SAMPLED BY						TURN AROUND TIME						SPECIAL INSTRUCTIONS					
JOB DESCRIPTION						OR						ALT. ID:					
SITE LOCATION						1 DAY 2 DAY 3 DAY 5 DAY											
DATE	TIME	SAMPLE IDENTIFICATION	MATRIX	NO.	TYPE												
2-13-18	13:30	D-1	W	2	1L poly	2											
				1	120ml calibration	3											
				1	250ml poly	5	X										
				1	1L poly	2					X						
				1	1L poly	2						X					
				1	1L poly	3					X						
				1	1L poly	3		X									
2-13-18	12:50	ED-1		3	1L poly	2					X	X					
				1	120ml calibration	3					X						
				1	1L poly	2						X					
				1	1L poly	3					X						
				1	1L poly	3		X									
				1	250ml poly	5	X										
SUSPECTED CONSTITUENTS						PRESERVATIVES:						(1) HCL (2) HNO ₃ (3) = COLD (4) = NaOH (5) = H ₂ SO ₄ (6) = Na ₂ S ₂ O ₃ (7) =					
RELINQUISHED BY (SIGN)		PRINT NAME / COMPANY		DATE / TIME		RECEIVED BY (SIGN)		PRINT NAME / COMPANY									
		A. Kapania / EMKO		2/16/18 14:35													
REC'D AT LAB BY		DATE / TIME		CONDITIONS / COMMENTS													
		2-16-18 14:40		HALLO												2-5	
SHIPPED BY		☐ FED X		☐ UPS		☐ OTHER		AIR BILL #									

Gold-Project Mgr./Lead Sampler/Terms and Conditions

Pink-Original/Terms and Conditions

Yellow- Lab file copy/Terms and Conditions

White-Lab/Terms and Conditions

CLs - Labs

CHAIN OF CUSTODY

CLS ID No.:

LOG N° 187398

REPORT TO:			CLIENT JOB NUMBER		ANALYSIS REQUESTED		GEOTRACKER:				
NAME AND ADDRESS			DESTINATION LABORATORY		PRESERVATIVES		EDF REPORT ☐ YES ☒ NO				
PROJECT MANAGER			CLs (916) 638-7301				GLOBAL ID: _____				
PROJECT NAME			3249 FITZGERALD RD.		Metals - see list General Mineral Cyanide + Amenable Cyan. Vol / TPHG SVOC PCB TPH + MO		COMPOSITE:				
SAMPLED BY			RANCHO CORDOVA, CA 95742				FIELD CONDITIONS:				
JOB DESCRIPTION			OTHER		TURN AROUND TIME		SPECIAL INSTRUCTIONS				
SITE LOCATION							OR				
DATE	TIME	SAMPLE IDENTIFICATION	MATRIX	CONTAINER NO.	TYPE	1 DAY	2 DAY	3 DAY	5 DAY	ALT.	ID:
2-13-18	13:30	D-1	W	1	250ml amber	3					
				4	VOA	1					
				1	1L poly	3	X				
				1	500ml poly	2	X				
				1	250ml poly	4		X			
				1	1L amber	3			X		
				2	1L amber	3		X			
2-13-18	12:50	ED-1		1	250ml amber	3			X		
				4	VOA	1		X			
				1	1L poly	3	X				
				1	500ml poly	2	X				
				1	250ml poly	4		X			
				3	1L amber	3		X	X		
SUSPECTED CONSTITUENTS						PRESERVATIVES:		(1) HCL (2) HNO ₃ (3) = COLD (4) = NaOH (5) = H ₂ SO ₄ (6) = Na ₂ S ₂ O ₃ (7) =			
RELINQUISHED BY (SIGN)		PRINT NAME / COMPANY		DATE / TIME		RECEIVED BY (SIGN)		PRINT NAME / COMPANY			
		A. Kopania/Emko		2/16/18 14:35							
REC'D AT LAB BY:		DATE / TIME		CONDITIONS / COMMENTS							
		2-16-18 1440		25.							
SHIPPED BY:		☒ FED X ☐ UPS ☐ OTHER		AIR BILL #							

Gold-Project Mgr./Field Sampler/Terms and Conditions

Pink-Original Terms and Conditions

Yellow-Lab file copy/Terms and Conditions

White-Lab/Terms and Conditions

18B0794

Coder: DRAIN 2

CLs - Labs

CHAIN OF CUSTODY

CLs ID No.:

LOG No 187401

18B0794

COOLER: NPDES #1

REPORT TO:				CLIENT JOB NUMBER		ANALYSIS REQUESTED						GEOTRACKER:					
NAME AND ADDRESS				DESTINATION LABORATORY		PRESERVATIVES						EDF REPORT ☐ YES ☒ NO					
PROJECT MANAGER				PHONE#								GLOBAL ID:					
PROJECT NAME				OTHER		COMPOSITE:						FIELD CONDITIONS:					
SAMPLED BY						TURN AROUND TIME						SPECIAL INSTRUCTIONS					
JOB DESCRIPTION						1 DAY 2 DAY 3 DAY 5 DAY						OR					
SITE LOCATION						ALT. ID:											
DATE	TIME	SAMPLE IDENTIFICATION	MATRIX	NO.	TYPE												
2-15-18	10:40	IND-1	W	4	1L poly	2											
				2	1L poly	3		X		X							
				1	120mL coliform					X							
				1	250mL poly	5	X										
2-15-18	9:45	IND-2		4	1L poly	2					X	X	X				
				2	1L poly	3		X		X							
				1	120mL coliform					X							
				1	250mL poly	5	X										
2-15-18	15:33	NBS-265		4	1L poly	2					X	X	X				INVOICE TO
	15:33			2	1L poly	3		X		X							
	13:40			1	120mL coliform					X							
	15:33			1	250mL poly	5	X										QUOTE #
SUSPECTED CONSTITUENTS						PRESERVATIVES:						(1) HCL (2) HNO ₃ (3) = COLD (4) = NaOH (5) = H ₂ SO ₄ (6) = Na ₂ S ₂ O ₃ (7) =					
RELINQUISHED BY (SIGN)		PRINT NAME / COMPANY		DATE / TIME		RECEIVED BY (SIGN)		PRINT NAME / COMPANY									
		A. Kuperia / EMKO		2/14/18 14:35													
REC'D AT LAB BY		DATE / TIME		CONDITIONS / COMMENTS:													
		2-16-18 1440		2-S													
SHIPPED BY		☐ FED X ☐ UPS ☐ OTHER		AIR BILL #													

Gold-Project Mgr./Field Sampler/Terms and Conditions

Pink- Origin/Terms and Conditions

Yellow- Lab file copy/Terms and Conditions

White-Lab/Terms and Conditions

Cooler: DRAIN 1

LOG № 187400

REPORT TO:		CLIENT JOB NUMBER		ANALYSIS REQUESTED		GEOTRACKER:					
NAME AND ADDRESS		DESTINATION LABORATORY		PRESERVATIVES		EDF REPORT ☐ YES ☐ NO					
PROJECT MANAGER		CLC (916) 638-7301				GLOBAL ID: _____					
PROJECT NAME		3249 FITZGERALD RD				COMPOSITE: _____					
SAMPLED BY		RANCHO CORDOVA, CA 95742				FIELD CONDITIONS: _____					
JOB DESCRIPTION		OTHER		TURN AROUND TIME		SPECIAL INSTRUCTIONS					
SITE LOCATION						OR					
						ALT. ID:					
DATE	TIME	SAMPLE IDENTIFICATION	MATRIX	CONTAINER NO.	TYPE	1 DAY	2 DAY	3 DAY	5 DAY	INVOICE TO:	
2-15-18	10:40	1MD-1	W	4	40ml VOA					see Shellie for specific METALS to be analyzed	
				3	1L amber						
				1	250ml amber						
				1	1L poly						
				1	500ml poly	X					
				1	250ml poly						
2-15-18	9:45	1MD-2		4	40ml VOA						
				3	1L amber						
				1	250ml amber						
				1	1L poly	X					
				1	500ml poly	X					
				1	250ml poly						
SUSPECTED CONSTITUENTS						PRESERVATIVES:		(1) HCL (2) HNO3		(3) = COLD (4) = NaOH	
RELINQUISHED BY (SIGN)		PRINT NAME / COMPANY		DATE / TIME		RECEIVED BY (SIGN)		PRINT NAME / COMPANY			
[Signature]		A. Kapania / EmKO		2/16/18/14:35		[Signature]					
REC'D AT LAB BY: [Signature]						DATE / TIME		CONDITIONS / COMMENTS			
SHIPPED BY: ☐ FED X ☐ UPS ☐ OTHER						2/16/18		1440		25-	
								AIR BILL #			

White-Lab/Terms and conditions

SHAFT 1

White-label Terms and conditions

Labs

CHAIN OF CUSTODY

CLS ID No.:

LOG No 186636

REPORT TO:

CLIENT JOB NUMBER

ANALYSIS REQUESTED

GEOTRACKER:

EDF REPORT ☐ YES ☒ NO
GLOBAL ID: _____

NAME AND ADDRESS

EMKO Environmental, Inc.
551 Lakewood Dr.
El Dorado Hills, CA 95762

PROJECT MANAGER

Andy Kopania

PHONE #

916-718-5511

PROJECT NAME

Rise

SAMPLED BY

AK

JOB DESCRIPTION

email results to:
akopania@sbcglobal.net

SITE LOCATION

DESTINATION LABORATORY

☒ CLS (916) 638-7301
3249 FITZGERALD RD.
RANCHO CORDOVA, CA
95742

☐ OTHER

PRESERVATIVES

Metals - see List
General Minerals
Cyanide & Ammonable Cyan
VOC / TPH6
SVOC
PCB
TPH4 + NO

COMPOSITE:

FIELD CONDITIONS:

TURN AROUND TIME

SPECIAL INSTRUCTIONS

1 DAY 2 DAY 3 DAY 5 DAY

OR

ALT. ID:

DATE	TIME	SAMPLE IDENTIFICATION	MATRIX	CONTAINER NO.	TYPE
2-15-17	14:30	NBS-1300	W	4	40mL VOA
	14:30			2	1L Amber
	16:35			1	1L Amber
	16:35			1	1L poly
	16:35			1	500mL poly
	16:35			1	250mL poly
	16:35			1	250mL poly
	16:35			1	250mL poly
2-15-17	18:10	NBS-2300		1	1L amber
				1	1L poly
				1	500mL poly
				1	250mL poly
				1	4mL amber
				1	250mL poly

SUSPECTED CONSTITUENTS

PRESERVATIVES:

(1) HCL
(2) HNO₃

(3) = COLD
(4) = NaOH

(5) = H₂SO₄
(6) = Na₂S₂O₃

(7) =

RELINQUISHED BY (SIGN)

PRINT NAME / COMPANY

DATE / TIME

RECEIVED BY (SIGN)

PRINT NAME / COMPANY

[Signature]

A. Kopania / EMKO

2/16/18 14:35

[Signature]

REC'D AT LAB BY

DATE / TIME

2-16-18 1440

CONDITIONS / COMMENTS

2-5

SHIPPED BY

☐ FED X

☐ UPS

☐ OTHER

AIR BILL #

Good-Project Mgr./Field Sampler/Terms and conditions

Print-Original/Terms and Conditions

Yellow-Lab file copy/Terms and Conditions

White-Lab/Terms and conditions

Cooler: SHAFT 2

White-Lab Terms and conditions

1880 799

Cooler: SHAFT 1

CLS - Labs

CHAIN OF CUSTODY

CLS ID No.:

LOG No 186634

REPORT TO:			CLIENT JOB NUMBER		ANALYSIS REQUESTED					GEOTRACKER:				
NAME AND ADDRESS EMKO Environmental, Inc. 551 Lakeside Dr. El Dorado Hills, CA 95762			DESTINATION LABORATORY ☒ CLS (916) 638-7301 3249 FITZGERALD RD. RANCHO CORDOVA, CA 95742		PRESERVATIVES Metals - see List General Minerals Cyanide + Ammonia/Lye VOC/TPH/B SVOC PCB TPH/D + MD					EDF REPORT ☐ YES ☒ NO				
PROJECT MANAGER Andy Kopania 916-714-5511			OTHER ☐							GLOBAL ID: _____				
PROJECT NAME Rise										COMPOSITE: _____				
SAMPLED BY AK										FIELD CONDITIONS: _____				
JOB DESCRIPTION email results to: akopania@sbcylab.net					TURN AROUND TIME					SPECIAL INSTRUCTIONS				
SITE LOCATION										OR				
										ALT. ID:				
DATE	TIME	SAMPLE IDENTIFICATION	MATRIX	CONTAINER NO	TYPE									
2-15-18	17:20	NBS-1600	W	1	1L amber	3								
	17:20			1	500ml poly	2	X							
	17:20			1	250ml poly	4		X						
	17:20			1	250ml amber	3				X				
2-15-18	17:20			1	1L poly	3		X						
2-16-18	~~11:44~~ 12:38			4	40ml VOA	1			X					
2-16-18	~~11:44~~ 12:38			2	1L amber					X				
SUSPECTED CONSTITUENTS						PRESERVATIVES: (1) HCL (2) HNO ₃ (3) = COLD (4) = NaOH (5) = H ₂ SO ₄ (6) = Na ₂ S ₂ O ₅ (7) =								
						INVOICE TO:								
						PO #								
						QUOTE #								
RELINQUISHED BY (SIGN)			PRINT NAME / COMPANY			DATE / TIME			RECEIVED BY (SIGN)			PRINT NAME / COMPANY		
			A. Kopania/EMKO			2/16/18 14:35								
REC'D AT LAB BY			DATE / TIME			CONDITIONS / COMMENTS								
			2/16/18 1440									25		
SHIPPED BY			☒ FED X ☐ UPS ☐ OTHER			AIR BILL #								

CLS LABS
SAMPLE RECEIVING EXCEPTION REPORTS

CLS Labs Job # 13B0794

Problem discovered by: D

Date: 2/16/13

Nature of problem

Sulfite

Chlorine, Total

Chlorine, Residual



Dissolved O2

BOD, 1ST, NO2, NO3, MBAS

(Circle analysis above) Received out of HOLD time.

Client contacted? Yes _____ No _____ Spoke With: _____

By whom: _____ Date: ____/____/____ Time: _____ HRS

Client instructions:

Resolution of problem:

Logged in regardless and will be ran for analysis requested.



CALIFORNIA LABORATORY SERVICES

Committed. Responsive. Flexible.

Page 3 of 87

02/27/18 10:41

EMKO Environmental, Inc.
551 Lakecrest Dr.
El Dorado Hills, CA 95762

Project: Rise
Project Number: [none]
Project Manager: Dr. Andrew Kopania

CLS Work Order #: 18B0794
COC #:

Conventional Chemistry Parameters by APHA/EPA Methods

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
D-1 (18B0794-01) Water Sampled: 02/13/18 13:30 Received: 02/16/18 14:40									
Ammonia as N	ND	100	µg/L	1	1801538	02/22/18	02/22/18	SM4500-NH4 C	
Bicarbonate as CaCO3	210	5.0	mg/L	"	1801442	02/19/18	02/19/18	SM2320B	
Biochemical Oxygen Demand	ND	3.0	"	"	1801382	02/16/18	02/21/18	SM5210B	HT-1
Calcium	12	1.0	"	"	1801462	02/20/18	02/21/18	200.7/2340B	
Carbonate as CaCO3	ND	5.0	"	"	1801442	02/19/18	02/19/18	SM2320B	
Chloride	2.9	0.50	"	"	1801394	02/16/18	02/16/18	EPA 300.0	
Cyanide (amenable)	ND	0.010	"	"	1801549	02/22/18	02/22/18	SM4500-CN G	
Cyanide (total)	ND	0.0050	"	"	"	"	"	SM4500-CN E	
Fluoride	ND	0.10	"	"	1801394	02/16/18	02/16/18	EPA 300.0	
Hardness as CaCO3	220	1.0	"	"	1801462	02/20/18	02/21/18	200.7/2340B	
Hydroxide as CaCO3	ND	5.0	"	"	1801442	02/19/18	02/19/18	SM2320B	
Magnesium	46	1.0	"	"	1801462	02/20/18	02/21/18	200.7/2340B	
MBAS as LAS, mol wt 340	ND	0.10	"	"	1801406	02/16/18	02/16/18	SM5540 C	HT-1
Nitrate as N	ND	0.40	"	"	1801394	02/16/18	02/16/18	EPA 300.0	HT-1
Nitrite as N	ND	0.40	"	"	"	"	"	"	HT-1, QC-2H
pH	7.70	0.01	pH Units	"	1801375	02/16/18	02/16/18	SM4500-H B	HT-F
Potassium	ND	1.0	mg/L	"	1801462	02/20/18	02/21/18	200.7/2340B	
Sodium	2.7	1.0	"	"	"	"	"	"	
Specific Conductance (EC)	420	1.0	µmhos/cm	"	1801426	02/19/18	02/19/18	EPA 120.1	
Sulfate as SO4	13	0.50	mg/L	"	1801394	02/16/18	02/16/18	EPA 300.0	
Total Alkalinity	210	5.0	"	"	1801442	02/19/18	02/19/18	SM2320B	
Total Dissolved Solids	210	10	"	"	1801423	02/19/18	02/20/18	SM2540C	
Total Suspended Solids	ND	5.0	"	"	1801457	02/20/18	02/20/18	SM2540D	

ED-1 (18B0794-02) Water Sampled: 02/13/18 12:50 Received: 02/16/18 14:40

Ammonia as N	50	100	µg/L	1	1801538	02/22/18	02/22/18	SM4500-NH4 C	J
Bicarbonate as CaCO3	220	5.0	mg/L	"	1801442	02/19/18	02/19/18	SM2320B	
Biochemical Oxygen Demand	8.0	3.0	"	"	1801382	02/16/18	02/21/18	SM5210B	HT-1
Calcium	47	1.0	"	"	1801462	02/20/18	02/21/18	200.7/2340B	
Carbonate as CaCO3	ND	5.0	"	"	1801442	02/19/18	02/19/18	SM2320B	



CALIFORNIA LABORATORY SERVICES

Committed. Responsive. Flexible.

Page 4 of 87

02/27/18 10:41

EMKO Environmental, Inc.
551 Lakecrest Dr.
El Dorado Hills, CA 95762

Project: Rise
Project Number: [none]
Project Manager: Dr. Andrew Kopania

CLS Work Order #: 18B0794
COC #:

Conventional Chemistry Parameters by APHA/EPA Methods

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
ED-1 (18B0794-02) Water Sampled: 02/13/18 12:50 Received: 02/16/18 14:40									
Chloride	2.4	0.50	mg/L	1	1801394	02/16/18	02/16/18	EPA 300.0	
Cyanide (amenable)	ND	0.010	"	"	1801549	02/22/18	02/22/18	SM4500-CN G	
Cyanide (total)	ND	0.0050	"	"	"	"	"	SM4500-CN E	
Fluoride	ND	0.10	"	"	1801394	02/16/18	02/16/18	EPA 300.0	
Hardness as CaCO₃	210	1.0	"	"	1801462	02/20/18	02/21/18	200.7/2340B	
Hydroxide as CaCO ₃	ND	5.0	"	"	1801442	02/19/18	02/19/18	SM2320B	
Magnesium	22	1.0	"	"	1801462	02/20/18	02/21/18	200.7/2340B	
MBAS as LAS, mol wt 340	ND	0.10	"	"	1801406	02/16/18	02/16/18	SM5540 C	HT-1
Nitrate as N	ND	0.40	"	"	1801394	02/16/18	02/16/18	EPA 300.0	HT-1
Nitrite as N	ND	0.40	"	"	"	"	"	"	HT-1, QC-2H
pH	7.09	0.01	pH Units	"	1801375	02/16/18	02/16/18	SM4500-H B	HT-F
Potassium	2.4	1.0	mg/L	"	1801462	02/20/18	02/21/18	200.7/2340B	
Sodium	13	1.0	"	"	"	"	"	"	
Specific Conductance (EC)	420	1.0	µmhos/cm	"	1801426	02/19/18	02/19/18	EPA 120.1	
Sulfate as SO ₄	ND	0.50	mg/L	"	1801394	02/16/18	02/16/18	EPA 300.0	
Total Alkalinity	220	5.0	"	"	1801442	02/19/18	02/19/18	SM2320B	
Total Dissolved Solids	230	10	"	"	1801423	02/19/18	02/20/18	SM2540C	
Total Suspended Solids	11	5.0	"	"	1801457	02/20/18	02/20/18	SM2540D	
IMD-1 (18B0794-03) Water Sampled: 02/15/18 10:40 Received: 02/16/18 14:40									
Ammonia as N	ND	100	µg/L	1	1801538	02/22/18	02/22/18	SM4500-NH4 C	
Bicarbonate as CaCO₃	220	5.0	mg/L	"	1801442	02/19/18	02/19/18	SM2320B	
Biochemical Oxygen Demand	15	3.0	"	"	1801382	02/16/18	02/21/18	SM5210B	
Calcium	47	1.0	"	"	1801462	02/20/18	02/21/18	200.7/2340B	
Carbonate as CaCO ₃	ND	5.0	"	"	1801442	02/19/18	02/19/18	SM2320B	
Chloride	2.3	0.50	"	"	1801394	02/16/18	02/16/18	EPA 300.0	
Cyanide (amenable)	ND	0.010	"	"	1801549	02/22/18	02/22/18	SM4500-CN G	
Cyanide (total)	ND	0.0050	"	"	"	"	"	SM4500-CN E	
Fluoride	ND	0.10	"	"	1801394	02/16/18	02/16/18	EPA 300.0	
Hardness as CaCO₃	200	1.0	"	"	1801462	02/20/18	02/21/18	200.7/2340B	
Hydroxide as CaCO ₃	ND	5.0	"	"	1801442	02/19/18	02/19/18	SM2320B	



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EMKO Environmental, Inc.
551 Lakecrest Dr.
El Dorado Hills, CA 95762

Project: Rise
Project Number: [none]
Project Manager: Dr. Andrew Kopania

CLS Work Order #: 18B0794
COC #:

Conventional Chemistry Parameters by APHA/EPA Methods

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
IMD-1 (18B0794-03) Water Sampled: 02/15/18 10:40 Received: 02/16/18 14:40									
Magnesium	20	1.0	mg/L	1	1801462	02/20/18	02/21/18	200.7/2340B	
MBAS as LAS, mol wt 340	ND	0.10	"	"	1801406	02/16/18	02/16/18	SM5540 C	
Nitrate as N	ND	0.40	"	"	1801394	02/16/18	02/16/18	EPA 300.0	
Nitrite as N	ND	0.40	"	"	"	"	"	"	QC-2H
pH	7.25	0.01	pH Units	"	1801375	02/16/18	02/16/18	SM4500-H B	HT-F
Potassium	2.3	1.0	mg/L	"	1801462	02/20/18	02/21/18	200.7/2340B	
Sodium	13	1.0	"	"	"	"	"	"	
Specific Conductance (EC)	410	1.0	µmhos/cm	"	1801426	02/19/18	02/19/18	EPA 120.1	
Sulfate as SO4	0.55	0.50	mg/L	"	1801394	02/16/18	02/16/18	EPA 300.0	
Total Alkalinity	220	5.0	"	"	1801442	02/19/18	02/19/18	SM2320B	
Total Dissolved Solids	220	10	"	"	1801423	02/19/18	02/20/18	SM2540C	
Total Suspended Solids	ND	5.0	"	"	1801457	02/20/18	02/20/18	SM2540D	
IMD-2 (18B0794-04) Water Sampled: 02/15/18 09:45 Received: 02/16/18 14:40									
Ammonia as N	240	100	µg/L	1	1801538	02/22/18	02/22/18	SM4500-NH4 C	
Bicarbonate as CaCO3	220	5.0	mg/L	"	1801442	02/19/18	02/19/18	SM2320B	
Biochemical Oxygen Demand	20	3.0	"	"	1801382	02/16/18	02/21/18	SM5210B	
Calcium	48	1.0	"	"	1801462	02/20/18	02/21/18	200.7/2340B	
Carbonate as CaCO3	ND	5.0	"	"	1801442	02/19/18	02/19/18	SM2320B	
Chloride	2.5	0.50	"	"	1801394	02/16/18	02/16/18	EPA 300.0	
Cyanide (amenable)	ND	0.010	"	"	1801549	02/22/18	02/22/18	SM4500-CN G	
Cyanide (total)	ND	0.0050	"	"	"	"	"	SM4500-CN E	
Fluoride	ND	0.10	"	"	1801394	02/16/18	02/16/18	EPA 300.0	
Hardness as CaCO3	210	1.0	"	"	1801462	02/20/18	02/21/18	200.7/2340B	
Hydroxide as CaCO3	ND	5.0	"	"	1801442	02/19/18	02/19/18	SM2320B	
Magnesium	21	1.0	"	"	1801462	02/20/18	02/21/18	200.7/2340B	
MBAS as LAS, mol wt 340	ND	0.10	"	"	1801406	02/16/18	02/16/18	SM5540 C	
Nitrate as N	ND	0.40	"	"	1801394	02/16/18	02/16/18	EPA 300.0	
Nitrite as N	ND	0.40	"	"	"	"	"	"	QC-2H
pH	7.09	0.01	pH Units	"	1801375	02/16/18	02/16/18	SM4500-H B	HT-F
Potassium	2.5	1.0	mg/L	"	1801462	02/20/18	02/21/18	200.7/2340B	



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EMKO Environmental, Inc.
551 Lakecrest Dr.
El Dorado Hills, CA 95762

Project: Rise
Project Number: [none]
Project Manager: Dr. Andrew Kopania

CLS Work Order #: 18B0794
COC #:

Conventional Chemistry Parameters by APHA/EPA Methods

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
IMD-2 (18B0794-04) Water Sampled: 02/15/18 09:45 Received: 02/16/18 14:40									
Sodium	13	1.0	mg/L	1	1801462	"	02/21/18	200.7/2340B	
Specific Conductance (EC)	410	1.0	µmhos/cm	"	1801426	02/19/18	02/19/18	EPA 120.1	
Sulfate as SO4	0.83	0.50	mg/L	"	1801394	02/16/18	02/16/18	EPA 300.0	
Total Alkalinity	220	5.0	"	"	1801442	02/19/18	02/19/18	SM2320B	
Total Dissolved Solids	230	10	"	"	1801423	02/19/18	02/20/18	SM2540C	
Total Suspended Solids	180	5.0	"	"	1801457	02/20/18	02/20/18	SM2540D	
NBS-265 (18B0794-05) Water Sampled: 02/15/18 15:33 Received: 02/16/18 14:40									
Ammonia as N	ND	100	µg/L	1	1801538	02/22/18	02/22/18	SM4500-NH4 C	
Bicarbonate as CaCO3	190	5.0	mg/L	"	1801442	02/19/18	02/19/18	SM2320B	
Biochemical Oxygen Demand	6.6	3.0	"	"	1801382	02/16/18	02/21/18	SM5210B	
Calcium	53	1.0	"	"	1801462	02/20/18	02/21/18	200.7/2340B	
Carbonate as CaCO3	ND	5.0	"	"	1801442	02/19/18	02/19/18	SM2320B	
Chloride	2.2	0.50	"	"	1801394	02/16/18	02/16/18	EPA 300.0	
Cyanide (amenable)	ND	0.010	"	"	1801549	02/22/18	02/22/18	SM4500-CN G	
Cyanide (total)	ND	0.0050	"	"	"	"	"	SM4500-CN E	
Fluoride	ND	0.10	"	"	1801394	02/16/18	02/16/18	EPA 300.0	
Hardness as CaCO3	190	1.0	"	"	1801462	02/20/18	02/21/18	200.7/2340B	
Hydroxide as CaCO3	ND	5.0	"	"	1801442	02/19/18	02/19/18	SM2320B	
Magnesium	14	1.0	"	"	1801462	02/20/18	02/21/18	200.7/2340B	
MBAS as LAS, mol wt 340	ND	0.10	"	"	1801406	02/16/18	02/16/18	SM5540 C	
Nitrate as N	ND	0.40	"	"	1801394	02/16/18	02/16/18	EPA 300.0	
Nitrite as N	ND	0.40	"	"	"	"	"	"	QC-2H
pH	7.22	0.01	pH Units	"	1801375	02/16/18	02/16/18	SM4500-H B	HT-F
Potassium	1.7	1.0	mg/L	"	1801462	02/20/18	02/21/18	200.7/2340B	
Sodium	7.7	1.0	"	"	"	"	"	"	
Specific Conductance (EC)	360	1.0	µmhos/cm	"	1801426	02/19/18	02/19/18	EPA 120.1	
Sulfate as SO4	0.62	0.50	mg/L	"	1801394	02/16/18	02/16/18	EPA 300.0	
Total Alkalinity	190	5.0	"	"	1801442	02/19/18	02/19/18	SM2320B	
Total Dissolved Solids	210	10	"	"	1801423	02/19/18	02/20/18	SM2540C	
Total Suspended Solids	ND	5.0	"	"	1801457	02/20/18	02/20/18	SM2540D	



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EMKO Environmental, Inc.
551 Lakecrest Dr.
El Dorado Hills, CA 95762

Project: Rise
Project Number: [none]
Project Manager: Dr. Andrew Kopania

CLS Work Order #: 18B0794
COC #:

Conventional Chemistry Parameters by APHA/EPA Methods

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
NBS-900 (18B0794-06) Water Sampled: 02/15/18 14:05 Received: 02/16/18 14:40									
Bicarbonate as CaCO₃	200	5.0	mg/L	1	1801442	02/19/18	02/19/18	SM2320B	
Calcium	53	1.0	"	"	1801462	02/20/18	02/21/18	200.7/2340B	
Carbonate as CaCO ₃	ND	5.0	"	"	1801442	02/19/18	02/19/18	SM2320B	
Chloride	2.2	0.50	"	"	1801394	02/16/18	02/16/18	EPA 300.0	
Cyanide (amenable)	ND	0.010	"	"	1801549	02/22/18	02/22/18	SM4500-CN G	
Cyanide (total)	ND	0.0050	"	"	"	"	"	SM4500-CN E	
Fluoride	ND	0.10	"	"	1801394	02/16/18	02/16/18	EPA 300.0	
Hardness as CaCO₃	190	1.0	"	"	1801462	02/20/18	02/21/18	200.7/2340B	
Hydroxide as CaCO ₃	ND	5.0	"	"	1801442	02/19/18	02/19/18	SM2320B	
Magnesium	14	1.0	"	"	1801462	02/20/18	02/21/18	200.7/2340B	
MBAS as LAS, mol wt 340	ND	0.10	"	"	1801406	02/16/18	02/16/18	SM5540 C	
Nitrate as N	ND	0.40	"	"	1801394	02/16/18	02/16/18	EPA 300.0	
Nitrite as N	ND	0.40	"	"	"	"	"	"	QC-2H
pH	7.25	0.01	pH Units	"	1801375	02/16/18	02/16/18	SM4500-H B	HT-F
Potassium	1.6	1.0	mg/L	"	1801462	02/20/18	02/21/18	200.7/2340B	
Sodium	7.5	1.0	"	"	"	"	"	"	
Specific Conductance (EC)	360	1.0	µmhos/cm	"	1801426	02/19/18	02/19/18	EPA 120.1	
Sulfate as SO ₄	ND	0.50	mg/L	"	1801394	02/16/18	02/16/18	EPA 300.0	
Total Alkalinity	200	5.0	"	"	1801442	02/19/18	02/19/18	SM2320B	
Total Dissolved Solids	200	10	"	"	1801423	02/19/18	02/20/18	SM2540C	

NBS-1300 (18B0794-07) Water

 Sampled: 02/15/18 14:30 Received: 02/16/18 14:40

Bicarbonate as CaCO₃	190	5.0	mg/L	1	1801442	02/19/18	02/19/18	SM2320B	
Calcium	54	1.0	"	"	1801462	02/20/18	02/21/18	200.7/2340B	
Carbonate as CaCO ₃	ND	5.0	"	"	1801442	02/19/18	02/19/18	SM2320B	
Chloride	2.2	0.50	"	"	1801394	02/16/18	02/16/18	EPA 300.0	
Cyanide (amenable)	ND	0.010	"	"	1801549	02/22/18	02/22/18	SM4500-CN G	
Cyanide (total)	ND	0.0050	"	"	"	"	"	SM4500-CN E	
Fluoride	ND	0.10	"	"	1801394	02/16/18	02/16/18	EPA 300.0	
Hardness as CaCO₃	190	1.0	"	"	1801462	02/20/18	02/21/18	200.7/2340B	
Hydroxide as CaCO ₃	ND	5.0	"	"	1801442	02/19/18	02/19/18	SM2320B	



CALIFORNIA LABORATORY SERVICES

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EMKO Environmental, Inc.
551 Lakecrest Dr.
El Dorado Hills, CA 95762

Project: Rise
Project Number: [none]
Project Manager: Dr. Andrew Kopania

CLS Work Order #: 18B0794
COC #:

Conventional Chemistry Parameters by APHA/EPA Methods

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
NBS-1300 (18B0794-07) Water Sampled: 02/15/18 14:30 Received: 02/16/18 14:40									
Magnesium	14	1.0	mg/L	1	1801462	02/20/18	02/21/18	200.7/2340B	
MBAS as LAS, mol wt 340	ND	0.10	"	"	1801406	02/16/18	02/16/18	SM5540 C	
Nitrate as N	ND	0.40	"	"	1801394	02/16/18	02/16/18	EPA 300.0	
Nitrite as N	ND	0.40	"	"	"	"	"	"	QC-2H
pH	7.27	0.01	pH Units	"	1801375	02/16/18	02/16/18	SM4500-H B	HT-F
Potassium	1.7	1.0	mg/L	"	1801462	02/20/18	02/21/18	200.7/2340B	
Sodium	7.7	1.0	"	"	"	"	"	"	
Specific Conductance (EC)	370	1.0	µmhos/cm	"	1801426	02/19/18	02/19/18	EPA 120.1	
Sulfate as SO ₄	ND	0.50	mg/L	"	1801394	02/16/18	02/16/18	EPA 300.0	
Total Alkalinity	190	5.0	"	"	1801442	02/19/18	02/19/18	SM2320B	
Total Dissolved Solids	220	10	"	"	1801423	02/19/18	02/20/18	SM2540C	
NBS-2300 (18B0794-08) Water Sampled: 02/15/18 18:10 Received: 02/16/18 14:40									
Ammonia as N	66	100	µg/L	1	1801538	02/22/18	02/22/18	SM4500-NH ₄ C	J
Bicarbonate as CaCO₃	180	5.0	mg/L	"	1801442	02/19/18	02/19/18	SM2320B	
Biochemical Oxygen Demand	8.3	3.0	"	"	1801382	02/16/18	02/21/18	SM5210B	
Calcium	55	1.0	"	"	1801462	02/20/18	02/21/18	200.7/2340B	
Carbonate as CaCO ₃	ND	5.0	"	"	1801442	02/19/18	02/19/18	SM2320B	
Chloride	2.2	0.50	"	"	1801394	02/16/18	02/16/18	EPA 300.0	
Cyanide (amenable)	ND	0.010	"	"	1801549	02/22/18	02/22/18	SM4500-CN G	
Cyanide (total)	ND	0.0050	"	"	"	"	"	SM4500-CN E	
Fluoride	ND	0.10	"	"	1801394	02/16/18	02/16/18	EPA 300.0	
Hardness as CaCO₃	200	1.0	"	"	1801462	02/20/18	02/21/18	200.7/2340B	
Hydroxide as CaCO ₃	ND	5.0	"	"	1801442	02/19/18	02/19/18	SM2320B	
Magnesium	14	1.0	"	"	1801462	02/20/18	02/21/18	200.7/2340B	
MBAS as LAS, mol wt 340	ND	0.10	"	"	1801406	02/16/18	02/16/18	SM5540 C	
Nitrate as N	ND	0.40	"	"	1801394	02/16/18	02/16/18	EPA 300.0	
Nitrite as N	ND	0.40	"	"	"	"	"	"	QC-2H
pH	7.26	0.01	pH Units	"	1801375	02/16/18	02/16/18	SM4500-H B	HT-F
Potassium	1.7	1.0	mg/L	"	1801462	02/20/18	02/21/18	200.7/2340B	
Sodium	7.9	1.0	"	"	"	"	"	"	



CALIFORNIA LABORATORY SERVICES

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EMKO Environmental, Inc.
551 Lakecrest Dr.
El Dorado Hills, CA 95762

Project: Rise
Project Number: [none]
Project Manager: Dr. Andrew Kopania

CLS Work Order #: 18B0794
COC #:

Conventional Chemistry Parameters by APHA/EPA Methods

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
NBS-2300 (18B0794-08) Water Sampled: 02/15/18 18:10 Received: 02/16/18 14:40									
Specific Conductance (EC)	360	1.0	µmhos/cm	1	1801426	02/19/18	02/19/18	EPA 120.1	
Sulfate as SO ₄	ND	0.50	mg/L	"	1801394	02/16/18	02/16/18	EPA 300.0	
Total Alkalinity	180	5.0	"	"	1801442	02/19/18	02/19/18	SM2320B	
Total Dissolved Solids	200	10	"	"	1801423	02/19/18	02/20/18	SM2540C	
Total Suspended Solids	ND	5.0	"	"	1801457	02/20/18	02/20/18	SM2540D	
NBS-1600 (18B0794-09) Water Sampled: 02/15/18 17:20 Received: 02/16/18 14:40									
Bicarbonate as CaCO₃	200	5.0	mg/L	1	1801442	02/19/18	02/19/18	SM2320B	
Calcium	52	1.0	"	"	1801462	02/20/18	02/21/18	200.7/2340B	
Carbonate as CaCO ₃	ND	5.0	"	"	1801442	02/19/18	02/19/18	SM2320B	
Chloride	2.2	0.50	"	"	1801394	02/16/18	02/16/18	EPA 300.0	
Cyanide (amenable)	ND	0.010	"	"	1801549	02/22/18	02/22/18	SM4500-CN G	
Cyanide (total)	ND	0.0050	"	"	"	"	"	SM4500-CN E	
Fluoride	ND	0.10	"	"	1801394	02/16/18	02/16/18	EPA 300.0	
Hardness as CaCO₃	190	1.0	"	"	1801462	02/20/18	02/21/18	200.7/2340B	
Hydroxide as CaCO ₃	ND	5.0	"	"	1801442	02/19/18	02/19/18	SM2320B	
Magnesium	14	1.0	"	"	1801462	02/20/18	02/21/18	200.7/2340B	
MBAS as LAS, mol wt 340	ND	0.10	"	"	1801406	02/16/18	02/16/18	SM5540 C	
Nitrate as N	ND	0.40	"	"	1801394	02/16/18	02/16/18	EPA 300.0	
Nitrite as N	ND	0.40	"	"	"	"	"	"	QC-2H
pH	7.27	0.01	pH Units	"	1801375	02/16/18	02/16/18	SM4500-H B	HT-F
Potassium	1.6	1.0	mg/L	"	1801462	02/20/18	02/21/18	200.7/2340B	
Sodium	7.4	1.0	"	"	"	"	"	"	
Specific Conductance (EC)	360	1.0	µmhos/cm	"	1801426	02/19/18	02/19/18	EPA 120.1	
Sulfate as SO ₄	ND	0.50	mg/L	"	1801394	02/16/18	02/16/18	EPA 300.0	
Total Alkalinity	200	5.0	"	"	1801442	02/19/18	02/19/18	SM2320B	
Total Dissolved Solids	200	10	"	"	1801423	02/19/18	02/20/18	SM2540C	



CALIFORNIA LABORATORY SERVICES

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EMKO Environmental, Inc.
551 Lakecrest Dr.
El Dorado Hills, CA 95762

Project: Rise
Project Number: [none]
Project Manager: Dr. Andrew Kopania

CLS Work Order #: 18B0794
COC #:

Extractable Petroleum Hydrocarbons by EPA Method 8015M

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
D-1 (18B0794-01) Water Sampled: 02/13/18 13:30 Received: 02/16/18 14:40									
Diesel	ND	0.050	mg/L	1	1801431	02/19/18	02/20/18	EPA 8015M	
Motor Oil	ND	0.050	"	"	"	"	"	"	
Surrogate: o-Terphenyl		102 %	65-135		"	"	"	"	
ED-1 (18B0794-02) Water Sampled: 02/13/18 12:50 Received: 02/16/18 14:40									
Diesel	ND	0.050	mg/L	1	1801431	02/19/18	02/20/18	EPA 8015M	
Motor Oil	ND	0.050	"	"	"	"	"	"	
Surrogate: o-Terphenyl		94 %	65-135		"	"	"	"	
IMD-1 (18B0794-03) Water Sampled: 02/15/18 10:40 Received: 02/16/18 14:40									
Diesel	ND	0.050	mg/L	1	1801431	02/19/18	02/20/18	EPA 8015M	
Motor Oil	ND	0.050	"	"	"	"	"	"	
Surrogate: o-Terphenyl		103 %	65-135		"	"	"	"	
IMD-2 (18B0794-04) Water Sampled: 02/15/18 09:45 Received: 02/16/18 14:40									
Diesel	ND	0.050	mg/L	1	1801431	02/19/18	02/20/18	EPA 8015M	
Motor Oil	ND	0.050	"	"	"	"	"	"	
Surrogate: o-Terphenyl		102 %	65-135		"	"	"	"	
NBS-265 (18B0794-05) Water Sampled: 02/15/18 15:33 Received: 02/16/18 14:40									
Diesel	ND	0.050	mg/L	1	1801431	02/19/18	02/20/18	EPA 8015M	
Motor Oil	0.83	0.050	"	"	"	"	"	"	
Surrogate: o-Terphenyl		113 %	65-135		"	"	"	"	
NBS-900 (18B0794-06) Water Sampled: 02/15/18 14:05 Received: 02/16/18 14:40									
Diesel	ND	0.050	mg/L	1	1801431	02/19/18	02/20/18	EPA 8015M	
Motor Oil	ND	0.050	"	"	"	"	"	"	



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EMKO Environmental, Inc.
551 Lakecrest Dr.
El Dorado Hills, CA 95762

Project: Rise
Project Number: [none]
Project Manager: Dr. Andrew Kopania

CLS Work Order #: 18B0794
COC #:

Extractable Petroleum Hydrocarbons by EPA Method 8015M

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
NBS-900 (18B0794-06) Water Sampled: 02/15/18 14:05 Received: 02/16/18 14:40									
Surrogate: o-Terphenyl		102 %	65-135		1801431	"	02/20/18	EPA 8015M	
NBS-1300 (18B0794-07) Water Sampled: 02/15/18 14:30 Received: 02/16/18 14:40									
Diesel	ND	0.050	mg/L	1	1801431	02/19/18	02/20/18	EPA 8015M	
Motor Oil	ND	0.050	"	"	"	"	"	"	
Surrogate: o-Terphenyl		100 %	65-135		"	"	"	"	
NBS-2300 (18B0794-08) Water Sampled: 02/15/18 18:10 Received: 02/16/18 14:40									
Diesel	ND	0.050	mg/L	1	1801431	02/19/18	02/20/18	EPA 8015M	
Motor Oil	ND	0.050	"	"	"	"	"	"	
Surrogate: o-Terphenyl		102 %	65-135		"	"	"	"	
NBS-1600 (18B0794-09) Water Sampled: 02/15/18 17:20 Received: 02/16/18 14:40									
Diesel	ND	0.050	mg/L	1	1801431	02/19/18	02/20/18	EPA 8015M	
Motor Oil	ND	0.050	"	"	"	"	"	"	
Surrogate: o-Terphenyl		92 %	65-135		"	"	"	"	



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EMKO Environmental, Inc.
551 Lakecrest Dr.
El Dorado Hills, CA 95762

Project: Rise
Project Number: [none]
Project Manager: Dr. Andrew Kopania

CLS Work Order #: 18B0794
COC #:

Metals (Drinking Water) by EPA 200 Series Methods

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
D-1 (18B0794-01) Water Sampled: 02/13/18 13:30 Received: 02/16/18 14:40									
Aluminum	ND	50	µg/L	1	1801462	02/20/18	02/21/18	EPA 200.7	
Antimony	ND	4.0	"	"	1801506	02/21/18	02/22/18	EPA 200.8	
Arsenic	6.6	2.0	"	"	"	"	"	"	
Barium	ND	100	"	"	1801462	02/20/18	02/21/18	EPA 200.7	
Beryllium	ND	1.0	"	"	"	"	"	"	
Boron	ND	100	"	"	"	"	"	"	
Cadmium	ND	1.0	"	"	1801506	02/21/18	02/22/18	EPA 200.8	
Chromium	ND	10	"	"	1801462	02/20/18	02/21/18	EPA 200.7	
Copper	ND	50	"	"	"	"	"	"	
Iron	ND	100	"	"	"	"	"	"	
Lead	ND	5.0	"	"	1801506	02/21/18	02/22/18	EPA 200.8	
Manganese	ND	20	"	"	1801462	02/20/18	02/21/18	EPA 200.7	
Mercury	ND	1.0	"	"	1801473	02/20/18	02/20/18	EPA 245.1	
Molybdenum	ND	2.0	"	"	1801506	02/21/18	02/22/18	EPA 200.8	
Nickel	24	10	"	"	"	"	"	"	
Selenium	ND	5.0	"	"	"	"	"	"	
Silver	ND	10	"	"	"	"	"	"	
Thallium	ND	1.0	"	"	"	"	"	"	
Vanadium	ND	3.0	"	"	"	"	"	"	
Zinc	ND	50	"	"	1801462	02/20/18	02/21/18	EPA 200.7	

ED-1 (18B0794-02) Water Sampled: 02/13/18 12:50 Received: 02/16/18 14:40

Aluminum	290	50	µg/L	1	1801462	02/20/18	02/21/18	EPA 200.7	
Antimony	ND	4.0	"	"	1801506	02/21/18	02/22/18	EPA 200.8	
Arsenic	59	2.0	"	"	"	"	"	"	
Barium	130	100	"	"	1801462	02/20/18	02/21/18	EPA 200.7	
Beryllium	ND	1.0	"	"	"	"	"	"	
Boron	140	100	"	"	"	"	"	"	
Cadmium	ND	1.0	"	"	1801506	02/21/18	02/22/18	EPA 200.8	
Chromium	ND	10	"	"	1801462	02/20/18	02/21/18	EPA 200.7	
Copper	ND	50	"	"	"	"	"	"	



CALIFORNIA LABORATORY SERVICES

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EMKO Environmental, Inc.
551 Lakecrest Dr.
El Dorado Hills, CA 95762

Project: Rise
Project Number: [none]
Project Manager: Dr. Andrew Kopania

CLS Work Order #: 18B0794
COC #:

Metals (Drinking Water) by EPA 200 Series Methods

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
ED-1 (18B0794-02) Water Sampled: 02/13/18 12:50 Received: 02/16/18 14:40									
Iron	4800	100	µg/L	1	1801462	"	02/21/18	EPA 200.7	
Lead	ND	5.0	"	"	1801506	02/21/18	02/22/18	EPA 200.8	
Manganese	310	20	"	"	1801462	02/20/18	02/21/18	EPA 200.7	
Mercury	ND	1.0	"	"	1801473	02/20/18	02/20/18	EPA 245.1	
Molybdenum	ND	2.0	"	"	1801506	02/21/18	02/22/18	EPA 200.8	
Nickel	ND	10	"	"	"	"	"	"	
Selenium	ND	5.0	"	"	"	"	"	"	
Silver	ND	10	"	"	"	"	"	"	
Thallium	ND	1.0	"	"	"	"	"	"	
Vanadium	ND	3.0	"	"	"	"	"	"	
Zinc	94	50	"	"	1801462	02/20/18	02/21/18	EPA 200.7	
IMD-1 (18B0794-03) Water Sampled: 02/15/18 10:40 Received: 02/16/18 14:40									
Aluminum	ND	50	µg/L	1	1801462	02/20/18	02/21/18	EPA 200.7	
Antimony	ND	4.0	"	"	1801506	02/21/18	02/22/18	EPA 200.8	
Arsenic	41	2.0	"	"	"	"	"	"	
Barium	130	100	"	"	1801462	02/20/18	02/21/18	EPA 200.7	
Beryllium	ND	1.0	"	"	"	"	"	"	
Boron	140	100	"	"	"	"	"	"	
Cadmium	ND	1.0	"	"	1801506	02/21/18	02/22/18	EPA 200.8	
Chromium	ND	10	"	"	1801462	02/20/18	02/21/18	EPA 200.7	
Copper	ND	50	"	"	"	"	"	"	
Iron	2200	100	"	"	"	"	"	"	
Lead	ND	5.0	"	"	1801506	02/21/18	02/22/18	EPA 200.8	
Manganese	200	20	"	"	1801462	02/20/18	02/21/18	EPA 200.7	
Mercury	ND	1.0	"	"	1801473	02/20/18	02/20/18	EPA 245.1	
Molybdenum	ND	2.0	"	"	1801506	02/21/18	02/22/18	EPA 200.8	
Nickel	ND	10	"	"	"	"	"	"	
Selenium	ND	5.0	"	"	"	"	"	"	
Silver	ND	10	"	"	"	"	"	"	
Thallium	ND	1.0	"	"	"	"	"	"	



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EMKO Environmental, Inc.
551 Lakecrest Dr.
El Dorado Hills, CA 95762

Project: Rise
Project Number: [none]
Project Manager: Dr. Andrew Kopania

CLS Work Order #: 18B0794
COC #:

Metals (Drinking Water) by EPA 200 Series Methods

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
IMD-1 (18B0794-03) Water Sampled: 02/15/18 10:40 Received: 02/16/18 14:40									
Vanadium	ND	3.0	µg/L	1	1801506	"	02/22/18	EPA 200.8	
Zinc	ND	50	"	"	1801462	02/20/18	02/21/18	EPA 200.7	
IMD-2 (18B0794-04) Water Sampled: 02/15/18 09:45 Received: 02/16/18 14:40									
Aluminum	ND	50	µg/L	1	1801462	02/20/18	02/21/18	EPA 200.7	
Antimony	ND	4.0	"	"	1801506	02/21/18	02/22/18	EPA 200.8	
Arsenic	37	2.0	"	"	"	"	"	"	
Barium	130	100	"	"	1801462	02/20/18	02/21/18	EPA 200.7	
Beryllium	ND	1.0	"	"	"	"	"	"	
Boron	140	100	"	"	"	"	"	"	
Cadmium	ND	1.0	"	"	1801506	02/21/18	02/22/18	EPA 200.8	
Chromium	ND	10	"	"	1801462	02/20/18	02/21/18	EPA 200.7	
Copper	ND	50	"	"	"	"	"	"	
Iron	1600	100	"	"	"	"	"	"	
Lead	ND	5.0	"	"	1801506	02/21/18	02/22/18	EPA 200.8	
Manganese	210	20	"	"	1801462	02/20/18	02/21/18	EPA 200.7	
Mercury	ND	1.0	"	"	1801473	02/20/18	02/20/18	EPA 245.1	
Molybdenum	ND	2.0	"	"	1801506	02/21/18	02/22/18	EPA 200.8	
Nickel	ND	10	"	"	"	"	"	"	
Selenium	ND	5.0	"	"	"	"	"	"	
Silver	ND	10	"	"	"	"	"	"	
Thallium	ND	1.0	"	"	"	"	"	"	
Vanadium	ND	3.0	"	"	"	"	"	"	
Zinc	ND	50	"	"	1801462	02/20/18	02/21/18	EPA 200.7	



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EMKO Environmental, Inc.
551 Lakecrest Dr.
El Dorado Hills, CA 95762

Project: Rise
Project Number: [none]
Project Manager: Dr. Andrew Kopania

CLS Work Order #: 18B0794
COC #:

Metals (Drinking Water) by EPA 200 Series Methods

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
NBS-265 (18B0794-05) Water Sampled: 02/15/18 15:33 Received: 02/16/18 14:40									
Aluminum	ND	50	µg/L	1	1801462	02/20/18	02/21/18	EPA 200.7	
Antimony	ND	4.0	"	"	1801506	02/21/18	02/22/18	EPA 200.8	
Arsenic	ND	2.0	"	"	"	"	"	"	
Barium	ND	100	"	"	1801462	02/20/18	02/21/18	EPA 200.7	
Beryllium	ND	1.0	"	"	"	"	"	"	
Boron	ND	100	"	"	"	"	"	"	
Cadmium	1.7	1.0	"	"	1801506	02/21/18	02/22/18	EPA 200.8	
Chromium	ND	10	"	"	1801462	02/20/18	02/21/18	EPA 200.7	
Copper	ND	50	"	"	"	"	"	"	
Iron	1600	100	"	"	"	"	"	"	
Lead	ND	5.0	"	"	1801506	02/21/18	02/22/18	EPA 200.8	
Manganese	270	20	"	"	1801462	02/20/18	02/21/18	EPA 200.7	
Mercury	ND	1.0	"	"	1801473	02/20/18	02/20/18	EPA 245.1	
Molybdenum	ND	2.0	"	"	1801506	02/21/18	02/22/18	EPA 200.8	
Nickel	ND	10	"	"	"	"	"	"	
Selenium	ND	5.0	"	"	"	"	"	"	
Silver	ND	10	"	"	"	"	"	"	
Thallium	ND	1.0	"	"	"	"	"	"	
Vanadium	ND	3.0	"	"	"	"	"	"	
Zinc	66	50	"	"	1801462	02/20/18	02/21/18	EPA 200.7	
NBS-900 (18B0794-06) Water Sampled: 02/15/18 14:05 Received: 02/16/18 14:40									
Aluminum	ND	50	µg/L	1	1801462	02/20/18	02/21/18	EPA 200.7	
Antimony	ND	4.0	"	"	1801506	02/21/18	02/22/18	EPA 200.8	
Arsenic	ND	2.0	"	"	"	"	"	"	
Barium	ND	100	"	"	1801462	02/20/18	02/21/18	EPA 200.7	
Beryllium	ND	1.0	"	"	"	"	"	"	
Boron	ND	100	"	"	"	"	"	"	
Cadmium	ND	1.0	"	"	1801506	02/21/18	02/22/18	EPA 200.8	
Chromium	ND	10	"	"	1801462	02/20/18	02/21/18	EPA 200.7	
Copper	ND	50	"	"	"	"	"	"	



CALIFORNIA LABORATORY SERVICES

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EMKO Environmental, Inc.
551 Lakecrest Dr.
El Dorado Hills, CA 95762

Project: Rise
Project Number: [none]
Project Manager: Dr. Andrew Kopania

CLS Work Order #: 18B0794
COC #:

Metals (Drinking Water) by EPA 200 Series Methods

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
NBS-900 (18B0794-06) Water Sampled: 02/15/18 14:05 Received: 02/16/18 14:40									
Iron	1600	100	µg/L	1	1801462	"	02/21/18	EPA 200.7	
Lead	ND	5.0	"	"	1801506	02/21/18	02/22/18	EPA 200.8	
Manganese	230	20	"	"	1801462	02/20/18	02/21/18	EPA 200.7	
Mercury	ND	1.0	"	"	1801473	02/20/18	02/20/18	EPA 245.1	
Molybdenum	ND	2.0	"	"	1801506	02/21/18	02/22/18	EPA 200.8	
Nickel	ND	10	"	"	"	"	"	"	
Selenium	ND	5.0	"	"	"	"	"	"	
Silver	ND	10	"	"	"	"	"	"	
Thallium	ND	1.0	"	"	"	"	"	"	
Vanadium	ND	3.0	"	"	"	"	"	"	
Zinc	ND	50	"	"	1801462	02/20/18	02/21/18	EPA 200.7	
NBS-1300 (18B0794-07) Water Sampled: 02/15/18 14:30 Received: 02/16/18 14:40									
Aluminum	ND	50	µg/L	1	1801462	02/20/18	02/21/18	EPA 200.7	
Antimony	ND	4.0	"	"	1801506	02/21/18	02/22/18	EPA 200.8	
Arsenic	ND	2.0	"	"	"	"	"	"	
Barium	ND	100	"	"	1801462	02/20/18	02/21/18	EPA 200.7	
Beryllium	ND	1.0	"	"	"	"	"	"	
Boron	ND	100	"	"	"	"	"	"	
Cadmium	ND	1.0	"	"	1801506	02/21/18	02/22/18	EPA 200.8	
Chromium	ND	10	"	"	1801462	02/20/18	02/21/18	EPA 200.7	
Copper	ND	50	"	"	"	"	"	"	
Iron	1600	100	"	"	"	"	"	"	
Lead	ND	5.0	"	"	1801506	02/21/18	02/22/18	EPA 200.8	
Manganese	230	20	"	"	1801462	02/20/18	02/21/18	EPA 200.7	
Mercury	ND	1.0	"	"	1801473	02/20/18	02/20/18	EPA 245.1	
Molybdenum	ND	2.0	"	"	1801506	02/21/18	02/22/18	EPA 200.8	
Nickel	ND	10	"	"	"	"	"	"	
Selenium	ND	5.0	"	"	"	"	"	"	
Silver	ND	10	"	"	"	"	"	"	
Thallium	ND	1.0	"	"	"	"	"	"	



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EMKO Environmental, Inc.
551 Lakecrest Dr.
El Dorado Hills, CA 95762

Project: Rise
Project Number: [none]
Project Manager: Dr. Andrew Kopania

CLS Work Order #: 18B0794
COC #:

Metals (Drinking Water) by EPA 200 Series Methods

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
NBS-1300 (18B0794-07) Water Sampled: 02/15/18 14:30 Received: 02/16/18 14:40									
Vanadium	ND	3.0	µg/L	1	1801506	"	02/22/18	EPA 200.8	
Zinc	ND	50	"	"	1801462	02/20/18	02/21/18	EPA 200.7	
NBS-2300 (18B0794-08) Water Sampled: 02/15/18 18:10 Received: 02/16/18 14:40									
Aluminum	ND	50	µg/L	1	1801462	02/20/18	02/21/18	EPA 200.7	
Antimony	ND	4.0	"	"	1801506	02/21/18	02/22/18	EPA 200.8	
Arsenic	ND	2.0	"	"	"	"	"	"	
Barium	ND	100	"	"	1801462	02/20/18	02/21/18	EPA 200.7	
Beryllium	ND	1.0	"	"	"	"	"	"	
Boron	ND	100	"	"	"	"	"	"	
Cadmium	ND	1.0	"	"	1801506	02/21/18	02/22/18	EPA 200.8	
Chromium	ND	10	"	"	1801462	02/20/18	02/21/18	EPA 200.7	
Copper	ND	50	"	"	"	"	"	"	
Iron	1600	100	"	"	"	"	"	"	
Lead	ND	5.0	"	"	1801506	02/21/18	02/22/18	EPA 200.8	
Manganese	240	20	"	"	1801462	02/20/18	02/21/18	EPA 200.7	
Mercury	ND	1.0	"	"	1801473	02/20/18	02/20/18	EPA 245.1	
Molybdenum	ND	2.0	"	"	1801506	02/21/18	02/22/18	EPA 200.8	
Nickel	ND	10	"	"	"	"	"	"	
Selenium	ND	5.0	"	"	"	"	"	"	
Silver	ND	10	"	"	"	"	"	"	
Thallium	ND	1.0	"	"	"	"	"	"	
Vanadium	ND	3.0	"	"	"	"	"	"	
Zinc	ND	50	"	"	1801462	02/20/18	02/21/18	EPA 200.7	



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EMKO Environmental, Inc.
551 Lakecrest Dr.
El Dorado Hills, CA 95762

Project: Rise
Project Number: [none]
Project Manager: Dr. Andrew Kopania

CLS Work Order #: 18B0794
COC #:

Metals (Drinking Water) by EPA 200 Series Methods

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
NBS-1600 (18B0794-09) Water Sampled: 02/15/18 17:20 Received: 02/16/18 14:40									
Aluminum	ND	50	µg/L	1	1801462	02/20/18	02/21/18	EPA 200.7	
Antimony	ND	4.0	"	"	1801506	02/21/18	02/22/18	EPA 200.8	
Arsenic	ND	2.0	"	"	"	"	"	"	
Barium	ND	100	"	"	1801462	02/20/18	02/21/18	EPA 200.7	
Beryllium	ND	1.0	"	"	"	"	"	"	
Boron	ND	100	"	"	"	"	"	"	
Cadmium	ND	1.0	"	"	1801506	02/21/18	02/22/18	EPA 200.8	
Chromium	ND	10	"	"	1801462	02/20/18	02/21/18	EPA 200.7	
Copper	ND	50	"	"	"	"	"	"	
Iron	1600	100	"	"	"	"	"	"	
Lead	ND	5.0	"	"	1801506	02/21/18	02/22/18	EPA 200.8	
Manganese	230	20	"	"	1801462	02/20/18	02/21/18	EPA 200.7	
Mercury	ND	1.0	"	"	1801473	02/20/18	02/20/18	EPA 245.1	
Molybdenum	ND	2.0	"	"	1801506	02/21/18	02/22/18	EPA 200.8	
Nickel	ND	10	"	"	"	"	"	"	
Selenium	ND	5.0	"	"	"	"	"	"	
Silver	ND	10	"	"	"	"	"	"	
Thallium	ND	1.0	"	"	"	"	"	"	
Vanadium	ND	3.0	"	"	"	"	"	"	
Zinc	ND	50	"	"	1801462	02/20/18	02/21/18	EPA 200.7	



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EMKO Environmental, Inc.
551 Lakecrest Dr.
El Dorado Hills, CA 95762

Project: Rise
Project Number: [none]
Project Manager: Dr. Andrew Kopania

CLS Work Order #: 18B0794
COC #:

Microbiological Parameters by APHA Standard Methods

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
D-1 (18B0794-01) Water Sampled: 02/13/18 13:30 Received: 02/16/18 14:40									
E. Coli	<1.8	1.8	MPN/100 mL	1	1801404	02/16/18	02/19/18	SM 9221	HT-1
Fecal Coliforms	<1.8	1.8	"	"	"	"	"	"	HT-1
Total Coliforms	>1600	1.8	"	"	"	"	"	"	HT-1
ED-1 (18B0794-02) Water Sampled: 02/13/18 12:50 Received: 02/16/18 14:40									
E. Coli	<1.8	1.8	MPN/100 mL	1	1801404	02/16/18	02/20/18	SM 9221	HT-1
Fecal Coliforms	<1.8	1.8	"	"	"	"	"	"	HT-1
Total Coliforms	140	1.8	"	"	"	"	"	"	HT-1
IMD-1 (18B0794-03) Water Sampled: 02/15/18 10:40 Received: 02/16/18 14:40									
E. Coli	<1.8	1.8	MPN/100 mL	1	1801404	02/16/18	02/20/18	SM 9221	HT-1
Fecal Coliforms	<1.8	1.8	"	"	"	"	"	"	HT-1
Total Coliforms	2.0	1.8	"	"	"	"	"	"	HT-1
IMD-2 (18B0794-04) Water Sampled: 02/15/18 09:45 Received: 02/16/18 14:40									
E. Coli	2.0	1.8	MPN/100 mL	1	1801404	02/16/18	02/20/18	SM 9221	HT-1
Fecal Coliforms	2.0	1.8	"	"	"	"	"	"	HT-1
Total Coliforms	17	1.8	"	"	"	"	"	"	HT-1
NBS-265 (18B0794-05) Water Sampled: 02/15/18 15:33 Received: 02/16/18 14:40									
E. Coli	ND	1.8	MPN/100 mL	1	1801404	02/16/18	02/20/18	SM 9221	HT-1
Fecal Coliforms	ND	1.8	"	"	"	"	"	"	HT-1
Total Coliforms	2.0	1.8	"	"	"	"	"	"	HT-1
NBS-2300 (18B0794-08) Water Sampled: 02/15/18 18:10 Received: 02/16/18 14:40									
E. Coli	<1.8	1.8	MPN/100 mL	1	1801404	02/16/18	02/20/18	SM 9221	HT-1
Fecal Coliforms	<1.8	1.8	"	"	"	"	"	"	HT-1
Total Coliforms	<1.8	1.8	"	"	"	"	"	"	HT-1



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EMKO Environmental, Inc.
551 Lakecrest Dr.
El Dorado Hills, CA 95762

Project: Rise
Project Number: [none]
Project Manager: Dr. Andrew Kopania

CLS Work Order #: 18B0794
COC #:

Polychlorinated Biphenyls by EPA Method 8082A

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes

D-1 (18B0794-01) Water Sampled: 02/13/18 13:30 Received: 02/16/18 14:40

Aroclor 1016	ND	0.50	µg/L	1	1801416	02/19/18	02/20/18	EPA 8082A	
Aroclor 1221	ND	0.50	"	"	"	"	"	"	
Aroclor 1232	ND	0.50	"	"	"	"	"	"	
Aroclor 1242	ND	0.50	"	"	"	"	"	"	
Aroclor 1248	ND	0.50	"	"	"	"	"	"	
Aroclor 1254	ND	0.50	"	"	"	"	"	"	
Aroclor 1260	ND	0.50	"	"	"	"	"	"	
Aroclor 1268	ND	0.50	"	"	"	"	"	"	

Surrogate: Decachlorobiphenyl 82 % 50-150 " " " "

ED-1 (18B0794-02) Water Sampled: 02/13/18 12:50 Received: 02/16/18 14:40

Aroclor 1016	ND	0.50	µg/L	1	1801416	02/19/18	02/20/18	EPA 8082A	
Aroclor 1221	ND	0.50	"	"	"	"	"	"	
Aroclor 1232	ND	0.50	"	"	"	"	"	"	
Aroclor 1242	ND	0.50	"	"	"	"	"	"	
Aroclor 1248	ND	0.50	"	"	"	"	"	"	
Aroclor 1254	ND	0.50	"	"	"	"	"	"	
Aroclor 1260	ND	0.50	"	"	"	"	"	"	
Aroclor 1268	ND	0.50	"	"	"	"	"	"	

Surrogate: Decachlorobiphenyl 92 % 50-150 " " " "

IMD-1 (18B0794-03) Water Sampled: 02/15/18 10:40 Received: 02/16/18 14:40

Aroclor 1016	ND	0.50	µg/L	1	1801416	02/19/18	02/20/18	EPA 8082A	
Aroclor 1221	ND	0.50	"	"	"	"	"	"	
Aroclor 1232	ND	0.50	"	"	"	"	"	"	
Aroclor 1242	ND	0.50	"	"	"	"	"	"	
Aroclor 1248	ND	0.50	"	"	"	"	"	"	
Aroclor 1254	ND	0.50	"	"	"	"	"	"	
Aroclor 1260	ND	0.50	"	"	"	"	"	"	



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EMKO Environmental, Inc.
551 Lakecrest Dr.
El Dorado Hills, CA 95762

Project: Rise
Project Number: [none]
Project Manager: Dr. Andrew Kopania

CLS Work Order #: 18B0794
COC #:

Polychlorinated Biphenyls by EPA Method 8082A

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes

IMD-1 (18B0794-03) Water Sampled: 02/15/18 10:40 Received: 02/16/18 14:40

Aroclor 1268	ND	0.50	µg/L	1	1801416	"	02/20/18	EPA 8082A	

Surrogate: Decachlorobiphenyl 96 % 50-150 " " " "

IMD-2 (18B0794-04) Water Sampled: 02/15/18 09:45 Received: 02/16/18 14:40

Aroclor 1016	ND	0.50	µg/L	1	1801416	02/19/18	02/20/18	EPA 8082A	
Aroclor 1221	ND	0.50	"	"	"	"	"	"	
Aroclor 1232	ND	0.50	"	"	"	"	"	"	
Aroclor 1242	ND	0.50	"	"	"	"	"	"	
Aroclor 1248	ND	0.50	"	"	"	"	"	"	
Aroclor 1254	ND	0.50	"	"	"	"	"	"	
Aroclor 1260	ND	0.50	"	"	"	"	"	"	
Aroclor 1268	ND	0.50	"	"	"	"	"	"	

Surrogate: Decachlorobiphenyl 73 % 50-150 " " " "

NBS-265 (18B0794-05) Water Sampled: 02/15/18 15:33 Received: 02/16/18 14:40

Aroclor 1016	ND	0.50	µg/L	1	1801416	02/19/18	02/20/18	EPA 8082A	
Aroclor 1221	ND	0.50	"	"	"	"	"	"	
Aroclor 1232	ND	0.50	"	"	"	"	"	"	
Aroclor 1242	ND	0.50	"	"	"	"	"	"	
Aroclor 1248	ND	0.50	"	"	"	"	"	"	
Aroclor 1254	ND	0.50	"	"	"	"	"	"	
Aroclor 1260	ND	0.50	"	"	"	"	"	"	
Aroclor 1268	ND	0.50	"	"	"	"	"	"	

Surrogate: Decachlorobiphenyl 58 % 50-150 " " " "



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EMKO Environmental, Inc.
551 Lakecrest Dr.
El Dorado Hills, CA 95762

Project: Rise
Project Number: [none]
Project Manager: Dr. Andrew Kopania

CLS Work Order #: 18B0794
COC #:

Polychlorinated Biphenyls by EPA Method 8082A

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
NBS-900 (18B0794-06) Water Sampled: 02/15/18 14:05 Received: 02/16/18 14:40									
Aroclor 1016	ND	0.59	µg/L	1	1801416	02/19/18	02/20/18	EPA 8082A	
Aroclor 1221	ND	0.59	"	"	"	"	"	"	
Aroclor 1232	ND	0.59	"	"	"	"	"	"	
Aroclor 1242	ND	0.59	"	"	"	"	"	"	
Aroclor 1248	ND	0.59	"	"	"	"	"	"	
Aroclor 1254	ND	0.59	"	"	"	"	"	"	
Aroclor 1260	ND	0.59	"	"	"	"	"	"	
Aroclor 1268	ND	0.59	"	"	"	"	"	"	
Surrogate: Decachlorobiphenyl		59 %	50-150		"	"	"	"	
NBS-1300 (18B0794-07) Water Sampled: 02/15/18 14:30 Received: 02/16/18 14:40									
Aroclor 1016	ND	0.59	µg/L	1	1801416	02/19/18	02/20/18	EPA 8082A	
Aroclor 1221	ND	0.59	"	"	"	"	"	"	
Aroclor 1232	ND	0.59	"	"	"	"	"	"	
Aroclor 1242	ND	0.59	"	"	"	"	"	"	
Aroclor 1248	ND	0.59	"	"	"	"	"	"	
Aroclor 1254	ND	0.59	"	"	"	"	"	"	
Aroclor 1260	ND	0.59	"	"	"	"	"	"	
Aroclor 1268	ND	0.59	"	"	"	"	"	"	
Surrogate: Decachlorobiphenyl		69 %	50-150		"	"	"	"	
NBS-2300 (18B0794-08) Water Sampled: 02/15/18 18:10 Received: 02/16/18 14:40									
Aroclor 1016	ND	0.50	µg/L	1	1801416	02/19/18	02/20/18	EPA 8082A	
Aroclor 1221	ND	0.50	"	"	"	"	"	"	
Aroclor 1232	ND	0.50	"	"	"	"	"	"	
Aroclor 1242	ND	0.50	"	"	"	"	"	"	
Aroclor 1248	ND	0.50	"	"	"	"	"	"	
Aroclor 1254	ND	0.50	"	"	"	"	"	"	
Aroclor 1260	ND	0.50	"	"	"	"	"	"	



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EMKO Environmental, Inc.
551 Lakecrest Dr.
El Dorado Hills, CA 95762

Project: Rise
Project Number: [none]
Project Manager: Dr. Andrew Kopania

CLS Work Order #: 18B0794
COC #:

Polychlorinated Biphenyls by EPA Method 8082A

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
NBS-2300 (18B0794-08) Water Sampled: 02/15/18 18:10 Received: 02/16/18 14:40									
Aroclor 1268	ND	0.50	µg/L	1	1801416	"	02/20/18	EPA 8082A	
Surrogate: Decachlorobiphenyl		96 %	50-150		"	"	"	"	
NBS-1600 (18B0794-09) Water Sampled: 02/15/18 17:20 Received: 02/16/18 14:40									
Aroclor 1016	ND	0.50	µg/L	1	1801416	02/19/18	02/20/18	EPA 8082A	
Aroclor 1221	ND	0.50	"	"	"	"	"	"	
Aroclor 1232	ND	0.50	"	"	"	"	"	"	
Aroclor 1242	ND	0.50	"	"	"	"	"	"	
Aroclor 1248	ND	0.50	"	"	"	"	"	"	
Aroclor 1254	ND	0.50	"	"	"	"	"	"	
Aroclor 1260	ND	0.50	"	"	"	"	"	"	
Aroclor 1268	ND	0.50	"	"	"	"	"	"	
Surrogate: Decachlorobiphenyl		86 %	50-150		"	"	"	"	



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EMKO Environmental, Inc.
551 Lakecrest Dr.
El Dorado Hills, CA 95762

Project: Rise
Project Number: [none]
Project Manager: Dr. Andrew Kopania

CLS Work Order #: 18B0794
COC #:

Semivolatile Organic Compounds by EPA Method 8270C

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
D-1 (18B0794-01) Water Sampled: 02/13/18 13:30 Received: 02/16/18 14:40									A-COM
1,2,4-Trichlorobenzene	ND	10	µg/L	1	1801413	02/19/18	02/20/18	EPA 8270C	
1,2-Dichlorobenzene	ND	10	"	"	"	"	"	"	
1,3-Dichlorobenzene	ND	10	"	"	"	"	"	"	
1,4-Dichlorobenzene	ND	10	"	"	"	"	"	"	
2,4,5-Trichlorophenol	ND	10	"	"	"	"	"	"	
2,4,6-Trichlorophenol	ND	10	"	"	"	"	"	"	
2,4-Dichlorophenol	ND	10	"	"	"	"	"	"	
2,4-Dimethylphenol	ND	10	"	"	"	"	"	"	
2,4-Dinitrophenol	ND	25	"	"	"	"	"	"	
2,4-Dinitrotoluene (2,4-DNT)	ND	10	"	"	"	"	"	"	
2,6-Dinitrotoluene (2,6-DNT)	ND	10	"	"	"	"	"	"	
2-Chloronaphthalene	ND	10	"	"	"	"	"	"	
2-Chlorophenol	ND	10	"	"	"	"	"	"	
2-Methylnaphthalene	ND	10	"	"	"	"	"	"	
2-Methylphenol	ND	10	"	"	"	"	"	"	
2-Nitroaniline	ND	25	"	"	"	"	"	"	
2-Nitrophenol	ND	10	"	"	"	"	"	"	
3 & 4-Methylphenol	ND	10	"	"	"	"	"	"	
3,3'-Dichlorobenzidine	ND	20	"	"	"	"	"	"	
3-Nitroaniline	ND	25	"	"	"	"	"	"	
4,6-Dinitro-2-methylphenol	ND	25	"	"	"	"	"	"	
4-Bromophenyl phenyl ether	ND	10	"	"	"	"	"	"	
4-Chloro-3-methylphenol	ND	10	"	"	"	"	"	"	
4-Chloroaniline	ND	10	"	"	"	"	"	"	
4-Chlorophenyl phenyl ether	ND	10	"	"	"	"	"	"	
4-Nitroaniline	ND	25	"	"	"	"	"	"	
4-Nitrophenol	ND	25	"	"	"	"	"	"	
Acenaphthene	ND	10	"	"	"	"	"	"	
Acenaphthylene	ND	10	"	"	"	"	"	"	
Anthracene	ND	10	"	"	"	"	"	"	
Benzo (a) anthracene	ND	10	"	"	"	"	"	"	



CALIFORNIA LABORATORY SERVICES

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EMKO Environmental, Inc.
551 Lakecrest Dr.
El Dorado Hills, CA 95762

Project: Rise
Project Number: [none]
Project Manager: Dr. Andrew Kopania

CLS Work Order #: 18B0794
COC #:

Semivolatile Organic Compounds by EPA Method 8270C

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
D-1 (18B0794-01) Water Sampled: 02/13/18 13:30 Received: 02/16/18 14:40									A-COM
Benzo (a) pyrene	ND	10	µg/L	1	1801413	"	02/20/18	EPA 8270C	
Benzo (b) fluoranthene	ND	10	"	"	"	"	"	"	
Benzo (g,h,i) perylene	ND	10	"	"	"	"	"	"	
Benzo (k) fluoranthene	ND	10	"	"	"	"	"	"	
Benzoic acid	ND	25	"	"	"	"	"	"	
Benzyl alcohol	ND	10	"	"	"	"	"	"	
Bis(2-chloroethoxy)methane	ND	10	"	"	"	"	"	"	
Bis(2-chloroethyl)ether	ND	10	"	"	"	"	"	"	
Bis(2-chloroisopropyl)ether	ND	10	"	"	"	"	"	"	
Bis(2-ethylhexyl)phthalate	ND	10	"	"	"	"	"	"	
Butyl benzyl phthalate	ND	10	"	"	"	"	"	"	
Chrysene	ND	10	"	"	"	"	"	"	
Dibenz (a,h) anthracene	ND	10	"	"	"	"	"	"	
Dibenzofuran	ND	10	"	"	"	"	"	"	
Diethyl phthalate	ND	10	"	"	"	"	"	"	
Dimethyl phthalate	ND	10	"	"	"	"	"	"	
Di-n-butyl phthalate	ND	10	"	"	"	"	"	"	
Di-n-octyl phthalate	ND	10	"	"	"	"	"	"	
Fluoranthene	ND	10	"	"	"	"	"	"	
Fluorene	ND	10	"	"	"	"	"	"	
Hexachlorobenzene	ND	10	"	"	"	"	"	"	
Hexachlorobutadiene	ND	10	"	"	"	"	"	"	
Hexachlorocyclopentadiene	ND	10	"	"	"	"	"	"	
Hexachloroethane	ND	10	"	"	"	"	"	"	
Indeno (1,2,3-cd) pyrene	ND	10	"	"	"	"	"	"	
Isophorone	ND	10	"	"	"	"	"	"	
Naphthalene	ND	10	"	"	"	"	"	"	
Nitrobenzene (NB)	ND	10	"	"	"	"	"	"	
N-Nitrosodi-n-propylamine	ND	10	"	"	"	"	"	"	
N-Nitrosodiphenylamine	ND	10	"	"	"	"	"	"	
Pentachlorophenol	ND	25	"	"	"	"	"	"	



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EMKO Environmental, Inc.
551 Lakecrest Dr.
El Dorado Hills, CA 95762

Project: Rise
Project Number: [none]
Project Manager: Dr. Andrew Kopania

CLS Work Order #: 18B0794
COC #:

Semivolatile Organic Compounds by EPA Method 8270C

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
D-1 (18B0794-01) Water Sampled: 02/13/18 13:30 Received: 02/16/18 14:40									
A-COM									
Phenanthrene	ND	10	µg/L	1	1801413	"	02/20/18	EPA 8270C	
Phenol	ND	10	"	"	"	"	"	"	
Pyrene	ND	10	"	"	"	"	"	"	
Surrogate: 2,4,6-Tribromophenol		90 %	10-123		"	"	"	"	
Surrogate: 2-Fluorobiphenyl		87 %	43-116		"	"	"	"	
Surrogate: 2-Fluorophenol		65 %	21-110		"	"	"	"	
Surrogate: Nitrobenzene-d5		91 %	35-114		"	"	"	"	
Surrogate: Phenol-d6		48 %	10-110		"	"	"	"	
Surrogate: Terphenyl-d14		92 %	33-141		"	"	"	"	
ED-1 (18B0794-02) Water Sampled: 02/13/18 12:50 Received: 02/16/18 14:40									
A-COM									
1,2,4-Trichlorobenzene	ND	10	µg/L	1	1801413	02/19/18	02/20/18	EPA 8270C	
1,2-Dichlorobenzene	ND	10	"	"	"	"	"	"	
1,3-Dichlorobenzene	ND	10	"	"	"	"	"	"	
1,4-Dichlorobenzene	ND	10	"	"	"	"	"	"	
2,4,5-Trichlorophenol	ND	10	"	"	"	"	"	"	
2,4,6-Trichlorophenol	ND	10	"	"	"	"	"	"	
2,4-Dichlorophenol	ND	10	"	"	"	"	"	"	
2,4-Dimethylphenol	ND	10	"	"	"	"	"	"	
2,4-Dinitrophenol	ND	25	"	"	"	"	"	"	
2,4-Dinitrotoluene (2,4-DNT)	ND	10	"	"	"	"	"	"	
2,6-Dinitrotoluene (2,6-DNT)	ND	10	"	"	"	"	"	"	
2-Chloronaphthalene	ND	10	"	"	"	"	"	"	
2-Chlorophenol	ND	10	"	"	"	"	"	"	
2-Methylnaphthalene	ND	10	"	"	"	"	"	"	
2-Methylphenol	ND	10	"	"	"	"	"	"	
2-Nitroaniline	ND	25	"	"	"	"	"	"	
2-Nitrophenol	ND	10	"	"	"	"	"	"	
3 & 4-Methylphenol	ND	10	"	"	"	"	"	"	
3,3'-Dichlorobenzidine	ND	20	"	"	"	"	"	"	



CALIFORNIA LABORATORY SERVICES

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EMKO Environmental, Inc.
551 Lakecrest Dr.
El Dorado Hills, CA 95762

Project: Rise
Project Number: [none]
Project Manager: Dr. Andrew Kopania

CLS Work Order #: 18B0794
COC #:

Semivolatile Organic Compounds by EPA Method 8270C

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
ED-1 (18B0794-02) Water Sampled: 02/13/18 12:50 Received: 02/16/18 14:40									
3-Nitroaniline	ND	25	µg/L	1	1801413	"	02/20/18	EPA 8270C	
4,6-Dinitro-2-methylphenol	ND	25	"	"	"	"	"	"	
4-Bromophenyl phenyl ether	ND	10	"	"	"	"	"	"	
4-Chloro-3-methylphenol	ND	10	"	"	"	"	"	"	
4-Chloroaniline	ND	10	"	"	"	"	"	"	
4-Chlorophenyl phenyl ether	ND	10	"	"	"	"	"	"	
4-Nitroaniline	ND	25	"	"	"	"	"	"	
4-Nitrophenol	ND	25	"	"	"	"	"	"	
Acenaphthene	ND	10	"	"	"	"	"	"	
Acenaphthylene	ND	10	"	"	"	"	"	"	
Anthracene	ND	10	"	"	"	"	"	"	
Benzo (a) anthracene	ND	10	"	"	"	"	"	"	
Benzo (a) pyrene	ND	10	"	"	"	"	"	"	
Benzo (b) fluoranthene	ND	10	"	"	"	"	"	"	
Benzo (g,h,i) perylene	ND	10	"	"	"	"	"	"	
Benzo (k) fluoranthene	ND	10	"	"	"	"	"	"	
Benzoic acid	ND	25	"	"	"	"	"	"	
Benzyl alcohol	ND	10	"	"	"	"	"	"	
Bis(2-chloroethoxy)methane	ND	10	"	"	"	"	"	"	
Bis(2-chloroethyl)ether	ND	10	"	"	"	"	"	"	
Bis(2-chloroisopropyl)ether	ND	10	"	"	"	"	"	"	
Bis(2-ethylhexyl)phthalate	ND	10	"	"	"	"	"	"	
Butyl benzyl phthalate	ND	10	"	"	"	"	"	"	
Chrysene	ND	10	"	"	"	"	"	"	
Dibenz (a,h) anthracene	ND	10	"	"	"	"	"	"	
Dibenzofuran	ND	10	"	"	"	"	"	"	
Diethyl phthalate	ND	10	"	"	"	"	"	"	
Dimethyl phthalate	ND	10	"	"	"	"	"	"	
Di-n-butyl phthalate	ND	10	"	"	"	"	"	"	
Di-n-octyl phthalate	ND	10	"	"	"	"	"	"	
Fluoranthene	ND	10	"	"	"	"	"	"	



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EMKO Environmental, Inc.
551 Lakecrest Dr.
El Dorado Hills, CA 95762

Project: Rise
Project Number: [none]
Project Manager: Dr. Andrew Kopania

CLS Work Order #: 18B0794
COC #:

Semivolatile Organic Compounds by EPA Method 8270C

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
ED-1 (18B0794-02) Water Sampled: 02/13/18 12:50 Received: 02/16/18 14:40 A-COM									
Fluorene	ND	10	µg/L	1	1801413	"	02/20/18	EPA 8270C	
Hexachlorobenzene	ND	10	"	"	"	"	"	"	
Hexachlorobutadiene	ND	10	"	"	"	"	"	"	
Hexachlorocyclopentadiene	ND	10	"	"	"	"	"	"	
Hexachloroethane	ND	10	"	"	"	"	"	"	
Indeno (1,2,3-cd) pyrene	ND	10	"	"	"	"	"	"	
Isophorone	ND	10	"	"	"	"	"	"	
Naphthalene	ND	10	"	"	"	"	"	"	
Nitrobenzene (NB)	ND	10	"	"	"	"	"	"	
N-Nitrosodi-n-propylamine	ND	10	"	"	"	"	"	"	
N-Nitrosodiphenylamine	ND	10	"	"	"	"	"	"	
Pentachlorophenol	ND	25	"	"	"	"	"	"	
Phenanthrene	ND	10	"	"	"	"	"	"	
Phenol	ND	10	"	"	"	"	"	"	
Pyrene	ND	10	"	"	"	"	"	"	

Surrogate: 2,4,6-Tribromophenol	88 %	10-123	"	"	"	"
Surrogate: 2-Fluorobiphenyl	87 %	43-116	"	"	"	"
Surrogate: 2-Fluorophenol	50 %	21-110	"	"	"	"
Surrogate: Nitrobenzene-d5	91 %	35-114	"	"	"	"
Surrogate: Phenol-d6	37 %	10-110	"	"	"	"
Surrogate: Terphenyl-d14	89 %	33-141	"	"	"	"

IMD-1 (18B0794-03) Water Sampled: 02/15/18 10:40 Received: 02/16/18 14:40 A-COM									
1,2,4-Trichlorobenzene	ND	10	µg/L	1	1801413	02/19/18	02/20/18	EPA 8270C	
1,2-Dichlorobenzene	ND	10	"	"	"	"	"	"	
1,3-Dichlorobenzene	ND	10	"	"	"	"	"	"	
1,4-Dichlorobenzene	ND	10	"	"	"	"	"	"	
2,4,5-Trichlorophenol	ND	10	"	"	"	"	"	"	
2,4,6-Trichlorophenol	ND	10	"	"	"	"	"	"	
2,4-Dichlorophenol	ND	10	"	"	"	"	"	"	



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EMKO Environmental, Inc.
551 Lakecrest Dr.
El Dorado Hills, CA 95762

Project: Rise
Project Number: [none]
Project Manager: Dr. Andrew Kopania

CLS Work Order #: 18B0794
COC #:

Semivolatile Organic Compounds by EPA Method 8270C

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
IMD-1 (18B0794-03) Water Sampled: 02/15/18 10:40 Received: 02/16/18 14:40									A-COM
2,4-Dimethylphenol	ND	10	µg/L	1	1801413	"	02/20/18	EPA 8270C	
2,4-Dinitrophenol	ND	25	"	"	"	"	"	"	
2,4-Dinitrotoluene (2,4-DNT)	ND	10	"	"	"	"	"	"	
2,6-Dinitrotoluene (2,6-DNT)	ND	10	"	"	"	"	"	"	
2-Chloronaphthalene	ND	10	"	"	"	"	"	"	
2-Chlorophenol	ND	10	"	"	"	"	"	"	
2-Methylnaphthalene	ND	10	"	"	"	"	"	"	
2-Methylphenol	ND	10	"	"	"	"	"	"	
2-Nitroaniline	ND	25	"	"	"	"	"	"	
2-Nitrophenol	ND	10	"	"	"	"	"	"	
3 & 4-Methylphenol	ND	10	"	"	"	"	"	"	
3,3'-Dichlorobenzidine	ND	20	"	"	"	"	"	"	
3-Nitroaniline	ND	25	"	"	"	"	"	"	
4,6-Dinitro-2-methylphenol	ND	25	"	"	"	"	"	"	
4-Bromophenyl phenyl ether	ND	10	"	"	"	"	"	"	
4-Chloro-3-methylphenol	ND	10	"	"	"	"	"	"	
4-Chloroaniline	ND	10	"	"	"	"	"	"	
4-Chlorophenyl phenyl ether	ND	10	"	"	"	"	"	"	
4-Nitroaniline	ND	25	"	"	"	"	"	"	
4-Nitrophenol	ND	25	"	"	"	"	"	"	
Acenaphthene	ND	10	"	"	"	"	"	"	
Acenaphthylene	ND	10	"	"	"	"	"	"	
Anthracene	ND	10	"	"	"	"	"	"	
Benzo (a) anthracene	ND	10	"	"	"	"	"	"	
Benzo (a) pyrene	ND	10	"	"	"	"	"	"	
Benzo (b) fluoranthene	ND	10	"	"	"	"	"	"	
Benzo (g,h,i) perylene	ND	10	"	"	"	"	"	"	
Benzo (k) fluoranthene	ND	10	"	"	"	"	"	"	
Benzoic acid	ND	25	"	"	"	"	"	"	
Benzyl alcohol	ND	10	"	"	"	"	"	"	
Bis(2-chloroethoxy)methane	ND	10	"	"	"	"	"	"	



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EMKO Environmental, Inc.
551 Lakecrest Dr.
El Dorado Hills, CA 95762

Project: Rise
Project Number: [none]
Project Manager: Dr. Andrew Kopania

CLS Work Order #: 18B0794
COC #:

Semivolatile Organic Compounds by EPA Method 8270C

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
IMD-1 (18B0794-03) Water Sampled: 02/15/18 10:40 Received: 02/16/18 14:40									A-COM
Bis(2-chloroethyl)ether	ND	10	µg/L	1	1801413	"	02/20/18	EPA 8270C	
Bis(2-chloroisopropyl)ether	ND	10	"	"	"	"	"	"	
Bis(2-ethylhexyl)phthalate	ND	10	"	"	"	"	"	"	
Butyl benzyl phthalate	ND	10	"	"	"	"	"	"	
Chrysene	ND	10	"	"	"	"	"	"	
Dibenz (a,h) anthracene	ND	10	"	"	"	"	"	"	
Dibenzofuran	ND	10	"	"	"	"	"	"	
Diethyl phthalate	ND	10	"	"	"	"	"	"	
Dimethyl phthalate	ND	10	"	"	"	"	"	"	
Di-n-butyl phthalate	ND	10	"	"	"	"	"	"	
Di-n-octyl phthalate	ND	10	"	"	"	"	"	"	
Fluoranthene	ND	10	"	"	"	"	"	"	
Fluorene	ND	10	"	"	"	"	"	"	
Hexachlorobenzene	ND	10	"	"	"	"	"	"	
Hexachlorobutadiene	ND	10	"	"	"	"	"	"	
Hexachlorocyclopentadiene	ND	10	"	"	"	"	"	"	
Hexachloroethane	ND	10	"	"	"	"	"	"	
Indeno (1,2,3-cd) pyrene	ND	10	"	"	"	"	"	"	
Isophorone	ND	10	"	"	"	"	"	"	
Naphthalene	ND	10	"	"	"	"	"	"	
Nitrobenzene (NB)	ND	10	"	"	"	"	"	"	
N-Nitrosodi-n-propylamine	ND	10	"	"	"	"	"	"	
N-Nitrosodiphenylamine	ND	10	"	"	"	"	"	"	
Pentachlorophenol	ND	25	"	"	"	"	"	"	
Phenanthrene	ND	10	"	"	"	"	"	"	
Phenol	ND	10	"	"	"	"	"	"	
Pyrene	ND	10	"	"	"	"	"	"	
Surrogate: 2,4,6-Tribromophenol		76 %		10-123	"	"	"	"	
Surrogate: 2-Fluorobiphenyl		72 %		43-116	"	"	"	"	
Surrogate: 2-Fluorophenol		41 %		21-110	"	"	"	"	



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EMKO Environmental, Inc.
551 Lakecrest Dr.
El Dorado Hills, CA 95762

Project: Rise
Project Number: [none]
Project Manager: Dr. Andrew Kopania

CLS Work Order #: 18B0794
COC #:

Semivolatile Organic Compounds by EPA Method 8270C

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
IMD-1 (18B0794-03) Water Sampled: 02/15/18 10:40 Received: 02/16/18 14:40 A-COM									
Surrogate: Nitrobenzene-d5		72 %		35-114	1801413	"	02/20/18	EPA 8270C	
Surrogate: Phenol-d6		29 %		10-110	"	"	"	"	
Surrogate: Terphenyl-d14		67 %		33-141	"	"	"	"	
IMD-2 (18B0794-04) Water Sampled: 02/15/18 09:45 Received: 02/16/18 14:40 A-COM									
1,2,4-Trichlorobenzene	ND	10	µg/L	1	1801413	02/19/18	02/20/18	EPA 8270C	
1,2-Dichlorobenzene	ND	10	"	"	"	"	"	"	
1,3-Dichlorobenzene	ND	10	"	"	"	"	"	"	
1,4-Dichlorobenzene	ND	10	"	"	"	"	"	"	
2,4,5-Trichlorophenol	ND	10	"	"	"	"	"	"	
2,4,6-Trichlorophenol	ND	10	"	"	"	"	"	"	
2,4-Dichlorophenol	ND	10	"	"	"	"	"	"	
2,4-Dimethylphenol	ND	10	"	"	"	"	"	"	
2,4-Dinitrophenol	ND	25	"	"	"	"	"	"	
2,4-Dinitrotoluene (2,4-DNT)	ND	10	"	"	"	"	"	"	
2,6-Dinitrotoluene (2,6-DNT)	ND	10	"	"	"	"	"	"	
2-Chloronaphthalene	ND	10	"	"	"	"	"	"	
2-Chlorophenol	ND	10	"	"	"	"	"	"	
2-Methylnaphthalene	ND	10	"	"	"	"	"	"	
2-Methylphenol	ND	10	"	"	"	"	"	"	
2-Nitroaniline	ND	25	"	"	"	"	"	"	
2-Nitrophenol	ND	10	"	"	"	"	"	"	
3 & 4-Methylphenol	ND	10	"	"	"	"	"	"	
3,3'-Dichlorobenzidine	ND	20	"	"	"	"	"	"	
3-Nitroaniline	ND	25	"	"	"	"	"	"	
4,6-Dinitro-2-methylphenol	ND	25	"	"	"	"	"	"	
4-Bromophenyl phenyl ether	ND	10	"	"	"	"	"	"	
4-Chloro-3-methylphenol	ND	10	"	"	"	"	"	"	
4-Chloroaniline	ND	10	"	"	"	"	"	"	
4-Chlorophenyl phenyl ether	ND	10	"	"	"	"	"	"	
4-Nitroaniline	ND	25	"	"	"	"	"	"	



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EMKO Environmental, Inc.
551 Lakecrest Dr.
El Dorado Hills, CA 95762

Project: Rise
Project Number: [none]
Project Manager: Dr. Andrew Kopania

CLS Work Order #: 18B0794
COC #:

Semivolatile Organic Compounds by EPA Method 8270C

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
IMD-2 (18B0794-04) Water Sampled: 02/15/18 09:45 Received: 02/16/18 14:40									A-COM
4-Nitrophenol	ND	25	µg/L	1	1801413	"	02/20/18	EPA 8270C	
Acenaphthene	ND	10	"	"	"	"	"	"	
Acenaphthylene	ND	10	"	"	"	"	"	"	
Anthracene	ND	10	"	"	"	"	"	"	
Benzo (a) anthracene	ND	10	"	"	"	"	"	"	
Benzo (a) pyrene	ND	10	"	"	"	"	"	"	
Benzo (b) fluoranthene	ND	10	"	"	"	"	"	"	
Benzo (g,h,i) perylene	ND	10	"	"	"	"	"	"	
Benzo (k) fluoranthene	ND	10	"	"	"	"	"	"	
Benzoic acid	ND	25	"	"	"	"	"	"	
Benzyl alcohol	ND	10	"	"	"	"	"	"	
Bis(2-chloroethoxy)methane	ND	10	"	"	"	"	"	"	
Bis(2-chloroethyl)ether	ND	10	"	"	"	"	"	"	
Bis(2-chloroisopropyl)ether	ND	10	"	"	"	"	"	"	
Bis(2-ethylhexyl)phthalate	ND	10	"	"	"	"	"	"	
Butyl benzyl phthalate	ND	10	"	"	"	"	"	"	
Chrysene	ND	10	"	"	"	"	"	"	
Dibenz (a,h) anthracene	ND	10	"	"	"	"	"	"	
Dibenzofuran	ND	10	"	"	"	"	"	"	
Diethyl phthalate	ND	10	"	"	"	"	"	"	
Dimethyl phthalate	ND	10	"	"	"	"	"	"	
Di-n-butyl phthalate	ND	10	"	"	"	"	"	"	
Di-n-octyl phthalate	ND	10	"	"	"	"	"	"	
Fluoranthene	ND	10	"	"	"	"	"	"	
Fluorene	ND	10	"	"	"	"	"	"	
Hexachlorobenzene	ND	10	"	"	"	"	"	"	
Hexachlorobutadiene	ND	10	"	"	"	"	"	"	
Hexachlorocyclopentadiene	ND	10	"	"	"	"	"	"	
Hexachloroethane	ND	10	"	"	"	"	"	"	
Indeno (1,2,3-cd) pyrene	ND	10	"	"	"	"	"	"	
Isophorone	ND	10	"	"	"	"	"	"	



CALIFORNIA LABORATORY SERVICES

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EMKO Environmental, Inc.
551 Lakecrest Dr.
El Dorado Hills, CA 95762

Project: Rise
Project Number: [none]
Project Manager: Dr. Andrew Kopania

CLS Work Order #: 18B0794
COC #:

Semivolatile Organic Compounds by EPA Method 8270C

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
IMD-2 (18B0794-04) Water Sampled: 02/15/18 09:45 Received: 02/16/18 14:40 A-COM									
Naphthalene	ND	10	µg/L	1	1801413	"	02/20/18	EPA 8270C	
Nitrobenzene (NB)	ND	10	"	"	"	"	"	"	
N-Nitrosodi-n-propylamine	ND	10	"	"	"	"	"	"	
N-Nitrosodiphenylamine	ND	10	"	"	"	"	"	"	
Pentachlorophenol	ND	25	"	"	"	"	"	"	
Phenanthrene	ND	10	"	"	"	"	"	"	
Phenol	ND	10	"	"	"	"	"	"	
Pyrene	ND	10	"	"	"	"	"	"	

Surrogate: 2,4,6-Tribromophenol	83 %	10-123	"	"	"	"
Surrogate: 2-Fluorobiphenyl	73 %	43-116	"	"	"	"
Surrogate: 2-Fluorophenol	53 %	21-110	"	"	"	"
Surrogate: Nitrobenzene-d5	79 %	35-114	"	"	"	"
Surrogate: Phenol-d6	40 %	10-110	"	"	"	"
Surrogate: Terphenyl-d14	61 %	33-141	"	"	"	"

NBS-265 (18B0794-05) Water Sampled: 02/15/18 15:33 Received: 02/16/18 14:40 A-COM									
1,2,4-Trichlorobenzene	ND	10	µg/L	1	1801413	02/19/18	02/20/18	EPA 8270C	
1,2-Dichlorobenzene	ND	10	"	"	"	"	"	"	
1,3-Dichlorobenzene	ND	10	"	"	"	"	"	"	
1,4-Dichlorobenzene	ND	10	"	"	"	"	"	"	
2,4,5-Trichlorophenol	ND	10	"	"	"	"	"	"	
2,4,6-Trichlorophenol	ND	10	"	"	"	"	"	"	
2,4-Dichlorophenol	ND	10	"	"	"	"	"	"	
2,4-Dimethylphenol	ND	10	"	"	"	"	"	"	
2,4-Dinitrophenol	ND	25	"	"	"	"	"	"	
2,4-Dinitrotoluene (2,4-DNT)	ND	10	"	"	"	"	"	"	
2,6-Dinitrotoluene (2,6-DNT)	ND	10	"	"	"	"	"	"	
2-Chloronaphthalene	ND	10	"	"	"	"	"	"	
2-Chlorophenol	ND	10	"	"	"	"	"	"	
2-Methylnaphthalene	ND	10	"	"	"	"	"	"	



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EMKO Environmental, Inc.
551 Lakecrest Dr.
El Dorado Hills, CA 95762

Project: Rise
Project Number: [none]
Project Manager: Dr. Andrew Kopania

CLS Work Order #: 18B0794
COC #:

Semivolatile Organic Compounds by EPA Method 8270C

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
NBS-265 (18B0794-05) Water Sampled: 02/15/18 15:33 Received: 02/16/18 14:40									A-COM
2-Methylphenol	ND	10	µg/L	1	1801413	"	02/20/18	EPA 8270C	
2-Nitroaniline	ND	25	"	"	"	"	"	"	
2-Nitrophenol	ND	10	"	"	"	"	"	"	
3 & 4-Methylphenol	ND	10	"	"	"	"	"	"	
3,3'-Dichlorobenzidine	ND	20	"	"	"	"	"	"	
3-Nitroaniline	ND	25	"	"	"	"	"	"	
4,6-Dinitro-2-methylphenol	ND	25	"	"	"	"	"	"	
4-Bromophenyl phenyl ether	ND	10	"	"	"	"	"	"	
4-Chloro-3-methylphenol	ND	10	"	"	"	"	"	"	
4-Chloroaniline	ND	10	"	"	"	"	"	"	
4-Chlorophenyl phenyl ether	ND	10	"	"	"	"	"	"	
4-Nitroaniline	ND	25	"	"	"	"	"	"	
4-Nitrophenol	ND	25	"	"	"	"	"	"	
Acenaphthene	ND	10	"	"	"	"	"	"	
Acenaphthylene	ND	10	"	"	"	"	"	"	
Anthracene	ND	10	"	"	"	"	"	"	
Benzo (a) anthracene	ND	10	"	"	"	"	"	"	
Benzo (a) pyrene	ND	10	"	"	"	"	"	"	
Benzo (b) fluoranthene	ND	10	"	"	"	"	"	"	
Benzo (g,h,i) perylene	ND	10	"	"	"	"	"	"	
Benzo (k) fluoranthene	ND	10	"	"	"	"	"	"	
Benzoic acid	ND	25	"	"	"	"	"	"	
Benzyl alcohol	ND	10	"	"	"	"	"	"	
Bis(2-chloroethoxy)methane	ND	10	"	"	"	"	"	"	
Bis(2-chloroethyl)ether	ND	10	"	"	"	"	"	"	
Bis(2-chloroisopropyl)ether	ND	10	"	"	"	"	"	"	
Bis(2-ethylhexyl)phthalate	ND	10	"	"	"	"	"	"	
Butyl benzyl phthalate	ND	10	"	"	"	"	"	"	
Chrysene	ND	10	"	"	"	"	"	"	
Dibenz (a,h) anthracene	ND	10	"	"	"	"	"	"	
Dibenzofuran	ND	10	"	"	"	"	"	"	



CALIFORNIA LABORATORY SERVICES

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EMKO Environmental, Inc.
551 Lakecrest Dr.
El Dorado Hills, CA 95762

Project: Rise
Project Number: [none]
Project Manager: Dr. Andrew Kopania

CLS Work Order #: 18B0794
COC #:

Semivolatile Organic Compounds by EPA Method 8270C

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
NBS-265 (18B0794-05) Water Sampled: 02/15/18 15:33 Received: 02/16/18 14:40									
Diethyl phthalate	ND	10	µg/L	1	1801413	"	02/20/18	EPA 8270C	
Dimethyl phthalate	ND	10	"	"	"	"	"	"	
Di-n-butyl phthalate	ND	10	"	"	"	"	"	"	
Di-n-octyl phthalate	ND	10	"	"	"	"	"	"	
Fluoranthene	ND	10	"	"	"	"	"	"	
Fluorene	ND	10	"	"	"	"	"	"	
Hexachlorobenzene	ND	10	"	"	"	"	"	"	
Hexachlorobutadiene	ND	10	"	"	"	"	"	"	
Hexachlorocyclopentadiene	ND	10	"	"	"	"	"	"	
Hexachloroethane	ND	10	"	"	"	"	"	"	
Indeno (1,2,3-cd) pyrene	ND	10	"	"	"	"	"	"	
Isophorone	ND	10	"	"	"	"	"	"	
Naphthalene	ND	10	"	"	"	"	"	"	
Nitrobenzene (NB)	ND	10	"	"	"	"	"	"	
N-Nitrosodi-n-propylamine	ND	10	"	"	"	"	"	"	
N-Nitrosodiphenylamine	ND	10	"	"	"	"	"	"	
Pentachlorophenol	ND	25	"	"	"	"	"	"	
Phenanthrene	ND	10	"	"	"	"	"	"	
Phenol	ND	10	"	"	"	"	"	"	
Pyrene	ND	10	"	"	"	"	"	"	

Surrogate: 2,4,6-Tribromophenol	88 %	10-123	"	"	"	"
Surrogate: 2-Fluorobiphenyl	81 %	43-116	"	"	"	"
Surrogate: 2-Fluorophenol	46 %	21-110	"	"	"	"
Surrogate: Nitrobenzene-d5	84 %	35-114	"	"	"	"
Surrogate: Phenol-d6	34 %	10-110	"	"	"	"
Surrogate: Terphenyl-d14	87 %	33-141	"	"	"	"



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EMKO Environmental, Inc.
551 Lakecrest Dr.
El Dorado Hills, CA 95762

Project: Rise
Project Number: [none]
Project Manager: Dr. Andrew Kopania

CLS Work Order #: 18B0794
COC #:

Semivolatile Organic Compounds by EPA Method 8270C

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
NBS-900 (18B0794-06) Water Sampled: 02/15/18 14:05 Received: 02/16/18 14:40									A-COM
1,2,4-Trichlorobenzene	ND	10	µg/L	1	1801413	02/19/18	02/20/18	EPA 8270C	
1,2-Dichlorobenzene	ND	10	"	"	"	"	"	"	
1,3-Dichlorobenzene	ND	10	"	"	"	"	"	"	
1,4-Dichlorobenzene	ND	10	"	"	"	"	"	"	
2,4,5-Trichlorophenol	ND	10	"	"	"	"	"	"	
2,4,6-Trichlorophenol	ND	10	"	"	"	"	"	"	
2,4-Dichlorophenol	ND	10	"	"	"	"	"	"	
2,4-Dimethylphenol	ND	10	"	"	"	"	"	"	
2,4-Dinitrophenol	ND	25	"	"	"	"	"	"	
2,4-Dinitrotoluene (2,4-DNT)	ND	10	"	"	"	"	"	"	
2,6-Dinitrotoluene (2,6-DNT)	ND	10	"	"	"	"	"	"	
2-Chloronaphthalene	ND	10	"	"	"	"	"	"	
2-Chlorophenol	ND	10	"	"	"	"	"	"	
2-Methylnaphthalene	ND	10	"	"	"	"	"	"	
2-Methylphenol	ND	10	"	"	"	"	"	"	
2-Nitroaniline	ND	25	"	"	"	"	"	"	
2-Nitrophenol	ND	10	"	"	"	"	"	"	
3 & 4-Methylphenol	ND	10	"	"	"	"	"	"	
3,3'-Dichlorobenzidine	ND	20	"	"	"	"	"	"	
3-Nitroaniline	ND	25	"	"	"	"	"	"	
4,6-Dinitro-2-methylphenol	ND	25	"	"	"	"	"	"	
4-Bromophenyl phenyl ether	ND	10	"	"	"	"	"	"	
4-Chloro-3-methylphenol	ND	10	"	"	"	"	"	"	
4-Chloroaniline	ND	10	"	"	"	"	"	"	
4-Chlorophenyl phenyl ether	ND	10	"	"	"	"	"	"	
4-Nitroaniline	ND	25	"	"	"	"	"	"	
4-Nitrophenol	ND	25	"	"	"	"	"	"	
Acenaphthene	ND	10	"	"	"	"	"	"	
Acenaphthylene	ND	10	"	"	"	"	"	"	
Anthracene	ND	10	"	"	"	"	"	"	
Benzo (a) anthracene	ND	10	"	"	"	"	"	"	



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EMKO Environmental, Inc.
551 Lakecrest Dr.
El Dorado Hills, CA 95762

Project: Rise
Project Number: [none]
Project Manager: Dr. Andrew Kopania

CLS Work Order #: 18B0794
COC #:

Semivolatile Organic Compounds by EPA Method 8270C

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
NBS-900 (18B0794-06) Water Sampled: 02/15/18 14:05 Received: 02/16/18 14:40									A-COM
Benzo (a) pyrene	ND	10	µg/L	1	1801413	"	02/20/18	EPA 8270C	
Benzo (b) fluoranthene	ND	10	"	"	"	"	"	"	
Benzo (g,h,i) perylene	ND	10	"	"	"	"	"	"	
Benzo (k) fluoranthene	ND	10	"	"	"	"	"	"	
Benzoic acid	ND	25	"	"	"	"	"	"	
Benzyl alcohol	ND	10	"	"	"	"	"	"	
Bis(2-chloroethoxy)methane	ND	10	"	"	"	"	"	"	
Bis(2-chloroethyl)ether	ND	10	"	"	"	"	"	"	
Bis(2-chloroisopropyl)ether	ND	10	"	"	"	"	"	"	
Bis(2-ethylhexyl)phthalate	ND	10	"	"	"	"	"	"	
Butyl benzyl phthalate	ND	10	"	"	"	"	"	"	
Chrysene	ND	10	"	"	"	"	"	"	
Dibenz (a,h) anthracene	ND	10	"	"	"	"	"	"	
Dibenzofuran	ND	10	"	"	"	"	"	"	
Diethyl phthalate	ND	10	"	"	"	"	"	"	
Dimethyl phthalate	ND	10	"	"	"	"	"	"	
Di-n-butyl phthalate	ND	10	"	"	"	"	"	"	
Di-n-octyl phthalate	ND	10	"	"	"	"	"	"	
Fluoranthene	ND	10	"	"	"	"	"	"	
Fluorene	ND	10	"	"	"	"	"	"	
Hexachlorobenzene	ND	10	"	"	"	"	"	"	
Hexachlorobutadiene	ND	10	"	"	"	"	"	"	
Hexachlorocyclopentadiene	ND	10	"	"	"	"	"	"	
Hexachloroethane	ND	10	"	"	"	"	"	"	
Indeno (1,2,3-cd) pyrene	ND	10	"	"	"	"	"	"	
Isophorone	ND	10	"	"	"	"	"	"	
Naphthalene	ND	10	"	"	"	"	"	"	
Nitrobenzene (NB)	ND	10	"	"	"	"	"	"	
N-Nitrosodi-n-propylamine	ND	10	"	"	"	"	"	"	
N-Nitrosodiphenylamine	ND	10	"	"	"	"	"	"	
Pentachlorophenol	ND	25	"	"	"	"	"	"	



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EMKO Environmental, Inc.
551 Lakecrest Dr.
El Dorado Hills, CA 95762

Project: Rise
Project Number: [none]
Project Manager: Dr. Andrew Kopania

CLS Work Order #: 18B0794
COC #:

Semivolatile Organic Compounds by EPA Method 8270C

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
NBS-900 (18B0794-06) Water Sampled: 02/15/18 14:05 Received: 02/16/18 14:40 A-COM									
Phenanthrene	ND	10	µg/L	1	1801413	"	02/20/18	EPA 8270C	
Phenol	ND	10	"	"	"	"	"	"	
Pyrene	ND	10	"	"	"	"	"	"	
Surrogate: 2,4,6-Tribromophenol		83 %	10-123		"	"	"	"	
Surrogate: 2-Fluorobiphenyl		80 %	43-116		"	"	"	"	
Surrogate: 2-Fluorophenol		41 %	21-110		"	"	"	"	
Surrogate: Nitrobenzene-d5		78 %	35-114		"	"	"	"	
Surrogate: Phenol-d6		31 %	10-110		"	"	"	"	
Surrogate: Terphenyl-d14		84 %	33-141		"	"	"	"	
NBS-1300 (18B0794-07) Water Sampled: 02/15/18 14:30 Received: 02/16/18 14:40 A-COM									
1,2,4-Trichlorobenzene	ND	10	µg/L	1	1801413	02/19/18	02/20/18	EPA 8270C	
1,2-Dichlorobenzene	ND	10	"	"	"	"	"	"	
1,3-Dichlorobenzene	ND	10	"	"	"	"	"	"	
1,4-Dichlorobenzene	ND	10	"	"	"	"	"	"	
2,4,5-Trichlorophenol	ND	10	"	"	"	"	"	"	
2,4,6-Trichlorophenol	ND	10	"	"	"	"	"	"	
2,4-Dichlorophenol	ND	10	"	"	"	"	"	"	
2,4-Dimethylphenol	ND	10	"	"	"	"	"	"	
2,4-Dinitrophenol	ND	25	"	"	"	"	"	"	
2,4-Dinitrotoluene (2,4-DNT)	ND	10	"	"	"	"	"	"	
2,6-Dinitrotoluene (2,6-DNT)	ND	10	"	"	"	"	"	"	
2-Chloronaphthalene	ND	10	"	"	"	"	"	"	
2-Chlorophenol	ND	10	"	"	"	"	"	"	
2-Methylnaphthalene	ND	10	"	"	"	"	"	"	
2-Methylphenol	ND	10	"	"	"	"	"	"	
2-Nitroaniline	ND	25	"	"	"	"	"	"	
2-Nitrophenol	ND	10	"	"	"	"	"	"	
3 & 4-Methylphenol	ND	10	"	"	"	"	"	"	
3,3'-Dichlorobenzidine	ND	20	"	"	"	"	"	"	



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EMKO Environmental, Inc.
551 Lakecrest Dr.
El Dorado Hills, CA 95762

Project: Rise
Project Number: [none]
Project Manager: Dr. Andrew Kopania

CLS Work Order #: 18B0794
COC #:

Semivolatile Organic Compounds by EPA Method 8270C

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
NBS-1300 (18B0794-07) Water Sampled: 02/15/18 14:30 Received: 02/16/18 14:40									A-COM
3-Nitroaniline	ND	25	µg/L	1	1801413	"	02/20/18	EPA 8270C	
4,6-Dinitro-2-methylphenol	ND	25	"	"	"	"	"	"	
4-Bromophenyl phenyl ether	ND	10	"	"	"	"	"	"	
4-Chloro-3-methylphenol	ND	10	"	"	"	"	"	"	
4-Chloroaniline	ND	10	"	"	"	"	"	"	
4-Chlorophenyl phenyl ether	ND	10	"	"	"	"	"	"	
4-Nitroaniline	ND	25	"	"	"	"	"	"	
4-Nitrophenol	ND	25	"	"	"	"	"	"	
Acenaphthene	ND	10	"	"	"	"	"	"	
Acenaphthylene	ND	10	"	"	"	"	"	"	
Anthracene	ND	10	"	"	"	"	"	"	
Benzo (a) anthracene	ND	10	"	"	"	"	"	"	
Benzo (a) pyrene	ND	10	"	"	"	"	"	"	
Benzo (b) fluoranthene	ND	10	"	"	"	"	"	"	
Benzo (g,h,i) perylene	ND	10	"	"	"	"	"	"	
Benzo (k) fluoranthene	ND	10	"	"	"	"	"	"	
Benzoic acid	ND	25	"	"	"	"	"	"	
Benzyl alcohol	ND	10	"	"	"	"	"	"	
Bis(2-chloroethoxy)methane	ND	10	"	"	"	"	"	"	
Bis(2-chloroethyl)ether	ND	10	"	"	"	"	"	"	
Bis(2-chloroisopropyl)ether	ND	10	"	"	"	"	"	"	
Bis(2-ethylhexyl)phthalate	ND	10	"	"	"	"	"	"	
Butyl benzyl phthalate	ND	10	"	"	"	"	"	"	
Chrysene	ND	10	"	"	"	"	"	"	
Dibenz (a,h) anthracene	ND	10	"	"	"	"	"	"	
Dibenzofuran	ND	10	"	"	"	"	"	"	
Diethyl phthalate	ND	10	"	"	"	"	"	"	
Dimethyl phthalate	ND	10	"	"	"	"	"	"	
Di-n-butyl phthalate	ND	10	"	"	"	"	"	"	
Di-n-octyl phthalate	ND	10	"	"	"	"	"	"	
Fluoranthene	ND	10	"	"	"	"	"	"	



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EMKO Environmental, Inc.
551 Lakecrest Dr.
El Dorado Hills, CA 95762

Project: Rise
Project Number: [none]
Project Manager: Dr. Andrew Kopania

CLS Work Order #: 18B0794
COC #:

Semivolatile Organic Compounds by EPA Method 8270C

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
NBS-1300 (18B0794-07) Water Sampled: 02/15/18 14:30 Received: 02/16/18 14:40 A-COM									
Fluorene	ND	10	µg/L	1	1801413	"	02/20/18	EPA 8270C	
Hexachlorobenzene	ND	10	"	"	"	"	"	"	
Hexachlorobutadiene	ND	10	"	"	"	"	"	"	
Hexachlorocyclopentadiene	ND	10	"	"	"	"	"	"	
Hexachloroethane	ND	10	"	"	"	"	"	"	
Indeno (1,2,3-cd) pyrene	ND	10	"	"	"	"	"	"	
Isophorone	ND	10	"	"	"	"	"	"	
Naphthalene	ND	10	"	"	"	"	"	"	
Nitrobenzene (NB)	ND	10	"	"	"	"	"	"	
N-Nitrosodi-n-propylamine	ND	10	"	"	"	"	"	"	
N-Nitrosodiphenylamine	ND	10	"	"	"	"	"	"	
Pentachlorophenol	ND	25	"	"	"	"	"	"	
Phenanthrene	ND	10	"	"	"	"	"	"	
Phenol	ND	10	"	"	"	"	"	"	
Pyrene	ND	10	"	"	"	"	"	"	

Surrogate: 2,4,6-Tribromophenol	82 %	10-123	"	"	"	"
Surrogate: 2-Fluorobiphenyl	80 %	43-116	"	"	"	"
Surrogate: 2-Fluorophenol	41 %	21-110	"	"	"	"
Surrogate: Nitrobenzene-d5	80 %	35-114	"	"	"	"
Surrogate: Phenol-d6	30 %	10-110	"	"	"	"
Surrogate: Terphenyl-d14	84 %	33-141	"	"	"	"

NBS-1600 (18B0794-09) Water Sampled: 02/15/18 17:20 Received: 02/16/18 14:40 A-COM									
1,2,4-Trichlorobenzene	ND	10	µg/L	1	1801413	02/19/18	02/20/18	EPA 8270C	
1,2-Dichlorobenzene	ND	10	"	"	"	"	"	"	
1,3-Dichlorobenzene	ND	10	"	"	"	"	"	"	
1,4-Dichlorobenzene	ND	10	"	"	"	"	"	"	
2,4,5-Trichlorophenol	ND	10	"	"	"	"	"	"	
2,4,6-Trichlorophenol	ND	10	"	"	"	"	"	"	
2,4-Dichlorophenol	ND	10	"	"	"	"	"	"	



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EMKO Environmental, Inc.
551 Lakecrest Dr.
El Dorado Hills, CA 95762

Project: Rise
Project Number: [none]
Project Manager: Dr. Andrew Kopania

CLS Work Order #: 18B0794
COC #:

Semivolatile Organic Compounds by EPA Method 8270C

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
NBS-1600 (18B0794-09) Water Sampled: 02/15/18 17:20 Received: 02/16/18 14:40									A-COM
2,4-Dimethylphenol	ND	10	µg/L	1	1801413	"	02/20/18	EPA 8270C	
2,4-Dinitrophenol	ND	25	"	"	"	"	"	"	
2,4-Dinitrotoluene (2,4-DNT)	ND	10	"	"	"	"	"	"	
2,6-Dinitrotoluene (2,6-DNT)	ND	10	"	"	"	"	"	"	
2-Chloronaphthalene	ND	10	"	"	"	"	"	"	
2-Chlorophenol	ND	10	"	"	"	"	"	"	
2-Methylnaphthalene	ND	10	"	"	"	"	"	"	
2-Methylphenol	ND	10	"	"	"	"	"	"	
2-Nitroaniline	ND	25	"	"	"	"	"	"	
2-Nitrophenol	ND	10	"	"	"	"	"	"	
3 & 4-Methylphenol	ND	10	"	"	"	"	"	"	
3,3'-Dichlorobenzidine	ND	20	"	"	"	"	"	"	
3-Nitroaniline	ND	25	"	"	"	"	"	"	
4,6-Dinitro-2-methylphenol	ND	25	"	"	"	"	"	"	
4-Bromophenyl phenyl ether	ND	10	"	"	"	"	"	"	
4-Chloro-3-methylphenol	ND	10	"	"	"	"	"	"	
4-Chloroaniline	ND	10	"	"	"	"	"	"	
4-Chlorophenyl phenyl ether	ND	10	"	"	"	"	"	"	
4-Nitroaniline	ND	25	"	"	"	"	"	"	
4-Nitrophenol	ND	25	"	"	"	"	"	"	
Acenaphthene	ND	10	"	"	"	"	"	"	
Acenaphthylene	ND	10	"	"	"	"	"	"	
Anthracene	ND	10	"	"	"	"	"	"	
Benzo (a) anthracene	ND	10	"	"	"	"	"	"	
Benzo (a) pyrene	ND	10	"	"	"	"	"	"	
Benzo (b) fluoranthene	ND	10	"	"	"	"	"	"	
Benzo (g,h,i) perylene	ND	10	"	"	"	"	"	"	
Benzo (k) fluoranthene	ND	10	"	"	"	"	"	"	
Benzoic acid	ND	25	"	"	"	"	"	"	
Benzyl alcohol	ND	10	"	"	"	"	"	"	
Bis(2-chloroethoxy)methane	ND	10	"	"	"	"	"	"	



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EMKO Environmental, Inc.
551 Lakecrest Dr.
El Dorado Hills, CA 95762

Project: Rise
Project Number: [none]
Project Manager: Dr. Andrew Kopania

CLS Work Order #: 18B0794
COC #:

Semivolatile Organic Compounds by EPA Method 8270C

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
NBS-1600 (18B0794-09) Water Sampled: 02/15/18 17:20 Received: 02/16/18 14:40									A-COM
Bis(2-chloroethyl)ether	ND	10	µg/L	1	1801413	"	02/20/18	EPA 8270C	
Bis(2-chloroisopropyl)ether	ND	10	"	"	"	"	"	"	
Bis(2-ethylhexyl)phthalate	ND	10	"	"	"	"	"	"	
Butyl benzyl phthalate	ND	10	"	"	"	"	"	"	
Chrysene	ND	10	"	"	"	"	"	"	
Dibenz (a,h) anthracene	ND	10	"	"	"	"	"	"	
Dibenzofuran	ND	10	"	"	"	"	"	"	
Diethyl phthalate	ND	10	"	"	"	"	"	"	
Dimethyl phthalate	ND	10	"	"	"	"	"	"	
Di-n-butyl phthalate	ND	10	"	"	"	"	"	"	
Di-n-octyl phthalate	ND	10	"	"	"	"	"	"	
Fluoranthene	ND	10	"	"	"	"	"	"	
Fluorene	ND	10	"	"	"	"	"	"	
Hexachlorobenzene	ND	10	"	"	"	"	"	"	
Hexachlorobutadiene	ND	10	"	"	"	"	"	"	
Hexachlorocyclopentadiene	ND	10	"	"	"	"	"	"	
Hexachloroethane	ND	10	"	"	"	"	"	"	
Indeno (1,2,3-cd) pyrene	ND	10	"	"	"	"	"	"	
Isophorone	ND	10	"	"	"	"	"	"	
Naphthalene	ND	10	"	"	"	"	"	"	
Nitrobenzene (NB)	ND	10	"	"	"	"	"	"	
N-Nitrosodi-n-propylamine	ND	10	"	"	"	"	"	"	
N-Nitrosodiphenylamine	ND	10	"	"	"	"	"	"	
Pentachlorophenol	ND	25	"	"	"	"	"	"	
Phenanthrene	ND	10	"	"	"	"	"	"	
Phenol	ND	10	"	"	"	"	"	"	
Pyrene	ND	10	"	"	"	"	"	"	
Surrogate: 2,4,6-Tribromophenol		69 %	10-123		"	"	"	"	
Surrogate: 2-Fluorobiphenyl		83 %	43-116		"	"	"	"	
Surrogate: 2-Fluorophenol		38 %	21-110		"	"	"	"	



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EMKO Environmental, Inc.
551 Lakecrest Dr.
El Dorado Hills, CA 95762

Project: Rise
Project Number: [none]
Project Manager: Dr. Andrew Kopania

CLS Work Order #: 18B0794
COC #:

Semivolatile Organic Compounds by EPA Method 8270C

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
NBS-1600 (18B0794-09) Water Sampled: 02/15/18 17:20 Received: 02/16/18 14:40 A-COM									
Surrogate: Nitrobenzene-d5		82 %		35-114	1801413	"	02/20/18	EPA 8270C	
Surrogate: Phenol-d6		30 %		10-110	"	"	"	"	
Surrogate: Terphenyl-d14		83 %		33-141	"	"	"	"	



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EMKO Environmental, Inc.
551 Lakecrest Dr.
El Dorado Hills, CA 95762

Project: Rise
Project Number: [none]
Project Manager: Dr. Andrew Kopania

CLS Work Order #: 18B0794
COC #:

TPH-Gasoline by GC FID

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
D-1 (18B0794-01) Water Sampled: 02/13/18 13:30 Received: 02/16/18 14:40									
Gasoline	ND	50	µg/L	1	1801449	02/19/18	02/19/18	EPA 8015M	
Surrogate: o-Chlorotoluene (Gas)		78 %	65-135		"	"	"	"	
ED-1 (18B0794-02) Water Sampled: 02/13/18 12:50 Received: 02/16/18 14:40									
Gasoline	ND	50	µg/L	1	1801449	02/19/18	02/19/18	EPA 8015M	
Surrogate: o-Chlorotoluene (Gas)		74 %	65-135		"	"	"	"	
IMD-1 (18B0794-03) Water Sampled: 02/15/18 10:40 Received: 02/16/18 14:40									
Gasoline	ND	50	µg/L	1	1801449	02/19/18	02/19/18	EPA 8015M	
Surrogate: o-Chlorotoluene (Gas)		78 %	65-135		"	"	"	"	
IMD-2 (18B0794-04) Water Sampled: 02/15/18 09:45 Received: 02/16/18 14:40									
Gasoline	ND	50	µg/L	1	1801449	02/19/18	02/19/18	EPA 8015M	
Surrogate: o-Chlorotoluene (Gas)		72 %	65-135		"	"	"	"	
NBS-265 (18B0794-05) Water Sampled: 02/15/18 15:33 Received: 02/16/18 14:40									
Gasoline	ND	50	µg/L	1	1801449	02/19/18	02/19/18	EPA 8015M	
Surrogate: o-Chlorotoluene (Gas)		76 %	65-135		"	"	"	"	
NBS-900 (18B0794-06) Water Sampled: 02/15/18 14:05 Received: 02/16/18 14:40									
Gasoline	ND	50	µg/L	1	1801449	02/19/18	02/19/18	EPA 8015M	
Surrogate: o-Chlorotoluene (Gas)		76 %	65-135		"	"	"	"	
NBS-1300 (18B0794-07) Water Sampled: 02/15/18 14:30 Received: 02/16/18 14:40									
Gasoline	ND	50	µg/L	1	1801449	02/19/18	02/19/18	EPA 8015M	



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EMKO Environmental, Inc.
551 Lakecrest Dr.
El Dorado Hills, CA 95762

Project: Rise
Project Number: [none]
Project Manager: Dr. Andrew Kopania

CLS Work Order #: 18B0794
COC #:

TPH-Gasoline by GC FID

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes

NBS-1300 (18B0794-07) Water Sampled: 02/15/18 14:30 Received: 02/16/18 14:40

Surrogate: o-Chlorotoluene (Gas)	75 %	65-135	1801449	"	02/19/18	EPA 8015M

NBS-1600 (18B0794-09) Water Sampled: 02/15/18 17:20 Received: 02/16/18 14:40

Gasoline	ND	50	µg/L	1	1801449	02/19/18	02/19/18	EPA 8015M

Surrogate: o-Chlorotoluene (Gas)	77 %	65-135	"	"	"	"



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EMKO Environmental, Inc.
551 Lakecrest Dr.
El Dorado Hills, CA 95762

Project: Rise
Project Number: [none]
Project Manager: Dr. Andrew Kopania

CLS Work Order #: 18B0794
COC #:

Volatile Organic Compounds by EPA Method 8260B

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
D-1 (18B0794-01) Water Sampled: 02/13/18 13:30 Received: 02/16/18 14:40									
1,1,1,2-Tetrachloroethane	ND	0.50	µg/L	1	1801495	02/20/18	02/20/18	EPA 8260B	
1,1,1-Trichloroethane	ND	0.50	"	"	"	"	"	"	
1,1,2,2-Tetrachloroethane	ND	0.50	"	"	"	"	"	"	
1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113)	ND	0.50	"	"	"	"	"	"	
1,1,2-Trichloroethane	ND	0.50	"	"	"	"	"	"	
1,1-Dichloroethane	ND	0.50	"	"	"	"	"	"	
1,1-Dichloroethene	ND	0.50	"	"	"	"	"	"	
1,1-Dichloropropene	ND	0.50	"	"	"	"	"	"	
1,2,3-Trichlorobenzene	ND	0.50	"	"	"	"	"	"	
1,2,3-Trichloropropane	ND	0.50	"	"	"	"	"	"	
1,2,4-Trichlorobenzene	ND	0.50	"	"	"	"	"	"	
1,2,4-Trimethylbenzene	ND	0.50	"	"	"	"	"	"	
1,2-Dibromo-3-chloropropane	ND	1.0	"	"	"	"	"	"	
1,2-Dibromoethane (EDB)	ND	0.50	"	"	"	"	"	"	
1,2-Dichlorobenzene	ND	0.50	"	"	"	"	"	"	
1,2-Dichloroethane	ND	0.50	"	"	"	"	"	"	
1,2-Dichloropropane	ND	0.50	"	"	"	"	"	"	
1,3,5-Trimethylbenzene	ND	0.50	"	"	"	"	"	"	
1,3-Dichlorobenzene	ND	0.50	"	"	"	"	"	"	
1,3-Dichloropropane	ND	0.50	"	"	"	"	"	"	
1,4-Dichlorobenzene	ND	0.50	"	"	"	"	"	"	
2,2-Dichloropropane	ND	0.50	"	"	"	"	"	"	
2-Butanone	ND	10	"	"	"	"	"	"	
2-Hexanone	ND	10	"	"	"	"	"	"	
4-Methyl-2-pentanone	ND	10	"	"	"	"	"	"	
Acetone	ND	10	"	"	"	"	"	"	
Benzene	ND	0.50	"	"	"	"	"	"	
Bromobenzene	ND	0.50	"	"	"	"	"	"	
Bromochloromethane	ND	0.50	"	"	"	"	"	"	
Bromodichloromethane	ND	0.50	"	"	"	"	"	"	



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EMKO Environmental, Inc.
551 Lakecrest Dr.
El Dorado Hills, CA 95762

Project: Rise
Project Number: [none]
Project Manager: Dr. Andrew Kopania

CLS Work Order #: 18B0794
COC #:

Volatile Organic Compounds by EPA Method 8260B

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
D-1 (18B0794-01) Water Sampled: 02/13/18 13:30 Received: 02/16/18 14:40									
Bromoform	ND	0.50	µg/L	1	1801495	"	02/20/18	EPA 8260B	
Bromomethane	ND	1.0	"	"	"	"	"	"	
Carbon tetrachloride	ND	0.50	"	"	"	"	"	"	
Chlorobenzene	ND	0.50	"	"	"	"	"	"	
Chloroethane	ND	0.50	"	"	"	"	"	"	
Chloroform	ND	0.50	"	"	"	"	"	"	
Chloromethane	ND	1.0	"	"	"	"	"	"	
cis-1,2-Dichloroethene	ND	0.50	"	"	"	"	"	"	
cis-1,3-Dichloropropene	ND	0.50	"	"	"	"	"	"	
Dibromochloromethane	ND	0.50	"	"	"	"	"	"	
Dibromomethane	ND	0.50	"	"	"	"	"	"	
Dichlorodifluoromethane (Freon 12)	ND	1.0	"	"	"	"	"	"	
Di-isopropyl ether	ND	0.50	"	"	"	"	"	"	
Ethyl tert-butyl ether	ND	0.50	"	"	"	"	"	"	
Ethylbenzene	ND	0.50	"	"	"	"	"	"	
Hexachlorobutadiene	ND	0.50	"	"	"	"	"	"	
Isopropylbenzene	ND	0.50	"	"	"	"	"	"	
Methyl tert-butyl ether	ND	0.50	"	"	"	"	"	"	
Methylene chloride	ND	0.50	"	"	"	"	"	"	
Naphthalene	ND	0.50	"	"	"	"	"	"	
n-Butylbenzene	ND	0.50	"	"	"	"	"	"	
n-Propylbenzene	ND	0.50	"	"	"	"	"	"	
o-Chlorotoluene	ND	0.50	"	"	"	"	"	"	
p-Chlorotoluene	ND	0.50	"	"	"	"	"	"	
p-Isopropyltoluene	ND	0.50	"	"	"	"	"	"	
sec-Butylbenzene	ND	0.50	"	"	"	"	"	"	
Styrene	ND	0.50	"	"	"	"	"	"	
tert-Amyl methyl ether	ND	0.50	"	"	"	"	"	"	
tert-Butyl alcohol	ND	5.0	"	"	"	"	"	"	
tert-Butylbenzene	ND	0.50	"	"	"	"	"	"	
Tetrachloroethene	ND	0.50	"	"	"	"	"	"	



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EMKO Environmental, Inc.
551 Lakecrest Dr.
El Dorado Hills, CA 95762

Project: Rise
Project Number: [none]
Project Manager: Dr. Andrew Kopania

CLS Work Order #: 18B0794
COC #:

Volatile Organic Compounds by EPA Method 8260B

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
D-1 (18B0794-01) Water Sampled: 02/13/18 13:30 Received: 02/16/18 14:40									
Toluene	ND	0.50	µg/L	1	1801495	"	02/20/18	EPA 8260B	
trans-1,2-Dichloroethene	ND	0.50	"	"	"	"	"	"	
trans-1,3-Dichloropropene	ND	0.50	"	"	"	"	"	"	
Trichloroethene	ND	0.50	"	"	"	"	"	"	
Trichlorofluoromethane	ND	0.50	"	"	"	"	"	"	
Vinyl chloride	ND	1.0	"	"	"	"	"	"	
Xylenes (total)	ND	1.0	"	"	"	"	"	"	

Surrogate: 1,2-Dichloroethane-d4	123 %	66-135	"	"	"	"
Surrogate: 4-Bromofluorobenzene	111 %	73-125	"	"	"	"
Surrogate: Toluene-d8	91 %	72-125	"	"	"	"

ED-1 (18B0794-02) Water Sampled: 02/13/18 12:50 Received: 02/16/18 14:40

1,1,1,2-Tetrachloroethane	ND	0.50	µg/L	1	1801495	02/20/18	02/20/18	EPA 8260B	
1,1,1-Trichloroethane	ND	0.50	"	"	"	"	"	"	
1,1,2,2-Tetrachloroethane	ND	0.50	"	"	"	"	"	"	
1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113)	ND	0.50	"	"	"	"	"	"	
1,1,2-Trichloroethane	ND	0.50	"	"	"	"	"	"	
1,1-Dichloroethane	ND	0.50	"	"	"	"	"	"	
1,1-Dichloroethene	ND	0.50	"	"	"	"	"	"	
1,1-Dichloropropene	ND	0.50	"	"	"	"	"	"	
1,2,3-Trichlorobenzene	ND	0.50	"	"	"	"	"	"	
1,2,3-Trichloropropane	ND	0.50	"	"	"	"	"	"	
1,2,4-Trichlorobenzene	ND	0.50	"	"	"	"	"	"	
1,2,4-Trimethylbenzene	ND	0.50	"	"	"	"	"	"	
1,2-Dibromo-3-chloropropane	ND	1.0	"	"	"	"	"	"	
1,2-Dibromoethane (EDB)	ND	0.50	"	"	"	"	"	"	
1,2-Dichlorobenzene	ND	0.50	"	"	"	"	"	"	
1,2-Dichloroethane	ND	0.50	"	"	"	"	"	"	
1,2-Dichloropropane	ND	0.50	"	"	"	"	"	"	
1,3,5-Trimethylbenzene	ND	0.50	"	"	"	"	"	"	



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EMKO Environmental, Inc.
551 Lakecrest Dr.
El Dorado Hills, CA 95762

Project: Rise
Project Number: [none]
Project Manager: Dr. Andrew Kopania

CLS Work Order #: 18B0794
COC #:

Volatile Organic Compounds by EPA Method 8260B

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
ED-1 (18B0794-02) Water Sampled: 02/13/18 12:50 Received: 02/16/18 14:40									
1,3-Dichlorobenzene	ND	0.50	µg/L	1	1801495	"	02/20/18	EPA 8260B	
1,3-Dichloropropane	ND	0.50	"	"	"	"	"	"	
1,4-Dichlorobenzene	ND	0.50	"	"	"	"	"	"	
2,2-Dichloropropane	ND	0.50	"	"	"	"	"	"	
2-Butanone	ND	10	"	"	"	"	"	"	
2-Hexanone	ND	10	"	"	"	"	"	"	
4-Methyl-2-pentanone	ND	10	"	"	"	"	"	"	
Acetone	ND	10	"	"	"	"	"	"	
Benzene	ND	0.50	"	"	"	"	"	"	
Bromobenzene	ND	0.50	"	"	"	"	"	"	
Bromochloromethane	ND	0.50	"	"	"	"	"	"	
Bromodichloromethane	ND	0.50	"	"	"	"	"	"	
Bromoform	ND	0.50	"	"	"	"	"	"	
Bromomethane	ND	1.0	"	"	"	"	"	"	
Carbon tetrachloride	ND	0.50	"	"	"	"	"	"	
Chlorobenzene	ND	0.50	"	"	"	"	"	"	
Chloroethane	ND	0.50	"	"	"	"	"	"	
Chloroform	ND	0.50	"	"	"	"	"	"	
Chloromethane	ND	1.0	"	"	"	"	"	"	
cis-1,2-Dichloroethene	ND	0.50	"	"	"	"	"	"	
cis-1,3-Dichloropropene	ND	0.50	"	"	"	"	"	"	
Dibromochloromethane	ND	0.50	"	"	"	"	"	"	
Dibromomethane	ND	0.50	"	"	"	"	"	"	
Dichlorodifluoromethane (Freon 12)	ND	1.0	"	"	"	"	"	"	
Di-isopropyl ether	ND	0.50	"	"	"	"	"	"	
Ethyl tert-butyl ether	ND	0.50	"	"	"	"	"	"	
Ethylbenzene	ND	0.50	"	"	"	"	"	"	
Hexachlorobutadiene	ND	0.50	"	"	"	"	"	"	
Isopropylbenzene	ND	0.50	"	"	"	"	"	"	
Methyl tert-butyl ether	ND	0.50	"	"	"	"	"	"	
Methylene chloride	ND	0.50	"	"	"	"	"	"	



CALIFORNIA LABORATORY SERVICES

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EMKO Environmental, Inc.
551 Lakecrest Dr.
El Dorado Hills, CA 95762

Project: Rise
Project Number: [none]
Project Manager: Dr. Andrew Kopania

CLS Work Order #: 18B0794
COC #:

Volatile Organic Compounds by EPA Method 8260B

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
ED-1 (18B0794-02) Water Sampled: 02/13/18 12:50 Received: 02/16/18 14:40									
Naphthalene	ND	0.50	µg/L	1	1801495	"	02/20/18	EPA 8260B	
n-Butylbenzene	ND	0.50	"	"	"	"	"	"	
n-Propylbenzene	ND	0.50	"	"	"	"	"	"	
o-Chlorotoluene	ND	0.50	"	"	"	"	"	"	
p-Chlorotoluene	ND	0.50	"	"	"	"	"	"	
p-Isopropyltoluene	ND	0.50	"	"	"	"	"	"	
sec-Butylbenzene	ND	0.50	"	"	"	"	"	"	
Styrene	ND	0.50	"	"	"	"	"	"	
tert-Amyl methyl ether	ND	0.50	"	"	"	"	"	"	
tert-Butyl alcohol	ND	5.0	"	"	"	"	"	"	
tert-Butylbenzene	ND	0.50	"	"	"	"	"	"	
Tetrachloroethene	ND	0.50	"	"	"	"	"	"	
Toluene	ND	0.50	"	"	"	"	"	"	
trans-1,2-Dichloroethene	ND	0.50	"	"	"	"	"	"	
trans-1,3-Dichloropropene	ND	0.50	"	"	"	"	"	"	
Trichloroethene	ND	0.50	"	"	"	"	"	"	
Trichlorofluoromethane	ND	0.50	"	"	"	"	"	"	
Vinyl chloride	ND	1.0	"	"	"	"	"	"	
Xylenes (total)	ND	1.0	"	"	"	"	"	"	

Surrogate: 1,2-Dichloroethane-d4	128 %	66-135	"	"	"	"
Surrogate: 4-Bromofluorobenzene	102 %	73-125	"	"	"	"
Surrogate: Toluene-d8	92 %	72-125	"	"	"	"

IMD-1 (18B0794-03) Water Sampled: 02/15/18 10:40 Received: 02/16/18 14:40

1,1,1,2-Tetrachloroethane	ND	0.50	µg/L	1	1801495	02/20/18	02/20/18	EPA 8260B
1,1,1-Trichloroethane	ND	0.50	"	"	"	"	"	"
1,1,2,2-Tetrachloroethane	ND	0.50	"	"	"	"	"	"
1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113)	ND	0.50	"	"	"	"	"	"
1,1,2-Trichloroethane	ND	0.50	"	"	"	"	"	"
1,1-Dichloroethane	ND	0.50	"	"	"	"	"	"



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EMKO Environmental, Inc.
551 Lakecrest Dr.
El Dorado Hills, CA 95762

Project: Rise
Project Number: [none]
Project Manager: Dr. Andrew Kopania

CLS Work Order #: 18B0794
COC #:

Volatile Organic Compounds by EPA Method 8260B

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
IMD-1 (18B0794-03) Water Sampled: 02/15/18 10:40 Received: 02/16/18 14:40									
1,1-Dichloroethene	ND	0.50	µg/L	1	1801495	"	02/20/18	EPA 8260B	
1,1-Dichloropropene	ND	0.50	"	"	"	"	"	"	
1,2,3-Trichlorobenzene	ND	0.50	"	"	"	"	"	"	
1,2,3-Trichloropropane	ND	0.50	"	"	"	"	"	"	
1,2,4-Trichlorobenzene	ND	0.50	"	"	"	"	"	"	
1,2,4-Trimethylbenzene	ND	0.50	"	"	"	"	"	"	
1,2-Dibromo-3-chloropropane	ND	1.0	"	"	"	"	"	"	
1,2-Dibromoethane (EDB)	ND	0.50	"	"	"	"	"	"	
1,2-Dichlorobenzene	ND	0.50	"	"	"	"	"	"	
1,2-Dichloroethane	ND	0.50	"	"	"	"	"	"	
1,2-Dichloropropane	ND	0.50	"	"	"	"	"	"	
1,3,5-Trimethylbenzene	ND	0.50	"	"	"	"	"	"	
1,3-Dichlorobenzene	ND	0.50	"	"	"	"	"	"	
1,3-Dichloropropane	ND	0.50	"	"	"	"	"	"	
1,4-Dichlorobenzene	ND	0.50	"	"	"	"	"	"	
2,2-Dichloropropane	ND	0.50	"	"	"	"	"	"	
2-Butanone	ND	10	"	"	"	"	"	"	
2-Hexanone	ND	10	"	"	"	"	"	"	
4-Methyl-2-pentanone	ND	10	"	"	"	"	"	"	
Acetone	ND	10	"	"	"	"	"	"	
Benzene	ND	0.50	"	"	"	"	"	"	
Bromobenzene	ND	0.50	"	"	"	"	"	"	
Bromochloromethane	ND	0.50	"	"	"	"	"	"	
Bromodichloromethane	ND	0.50	"	"	"	"	"	"	
Bromoform	ND	0.50	"	"	"	"	"	"	
Bromomethane	ND	1.0	"	"	"	"	"	"	
Carbon tetrachloride	ND	0.50	"	"	"	"	"	"	
Chlorobenzene	ND	0.50	"	"	"	"	"	"	
Chloroethane	ND	0.50	"	"	"	"	"	"	
Chloroform	ND	0.50	"	"	"	"	"	"	
Chloromethane	ND	1.0	"	"	"	"	"	"	



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EMKO Environmental, Inc.
551 Lakecrest Dr.
El Dorado Hills, CA 95762

Project: Rise
Project Number: [none]
Project Manager: Dr. Andrew Kopania

CLS Work Order #: 18B0794
COC #:

Volatile Organic Compounds by EPA Method 8260B

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
IMD-1 (18B0794-03) Water Sampled: 02/15/18 10:40 Received: 02/16/18 14:40									
cis-1,2-Dichloroethene	ND	0.50	µg/L	1	1801495	"	02/20/18	EPA 8260B	
cis-1,3-Dichloropropene	ND	0.50	"	"	"	"	"	"	
Dibromochloromethane	ND	0.50	"	"	"	"	"	"	
Dibromomethane	ND	0.50	"	"	"	"	"	"	
Dichlorodifluoromethane (Freon 12)	ND	1.0	"	"	"	"	"	"	
Di-isopropyl ether	ND	0.50	"	"	"	"	"	"	
Ethyl tert-butyl ether	ND	0.50	"	"	"	"	"	"	
Ethylbenzene	ND	0.50	"	"	"	"	"	"	
Hexachlorobutadiene	ND	0.50	"	"	"	"	"	"	
Isopropylbenzene	ND	0.50	"	"	"	"	"	"	
Methyl tert-butyl ether	ND	0.50	"	"	"	"	"	"	
Methylene chloride	ND	0.50	"	"	"	"	"	"	
Naphthalene	ND	0.50	"	"	"	"	"	"	
n-Butylbenzene	ND	0.50	"	"	"	"	"	"	
n-Propylbenzene	ND	0.50	"	"	"	"	"	"	
o-Chlorotoluene	ND	0.50	"	"	"	"	"	"	
p-Chlorotoluene	ND	0.50	"	"	"	"	"	"	
p-Isopropyltoluene	ND	0.50	"	"	"	"	"	"	
sec-Butylbenzene	ND	0.50	"	"	"	"	"	"	
Styrene	ND	0.50	"	"	"	"	"	"	
tert-Amyl methyl ether	ND	0.50	"	"	"	"	"	"	
tert-Butyl alcohol	ND	5.0	"	"	"	"	"	"	
tert-Butylbenzene	ND	0.50	"	"	"	"	"	"	
Tetrachloroethene	ND	0.50	"	"	"	"	"	"	
Toluene	ND	0.50	"	"	"	"	"	"	
trans-1,2-Dichloroethene	ND	0.50	"	"	"	"	"	"	
trans-1,3-Dichloropropene	ND	0.50	"	"	"	"	"	"	
Trichloroethene	ND	0.50	"	"	"	"	"	"	
Trichlorofluoromethane	ND	0.50	"	"	"	"	"	"	
Vinyl chloride	ND	1.0	"	"	"	"	"	"	
Xylenes (total)	ND	1.0	"	"	"	"	"	"	



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EMKO Environmental, Inc.
551 Lakecrest Dr.
El Dorado Hills, CA 95762

Project: Rise
Project Number: [none]
Project Manager: Dr. Andrew Kopania

CLS Work Order #: 18B0794
COC #:

Volatile Organic Compounds by EPA Method 8260B

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
IMD-1 (18B0794-03) Water Sampled: 02/15/18 10:40 Received: 02/16/18 14:40									
Surrogate: 1,2-Dichloroethane-d4		130 %	66-135		1801495	"	02/20/18	EPA 8260B	
Surrogate: 4-Bromofluorobenzene		106 %	73-125		"	"	"	"	
Surrogate: Toluene-d8		91 %	72-125		"	"	"	"	
IMD-2 (18B0794-04) Water Sampled: 02/15/18 09:45 Received: 02/16/18 14:40									
1,1,1,2-Tetrachloroethane	ND	0.50	µg/L	1	1801495	02/20/18	02/20/18	EPA 8260B	
1,1,1-Trichloroethane	ND	0.50	"	"	"	"	"	"	
1,1,2,2-Tetrachloroethane	ND	0.50	"	"	"	"	"	"	
1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113)	ND	0.50	"	"	"	"	"	"	
1,1,2-Trichloroethane	ND	0.50	"	"	"	"	"	"	
1,1-Dichloroethane	ND	0.50	"	"	"	"	"	"	
1,1-Dichloroethene	ND	0.50	"	"	"	"	"	"	
1,1-Dichloropropene	ND	0.50	"	"	"	"	"	"	
1,2,3-Trichlorobenzene	ND	0.50	"	"	"	"	"	"	
1,2,3-Trichloropropane	ND	0.50	"	"	"	"	"	"	
1,2,4-Trichlorobenzene	ND	0.50	"	"	"	"	"	"	
1,2,4-Trimethylbenzene	ND	0.50	"	"	"	"	"	"	
1,2-Dibromo-3-chloropropane	ND	1.0	"	"	"	"	"	"	
1,2-Dibromoethane (EDB)	ND	0.50	"	"	"	"	"	"	
1,2-Dichlorobenzene	ND	0.50	"	"	"	"	"	"	
1,2-Dichloroethane	ND	0.50	"	"	"	"	"	"	
1,2-Dichloropropane	ND	0.50	"	"	"	"	"	"	
1,3,5-Trimethylbenzene	ND	0.50	"	"	"	"	"	"	
1,3-Dichlorobenzene	ND	0.50	"	"	"	"	"	"	
1,3-Dichloropropane	ND	0.50	"	"	"	"	"	"	
1,4-Dichlorobenzene	ND	0.50	"	"	"	"	"	"	
2,2-Dichloropropane	ND	0.50	"	"	"	"	"	"	
2-Butanone	ND	10	"	"	"	"	"	"	
2-Hexanone	ND	10	"	"	"	"	"	"	
4-Methyl-2-pentanone	ND	10	"	"	"	"	"	"	
Acetone	ND	10	"	"	"	"	"	"	



CALIFORNIA LABORATORY SERVICES

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EMKO Environmental, Inc.
551 Lakecrest Dr.
El Dorado Hills, CA 95762

Project: Rise
Project Number: [none]
Project Manager: Dr. Andrew Kopania

CLS Work Order #: 18B0794
COC #:

Volatile Organic Compounds by EPA Method 8260B

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
IMD-2 (18B0794-04) Water Sampled: 02/15/18 09:45 Received: 02/16/18 14:40									
Benzene	ND	0.50	µg/L	1	1801495	"	02/20/18	EPA 8260B	
Bromobenzene	ND	0.50	"	"	"	"	"	"	
Bromochloromethane	ND	0.50	"	"	"	"	"	"	
Bromodichloromethane	ND	0.50	"	"	"	"	"	"	
Bromoform	ND	0.50	"	"	"	"	"	"	
Bromomethane	ND	1.0	"	"	"	"	"	"	
Carbon tetrachloride	ND	0.50	"	"	"	"	"	"	
Chlorobenzene	ND	0.50	"	"	"	"	"	"	
Chloroethane	ND	0.50	"	"	"	"	"	"	
Chloroform	ND	0.50	"	"	"	"	"	"	
Chloromethane	ND	1.0	"	"	"	"	"	"	
cis-1,2-Dichloroethene	ND	0.50	"	"	"	"	"	"	
cis-1,3-Dichloropropene	ND	0.50	"	"	"	"	"	"	
Dibromochloromethane	ND	0.50	"	"	"	"	"	"	
Dibromomethane	ND	0.50	"	"	"	"	"	"	
Dichlorodifluoromethane (Freon 12)	ND	1.0	"	"	"	"	"	"	
Di-isopropyl ether	ND	0.50	"	"	"	"	"	"	
Ethyl tert-butyl ether	ND	0.50	"	"	"	"	"	"	
Ethylbenzene	ND	0.50	"	"	"	"	"	"	
Hexachlorobutadiene	ND	0.50	"	"	"	"	"	"	
Isopropylbenzene	ND	0.50	"	"	"	"	"	"	
Methyl tert-butyl ether	ND	0.50	"	"	"	"	"	"	
Methylene chloride	ND	0.50	"	"	"	"	"	"	
Naphthalene	ND	0.50	"	"	"	"	"	"	
n-Butylbenzene	ND	0.50	"	"	"	"	"	"	
n-Propylbenzene	ND	0.50	"	"	"	"	"	"	
o-Chlorotoluene	ND	0.50	"	"	"	"	"	"	
p-Chlorotoluene	ND	0.50	"	"	"	"	"	"	
p-Isopropyltoluene	ND	0.50	"	"	"	"	"	"	
sec-Butylbenzene	ND	0.50	"	"	"	"	"	"	
Styrene	ND	0.50	"	"	"	"	"	"	



CALIFORNIA LABORATORY SERVICES

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EMKO Environmental, Inc.
551 Lakecrest Dr.
El Dorado Hills, CA 95762

Project: Rise
Project Number: [none]
Project Manager: Dr. Andrew Kopania

CLS Work Order #: 18B0794
COC #:

Volatile Organic Compounds by EPA Method 8260B

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
IMD-2 (18B0794-04) Water Sampled: 02/15/18 09:45 Received: 02/16/18 14:40									
tert-Amyl methyl ether	ND	0.50	µg/L	1	1801495	"	02/20/18	EPA 8260B	
tert-Butyl alcohol	ND	5.0	"	"	"	"	"	"	
tert-Butylbenzene	ND	0.50	"	"	"	"	"	"	
Tetrachloroethene	ND	0.50	"	"	"	"	"	"	
Toluene	1.1	0.50	"	"	"	"	"	"	
trans-1,2-Dichloroethene	ND	0.50	"	"	"	"	"	"	
trans-1,3-Dichloropropene	ND	0.50	"	"	"	"	"	"	
Trichloroethene	ND	0.50	"	"	"	"	"	"	
Trichlorofluoromethane	ND	0.50	"	"	"	"	"	"	
Vinyl chloride	ND	1.0	"	"	"	"	"	"	
Xylenes (total)	ND	1.0	"	"	"	"	"	"	

Surrogate: 1,2-Dichloroethane-d4	135 %	66-135	"	"	"	"
Surrogate: 4-Bromofluorobenzene	104 %	73-125	"	"	"	"
Surrogate: Toluene-d8	91 %	72-125	"	"	"	"

NBS-265 (18B0794-05) Water

 Sampled: 02/15/18 15:33 Received: 02/16/18 14:40

1,1,1,2-Tetrachloroethane	ND	0.50	µg/L	1	1801495	02/20/18	02/20/18	EPA 8260B	
1,1,1-Trichloroethane	ND	0.50	"	"	"	"	"	"	
1,1,2,2-Tetrachloroethane	ND	0.50	"	"	"	"	"	"	
1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113)	ND	0.50	"	"	"	"	"	"	
1,1,2-Trichloroethane	ND	0.50	"	"	"	"	"	"	
1,1-Dichloroethane	ND	0.50	"	"	"	"	"	"	
1,1-Dichloroethene	ND	0.50	"	"	"	"	"	"	
1,1-Dichloropropene	ND	0.50	"	"	"	"	"	"	
1,2,3-Trichlorobenzene	ND	0.50	"	"	"	"	"	"	
1,2,3-Trichloropropane	ND	0.50	"	"	"	"	"	"	
1,2,4-Trichlorobenzene	ND	0.50	"	"	"	"	"	"	
1,2,4-Trimethylbenzene	ND	0.50	"	"	"	"	"	"	
1,2-Dibromo-3-chloropropane	ND	1.0	"	"	"	"	"	"	
1,2-Dibromoethane (EDB)	ND	0.50	"	"	"	"	"	"	



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EMKO Environmental, Inc.
551 Lakecrest Dr.
El Dorado Hills, CA 95762

Project: Rise
Project Number: [none]
Project Manager: Dr. Andrew Kopania

CLS Work Order #: 18B0794
COC #:

Volatile Organic Compounds by EPA Method 8260B

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
NBS-265 (18B0794-05) Water Sampled: 02/15/18 15:33 Received: 02/16/18 14:40									
1,2-Dichlorobenzene	ND	0.50	µg/L	1	1801495	"	02/20/18	EPA 8260B	
1,2-Dichloroethane	ND	0.50	"	"	"	"	"	"	
1,2-Dichloropropane	ND	0.50	"	"	"	"	"	"	
1,3,5-Trimethylbenzene	ND	0.50	"	"	"	"	"	"	
1,3-Dichlorobenzene	ND	0.50	"	"	"	"	"	"	
1,3-Dichloropropane	ND	0.50	"	"	"	"	"	"	
1,4-Dichlorobenzene	ND	0.50	"	"	"	"	"	"	
2,2-Dichloropropane	ND	0.50	"	"	"	"	"	"	
2-Butanone	ND	10	"	"	"	"	"	"	
2-Hexanone	ND	10	"	"	"	"	"	"	
4-Methyl-2-pentanone	ND	10	"	"	"	"	"	"	
Acetone	ND	10	"	"	"	"	"	"	
Benzene	ND	0.50	"	"	"	"	"	"	
Bromobenzene	ND	0.50	"	"	"	"	"	"	
Bromochloromethane	ND	0.50	"	"	"	"	"	"	
Bromodichloromethane	ND	0.50	"	"	"	"	"	"	
Bromoform	ND	0.50	"	"	"	"	"	"	
Bromomethane	ND	1.0	"	"	"	"	"	"	
Carbon tetrachloride	ND	0.50	"	"	"	"	"	"	
Chlorobenzene	ND	0.50	"	"	"	"	"	"	
Chloroethane	ND	0.50	"	"	"	"	"	"	
Chloroform	ND	0.50	"	"	"	"	"	"	
Chloromethane	ND	1.0	"	"	"	"	"	"	
cis-1,2-Dichloroethene	2.4	0.50	"	"	"	"	"	"	
cis-1,3-Dichloropropene	ND	0.50	"	"	"	"	"	"	
Dibromochloromethane	ND	0.50	"	"	"	"	"	"	
Dibromomethane	ND	0.50	"	"	"	"	"	"	
Dichlorodifluoromethane (Freon 12)	ND	1.0	"	"	"	"	"	"	
Di-isopropyl ether	ND	0.50	"	"	"	"	"	"	
Ethyl tert-butyl ether	ND	0.50	"	"	"	"	"	"	
Ethylbenzene	ND	0.50	"	"	"	"	"	"	



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EMKO Environmental, Inc.
551 Lakecrest Dr.
El Dorado Hills, CA 95762

Project: Rise
Project Number: [none]
Project Manager: Dr. Andrew Kopania

CLS Work Order #: 18B0794
COC #:

Volatile Organic Compounds by EPA Method 8260B

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
NBS-265 (18B0794-05) Water Sampled: 02/15/18 15:33 Received: 02/16/18 14:40									
Hexachlorobutadiene	ND	0.50	µg/L	1	1801495	"	02/20/18	EPA 8260B	
Isopropylbenzene	ND	0.50	"	"	"	"	"	"	
Methyl tert-butyl ether	ND	0.50	"	"	"	"	"	"	
Methylene chloride	ND	0.50	"	"	"	"	"	"	
Naphthalene	ND	0.50	"	"	"	"	"	"	
n-Butylbenzene	ND	0.50	"	"	"	"	"	"	
n-Propylbenzene	ND	0.50	"	"	"	"	"	"	
o-Chlorotoluene	ND	0.50	"	"	"	"	"	"	
p-Chlorotoluene	ND	0.50	"	"	"	"	"	"	
p-Isopropyltoluene	ND	0.50	"	"	"	"	"	"	
sec-Butylbenzene	ND	0.50	"	"	"	"	"	"	
Styrene	ND	0.50	"	"	"	"	"	"	
tert-Amyl methyl ether	ND	0.50	"	"	"	"	"	"	
tert-Butyl alcohol	ND	5.0	"	"	"	"	"	"	
tert-Butylbenzene	ND	0.50	"	"	"	"	"	"	
Tetrachloroethene	ND	0.50	"	"	"	"	"	"	
Toluene	ND	0.50	"	"	"	"	"	"	
trans-1,2-Dichloroethene	ND	0.50	"	"	"	"	"	"	
trans-1,3-Dichloropropene	ND	0.50	"	"	"	"	"	"	
Trichloroethene	ND	0.50	"	"	"	"	"	"	
Trichlorofluoromethane	ND	0.50	"	"	"	"	"	"	
Vinyl chloride	ND	1.0	"	"	"	"	"	"	
Xylenes (total)	ND	1.0	"	"	"	"	"	"	

Surrogate: 1,2-Dichloroethane-d4	131 %	66-135	"	"	"	"
Surrogate: 4-Bromofluorobenzene	109 %	73-125	"	"	"	"
Surrogate: Toluene-d8	90 %	72-125	"	"	"	"



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EMKO Environmental, Inc.
551 Lakecrest Dr.
El Dorado Hills, CA 95762

Project: Rise
Project Number: [none]
Project Manager: Dr. Andrew Kopania

CLS Work Order #: 18B0794
COC #:

Volatile Organic Compounds by EPA Method 8260B

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
NBS-900 (18B0794-06) Water Sampled: 02/15/18 14:05 Received: 02/16/18 14:40									
1,1,1,2-Tetrachloroethane	ND	0.50	µg/L	1	1801495	02/20/18	02/21/18	EPA 8260B	
1,1,1-Trichloroethane	ND	0.50	"	"	"	"	"	"	
1,1,2,2-Tetrachloroethane	ND	0.50	"	"	"	"	"	"	
1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113)	ND	0.50	"	"	"	"	"	"	
1,1,2-Trichloroethane	ND	0.50	"	"	"	"	"	"	
1,1-Dichloroethane	ND	0.50	"	"	"	"	"	"	
1,1-Dichloroethene	ND	0.50	"	"	"	"	"	"	
1,1-Dichloropropene	ND	0.50	"	"	"	"	"	"	
1,2,3-Trichlorobenzene	ND	0.50	"	"	"	"	"	"	
1,2,3-Trichloropropane	ND	0.50	"	"	"	"	"	"	
1,2,4-Trichlorobenzene	ND	0.50	"	"	"	"	"	"	
1,2,4-Trimethylbenzene	ND	0.50	"	"	"	"	"	"	
1,2-Dibromo-3-chloropropane	ND	1.0	"	"	"	"	"	"	
1,2-Dibromoethane (EDB)	ND	0.50	"	"	"	"	"	"	
1,2-Dichlorobenzene	ND	0.50	"	"	"	"	"	"	
1,2-Dichloroethane	ND	0.50	"	"	"	"	"	"	
1,2-Dichloropropane	ND	0.50	"	"	"	"	"	"	
1,3,5-Trimethylbenzene	ND	0.50	"	"	"	"	"	"	
1,3-Dichlorobenzene	ND	0.50	"	"	"	"	"	"	
1,3-Dichloropropane	ND	0.50	"	"	"	"	"	"	
1,4-Dichlorobenzene	ND	0.50	"	"	"	"	"	"	
2,2-Dichloropropane	ND	0.50	"	"	"	"	"	"	
2-Butanone	ND	10	"	"	"	"	"	"	
2-Hexanone	ND	10	"	"	"	"	"	"	
4-Methyl-2-pentanone	ND	10	"	"	"	"	"	"	
Acetone	ND	10	"	"	"	"	"	"	
Benzene	ND	0.50	"	"	"	"	"	"	
Bromobenzene	ND	0.50	"	"	"	"	"	"	
Bromochloromethane	ND	0.50	"	"	"	"	"	"	
Bromodichloromethane	ND	0.50	"	"	"	"	"	"	



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EMKO Environmental, Inc.
551 Lakecrest Dr.
El Dorado Hills, CA 95762

Project: Rise
Project Number: [none]
Project Manager: Dr. Andrew Kopania

CLS Work Order #: 18B0794
COC #:

Volatile Organic Compounds by EPA Method 8260B

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
NBS-900 (18B0794-06) Water Sampled: 02/15/18 14:05 Received: 02/16/18 14:40									
Bromoform	ND	0.50	µg/L	1	1801495	"	02/21/18	EPA 8260B	
Bromomethane	ND	1.0	"	"	"	"	"	"	
Carbon tetrachloride	ND	0.50	"	"	"	"	"	"	
Chlorobenzene	ND	0.50	"	"	"	"	"	"	
Chloroethane	ND	0.50	"	"	"	"	"	"	
Chloroform	ND	0.50	"	"	"	"	"	"	
Chloromethane	ND	1.0	"	"	"	"	"	"	
cis-1,2-Dichloroethene	1.8	0.50	"	"	"	"	"	"	
cis-1,3-Dichloropropene	ND	0.50	"	"	"	"	"	"	
Dibromochloromethane	ND	0.50	"	"	"	"	"	"	
Dibromomethane	ND	0.50	"	"	"	"	"	"	
Dichlorodifluoromethane (Freon 12)	ND	1.0	"	"	"	"	"	"	
Di-isopropyl ether	ND	0.50	"	"	"	"	"	"	
Ethyl tert-butyl ether	ND	0.50	"	"	"	"	"	"	
Ethylbenzene	ND	0.50	"	"	"	"	"	"	
Hexachlorobutadiene	ND	0.50	"	"	"	"	"	"	
Isopropylbenzene	ND	0.50	"	"	"	"	"	"	
Methyl tert-butyl ether	ND	0.50	"	"	"	"	"	"	
Methylene chloride	ND	0.50	"	"	"	"	"	"	
Naphthalene	ND	0.50	"	"	"	"	"	"	
n-Butylbenzene	ND	0.50	"	"	"	"	"	"	
n-Propylbenzene	ND	0.50	"	"	"	"	"	"	
o-Chlorotoluene	ND	0.50	"	"	"	"	"	"	
p-Chlorotoluene	ND	0.50	"	"	"	"	"	"	
p-Isopropyltoluene	ND	0.50	"	"	"	"	"	"	
sec-Butylbenzene	ND	0.50	"	"	"	"	"	"	
Styrene	ND	0.50	"	"	"	"	"	"	
tert-Amyl methyl ether	ND	0.50	"	"	"	"	"	"	
tert-Butyl alcohol	ND	5.0	"	"	"	"	"	"	
tert-Butylbenzene	ND	0.50	"	"	"	"	"	"	
Tetrachloroethene	ND	0.50	"	"	"	"	"	"	



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EMKO Environmental, Inc.
551 Lakecrest Dr.
El Dorado Hills, CA 95762

Project: Rise
Project Number: [none]
Project Manager: Dr. Andrew Kopania

CLS Work Order #: 18B0794
COC #:

Volatile Organic Compounds by EPA Method 8260B

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
NBS-900 (18B0794-06) Water Sampled: 02/15/18 14:05 Received: 02/16/18 14:40									
Toluene	ND	0.50	µg/L	1	1801495	"	02/21/18	EPA 8260B	
trans-1,2-Dichloroethene	ND	0.50	"	"	"	"	"	"	
trans-1,3-Dichloropropene	ND	0.50	"	"	"	"	"	"	
Trichloroethene	ND	0.50	"	"	"	"	"	"	
Trichlorofluoromethane	ND	0.50	"	"	"	"	"	"	
Vinyl chloride	ND	1.0	"	"	"	"	"	"	
Xylenes (total)	ND	1.0	"	"	"	"	"	"	

Surrogate: 1,2-Dichloroethane-d4	129 %	66-135	"	"	"	"
Surrogate: 4-Bromofluorobenzene	107 %	73-125	"	"	"	"
Surrogate: Toluene-d8	93 %	72-125	"	"	"	"

NBS-1300 (18B0794-07) Water

 Sampled: 02/15/18 14:30 Received: 02/16/18 14:40

1,1,1,2-Tetrachloroethane	ND	0.50	µg/L	1	1801495	02/20/18	02/21/18	EPA 8260B
1,1,1-Trichloroethane	ND	0.50	"	"	"	"	"	"
1,1,2,2-Tetrachloroethane	ND	0.50	"	"	"	"	"	"
1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113)	ND	0.50	"	"	"	"	"	"
1,1,2-Trichloroethane	ND	0.50	"	"	"	"	"	"
1,1-Dichloroethane	ND	0.50	"	"	"	"	"	"
1,1-Dichloroethene	ND	0.50	"	"	"	"	"	"
1,1-Dichloropropene	ND	0.50	"	"	"	"	"	"
1,2,3-Trichlorobenzene	ND	0.50	"	"	"	"	"	"
1,2,3-Trichloropropane	ND	0.50	"	"	"	"	"	"
1,2,4-Trichlorobenzene	ND	0.50	"	"	"	"	"	"
1,2,4-Trimethylbenzene	ND	0.50	"	"	"	"	"	"
1,2-Dibromo-3-chloropropane	ND	1.0	"	"	"	"	"	"
1,2-Dibromoethane (EDB)	ND	0.50	"	"	"	"	"	"
1,2-Dichlorobenzene	ND	0.50	"	"	"	"	"	"
1,2-Dichloroethane	ND	0.50	"	"	"	"	"	"
1,2-Dichloropropane	ND	0.50	"	"	"	"	"	"
1,3,5-Trimethylbenzene	ND	0.50	"	"	"	"	"	"



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EMKO Environmental, Inc.
551 Lakecrest Dr.
El Dorado Hills, CA 95762

Project: Rise
Project Number: [none]
Project Manager: Dr. Andrew Kopania

CLS Work Order #: 18B0794
COC #:

Volatile Organic Compounds by EPA Method 8260B

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
NBS-1300 (18B0794-07) Water Sampled: 02/15/18 14:30 Received: 02/16/18 14:40									
1,3-Dichlorobenzene	ND	0.50	µg/L	1	1801495	"	02/21/18	EPA 8260B	
1,3-Dichloropropane	ND	0.50	"	"	"	"	"	"	
1,4-Dichlorobenzene	ND	0.50	"	"	"	"	"	"	
2,2-Dichloropropane	ND	0.50	"	"	"	"	"	"	
2-Butanone	ND	10	"	"	"	"	"	"	
2-Hexanone	ND	10	"	"	"	"	"	"	
4-Methyl-2-pentanone	ND	10	"	"	"	"	"	"	
Acetone	ND	10	"	"	"	"	"	"	
Benzene	ND	0.50	"	"	"	"	"	"	
Bromobenzene	ND	0.50	"	"	"	"	"	"	
Bromochloromethane	ND	0.50	"	"	"	"	"	"	
Bromodichloromethane	ND	0.50	"	"	"	"	"	"	
Bromoform	ND	0.50	"	"	"	"	"	"	
Bromomethane	ND	1.0	"	"	"	"	"	"	
Carbon tetrachloride	ND	0.50	"	"	"	"	"	"	
Chlorobenzene	ND	0.50	"	"	"	"	"	"	
Chloroethane	ND	0.50	"	"	"	"	"	"	
Chloroform	ND	0.50	"	"	"	"	"	"	
Chloromethane	ND	1.0	"	"	"	"	"	"	
cis-1,2-Dichloroethene	2.4	0.50	"	"	"	"	"	"	
cis-1,3-Dichloropropene	ND	0.50	"	"	"	"	"	"	
Dibromochloromethane	ND	0.50	"	"	"	"	"	"	
Dibromomethane	ND	0.50	"	"	"	"	"	"	
Dichlorodifluoromethane (Freon 12)	ND	1.0	"	"	"	"	"	"	
Di-isopropyl ether	ND	0.50	"	"	"	"	"	"	
Ethyl tert-butyl ether	ND	0.50	"	"	"	"	"	"	
Ethylbenzene	ND	0.50	"	"	"	"	"	"	
Hexachlorobutadiene	ND	0.50	"	"	"	"	"	"	
Isopropylbenzene	ND	0.50	"	"	"	"	"	"	
Methyl tert-butyl ether	ND	0.50	"	"	"	"	"	"	
Methylene chloride	ND	0.50	"	"	"	"	"	"	



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EMKO Environmental, Inc.
551 Lakecrest Dr.
El Dorado Hills, CA 95762

Project: Rise
Project Number: [none]
Project Manager: Dr. Andrew Kopania

CLS Work Order #: 18B0794
COC #:

Volatile Organic Compounds by EPA Method 8260B

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
NBS-1300 (18B0794-07) Water Sampled: 02/15/18 14:30 Received: 02/16/18 14:40									
Naphthalene	ND	0.50	µg/L	1	1801495	"	02/21/18	EPA 8260B	
n-Butylbenzene	ND	0.50	"	"	"	"	"	"	
n-Propylbenzene	ND	0.50	"	"	"	"	"	"	
o-Chlorotoluene	ND	0.50	"	"	"	"	"	"	
p-Chlorotoluene	ND	0.50	"	"	"	"	"	"	
p-Isopropyltoluene	ND	0.50	"	"	"	"	"	"	
sec-Butylbenzene	ND	0.50	"	"	"	"	"	"	
Styrene	ND	0.50	"	"	"	"	"	"	
tert-Amyl methyl ether	ND	0.50	"	"	"	"	"	"	
tert-Butyl alcohol	ND	5.0	"	"	"	"	"	"	
tert-Butylbenzene	ND	0.50	"	"	"	"	"	"	
Tetrachloroethene	ND	0.50	"	"	"	"	"	"	
Toluene	ND	0.50	"	"	"	"	"	"	
trans-1,2-Dichloroethene	ND	0.50	"	"	"	"	"	"	
trans-1,3-Dichloropropene	ND	0.50	"	"	"	"	"	"	
Trichloroethene	ND	0.50	"	"	"	"	"	"	
Trichlorofluoromethane	ND	0.50	"	"	"	"	"	"	
Vinyl chloride	ND	1.0	"	"	"	"	"	"	
Xylenes (total)	ND	1.0	"	"	"	"	"	"	

Surrogate: 1,2-Dichloroethane-d4	130 %	66-135	"	"	"	"
Surrogate: 4-Bromofluorobenzene	115 %	73-125	"	"	"	"
Surrogate: Toluene-d8	88 %	72-125	"	"	"	"

NBS-1600 (18B0794-09) Water

 Sampled: 02/15/18 17:20 Received: 02/16/18 14:40

1,1,1,2-Tetrachloroethane	ND	0.50	µg/L	1	1801495	02/20/18	02/21/18	EPA 8260B
1,1,1-Trichloroethane	ND	0.50	"	"	"	"	"	"
1,1,2,2-Tetrachloroethane	ND	0.50	"	"	"	"	"	"
1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113)	ND	0.50	"	"	"	"	"	"
1,1,2-Trichloroethane	ND	0.50	"	"	"	"	"	"
1,1-Dichloroethane	ND	0.50	"	"	"	"	"	"



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EMKO Environmental, Inc.
551 Lakecrest Dr.
El Dorado Hills, CA 95762

Project: Rise
Project Number: [none]
Project Manager: Dr. Andrew Kopania

CLS Work Order #: 18B0794
COC #:

Volatile Organic Compounds by EPA Method 8260B

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
NBS-1600 (18B0794-09) Water Sampled: 02/15/18 17:20 Received: 02/16/18 14:40									
1,1-Dichloroethene	ND	0.50	µg/L	1	1801495	"	02/21/18	EPA 8260B	
1,1-Dichloropropene	ND	0.50	"	"	"	"	"	"	
1,2,3-Trichlorobenzene	ND	0.50	"	"	"	"	"	"	
1,2,3-Trichloropropane	ND	0.50	"	"	"	"	"	"	
1,2,4-Trichlorobenzene	ND	0.50	"	"	"	"	"	"	
1,2,4-Trimethylbenzene	ND	0.50	"	"	"	"	"	"	
1,2-Dibromo-3-chloropropane	ND	1.0	"	"	"	"	"	"	
1,2-Dibromoethane (EDB)	ND	0.50	"	"	"	"	"	"	
1,2-Dichlorobenzene	ND	0.50	"	"	"	"	"	"	
1,2-Dichloroethane	ND	0.50	"	"	"	"	"	"	
1,2-Dichloropropane	ND	0.50	"	"	"	"	"	"	
1,3,5-Trimethylbenzene	ND	0.50	"	"	"	"	"	"	
1,3-Dichlorobenzene	ND	0.50	"	"	"	"	"	"	
1,3-Dichloropropane	ND	0.50	"	"	"	"	"	"	
1,4-Dichlorobenzene	ND	0.50	"	"	"	"	"	"	
2,2-Dichloropropane	ND	0.50	"	"	"	"	"	"	
2-Butanone	ND	10	"	"	"	"	"	"	
2-Hexanone	ND	10	"	"	"	"	"	"	
4-Methyl-2-pentanone	ND	10	"	"	"	"	"	"	
Acetone	ND	10	"	"	"	"	"	"	
Benzene	ND	0.50	"	"	"	"	"	"	
Bromobenzene	ND	0.50	"	"	"	"	"	"	
Bromochloromethane	ND	0.50	"	"	"	"	"	"	
Bromodichloromethane	ND	0.50	"	"	"	"	"	"	
Bromoform	ND	0.50	"	"	"	"	"	"	
Bromomethane	ND	1.0	"	"	"	"	"	"	
Carbon tetrachloride	ND	0.50	"	"	"	"	"	"	
Chlorobenzene	ND	0.50	"	"	"	"	"	"	
Chloroethane	ND	0.50	"	"	"	"	"	"	
Chloroform	ND	0.50	"	"	"	"	"	"	
Chloromethane	ND	1.0	"	"	"	"	"	"	



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EMKO Environmental, Inc.
551 Lakecrest Dr.
El Dorado Hills, CA 95762

Project: Rise
Project Number: [none]
Project Manager: Dr. Andrew Kopania

CLS Work Order #: 18B0794
COC #:

Volatile Organic Compounds by EPA Method 8260B

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
NBS-1600 (18B0794-09) Water Sampled: 02/15/18 17:20 Received: 02/16/18 14:40									
cis-1,2-Dichloroethene	3.1	0.50	µg/L	1	1801495	"	02/21/18	EPA 8260B	
cis-1,3-Dichloropropene	ND	0.50	"	"	"	"	"	"	
Dibromochloromethane	ND	0.50	"	"	"	"	"	"	
Dibromomethane	ND	0.50	"	"	"	"	"	"	
Dichlorodifluoromethane (Freon 12)	ND	1.0	"	"	"	"	"	"	
Di-isopropyl ether	ND	0.50	"	"	"	"	"	"	
Ethyl tert-butyl ether	ND	0.50	"	"	"	"	"	"	
Ethylbenzene	ND	0.50	"	"	"	"	"	"	
Hexachlorobutadiene	ND	0.50	"	"	"	"	"	"	
Isopropylbenzene	ND	0.50	"	"	"	"	"	"	
Methyl tert-butyl ether	ND	0.50	"	"	"	"	"	"	
Methylene chloride	ND	0.50	"	"	"	"	"	"	
Naphthalene	ND	0.50	"	"	"	"	"	"	
n-Butylbenzene	ND	0.50	"	"	"	"	"	"	
n-Propylbenzene	ND	0.50	"	"	"	"	"	"	
o-Chlorotoluene	ND	0.50	"	"	"	"	"	"	
p-Chlorotoluene	ND	0.50	"	"	"	"	"	"	
p-Isopropyltoluene	ND	0.50	"	"	"	"	"	"	
sec-Butylbenzene	ND	0.50	"	"	"	"	"	"	
Styrene	ND	0.50	"	"	"	"	"	"	
tert-Amyl methyl ether	ND	0.50	"	"	"	"	"	"	
tert-Butyl alcohol	ND	5.0	"	"	"	"	"	"	
tert-Butylbenzene	ND	0.50	"	"	"	"	"	"	
Tetrachloroethene	ND	0.50	"	"	"	"	"	"	
Toluene	ND	0.50	"	"	"	"	"	"	
trans-1,2-Dichloroethene	ND	0.50	"	"	"	"	"	"	
trans-1,3-Dichloropropene	ND	0.50	"	"	"	"	"	"	
Trichloroethene	ND	0.50	"	"	"	"	"	"	
Trichlorofluoromethane	ND	0.50	"	"	"	"	"	"	
Vinyl chloride	ND	1.0	"	"	"	"	"	"	
Xylenes (total)	ND	1.0	"	"	"	"	"	"	



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EMKO Environmental, Inc.
551 Lakecrest Dr.
El Dorado Hills, CA 95762

Project: Rise
Project Number: [none]
Project Manager: Dr. Andrew Kopania

CLS Work Order #: 18B0794
COC #:

Volatile Organic Compounds by EPA Method 8260B

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
NBS-1600 (18B0794-09) Water Sampled: 02/15/18 17:20 Received: 02/16/18 14:40									
Surrogate: 1,2-Dichloroethane-d4		128 %		66-135	1801495	"	02/21/18	EPA 8260B	
Surrogate: 4-Bromofluorobenzene		109 %		73-125	"	"	"	"	
Surrogate: Toluene-d8		91 %		72-125	"	"	"	"	



CALIFORNIA LABORATORY SERVICES

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EMKO Environmental, Inc.
551 Lakecrest Dr.
El Dorado Hills, CA 95762

Project: Rise
Project Number: [none]
Project Manager: Dr. Andrew Kopania

CLS Work Order #: 18B0794
COC #:

Conventional Chemistry Parameters by APHA/EPA Methods - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes

Batch 1801382 - General

Blank (1801382-BLK1)

Prepared: 02/16/18 Analyzed: 02/21/18

Biochemical Oxygen Demand	ND	3.0	mg/L

LCS (1801382-BS1)

Prepared: 02/16/18 Analyzed: 02/21/18

Biochemical Oxygen Demand	186	3.0	mg/L	167	112	83-138

LCS Dup (1801382-BSD1)

Prepared: 02/16/18 Analyzed: 02/21/18

Biochemical Oxygen Demand	189	3.0	mg/L	167	113	83-138	2	21

Batch 1801394 - General Prep

Blank (1801394-BLK1)

Prepared & Analyzed: 02/16/18

Fluoride	ND	0.10	mg/L
Sulfate as SO ₄	ND	0.50	"
Chloride	ND	0.50	"
Nitrate as N	ND	0.40	"
Nitrite as N	ND	0.40	"

LCS (1801394-BS1)

Prepared & Analyzed: 02/16/18

Fluoride	2.20	0.10	mg/L	2.00	110	80-120
Chloride	5.02	0.50	"	5.00	100	80-120
Sulfate as SO ₄	4.97	0.50	"	5.00	99	80-120
Nitrite as N	2.38	0.40	"	2.00	119	80-120
Nitrate as N	2.01	0.40	"	2.00	100	80-120

LCS Dup (1801394-BSD1)

Prepared & Analyzed: 02/16/18

Chloride	4.96	0.50	mg/L	5.00	99	80-120	1	20
Sulfate as SO ₄	4.97	0.50	"	5.00	99	80-120	0.03	20
Fluoride	2.20	0.10	"	2.00	110	80-120	0.08	20
Nitrate as N	2.01	0.40	"	2.00	100	80-120	0.04	20
Nitrite as N	2.37	0.40	"	2.00	119	80-120	0.2	20



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EMKO Environmental, Inc.
551 Lakecrest Dr.
El Dorado Hills, CA 95762

Project: Rise
Project Number: [none]
Project Manager: Dr. Andrew Kopania

CLS Work Order #: 18B0794
COC #:

Conventional Chemistry Parameters by APHA/EPA Methods - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes

Batch 1801394 - General Prep

Matrix Spike (1801394-MS1)	Source: 18B0794-01			Prepared & Analyzed: 02/16/18						
Fluoride	2.05	0.10	mg/L	2.00	0.0412	101	80-120			
Chloride	7.88	0.50	"	5.00	2.93	99	80-120			
Sulfate as SO ₄	17.7	0.50	"	5.00	12.7	101	80-120			
Nitrate as N	2.31	0.40	"	2.00	0.319	100	80-120			
Nitrite as N	2.27	0.40	"	2.00	ND	113	80-120			

Matrix Spike Dup (1801394-MSD1)	Source: 18B0794-01			Prepared & Analyzed: 02/16/18						
Chloride	8.00	0.50	mg/L	5.00	2.93	101	80-120	2	20	
Fluoride	2.11	0.10	"	2.00	0.0412	103	80-120	3	20	
Sulfate as SO ₄	17.8	0.50	"	5.00	12.7	103	80-120	0.6	20	
Nitrite as N	2.33	0.40	"	2.00	ND	117	80-120	3	20	
Nitrate as N	2.36	0.40	"	2.00	0.319	102	80-120	2	20	

Batch 1801406 - General Preparation

Blank (1801406-BLK1)	Prepared & Analyzed: 02/16/18									
MBAS as LAS, mol wt 340	ND	0.10	mg/L							

LCS (1801406-BS1)	Prepared & Analyzed: 02/16/18									
MBAS as LAS, mol wt 340	0.480	0.10	mg/L	0.500		96	80-120			

LCS Dup (1801406-BSD1)	Prepared & Analyzed: 02/16/18									
MBAS as LAS, mol wt 340	0.510	0.10	mg/L	0.500		102	80-120	6	20	

Matrix Spike (1801406-MS1)	Source: 18B0794-01			Prepared & Analyzed: 02/16/18						
MBAS as LAS, mol wt 340	0.406	0.10	mg/L	0.500	ND	81	75-125			



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EMKO Environmental, Inc.
551 Lakecrest Dr.
El Dorado Hills, CA 95762

Project: Rise
Project Number: [none]
Project Manager: Dr. Andrew Kopania

CLS Work Order #: 18B0794
COC #:

Conventional Chemistry Parameters by APHA/EPA Methods - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes

Batch 1801406 - General Preparation

Matrix Spike Dup (1801406-MSD1)

Source: 18B0794-01

Prepared & Analyzed: 02/16/18

MBAS as LAS, mol wt 340	0.392	0.10	mg/L	0.500	ND	78	75-125	4	25	

Batch 1801423 - General Preparation

Blank (1801423-BLK1)

Prepared: 02/19/18 Analyzed: 02/20/18

Total Dissolved Solids	ND	10	mg/L							

Duplicate (1801423-DUP1)

Source: 18B0794-01

Prepared: 02/19/18 Analyzed: 02/20/18

Total Dissolved Solids	207	10	mg/L		210			1	20	

Batch 1801426 - General Preparation

Blank (1801426-BLK1)

Prepared & Analyzed: 02/19/18

Specific Conductance (EC)	ND	1.0	µmhos/cm							

Batch 1801442 - General Preparation

Blank (1801442-BLK1)

Prepared & Analyzed: 02/19/18

Total Alkalinity	ND	5.0	mg/L							
Bicarbonate as CaCO ₃	ND	5.0	"							
Carbonate as CaCO ₃	ND	5.0	"							
Hydroxide as CaCO ₃	ND	5.0	"							

Blank (1801442-BLK2)

Prepared & Analyzed: 02/19/18

Total Alkalinity	ND	5.0	mg/L							
Bicarbonate as CaCO ₃	ND	5.0	"							
Carbonate as CaCO ₃	ND	5.0	"							
Hydroxide as CaCO ₃	ND	5.0	"							



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EMKO Environmental, Inc.
551 Lakecrest Dr.
El Dorado Hills, CA 95762

Project: Rise
Project Number: [none]
Project Manager: Dr. Andrew Kopania

CLS Work Order #: 18B0794
COC #:

Conventional Chemistry Parameters by APHA/EPA Methods - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes

Batch 1801442 - General Preparation

Duplicate (1801442-DUP1)	Source: 18B0714-01			Prepared & Analyzed: 02/19/18						
Total Alkalinity	73.0	5.0	mg/L		72.0			1	20	
Bicarbonate as CaCO ₃	73.0	5.0	"		72.0			1	20	
Carbonate as CaCO ₃	ND	5.0	"		ND				20	
Hydroxide as CaCO ₃	ND	5.0	"		ND				20	

Duplicate (1801442-DUP2)	Source: 18B0802-01			Prepared & Analyzed: 02/19/18						
Total Alkalinity	17.8	5.0	mg/L		18.8			5	20	
Bicarbonate as CaCO ₃	17.8	5.0	"		18.8			5	20	
Carbonate as CaCO ₃	ND	5.0	"		ND				20	
Hydroxide as CaCO ₃	ND	5.0	"		ND				20	

Batch 1801457 - General Preparation

Blank (1801457-BLK1)	Prepared & Analyzed: 02/20/18									
Total Suspended Solids	ND	5.0	mg/L							

Duplicate (1801457-DUP1)	Source: 18B0794-01			Prepared & Analyzed: 02/20/18						
Total Suspended Solids	ND	5.0	mg/L		ND				20	

Batch 1801462 - EPA 200 Series

Blank (1801462-BLK1)	Prepared: 02/20/18 Analyzed: 02/21/18									
Calcium	ND	1.0	mg/L							
Hardness as CaCO ₃	ND	1.0	"							
Magnesium	ND	1.0	"							
Potassium	ND	1.0	"							
Sodium	ND	1.0	"							



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EMKO Environmental, Inc.
551 Lakecrest Dr.
El Dorado Hills, CA 95762

Project: Rise
Project Number: [none]
Project Manager: Dr. Andrew Kopania

CLS Work Order #: 18B0794
COC #:

Conventional Chemistry Parameters by APHA/EPA Methods - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes

Batch 1801462 - EPA 200 Series

LCS (1801462-BS1)

Prepared: 02/20/18 Analyzed: 02/21/18

Calcium	4.81	1.0	mg/L	5.00		96	85-115			
Magnesium	4.86	1.0	"	5.00		97	85-115			
Potassium	5.25	1.0	"	5.00		105	85-115			
Sodium	5.02	1.0	"	5.00		100	85-115			

Matrix Spike (1801462-MS1)

Source: 18B0794-01

Prepared: 02/20/18 Analyzed: 02/21/18

Calcium	17.6	1.0	mg/L	5.00	12.3	106	70-130			
Magnesium	50.5	1.0	"	5.00	46.4	82	70-130			
Potassium	5.98	1.0	"	5.00	ND	120	70-130			
Sodium	7.97	1.0	"	5.00	2.67	106	70-130			

Matrix Spike (1801462-MS2)

Source: 18B0840-02

Prepared: 02/20/18 Analyzed: 02/21/18

Calcium	32.6	1.0	mg/L	5.00	31.4	23	70-130			QM-4X
Magnesium	34.0	1.0	"	5.00	34.0	1	70-130			QM-4X
Potassium	7.75	1.0	"	5.00	3.09	93	70-130			
Sodium	241	1.0	"	5.00	254	NR	70-130			QM-4X

Batch 1801538 - General Preparation

Blank (1801538-BLK1)

Prepared & Analyzed: 02/22/18

Ammonia as N	ND	100	µg/L							

LCS (1801538-BS1)

Prepared & Analyzed: 02/22/18

Ammonia as N	429	100	µg/L	500		86	80-120			

LCS Dup (1801538-BSD1)

Prepared & Analyzed: 02/22/18

Ammonia as N	450	100	µg/L	500		90	80-120	5	25	



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EMKO Environmental, Inc.
551 Lakecrest Dr.
El Dorado Hills, CA 95762

Project: Rise
Project Number: [none]
Project Manager: Dr. Andrew Kopania

CLS Work Order #: 18B0794
COC #:

Conventional Chemistry Parameters by APHA/EPA Methods - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes

Batch 1801538 - General Preparation

Matrix Spike (1801538-MS1) Source: 18B0752-05 Prepared & Analyzed: 02/22/18

Ammonia as N	576	100	µg/L	500	66.0	102	75-125			

Matrix Spike Dup (1801538-MSD1) Source: 18B0752-05 Prepared & Analyzed: 02/22/18

Ammonia as N	528	100	µg/L	500	66.0	92	75-125	9	25	

Batch 1801549 - General Preparation

Blank (1801549-BLK1) Prepared & Analyzed: 02/22/18

Cyanide (amenable)	ND	0.010	mg/L							
Cyanide (total)	ND	0.0050	"							

LCS (1801549-BS1) Prepared & Analyzed: 02/22/18

Cyanide (amenable)	0.0903	0.010	mg/L	0.100		90	75-125			
Cyanide (total)	0.0903	0.0050	"	0.100		90	75-125			

LCS Dup (1801549-BSD1) Prepared & Analyzed: 02/22/18

Cyanide (total)	0.0918	0.0050	mg/L	0.100		92	75-125	2	25	
Cyanide (amenable)	0.0918	0.010	"	0.100		92	75-125	2	25	

Matrix Spike (1801549-MS1) Source: 18B0849-01 Prepared & Analyzed: 02/22/18

Cyanide (total)	0.0808	0.0050	mg/L	0.100	0.00210	79	75-125			
Cyanide (amenable)	0.0808	0.010	"	0.100	0.00210	79	75-125			

Matrix Spike Dup (1801549-MSD1) Source: 18B0849-01 Prepared & Analyzed: 02/22/18

Cyanide (total)	0.0827	0.0050	mg/L	0.100	0.00210	81	75-125	2	25	
Cyanide (amenable)	0.0827	0.010	"	0.100	0.00210	81	75-125	2	25	



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El Dorado Hills, CA 95762

Project: Rise
Project Number: [none]
Project Manager: Dr. Andrew Kopania

CLS Work Order #: 18B0794
COC #:

Extractable Petroleum Hydrocarbons by EPA Method 8015M - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 1801431 - EPA 3510B GCNV										
Blank (1801431-BLK1)										
				Prepared: 02/19/18 Analyzed: 02/20/18						
Diesel	ND	0.050	mg/L							
Motor Oil	ND	0.050	"							
Surrogate: o-Terphenyl	0.0249		"	0.0250		99	65-135			
LCS (1801431-BS1)										
				Prepared: 02/19/18 Analyzed: 02/20/18						
Diesel	2.48	0.050	mg/L	2.50		99	65-135			
Surrogate: o-Terphenyl	0.0265		"	0.0250		106	65-135			
LCS Dup (1801431-BSD1)										
				Prepared: 02/19/18 Analyzed: 02/20/18						
Diesel	2.19	0.050	mg/L	2.50		88	65-135	12	30	
Surrogate: o-Terphenyl	0.0257		"	0.0250		103	65-135			
Matrix Spike (1801431-MS1)										
				Source: 18B0742-01		Prepared: 02/19/18 Analyzed: 02/20/18				
Diesel	2.57	0.050	mg/L	2.50	ND	103	46-137			
Surrogate: o-Terphenyl	0.0266		"	0.0250		107	65-135			
Matrix Spike Dup (1801431-MSD1)										
				Source: 18B0742-01		Prepared: 02/19/18 Analyzed: 02/20/18				
Diesel	2.67	0.050	mg/L	2.50	ND	107	46-137	4	30	
Surrogate: o-Terphenyl	0.0276		"	0.0250		110	65-135			



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EMKO Environmental, Inc.
551 Lakecrest Dr.
El Dorado Hills, CA 95762

Project: Rise
Project Number: [none]
Project Manager: Dr. Andrew Kopania

CLS Work Order #: 18B0794
COC #:

Metals (Drinking Water) by EPA 200 Series Methods - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes

Batch 1801462 - EPA 200 Series

Blank (1801462-BLK1)

Prepared: 02/20/18 Analyzed: 02/21/18

Aluminum	ND	50	µg/L
Barium	ND	100	"
Boron	ND	100	"
Beryllium	ND	1.0	"
Chromium	ND	10	"
Copper	ND	50	"
Iron	ND	100	"
Manganese	ND	20	"
Zinc	ND	50	"

LCS (1801462-BS1)

Prepared: 02/20/18 Analyzed: 02/21/18

Aluminum	5440	50	µg/L	5000	109	85-115
Barium	1060	100	"	1000	106	85-115
Boron	1100	100	"	1000	110	85-115
Beryllium	1060	1.0	"	1000	106	85-115
Chromium	1010	10	"	1000	101	85-115
Copper	999	50	"	1000	100	85-115
Iron	1160	100	"	1000	116	85-115
Manganese	1070	20	"	1000	107	85-115
Zinc	1080	50	"	1000	108	85-115

QM-1

Matrix Spike (1801462-MS1)

Source: 18B0794-01

Prepared: 02/20/18 Analyzed: 02/21/18

Aluminum	5820	50	µg/L	5000	ND	116	70-130
Barium	1080	100	"	1000	6.72	107	70-130
Boron	1210	100	"	1000	24.8	119	70-130
Beryllium	1140	1.0	"	1000	ND	114	70-130
Chromium	1020	10	"	1000	ND	102	70-130
Copper	1040	50	"	1000	ND	104	70-130
Iron	1130	100	"	1000	43.2	109	70-130
Manganese	1100	20	"	1000	7.54	109	70-130
Zinc	1170	50	"	1000	10.1	116	70-130



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EMKO Environmental, Inc.
551 Lakecrest Dr.
El Dorado Hills, CA 95762

Project: Rise
Project Number: [none]
Project Manager: Dr. Andrew Kopania

CLS Work Order #: 18B0794
COC #:

Metals (Drinking Water) by EPA 200 Series Methods - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes

Batch 1801462 - EPA 200 Series

Matrix Spike (1801462-MS2)	Source: 18B0840-02			Prepared: 02/20/18 Analyzed: 02/21/18						
Aluminum	5100	50	µg/L	5000	ND	102	70-130			
Barium	983	100	"	1000	58.1	92	70-130			
Boron	3140	100	"	1000	2320	82	70-130			
Beryllium	1000	1.0	"	1000	ND	100	70-130			
Chromium	903	10	"	1000	ND	90	70-130			
Copper	947	50	"	1000	ND	95	70-130			
Iron	1090	100	"	1000	28.4	106	70-130			
Manganese	991	20	"	1000	173	82	70-130			
Zinc	1060	50	"	1000	ND	106	70-130			

Batch 1801473 - EPA 7470A

Blank (1801473-BLK1)	Prepared & Analyzed: 02/20/18									
Mercury	ND	1.0	µg/L							
LCS (1801473-BS1)	Prepared & Analyzed: 02/20/18									
Mercury	4.85	1.0	µg/L	5.00		97	85-115			
Matrix Spike (1801473-MS1)	Source: 18B0742-01			Prepared & Analyzed: 02/20/18						
Mercury	2.77	1.0	µg/L	5.00	ND	55	70-130			QM-5
Matrix Spike (1801473-MS2)	Source: 18B0797-01			Prepared & Analyzed: 02/20/18						
Mercury	4.75	1.0	µg/L	5.00	ND	95	70-130			
Matrix Spike Dup (1801473-MSD1)	Source: 18B0742-01			Prepared & Analyzed: 02/20/18						
Mercury	2.60	1.0	µg/L	5.00	ND	52	70-130	7	25	QM-5



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El Dorado Hills, CA 95762

Project: Rise
Project Number: [none]
Project Manager: Dr. Andrew Kopania

CLS Work Order #: 18B0794
COC #:

Metals (Drinking Water) by EPA 200 Series Methods - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes

Batch 1801506 - EPA 200 Series

Blank (1801506-BLK1)

Prepared: 02/21/18 Analyzed: 02/22/18

Molybdenum	ND	2.0	µg/L
Antimony	ND	4.0	"
Arsenic	ND	2.0	"
Cadmium	ND	1.0	"
Lead	ND	5.0	"
Nickel	ND	10	"
Selenium	ND	5.0	"
Silver	ND	10	"
Vanadium	ND	3.0	"
Thallium	ND	1.0	"

LCS (1801506-BS1)

Prepared: 02/21/18 Analyzed: 02/22/18

Molybdenum	204	2.0	µg/L	200	102	85-115
Antimony	200	4.0	"	200	100	85-115
Arsenic	200	2.0	"	200	100	85-115
Cadmium	202	1.0	"	200	101	85-115
Lead	200	5.0	"	200	100	85-115
Nickel	199	10	"	200	100	85-115
Selenium	203	5.0	"	200	102	85-115
Silver	201	10	"	200	101	85-115
Vanadium	195	3.0	"	200	97	85-115
Thallium	202	1.0	"	200	101	85-115

Matrix Spike (1801506-MS1)

Source: 18B0797-01

Prepared: 02/21/18 Analyzed: 02/22/18

Molybdenum	192	2.0	µg/L	200	1.52	95	70-130
Antimony	184	4.0	"	200	1.14	91	70-130
Arsenic	188	2.0	"	200	2.46	93	70-130
Cadmium	186	1.0	"	200	ND	93	70-130
Lead	188	5.0	"	200	ND	94	70-130
Nickel	183	10	"	200	6.69	88	70-130
Selenium	189	5.0	"	200	3.84	93	70-130
Silver	47.5	10	"	200	ND	24	70-130

QM-7



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EMKO Environmental, Inc.
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Project: Rise
Project Number: [none]
Project Manager: Dr. Andrew Kopania

CLS Work Order #: 18B0794
COC #:

Metals (Drinking Water) by EPA 200 Series Methods - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes

Batch 1801506 - EPA 200 Series

Matrix Spike (1801506-MS1)

Source: 18B0797-01

Prepared: 02/21/18 Analyzed: 02/22/18

Vanadium	190	3.0	µg/L	200	2.97	93	70-130			
Thallium	196	1.0	"	200	0.160	98	70-130			

Matrix Spike (1801506-MS2)

Source: 18B0928-01

Prepared: 02/21/18 Analyzed: 02/22/18

Molybdenum	192	2.0	µg/L	200	0.870	95	70-130			
Antimony	187	4.0	"	200	ND	94	70-130			
Arsenic	193	2.0	"	200	4.02	95	70-130			
Cadmium	186	1.0	"	200	ND	93	70-130			
Lead	187	5.0	"	200	ND	94	70-130			
Nickel	167	10	"	200	0.280	83	70-130			
Selenium	191	5.0	"	200	ND	96	70-130			
Silver	45.2	10	"	200	ND	23	70-130			
Vanadium	210	3.0	"	200	34.8	87	70-130			
Thallium	190	1.0	"	200	ND	95	70-130			

QM-7



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EMKO Environmental, Inc.
551 Lakecrest Dr.
El Dorado Hills, CA 95762

Project: Rise
Project Number: [none]
Project Manager: Dr. Andrew Kopania

CLS Work Order #: 18B0794
COC #:

Polychlorinated Biphenyls by EPA Method 8082A - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes

Batch 1801416 - EPA 3510B GCNV

Blank (1801416-BLK1)

Prepared: 02/19/18 Analyzed: 02/20/18

Aroclor 1016	ND	0.50	µg/L							
Aroclor 1221	ND	0.50	"							
Aroclor 1232	ND	0.50	"							
Aroclor 1242	ND	0.50	"							
Aroclor 1248	ND	0.50	"							
Aroclor 1254	ND	0.50	"							
Aroclor 1260	ND	0.50	"							
Aroclor 1268	ND	0.50	"							
Surrogate: Decachlorobiphenyl	0.200		"	0.250		80	50-150			

LCS (1801416-BS1)

Prepared: 02/19/18 Analyzed: 02/20/18

Aroclor 1260	2.37	0.50	µg/L	2.50		95	31-138			
Surrogate: Decachlorobiphenyl	0.216		"	0.250		86	50-150			

LCS Dup (1801416-BSD1)

Prepared: 02/19/18 Analyzed: 02/20/18

Aroclor 1260	2.03	0.50	µg/L	2.50		81	31-138	16	30	
Surrogate: Decachlorobiphenyl	0.151		"	0.250		60	50-150			

Matrix Spike (1801416-MS1)

Source: 18B0848-01

Prepared: 02/19/18 Analyzed: 02/20/18

Aroclor 1260	21.0	5.0	µg/L	25.0	ND	84	31-138			QRL-7
Surrogate: Decachlorobiphenyl	1.61		"	2.50		64	50-150			

Matrix Spike Dup (1801416-MSD1)

Source: 18B0848-01

Prepared: 02/19/18 Analyzed: 02/20/18

Aroclor 1260	21.6	5.0	µg/L	25.0	ND	86	31-138	3	30	QRL-7
Surrogate: Decachlorobiphenyl	1.62		"	2.50		65	50-150			



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551 Lakecrest Dr.
El Dorado Hills, CA 95762

Project: Rise
Project Number: [none]
Project Manager: Dr. Andrew Kopania

CLS Work Order #: 18B0794
COC #:

Semivolatile Organic Compounds by EPA Method 8270C - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes

Batch 1801413 - EPA 3510B GCMS

Blank (1801413-BLK1)

Prepared: 02/19/18 Analyzed: 02/20/18

Acenaphthene	ND	10	µg/L
Acenaphthylene	ND	10	"
Anthracene	ND	10	"
Benzo (a) anthracene	ND	10	"
Benzo (b) fluoranthene	ND	10	"
Benzo (k) fluoranthene	ND	10	"
Benzo (g,h,i) perylene	ND	10	"
Benzo (a) pyrene	ND	10	"
Benzyl alcohol	ND	10	"
Bis(2-chloroethoxy)methane	ND	10	"
Bis(2-chloroethyl)ether	ND	10	"
Bis(2-chloroisopropyl)ether	ND	10	"
Bis(2-ethylhexyl)phthalate	ND	10	"
4-Bromophenyl phenyl ether	ND	10	"
Butyl benzyl phthalate	ND	10	"
4-Chloroaniline	ND	10	"
2-Chloronaphthalene	ND	10	"
4-Chlorophenyl phenyl ether	ND	10	"
Chrysene	ND	10	"
Dibenz (a,h) anthracene	ND	10	"
Dibenzofuran	ND	10	"
Di-n-butyl phthalate	ND	10	"
1,2-Dichlorobenzene	ND	10	"
1,3-Dichlorobenzene	ND	10	"
1,4-Dichlorobenzene	ND	10	"
3,3'-Dichlorobenzidine	ND	20	"
Diethyl phthalate	ND	10	"
Dimethyl phthalate	ND	10	"
2,4-Dinitrotoluene (2,4-DNT)	ND	10	"
2,6-Dinitrotoluene (2,6-DNT)	ND	10	"
Di-n-octyl phthalate	ND	10	"



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EMKO Environmental, Inc.
551 Lakecrest Dr.
El Dorado Hills, CA 95762

Project: Rise
Project Number: [none]
Project Manager: Dr. Andrew Kopania

CLS Work Order #: 18B0794
COC #:

Semivolatile Organic Compounds by EPA Method 8270C - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes

Batch 1801413 - EPA 3510B GCMS

Blank (1801413-BLK1)

Prepared: 02/19/18 Analyzed: 02/20/18

Fluoranthene	ND	10	µg/L
Fluorene	ND	10	"
Hexachlorobenzene	ND	10	"
Hexachlorobutadiene	ND	10	"
Hexachlorocyclopentadiene	ND	10	"
Hexachloroethane	ND	10	"
Indeno (1,2,3-cd) pyrene	ND	10	"
Isophorone	ND	10	"
2-Methylnaphthalene	ND	10	"
Naphthalene	ND	10	"
2-Nitroaniline	ND	25	"
3-Nitroaniline	ND	25	"
4-Nitroaniline	ND	25	"
Nitrobenzene (NB)	ND	10	"
N-Nitrosodiphenylamine	ND	10	"
N-Nitrosodi-n-propylamine	ND	10	"
Phenanthrene	ND	10	"
Pyrene	ND	10	"
1,2,4-Trichlorobenzene	ND	10	"
Benzoic acid	ND	25	"
4-Chloro-3-methylphenol	ND	10	"
2-Chlorophenol	ND	10	"
2,4-Dichlorophenol	ND	10	"
2,4-Dimethylphenol	ND	10	"
4,6-Dinitro-2-methylphenol	ND	25	"
2,4-Dinitrophenol	ND	25	"
2-Methylphenol	ND	10	"
3 & 4-Methylphenol	ND	10	"
2-Nitrophenol	ND	10	"
4-Nitrophenol	ND	25	"
Pentachlorophenol	ND	25	"



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EMKO Environmental, Inc.
551 Lakecrest Dr.
El Dorado Hills, CA 95762

Project: Rise
Project Number: [none]
Project Manager: Dr. Andrew Kopania

CLS Work Order #: 18B0794
COC #:

Semivolatile Organic Compounds by EPA Method 8270C - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes

Batch 1801413 - EPA 3510B GCMS

Blank (1801413-BLK1)

Prepared: 02/19/18 Analyzed: 02/20/18

Phenol	ND	10	µg/L							
2,4,5-Trichlorophenol	ND	10	"							
2,4,6-Trichlorophenol	ND	10	"							
Surrogate: 2-Fluorophenol	27.6		"	40.0		69	21-110			
Surrogate: Phenol-d6	21.5		"	40.0		54	10-110			
Surrogate: Nitrobenzene-d5	34.3		"	40.0		86	35-114			
Surrogate: 2-Fluorobiphenyl	32.2		"	40.0		81	43-116			
Surrogate: 2,4,6-Tribromophenol	32.9		"	40.0		82	10-123			
Surrogate: Terphenyl-d14	35.4		"	40.0		89	33-141			

LCS (1801413-BS1)

Prepared: 02/19/18 Analyzed: 02/20/18

Acenaphthene	35.3	10	µg/L	40.0		88	46-118			
1,4-Dichlorobenzene	29.8	10	"	40.0		74	36-117			
2,4-Dinitrotoluene (2,4-DNT)	37.6	10	"	40.0		94	24-116			
N-Nitrosodi-n-propylamine	38.6	10	"	40.0		97	41-126			
Pyrene	34.9	10	"	40.0		87	26-127			
1,2,4-Trichlorobenzene	33.0	10	"	40.0		82	39-118			
4-Chloro-3-methylphenol	33.0	10	"	40.0		82	23-117			
2-Chlorophenol	33.0	10	"	40.0		82	23-134			
4-Nitrophenol	20.4	25	"	40.0		51	10-108			
Pentachlorophenol	29.8	25	"	40.0		74	10-113			
Phenol	35.5	10	"	40.0		89	5-112			
Surrogate: 2-Fluorophenol	30.3		"	40.0		76	21-110			
Surrogate: Phenol-d6	23.9		"	40.0		60	10-110			
Surrogate: Nitrobenzene-d5	37.3		"	40.0		93	35-114			
Surrogate: 2-Fluorobiphenyl	33.8		"	40.0		84	43-116			
Surrogate: 2,4,6-Tribromophenol	36.7		"	40.0		92	10-123			
Surrogate: Terphenyl-d14	36.9		"	40.0		92	33-141			



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EMKO Environmental, Inc.
551 Lakecrest Dr.
El Dorado Hills, CA 95762

Project: Rise
Project Number: [none]
Project Manager: Dr. Andrew Kopania

CLS Work Order #: 18B0794
COC #:

Semivolatile Organic Compounds by EPA Method 8270C - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes

Batch 1801413 - EPA 3510B GCMS

LCS Dup (1801413-BSD1)

Prepared: 02/19/18 Analyzed: 02/20/18

Acenaphthene	35.0	10	µg/L	40.0		88	46-118	0.7	31	
1,4-Dichlorobenzene	29.8	10	"	40.0		75	36-117	0.03	28	
2,4-Dinitrotoluene (2,4-DNT)	37.9	10	"	40.0		95	24-116	0.9	38	
N-Nitrosodi-n-propylamine	39.2	10	"	40.0		98	41-126	1	38	
Pyrene	35.1	10	"	40.0		88	26-127	0.7	31	
1,2,4-Trichlorobenzene	33.0	10	"	40.0		83	39-118	0.2	28	
4-Chloro-3-methylphenol	33.9	10	"	40.0		85	23-117	3	42	
2-Chlorophenol	33.6	10	"	40.0		84	23-134	2	40	
4-Nitrophenol	19.6	25	"	40.0		49	10-108	4	45	
Pentachlorophenol	30.0	25	"	40.0		75	10-113	0.6	45	
Phenol	34.8	10	"	40.0		87	5-112	2	42	
Surrogate: 2-Fluorophenol	30.7		"	40.0		77	21-110			
Surrogate: Phenol-d6	23.7		"	40.0		59	10-110			
Surrogate: Nitrobenzene-d5	37.9		"	40.0		95	35-114			
Surrogate: 2-Fluorobiphenyl	34.1		"	40.0		85	43-116			
Surrogate: 2,4,6-Tribromophenol	37.9		"	40.0		95	10-123			
Surrogate: Terphenyl-d14	37.8		"	40.0		95	33-141			

Matrix Spike (1801413-MS1)

Source: 18B0784-01

Prepared: 02/19/18 Analyzed: 02/21/18

Acenaphthene	1280	400	µg/L	1600	ND	80	46-118			
1,4-Dichlorobenzene	1010	400	"	1600	ND	63	36-105			
2,4-Dinitrotoluene (2,4-DNT)	1360	400	"	1600	ND	85	24-105			
N-Nitrosodi-n-propylamine	1460	400	"	1600	ND	91	41-116			
Pyrene	1170	400	"	1600	ND	73	26-127			
1,2,4-Trichlorobenzene	1000	400	"	1600	ND	63	39-105			
4-Chloro-3-methylphenol	1640	400	"	1600	ND	103	23-105			
2-Chlorophenol	1170	400	"	1600	ND	73	27-123			
4-Nitrophenol	658	1000	"	1600	99.6	35	10-105			
Pentachlorophenol	1320	1000	"	1600	ND	82	10-103			
Phenol	1720	400	"	1600	612	70	12-110			
Surrogate: 2-Fluorophenol	1030		"	1600		64	21-110			



CALIFORNIA LABORATORY SERVICES

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EMKO Environmental, Inc.
551 Lakecrest Dr.
El Dorado Hills, CA 95762

Project: Rise
Project Number: [none]
Project Manager: Dr. Andrew Kopania

CLS Work Order #: 18B0794
COC #:

Semivolatile Organic Compounds by EPA Method 8270C - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes

Batch 1801413 - EPA 3510B GCMS

Matrix Spike (1801413-MS1)

Source: 18B0784-01

Prepared: 02/19/18 Analyzed: 02/21/18

Surrogate: Phenol-d6	889		µg/L	1600		56	10-110			
Surrogate: Nitrobenzene-d5	1280		"	1600		80	35-114			
Surrogate: 2-Fluorobiphenyl	1520		"	1600		95	43-116			
Surrogate: 2,4,6-Tribromophenol	1530		"	1600		96	10-123			
Surrogate: Terphenyl-d14	1320		"	1600		83	33-141			

Matrix Spike Dup (1801413-MSD1)

Source: 18B0784-01

Prepared: 02/19/18 Analyzed: 02/21/18

Acenaphthene	1320	400	µg/L	1600	ND	83	46-118	3	31	
1,4-Dichlorobenzene	1080	400	"	1600	ND	68	36-105	7	28	
2,4-Dinitrotoluene (2,4-DNT)	1340	400	"	1600	ND	84	24-105	1	38	
N-Nitrosodi-n-propylamine	1480	400	"	1600	ND	93	41-116	1	38	
Pyrene	1230	400	"	1600	ND	77	26-127	5	31	
1,2,4-Trichlorobenzene	1040	400	"	1600	ND	65	39-105	4	28	
4-Chloro-3-methylphenol	1660	400	"	1600	ND	104	23-105	1	42	
2-Chlorophenol	1220	400	"	1600	ND	76	27-123	4	40	
4-Nitrophenol	671	1000	"	1600	99.6	36	10-105	2	42	
Pentachlorophenol	1340	1000	"	1600	ND	84	10-103	2	45	
Phenol	1830	400	"	1600	612	76	12-110	6	42	
Surrogate: 2-Fluorophenol	972		"	1600		61	21-110			
Surrogate: Phenol-d6	823		"	1600		51	10-110			
Surrogate: Nitrobenzene-d5	1210		"	1600		76	35-114			
Surrogate: 2-Fluorobiphenyl	1450		"	1600		91	43-116			
Surrogate: 2,4,6-Tribromophenol	1390		"	1600		87	10-123			
Surrogate: Terphenyl-d14	1250		"	1600		78	33-141			



CALIFORNIA LABORATORY SERVICES

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EMKO Environmental, Inc.
551 Lakecrest Dr.
El Dorado Hills, CA 95762

Project: Rise
Project Number: [none]
Project Manager: Dr. Andrew Kopania

CLS Work Order #: 18B0794
COC #:

TPH-Gasoline by GC FID - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes

Batch 1801449 - EPA 5030 Water GC

Blank (1801449-BLK1)

Prepared & Analyzed: 02/19/18

Gasoline	ND	50	µg/L							
Surrogate: o-Chlorotoluene (Gas)	16.0		"	20.0		80	65-135			

LCS (1801449-BS1)

Prepared & Analyzed: 02/19/18

Gasoline	523	50	µg/L	500		105	70-130			
Surrogate: o-Chlorotoluene (Gas)	17.1		"	20.0		85	65-135			

LCS Dup (1801449-BSD1)

Prepared & Analyzed: 02/19/18

Gasoline	582	50	µg/L	500		116	70-130	11	30	
Surrogate: o-Chlorotoluene (Gas)	17.0		"	20.0		85	65-135			

Matrix Spike (1801449-MS1)

Source: 18B0663-01

Prepared & Analyzed: 02/19/18

Gasoline	590	50	µg/L	500	173	83	68-132			
Surrogate: o-Chlorotoluene (Gas)	16.2		"	20.0		81	65-135			

Matrix Spike Dup (1801449-MSD1)

Source: 18B0663-01

Prepared & Analyzed: 02/19/18

Gasoline	648	50	µg/L	500	173	95	68-132	9	32	
Surrogate: o-Chlorotoluene (Gas)	16.9		"	20.0		85	65-135			



CALIFORNIA LABORATORY SERVICES

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EMKO Environmental, Inc.
551 Lakecrest Dr.
El Dorado Hills, CA 95762

Project: Rise
Project Number: [none]
Project Manager: Dr. Andrew Kopania

CLS Work Order #: 18B0794
COC #:

Volatile Organic Compounds by EPA Method 8260B - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes

Batch 1801495 - EPA 5030 Water MS

Blank (1801495-BLK1)

Prepared & Analyzed: 02/20/18

Acetone	ND	10	µg/L
Benzene	ND	0.50	"
Bromobenzene	ND	0.50	"
Bromochloromethane	ND	0.50	"
Bromodichloromethane	ND	0.50	"
Bromoform	ND	0.50	"
Bromomethane	ND	1.0	"
2-Butanone	ND	10	"
n-Butylbenzene	ND	0.50	"
sec-Butylbenzene	ND	0.50	"
tert-Butylbenzene	ND	0.50	"
Carbon tetrachloride	ND	0.50	"
Chlorobenzene	ND	0.50	"
Chloroethane	ND	0.50	"
Chloroform	ND	0.50	"
Chloromethane	ND	1.0	"
o-Chlorotoluene	ND	0.50	"
p-Chlorotoluene	ND	0.50	"
Dibromochloromethane	ND	0.50	"
1,2-Dibromo-3-chloropropane	ND	1.0	"
1,2-Dibromoethane (EDB)	ND	0.50	"
Dibromomethane	ND	0.50	"
1,2-Dichlorobenzene	ND	0.50	"
1,3-Dichlorobenzene	ND	0.50	"
1,4-Dichlorobenzene	ND	0.50	"
Dichlorodifluoromethane (Freon 12)	ND	1.0	"
1,1-Dichloroethane	ND	0.50	"
1,2-Dichloroethane	ND	0.50	"
1,1-Dichloroethene	ND	0.50	"
cis-1,2-Dichloroethene	ND	0.50	"
trans-1,2-Dichloroethene	ND	0.50	"



CALIFORNIA LABORATORY SERVICES

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EMKO Environmental, Inc.
551 Lakecrest Dr.
El Dorado Hills, CA 95762

Project: Rise
Project Number: [none]
Project Manager: Dr. Andrew Kopania

CLS Work Order #: 18B0794
COC #:

Volatile Organic Compounds by EPA Method 8260B - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes

Batch 1801495 - EPA 5030 Water MS

Blank (1801495-BLK1)

Prepared & Analyzed: 02/20/18

1,2-Dichloropropane	ND	0.50	µg/L
1,3-Dichloropropane	ND	0.50	"
2,2-Dichloropropane	ND	0.50	"
1,1-Dichloropropene	ND	0.50	"
cis-1,3-Dichloropropene	ND	0.50	"
trans-1,3-Dichloropropene	ND	0.50	"
Ethylbenzene	ND	0.50	"
1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113)	ND	0.50	"
Hexachlorobutadiene	ND	0.50	"
2-Hexanone	ND	10	"
Isopropylbenzene	ND	0.50	"
p-Isopropyltoluene	ND	0.50	"
Methylene chloride	ND	0.50	"
4-Methyl-2-pentanone	ND	10	"
Methyl tert-butyl ether	ND	0.50	"
Naphthalene	ND	0.50	"
n-Propylbenzene	ND	0.50	"
Styrene	ND	0.50	"
1,1,1,2-Tetrachloroethane	ND	0.50	"
1,1,2,2-Tetrachloroethane	ND	0.50	"
Tetrachloroethene	ND	0.50	"
Toluene	ND	0.50	"
1,2,3-Trichlorobenzene	ND	0.50	"
1,2,4-Trichlorobenzene	ND	0.50	"
1,1,1-Trichloroethane	ND	0.50	"
1,1,2-Trichloroethane	ND	0.50	"
Trichloroethene	ND	0.50	"
Trichlorofluoromethane	ND	0.50	"
1,2,3-Trichloropropane	ND	0.50	"
1,2,4-Trimethylbenzene	ND	0.50	"
1,3,5-Trimethylbenzene	ND	0.50	"



CALIFORNIA LABORATORY SERVICES

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EMKO Environmental, Inc.
551 Lakecrest Dr.
El Dorado Hills, CA 95762

Project: Rise
Project Number: [none]
Project Manager: Dr. Andrew Kopania

CLS Work Order #: 18B0794
COC #:

Volatile Organic Compounds by EPA Method 8260B - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes

Batch 1801495 - EPA 5030 Water MS

Blank (1801495-BLK1)

Prepared & Analyzed: 02/20/18

Vinyl chloride	ND	1.0	µg/L							
Xylenes (total)	ND	1.0	"							
Di-isopropyl ether	ND	0.50	"							
Ethyl tert-butyl ether	ND	0.50	"							
tert-Amyl methyl ether	ND	0.50	"							
tert-Butyl alcohol	ND	5.0	"							
Surrogate: 1,2-Dichloroethane-d4	12.1		"	10.0		121	66-135			
Surrogate: Toluene-d8	9.39		"	10.0		94	72-125			
Surrogate: 4-Bromofluorobenzene	11.1		"	10.0		111	73-125			

LCS (1801495-BS1)

Prepared & Analyzed: 02/20/18

Benzene	20.9	0.50	µg/L	20.0		104	60-135			
Chlorobenzene	20.3	0.50	"	20.0		102	60-133			
1,1-Dichloroethene	22.2	0.50	"	20.0		111	42-150			
Toluene	21.3	0.50	"	20.0		106	60-137			
Trichloroethene	20.5	0.50	"	20.0		102	62-140			
Surrogate: 1,2-Dichloroethane-d4	9.60		"	10.0		96	66-135			
Surrogate: Toluene-d8	10.2		"	10.0		102	72-125			
Surrogate: 4-Bromofluorobenzene	10.9		"	10.0		109	73-125			

LCS Dup (1801495-BSD1)

Prepared & Analyzed: 02/20/18

Benzene	20.9	0.50	µg/L	20.0		105	60-135	0.1	25	
Chlorobenzene	19.6	0.50	"	20.0		98	60-133	4	25	
1,1-Dichloroethene	21.6	0.50	"	20.0		108	42-150	3	25	
Toluene	21.5	0.50	"	20.0		108	60-137	1	25	
Trichloroethene	20.5	0.50	"	20.0		103	62-140	0.1	25	
Surrogate: 1,2-Dichloroethane-d4	9.60		"	10.0		96	66-135			
Surrogate: Toluene-d8	10.2		"	10.0		102	72-125			
Surrogate: 4-Bromofluorobenzene	10.2		"	10.0		102	73-125			



CALIFORNIA LABORATORY SERVICES

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02/27/18 10:41

EMKO Environmental, Inc.
551 Lakecrest Dr.
El Dorado Hills, CA 95762

Project: Rise
Project Number: [none]
Project Manager: Dr. Andrew Kopania

CLS Work Order #: 18B0794
COC #:

Notes and Definitions

QRL-7	The initial volume was decreased or the final volume of the extract was increased due to matrix interference, which resulted in higher reporting limits.
QM-7	The spike recovery was outside acceptance limits for the MS and/or MSD. The batch was accepted based on acceptable LCS/LCSD recovery.
QM-5	The spike recovery was outside acceptance limits for the MS and/or MSD due to matrix interference. The LCS and/or LCSD were within acceptance limits showing that the laboratory is in control and the data is acceptable.
QM-4X	The spike recovery was outside of QC acceptance limits for the MS and/or MSD due to analyte concentration at 4 times or greater the spike concentration. The QC batch was accepted based on LCS and/or LCSD recoveries within the acceptance limits.
QM-1	The spike recovery was outside acceptance limits for the LCS or LCSD. The batch was accepted based on acceptable MS/MSD recoveries & RPD's.
QC-2H	The recovery of one CCV was greater than the acceptance limit. However, all analytes in the associated samples were ND; therefore a reanalysis was not performed.
J	Detected but below the Reporting Limit; therefore, result is an estimated concentration.
HT-F	This is a field test method and it is performed in the lab outside holding time.
HT-1	The sample was received outside of the EPA recommended holding time.
BT-5	>1600
BT-4	<1.8
A-COM	The %RSD of the CCC compound, PCP, in the initial calibration was 33% which exceeds the control limit of 30%; however, the average %RSD of all analytes was 8% well within the control limit of 15%.
DET	Analyte DETECTED
ND	Analyte NOT DETECTED at or above the reporting limit (or method detection limit when specified)
NR	Not Reported
dry	Sample results reported on a dry weight basis
RPD	Relative Percent Difference



CALIFORNIA LABORATORY SERVICES

Committed. Responsive. Flexible.

January 15, 2019

CLS Work Order #: 18L0968

**COC #: 194536, 194533, 194691,
194534**

Dr. Andrew Kopania
EMKO Environmental, Inc.
551 Lakecrest Dr.
El Dorado Hills, CA 95762

Project Name: Brunswick NPDES

Enclosed are the results of analyses for samples received by the laboratory on 12/18/18 16:00. Samples were analyzed pursuant to client request utilizing EPA or other ELAP approved methodologies. I certify that the results are in compliance both technically and for completeness.

Analytical results are attached to this letter. Please call if we can provide additional assistance.

Sincerely,

James Liang, Ph.D.
Laboratory Director

CA SWRCB ELAP Accreditation/Registration number 1233



email results to: akypantia@sbcglobal.net P#1 of 4

CHAIN OF CUSTODY

CL# ID No.

18L0968

LOG

No 194536

REPORT TO:		CLIENT JOB NUMBER		ANALYSIS REQUESTED		GEOTRACKER:	
NAME AND ADDRESS: Andy Kypantia 551 Lakewood Dr. El Dorado Hills, CA 95762		DESTINATION LABORATORY: ☒ CLS (916) 638-7301 3249 FITZGERALD RD. RANCHO CORDOVA, CA 95742		PRESERVATIVES Aqua TDS - Carbon Dioxide NPDs (Cob, Cr, Cu, Pb, Ni, Se, Ag, Tl, Zn, Al, Fe, Mn) Asbestos, Dioxin (2,3,7,8) Cr6, CrIII, Cyanide Metals (various) Hardness Etc, TDS, Turbidity		EDF REPORT ☐ YES ☒ NO	
PROJECT MANAGER: Andy Kypantia PROJECT NAME: Brunswick NPDES		PHONE: 916-716-5511				CDPH WRITE ON EDT TRANSMISSION? ☐ YES ☒ NO	
SAMPLED BY: AK		OTHER: ☐				STATE SYSTEM NUMBER	
JOB DESCRIPTION						IF "YES" PLEASE ENTER THE SOURCE NUMBER(S).	
SITE LOCATION: Grass Valley						COMPOSITE: METALS	
						5b, As, Pb, Cd, Cr, Cu, Pb, Ni, Se, Ag, Tl, Zn, Al, Fe, Mn	
						TURN AROUND TIME	
						SPECIAL INSTRUCTIONS	
						OR	
						ALT. ID:	
DATE 12/10/13		TIME 11:04		SAMPLE IDENTIFICATION NDS-Pump		MATRIX W	
						CONTAINER NO. TYPE	
						1 1L anti 3	
						2 1L glass 3	
						1 500ml 2	
						1 500ml 2	
						1 250ml 2	
						1 250ml 4	
						1 250ml 5	
						6 10A 1	
						1 10L 3 X	
						INVOICE TO:	
						PO #	
						QUOTE #	
						SUSPECTED CONSTITUENTS	
						PRESERVATIVES:	
						(1) HCL (2) HNO3 (3) = COLD (4) = NaOH (5) = H2SO4 (6) = Na2S2O3 (7) =	
RELINQUISHED BY (SIGN)		PRINT NAME / COMPANY		DATE / TIME		RECEIVED BY (SIGN)	
[Signature]		Andy Kypantia/ENKO		12/10/13 16:00		[Signature]	
RECD AT LAB BY		DATE / TIME		CONDITIONS / COMMENTS			
[Signature]		12/10/13 1600		1.4			
SHIPPED BY:		☐ FED X ☐ UPS ☐ OTHER		AIR BILL #			



email results to: andykuperia@sbcglobal.net

PS: 20-4

CHAIN OF CUSTODY

CLS ID No.: 180903

LOG No 194533

REPORT TO:			CLIENT JOB NUMBER		ANALYSIS REQUESTED					GEOTHRACKER:						
NAME AND ADDRESS			DESTINATION LABORATORY							EDF REPORT ☐ YES ☒ NO						
PROJECT MANAGER			CLAS (916) 638-7301							CDPH WRITE ON EDT TRANSMISSION? ☐ YES ☒ NO						
PROJECT NAME			3249 FITZGERALD RD.							STATE SYSTEM NUMBER						
SAMPLED BY			RANCHO CORDOVA, CA 95148							IF "YES" PLEASE ENTER THE SOURCE NUMBER(S).						
JOB DESCRIPTION			☐ OTHER							COMPOSITE:						
SITE LOCATION										TURN AROUND TIME						
										SPECIAL INSTRUCTIONS						
										OR						
										ALT. ID:						
DATE	TIME	SAMPLE IDENTIFICATION	MATRIX	CONTAINER NO.	TYPE						1 DAY	2 DAY	3 DAY	5 DAY		
12/18/18	13:25	WC - down	W	6	16 oz	3										
				2	16 oz	3										
				1	500 ml	2										
				1	250 ml	2										
				1	250 ml	4										
				1	250 ml	5										
				6	40A	1										
				1	10 L	3	X									
											INVOICE TO:					
											PD. #					
											QUOTE #					
SUSPECTED CONSTITUENTS:						PRESERVATIVES:					(1) HCL (2) HNO ₃ (3) = COLD (4) = NaOH (5) = H ₂ SO ₄ (6) = Na ₂ S ₂ O ₃ (7) =					
RELINQUISHED BY (SIGN)		PRINT NAME / COMPANY		DATE / TIME		RECEIVED BY (SIGN)		PRINT NAME / COMPANY								
		Andy Kuperia / EMKO		12/18/18 16:00												
REC'D AT LAB BY:		DATE / TIME		CONDITIONS / COMMENTS												
		12/18/18 16:00		1.4												
SHIPPED BY:		☐ FED X ☐ UPS ☐ OTHER		AIR BILL #												



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LOG № 194691

REPORT TO:			CLIENT JOB NUMBER		ANALYSIS REQUESTED					GEOTHRAK: EDF REPORT		
NAME AND ADDRESS			DESTINATION LABORATORY		PRESERVATIVES					GLOBAL ID: ☐ YES ☒ NO		
PROJECT MANAGER			CLS (916) 638-7301							CDPH WRITE ON EDT TRANSMISSION? ☐ YES ☒ NO		
PROJECT NAME			3249 FITZGERALD RD.							STATE SYSTEM NUMBER		
SAMPLED BY			RANCHO CORDOVA, CA. 95742							IF "YES" PLEASE ENTER THE SOURCE NUMBER(S).		
JOB DESCRIPTION			OTHER ☐		COMPOSITE:					TURN AROUND TIME		
SITE LOCATION										SPECIAL INSTRUCTIONS		
DATE	TIME	SAMPLE IDENTIFICATION	MATRIX	CONTAINER NO.	TYPE						OR	
						1 DAY	2 DAY	3 DAY	5 DAY	ALT. ID:		
12/18/18	12:02	WC - Mid	W	6	1L amb 3							
				2	1L pl 3							
				1	500ml 2							
				1	250ml 2							
				1	250ml 4							
				1	250ml 5							
				6	VOA 1							
				1	10 L 3 X							
SUSPECTED CONSTITUENTS						INVOICE TO:						
RELINQUISHED BY (SIGN)						PD. #						
PRINT NAME / COMPANY						QUOTE #						
DATE / TIME						PRESERVATIVES:						
RECEIVED BY (SIGN)						(1) HCL (2) HNO3 (3) = COLD (4) = NaOH (5) = H2SO4 (6) = Na2S2O8 (7) =						
PRINT NAME / COMPANY												
REC'D AT LAB BY:						DATE / TIME						
SHIPPED BY:						CONDITIONS / COMMENTS:						
☐ FED X ☐ UPS ☐ OTHER						AIR BILL #						



email results to: akypantia@sbglobal.net

40F4

CHAIN OF CUSTODY

CLS ID No.: 1820968

LOG No 194534

REPORT TO:			CLIENT JOB NUMBER		ANALYSIS REQUESTED										GEOTRACKER:		
NAME AND ADDRESS			DESTINATION LABORATORY		PRESERVATIVES										EDF REPORT		
PROJECT MANAGER			CLAS (916) 638-7301												YES		NO
PROJECT NAME			3249 FITZGERALD RD.		CDPH WRITE ON EDT TRANSMISSION? YES NO										GLOBAL ID:		
SAMPLED BY			RANCHO CORDOVA, CA 95742												YES		NO
JOB DESCRIPTION			OTHER		COMPOSITE:										STATE SYSTEM NUMBER		
SITE LOCATION															IF "YES" PLEASE ENTER THE SOURCE NUMBER(S).		
					TURN AROUND TIME										SPECIAL INSTRUCTIONS		
															1 DAY		2 DAY
					ALT.										ID:		
DATE	TIME	SAMPLE IDENTIFICATION	MATRIX	NO.											TYPE		
12/18/18	12:46	WC-UP	W	6	1L amber	3											
				2	1L plastic	3											
				1	500ml	2											
				1	250ml	2											
				1	250ml	4											
				1	250ml	5											
				6	VQA	1											
				1	10 L	3	X										
INVOICE TO																	
PO #																	
QUOTE #																	
SUSPECTED CONSTITUENTS																	
PRESERVATIVES: (1) HCL (2) HNO3 (3) = COLD (4) = NaOH (5) = H2SO4 (6) = Na2S2O3 (7) =																	
RELINQUISHED BY (SIGN)			PRINT NAME / COMPANY			DATE / TIME			RECEIVED BY (SIGN)			PRINT NAME / COMPANY					
[Signature]			Andy Kypantia/EMKO			12/18/18/16:00											
REC'D AT LAB BY			DATE / TIME			CONDITIONS / COMMENTS											
[Signature]			12/18/18 1600			1.2											
SHIPPED BY:			FED X			UPS			OTHER			AIR BILL #					



CALIFORNIA LABORATORY SERVICES

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EMKO Environmental, Inc.
551 Lakecrest Dr.
El Dorado Hills, CA 95762

Project: Brunswick NPDES
Project Number: [none]
Project Manager: Dr. Andrew Kopania

CLS Work Order #: 18L0968
COC #: 194536, 194533, 194691, 194534

Acid and Base/Neutral Extractables by EPA Method 625

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
NBS-Pump (18L0968-01) Water Sampled: 12/18/18 11:04 Received: 12/18/18 16:00									
1,2-Diphenylhydrazine	ND	1.0	µg/L	1	1810715	12/19/18	12/19/18	EPA 625	
2,4,6-Trichlorophenol	ND	10	"	"	"	"	"	"	
2,4-Dichlorophenol	ND	1.0	"	"	"	"	"	"	
2,4-Dimethylphenol	ND	2.0	"	"	"	"	"	"	
2,4-Dinitrophenol	ND	5.0	"	"	"	"	"	"	
2,4-Dinitrotoluene (2,4-DNT)	ND	5.0	"	"	"	"	"	"	
2,6-Dinitrotoluene (2,6-DNT)	ND	5.0	"	"	"	"	"	"	
2-Chloronaphthalene	ND	10	"	"	"	"	"	"	
2-Chlorophenol	ND	2.0	"	"	"	"	"	"	
2-Nitrophenol	ND	10	"	"	"	"	"	"	
3,3'-Dichlorobenzidine	ND	5.0	"	"	"	"	"	"	
4,6-Dinitro-2-methylphenol	ND	10	"	"	"	"	"	"	
4-Bromophenyl phenyl ether	ND	5.0	"	"	"	"	"	"	
4-Chloro-3-methylphenol	ND	1.0	"	"	"	"	"	"	
4-Chlorophenyl phenyl ether	ND	5.0	"	"	"	"	"	"	
4-Nitrophenol	ND	10	"	"	"	"	"	"	
Benzidine	ND	5.0	"	"	"	"	"	"	
Bis(2-chloroethoxy)methane	ND	5.0	"	"	"	"	"	"	
Bis(2-chloroethyl)ether	ND	1.0	"	"	"	"	"	"	
Bis(2-chloroisopropyl)ether	ND	2.0	"	"	"	"	"	"	
Bis(2-ethylhexyl)adipate	ND	5.0	"	"	"	"	"	"	
Bis(2-ethylhexyl)phthalate	5.3	1.5	"	"	"	"	"	"	
Butyl benzyl phthalate	ND	10	"	"	"	"	"	"	
Diethyl phthalate	ND	2.0	"	"	"	"	"	"	
Dimethyl phthalate	ND	2.0	"	"	"	"	"	"	
Di-n-butyl phthalate	ND	10	"	"	"	"	"	"	
Di-n-octyl phthalate	ND	10	"	"	"	"	"	"	
Hexachlorobenzene	ND	1.0	"	"	"	"	"	"	
Hexachlorocyclopentadiene	ND	5.0	"	"	"	"	"	"	
Hexachloroethane	ND	1.0	"	"	"	"	"	"	
Isophorone	ND	1.0	"	"	"	"	"	"	



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EMKO Environmental, Inc.
551 Lakecrest Dr.
El Dorado Hills, CA 95762

Project: Brunswick NPDES
Project Number: [none]
Project Manager: Dr. Andrew Kopania

CLS Work Order #: 18L0968
COC #: 194536, 194533, 194691, 194534

Acid and Base/Neutral Extractables by EPA Method 625

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
NBS-Pump (18L0968-01) Water Sampled: 12/18/18 11:04 Received: 12/18/18 16:00									
Nitrobenzene (NB)	ND	1.0	µg/L	1	1810715	"	12/19/18	EPA 625	
N-Nitrosodimethylamine	ND	5.0	"	"	"	"	"	"	
N-Nitrosodi-n-propylamine	ND	5.0	"	"	"	"	"	"	
N-Nitrosodiphenylamine	ND	1.0	"	"	"	"	"	"	
Pentachlorophenol	ND	5.0	"	"	"	"	"	"	
Phenol	ND	1.0	"	"	"	"	"	"	
Surrogate: 2,4,6-Tribromophenol		101 %	10-123		"	"	"	"	
Surrogate: 2-Fluorobiphenyl		79 %	43-116		"	"	"	"	
Surrogate: 2-Fluorophenol		43 %	21-110		"	"	"	"	
Surrogate: Nitrobenzene-d5		81 %	35-114		"	"	"	"	
Surrogate: Phenol-d6		29 %	10-110		"	"	"	"	
Surrogate: Terphenyl-d14		86 %	33-141		"	"	"	"	
WC-Down (18L0968-02) Water Sampled: 12/18/18 13:25 Received: 12/18/18 16:00									
1,2-Diphenylhydrazine	ND	1.0	µg/L	1	1810715	12/19/18	12/19/18	EPA 625	
2,4,6-Trichlorophenol	ND	10	"	"	"	"	"	"	
2,4-Dichlorophenol	ND	1.0	"	"	"	"	"	"	
2,4-Dimethylphenol	ND	2.0	"	"	"	"	"	"	
2,4-Dinitrophenol	ND	5.0	"	"	"	"	"	"	
2,4-Dinitrotoluene (2,4-DNT)	ND	5.0	"	"	"	"	"	"	
2,6-Dinitrotoluene (2,6-DNT)	ND	5.0	"	"	"	"	"	"	
2-Chloronaphthalene	ND	10	"	"	"	"	"	"	
2-Chlorophenol	ND	2.0	"	"	"	"	"	"	
2-Nitrophenol	ND	10	"	"	"	"	"	"	
3,3'-Dichlorobenzidine	ND	5.0	"	"	"	"	"	"	
4,6-Dinitro-2-methylphenol	ND	10	"	"	"	"	"	"	
4-Bromophenyl phenyl ether	ND	5.0	"	"	"	"	"	"	
4-Chloro-3-methylphenol	ND	1.0	"	"	"	"	"	"	
4-Chlorophenyl phenyl ether	ND	5.0	"	"	"	"	"	"	
4-Nitrophenol	ND	10	"	"	"	"	"	"	



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EMKO Environmental, Inc.
551 Lakecrest Dr.
El Dorado Hills, CA 95762

Project: Brunswick NPDES
Project Number: [none]
Project Manager: Dr. Andrew Kopania

CLS Work Order #: 18L0968
COC #: 194536, 194533, 194691, 194534

Acid and Base/Neutral Extractables by EPA Method 625

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
WC-Down (18L0968-02) Water Sampled: 12/18/18 13:25 Received: 12/18/18 16:00									
Benzidine	ND	5.0	µg/L	1	1810715	"	12/19/18	EPA 625	
Bis(2-chloroethoxy)methane	ND	5.0	"	"	"	"	"	"	
Bis(2-chloroethyl)ether	ND	1.0	"	"	"	"	"	"	
Bis(2-chloroisopropyl)ether	ND	2.0	"	"	"	"	"	"	
Bis(2-ethylhexyl)adipate	ND	5.0	"	"	"	"	"	"	
Bis(2-ethylhexyl)phthalate	ND	1.5	"	"	"	"	"	"	
Butyl benzyl phthalate	ND	10	"	"	"	"	"	"	
Diethyl phthalate	ND	2.0	"	"	"	"	"	"	
Dimethyl phthalate	ND	2.0	"	"	"	"	"	"	
Di-n-butyl phthalate	ND	10	"	"	"	"	"	"	
Di-n-octyl phthalate	ND	10	"	"	"	"	"	"	
Hexachlorobenzene	ND	1.0	"	"	"	"	"	"	
Hexachlorocyclopentadiene	ND	5.0	"	"	"	"	"	"	
Hexachloroethane	ND	1.0	"	"	"	"	"	"	
Isophorone	ND	1.0	"	"	"	"	"	"	
Nitrobenzene (NB)	ND	1.0	"	"	"	"	"	"	
N-Nitrosodimethylamine	ND	5.0	"	"	"	"	"	"	
N-Nitrosodi-n-propylamine	ND	5.0	"	"	"	"	"	"	
N-Nitrosodiphenylamine	ND	1.0	"	"	"	"	"	"	
Pentachlorophenol	ND	5.0	"	"	"	"	"	"	
Phenol	ND	1.0	"	"	"	"	"	"	

Surrogate: 2,4,6-Tribromophenol	110 %	10-123	"	"	"	"
Surrogate: 2-Fluorobiphenyl	82 %	43-116	"	"	"	"
Surrogate: 2-Fluorophenol	60 %	21-110	"	"	"	"
Surrogate: Nitrobenzene-d5	87 %	35-114	"	"	"	"
Surrogate: Phenol-d6	37 %	10-110	"	"	"	"
Surrogate: Terphenyl-d14	75 %	33-141	"	"	"	"



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EMKO Environmental, Inc.
551 Lakecrest Dr.
El Dorado Hills, CA 95762

Project: Brunswick NPDES
Project Number: [none]
Project Manager: Dr. Andrew Kopania

CLS Work Order #: 18L0968
COC #: 194536, 194533, 194691, 194534

Acid and Base/Neutral Extractables by EPA Method 625

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
WC-Mid (18L0968-03) Water Sampled: 12/18/18 12:02 Received: 12/18/18 16:00									
1,2-Diphenylhydrazine	ND	1.0	µg/L	1	1810715	12/19/18	12/19/18	EPA 625	
2,4,6-Trichlorophenol	ND	10	"	"	"	"	"	"	
2,4-Dichlorophenol	ND	1.0	"	"	"	"	"	"	
2,4-Dimethylphenol	ND	2.0	"	"	"	"	"	"	
2,4-Dinitrophenol	ND	5.0	"	"	"	"	"	"	
2,4-Dinitrotoluene (2,4-DNT)	ND	5.0	"	"	"	"	"	"	
2,6-Dinitrotoluene (2,6-DNT)	ND	5.0	"	"	"	"	"	"	
2-Chloronaphthalene	ND	10	"	"	"	"	"	"	
2-Chlorophenol	ND	2.0	"	"	"	"	"	"	
2-Nitrophenol	ND	10	"	"	"	"	"	"	
3,3'-Dichlorobenzidine	ND	5.0	"	"	"	"	"	"	
4,6-Dinitro-2-methylphenol	ND	10	"	"	"	"	"	"	
4-Bromophenyl phenyl ether	ND	5.0	"	"	"	"	"	"	
4-Chloro-3-methylphenol	ND	1.0	"	"	"	"	"	"	
4-Chlorophenyl phenyl ether	ND	5.0	"	"	"	"	"	"	
4-Nitrophenol	ND	10	"	"	"	"	"	"	
Benzidine	ND	5.0	"	"	"	"	"	"	
Bis(2-chloroethoxy)methane	ND	5.0	"	"	"	"	"	"	
Bis(2-chloroethyl)ether	ND	1.0	"	"	"	"	"	"	
Bis(2-chloroisopropyl)ether	ND	2.0	"	"	"	"	"	"	
Bis(2-ethylhexyl)adipate	ND	5.0	"	"	"	"	"	"	
Bis(2-ethylhexyl)phthalate	ND	1.5	"	"	"	"	"	"	
Butyl benzyl phthalate	ND	10	"	"	"	"	"	"	
Diethyl phthalate	ND	2.0	"	"	"	"	"	"	
Dimethyl phthalate	ND	2.0	"	"	"	"	"	"	
Di-n-butyl phthalate	ND	10	"	"	"	"	"	"	
Di-n-octyl phthalate	ND	10	"	"	"	"	"	"	
Hexachlorobenzene	ND	1.0	"	"	"	"	"	"	
Hexachlorocyclopentadiene	ND	5.0	"	"	"	"	"	"	
Hexachloroethane	ND	1.0	"	"	"	"	"	"	
Isophorone	ND	1.0	"	"	"	"	"	"	



CALIFORNIA LABORATORY SERVICES

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EMKO Environmental, Inc.
551 Lakecrest Dr.
El Dorado Hills, CA 95762

Project: Brunswick NPDES
Project Number: [none]
Project Manager: Dr. Andrew Kopania

CLS Work Order #: 18L0968
COC #: 194536, 194533, 194691, 194534

Acid and Base/Neutral Extractables by EPA Method 625

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
WC-Mid (18L0968-03) Water Sampled: 12/18/18 12:02 Received: 12/18/18 16:00									
Nitrobenzene (NB)	ND	1.0	µg/L	1	1810715	"	12/19/18	EPA 625	
N-Nitrosodimethylamine	ND	5.0	"	"	"	"	"	"	
N-Nitrosodi-n-propylamine	ND	5.0	"	"	"	"	"	"	
N-Nitrosodiphenylamine	ND	1.0	"	"	"	"	"	"	
Pentachlorophenol	ND	5.0	"	"	"	"	"	"	
Phenol	ND	1.0	"	"	"	"	"	"	
<i>Surrogate: 2,4,6-Tribromophenol</i>									
		110 %	10-123		"	"	"	"	
<i>Surrogate: 2-Fluorobiphenyl</i>									
		90 %	43-116		"	"	"	"	
<i>Surrogate: 2-Fluorophenol</i>									
		73 %	21-110		"	"	"	"	
<i>Surrogate: Nitrobenzene-d5</i>									
		99 %	35-114		"	"	"	"	
<i>Surrogate: Phenol-d6</i>									
		44 %	10-110		"	"	"	"	
<i>Surrogate: Terphenyl-d14</i>									
		75 %	33-141		"	"	"	"	
WC-Up (18L0968-04) Water Sampled: 12/18/18 12:46 Received: 12/18/18 16:00									
1,2-Diphenylhydrazine	ND	1.0	µg/L	1	1810715	12/19/18	12/19/18	EPA 625	
2,4,6-Trichlorophenol	ND	10	"	"	"	"	"	"	
2,4-Dichlorophenol	ND	1.0	"	"	"	"	"	"	
2,4-Dimethylphenol	ND	2.0	"	"	"	"	"	"	
2,4-Dinitrophenol	ND	5.0	"	"	"	"	"	"	
2,4-Dinitrotoluene (2,4-DNT)	ND	5.0	"	"	"	"	"	"	
2,6-Dinitrotoluene (2,6-DNT)	ND	5.0	"	"	"	"	"	"	
2-Chloronaphthalene	ND	10	"	"	"	"	"	"	
2-Chlorophenol	ND	2.0	"	"	"	"	"	"	
2-Nitrophenol	ND	10	"	"	"	"	"	"	
3,3'-Dichlorobenzidine	ND	5.0	"	"	"	"	"	"	
4,6-Dinitro-2-methylphenol	ND	10	"	"	"	"	"	"	
4-Bromophenyl phenyl ether	ND	5.0	"	"	"	"	"	"	
4-Chloro-3-methylphenol	ND	1.0	"	"	"	"	"	"	
4-Chlorophenyl phenyl ether	ND	5.0	"	"	"	"	"	"	
4-Nitrophenol	ND	10	"	"	"	"	"	"	



CALIFORNIA LABORATORY SERVICES

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EMKO Environmental, Inc.
551 Lakecrest Dr.
El Dorado Hills, CA 95762

Project: Brunswick NPDES
Project Number: [none]
Project Manager: Dr. Andrew Kopania

CLS Work Order #: 18L0968
COC #: 194536, 194533, 194691, 194534

Acid and Base/Neutral Extractables by EPA Method 625

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
WC-Up (18L0968-04) Water Sampled: 12/18/18 12:46 Received: 12/18/18 16:00									
Benzidine	ND	5.0	µg/L	1	1810715	"	12/19/18	EPA 625	
Bis(2-chloroethoxy)methane	ND	5.0	"	"	"	"	"	"	
Bis(2-chloroethyl)ether	ND	1.0	"	"	"	"	"	"	
Bis(2-chloroisopropyl)ether	ND	2.0	"	"	"	"	"	"	
Bis(2-ethylhexyl)adipate	ND	5.0	"	"	"	"	"	"	
Bis(2-ethylhexyl)phthalate	ND	1.5	"	"	"	"	"	"	
Butyl benzyl phthalate	ND	10	"	"	"	"	"	"	
Diethyl phthalate	ND	2.0	"	"	"	"	"	"	
Dimethyl phthalate	ND	2.0	"	"	"	"	"	"	
Di-n-butyl phthalate	ND	10	"	"	"	"	"	"	
Di-n-octyl phthalate	ND	10	"	"	"	"	"	"	
Hexachlorobenzene	ND	1.0	"	"	"	"	"	"	
Hexachlorocyclopentadiene	ND	5.0	"	"	"	"	"	"	
Hexachloroethane	ND	1.0	"	"	"	"	"	"	
Isophorone	ND	1.0	"	"	"	"	"	"	
Nitrobenzene (NB)	ND	1.0	"	"	"	"	"	"	
N-Nitrosodimethylamine	ND	5.0	"	"	"	"	"	"	
N-Nitrosodi-n-propylamine	ND	5.0	"	"	"	"	"	"	
N-Nitrosodiphenylamine	ND	1.0	"	"	"	"	"	"	
Pentachlorophenol	ND	5.0	"	"	"	"	"	"	
Phenol	ND	1.0	"	"	"	"	"	"	

Surrogate: 2,4,6-Tribromophenol	90 %	10-123	"	"	"	"
Surrogate: 2-Fluorobiphenyl	69 %	43-116	"	"	"	"
Surrogate: 2-Fluorophenol	50 %	21-110	"	"	"	"
Surrogate: Nitrobenzene-d5	71 %	35-114	"	"	"	"
Surrogate: Phenol-d6	31 %	10-110	"	"	"	"
Surrogate: Terphenyl-d14	57 %	33-141	"	"	"	"



CALIFORNIA LABORATORY SERVICES

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EMKO Environmental, Inc.
551 Lakecrest Dr.
El Dorado Hills, CA 95762

Project: Brunswick NPDES
Project Number: [none]
Project Manager: Dr. Andrew Kopania

CLS Work Order #: 18L0968
COC #: 194536, 194533, 194691, 194534

Conventional Chemistry Parameters by APHA/EPA Methods

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
NBS-Pump (18L0968-01) Water Sampled: 12/18/18 11:04 Received: 12/18/18 16:00									
Bicarbonate as CaCO₃	190	5.0	mg/L	1	1810753	12/19/18	12/19/18	SM2320B	
Calcium	51	1.0	"	"	1810760	12/20/18	12/21/18	200.7/2340B	
Carbonate as CaCO ₃	ND	5.0	"	"	1810753	12/19/18	12/19/18	SM2320B	
Chloride	2.2	0.50	"	"	1810712	12/19/18	12/19/18	EPA 300.0	
Cyanide (total)	2.2	5.0	µg/L	"	1810779	12/20/18	12/20/18	SM4500-CN E	J
Hardness as CaCO₃	180	1.0	mg/L	"	1810760	12/20/18	12/21/18	200.7/2340B	
Hexavalent Chromium	ND	1.0	µg/L	"	1810713	12/19/18	12/20/18	EPA 218.6	
Hydroxide as CaCO ₃	ND	5.0	mg/L	"	1810753	12/19/18	12/19/18	SM2320B	
Ion Balance, RPD %	6.0		meq/L	"	1810876	12/24/18	12/24/18	NONE	
Magnesium	14	1.0	mg/L	"	1810760	12/20/18	12/21/18	200.7/2340B	
Potassium	1.4	1.0	"	"	"	"	"	"	
Sodium	7.7	1.0	"	"	"	"	"	"	
Specific Conductance (EC)	400	1.0	µmhos/cm	"	1810743	12/19/18	12/19/18	EPA 120.1	
Total Alkalinity	190	5.0	mg/L	"	1810753	12/19/18	12/19/18	SM2320B	
Total Anions	3.9		meq/L	"	1810876	12/24/18	12/24/18	NONE	
Total Cations	4.1		"	"	"	"	"	"	
Total Dissolved Solids	210	10	mg/L	"	1810777	12/20/18	12/21/18	SM2540C	
Total Phosphorus as P	ND	50	µg/L	"	1810746	12/19/18	12/19/18	SM4500-P E	
Trivalent Chromium	ND	10	"	"	1810916	12/26/18	12/26/18	N/A	Cr3
Turbidity	4.7	0.10	NTU	"	1810752	12/19/18	12/19/18	EPA 180.1	
WC-Down (18L0968-02) Water Sampled: 12/18/18 13:25 Received: 12/18/18 16:00									
Bicarbonate as CaCO₃	67	5.0	mg/L	1	1810753	12/19/18	12/19/18	SM2320B	
Calcium	12	1.0	"	"	1810760	12/20/18	12/21/18	200.7/2340B	
Carbonate as CaCO ₃	ND	5.0	"	"	1810753	12/19/18	12/19/18	SM2320B	
Chloride	3.2	0.50	"	"	1810712	12/19/18	12/19/18	EPA 300.0	
Cyanide (total)	ND	5.0	µg/L	"	1810779	12/20/18	12/20/18	SM4500-CN E	
Hardness as CaCO₃	69	1.0	mg/L	"	1810760	12/20/18	12/21/18	200.7/2340B	
Hexavalent Chromium	ND	1.0	µg/L	"	1810713	12/19/18	12/20/18	EPA 218.6	
Hydroxide as CaCO ₃	ND	5.0	mg/L	"	1810753	12/19/18	12/19/18	SM2320B	
Ion Balance, RPD %	3.0		meq/L	"	1810876	12/24/18	12/24/18	NONE	



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EMKO Environmental, Inc.
551 Lakecrest Dr.
El Dorado Hills, CA 95762

Project: Brunswick NPDES
Project Number: [none]
Project Manager: Dr. Andrew Kopania

CLS Work Order #: 18L0968
COC #: 194536, 194533, 194691, 194534

Conventional Chemistry Parameters by APHA/EPA Methods

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
WC-Down (18L0968-02) Water Sampled: 12/18/18 13:25 Received: 12/18/18 16:00									
Magnesium	9.5	1.0	mg/L	1	1810760	12/20/18	12/21/18	200.7/2340B	
Potassium	1.1	1.0	"	"	"	"	"	"	
Sodium	4.3	1.0	"	"	"	"	"	"	
Specific Conductance (EC)	170	1.0	µmhos/cm	"	1810743	12/19/18	12/19/18	EPA 120.1	
Total Alkalinity	67	5.0	mg/L	"	1810753	12/19/18	12/19/18	SM2320B	
Total Anions	1.6		meq/L	"	1810876	12/24/18	12/24/18	NONE	
Total Cations	1.6		"	"	"	"	"	"	
Total Dissolved Solids	82	10	mg/L	"	1810777	12/20/18	12/21/18	SM2540C	
Total Phosphorus as P	ND	50	µg/L	"	1810746	12/19/18	12/19/18	SM4500-P E	
Trivalent Chromium	ND	10	"	"	1810916	12/26/18	12/26/18	N/A	Cr3
Turbidity	1.9	0.10	NTU	"	1810752	12/19/18	12/19/18	EPA 180.1	
WC-Mid (18L0968-03) Water Sampled: 12/18/18 12:02 Received: 12/18/18 16:00									
Bicarbonate as CaCO3	50	5.0	mg/L	1	1810753	12/19/18	12/19/18	SM2320B	
Calcium	11	1.0	"	"	1810760	12/20/18	12/26/18	200.7/2340B	
Carbonate as CaCO3	ND	5.0	"	"	1810753	12/19/18	12/19/18	SM2320B	
Chloride	3.0	0.50	"	"	1810712	12/19/18	12/19/18	EPA 300.0	
Cyanide (total)	1.8	5.0	µg/L	"	1810779	12/20/18	12/20/18	SM4500-CN E	J
Hardness as CaCO3	64	1.0	mg/L	"	1810760	12/20/18	12/26/18	200.7/2340B	
Hexavalent Chromium	ND	1.0	µg/L	"	1810713	12/19/18	12/20/18	EPA 218.6	
Hydroxide as CaCO3	ND	5.0	mg/L	"	1810753	12/19/18	12/19/18	SM2320B	
Ion Balance, RPD %	9.8		meq/L	"	1810876	12/24/18	12/24/18	NONE	
Magnesium	9.2	1.0	mg/L	"	1810760	12/20/18	12/26/18	200.7/2340B	
Potassium	1.3	1.0	"	"	"	"	"	"	
Sodium	4.2	1.0	"	"	"	"	"	"	
Specific Conductance (EC)	140	1.0	µmhos/cm	"	1810743	12/19/18	12/19/18	EPA 120.1	
Total Alkalinity	50	5.0	mg/L	"	1810753	12/19/18	12/19/18	SM2320B	
Total Anions	1.6		meq/L	"	1810876	12/24/18	12/24/18	NONE	
Total Cations	1.5		"	"	"	"	"	"	
Total Dissolved Solids	91	10	mg/L	"	1810777	12/20/18	12/21/18	SM2540C	
Total Phosphorus as P	ND	50	µg/L	"	1810746	12/19/18	12/19/18	SM4500-P E	



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EMKO Environmental, Inc.
551 Lakecrest Dr.
El Dorado Hills, CA 95762

Project: Brunswick NPDES
Project Number: [none]
Project Manager: Dr. Andrew Kopania

CLS Work Order #: 18L0968
COC #: 194536, 194533, 194691, 194534

Conventional Chemistry Parameters by APHA/EPA Methods

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
WC-Mid (18L0968-03) Water Sampled: 12/18/18 12:02 Received: 12/18/18 16:00									
Trivalent Chromium	ND	10	µg/L	1	1810916	12/26/18	12/26/18	N/A	Cr3
Turbidity	2.4	0.10	NTU	"	1810752	12/19/18	12/19/18	EPA 180.1	
WC-Up (18L0968-04) Water Sampled: 12/18/18 12:46 Received: 12/18/18 16:00									
Bicarbonate as CaCO ₃	87	5.0	mg/L	1	1810753	12/19/18	12/19/18	SM2320B	
Calcium	16	1.0	"	"	1810760	12/20/18	12/26/18	200.7/2340B	
Carbonate as CaCO ₃	ND	5.0	"	"	1810753	12/19/18	12/19/18	SM2320B	
Chloride	4.5	0.50	"	"	1810712	12/19/18	12/19/18	EPA 300.0	
Cyanide (total)	2.6	5.0	µg/L	"	1810779	12/20/18	12/20/18	SM4500-CN E	J
Hardness as CaCO ₃	100	1.0	mg/L	"	1810760	12/20/18	12/26/18	200.7/2340B	
Hexavalent Chromium	ND	1.0	µg/L	"	1810713	12/19/18	12/20/18	EPA 218.6	
Hydroxide as CaCO ₃	ND	5.0	mg/L	"	1810753	12/19/18	12/19/18	SM2320B	
Ion Balance, RPD %	4.0		meq/L	"	1810876	12/24/18	12/24/18	NONE	
Magnesium	15	1.0	mg/L	"	1810760	12/20/18	12/26/18	200.7/2340B	
Potassium	1.5	1.0	"	"	"	"	"	"	
Sodium	5.5	1.0	"	"	"	"	"	"	
Specific Conductance (EC)	200	1.0	µmhos/cm	"	1810743	12/19/18	12/19/18	EPA 120.1	
Total Alkalinity	87	5.0	mg/L	"	1810753	12/19/18	12/19/18	SM2320B	
Total Anions	2.0		meq/L	"	1810876	12/24/18	12/24/18	NONE	
Total Cations	2.1		"	"	"	"	"	"	
Total Dissolved Solids	140	10	mg/L	"	1810777	12/20/18	12/21/18	SM2540C	
Total Phosphorus as P	ND	50	µg/L	"	1810746	12/19/18	12/19/18	SM4500-P E	
Trivalent Chromium	ND	10	"	"	1810916	12/26/18	12/26/18	N/A	Cr3
Turbidity	2.5	0.10	NTU	"	1810752	12/19/18	12/19/18	EPA 180.1	



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EMKO Environmental, Inc.
551 Lakecrest Dr.
El Dorado Hills, CA 95762

Project: Brunswick NPDES
Project Number: [none]
Project Manager: Dr. Andrew Kopania

CLS Work Order #: 18L0968
COC #: 194536, 194533, 194691, 194534

Metals by EPA 200 Series Methods

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
NBS-Pump (18L0968-01) Water Sampled: 12/18/18 11:04 Received: 12/18/18 16:00									
Aluminum	16	50	µg/L	1	1810760	12/20/18	12/21/18	EPA 200.7	J
Antimony	ND	5.0	"	"	1810721	12/19/18	12/21/18	EPA 200.8	
Arsenic	2.1	1.0	"	"	"	"	"	"	
Beryllium	ND	1.0	"	"	1810760	12/20/18	12/21/18	EPA 200.7	
Boron	26	50	"	"	"	"	"	"	J
Cadmium	ND	0.25	"	"	1810721	12/19/18	12/21/18	EPA 200.8	
Chromium	0.32	2.0	"	"	"	"	"	"	J
Copper	0.40	0.50	"	"	"	"	"	"	J
Iron	1400	100	"	"	1810760	12/20/18	12/21/18	EPA 200.7	
Lead	ND	0.50	"	"	1810721	12/19/18	12/21/18	EPA 200.8	
Manganese	230	20	"	"	1810760	12/20/18	12/21/18	EPA 200.7	
Mercury	ND	0.050	"	"	1810775	12/20/18	12/20/18	EPA 245.1	
Nickel	ND	5.0	"	"	1810721	12/19/18	12/21/18	EPA 200.8	
Selenium	ND	5.0	"	"	"	"	12/26/18	"	
Silver	ND	1.0	"	"	"	"	12/26/18	"	
Thallium	0.12	1.0	"	"	"	"	12/26/18	"	J
Zinc	5.5	10	"	"	1810760	12/20/18	12/21/18	EPA 200.7	J
WC-Down (18L0968-02) Water Sampled: 12/18/18 13:25 Received: 12/18/18 16:00									
Aluminum	100	50	µg/L	1	1810760	12/20/18	12/21/18	EPA 200.7	
Antimony	ND	5.0	"	"	1810721	12/19/18	12/21/18	EPA 200.8	
Arsenic	4.0	1.0	"	"	"	"	"	"	
Beryllium	ND	1.0	"	"	1810760	12/20/18	12/21/18	EPA 200.7	
Boron	18	50	"	"	"	"	"	"	J
Cadmium	ND	0.25	"	"	1810721	12/19/18	12/21/18	EPA 200.8	
Chromium	0.76	2.0	"	"	"	"	"	"	J
Copper	1.4	0.50	"	"	"	"	"	"	
Iron	310	100	"	"	1810760	12/20/18	12/21/18	EPA 200.7	
Lead	ND	0.50	"	"	1810721	12/19/18	12/21/18	EPA 200.8	
Manganese	35	20	"	"	1810760	12/20/18	12/21/18	EPA 200.7	
Mercury	ND	0.050	"	"	1810775	12/20/18	12/20/18	EPA 245.1	



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EMKO Environmental, Inc.
551 Lakecrest Dr.
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Project: Brunswick NPDES
Project Number: [none]
Project Manager: Dr. Andrew Kopania

CLS Work Order #: 18L0968
COC #: 194536, 194533, 194691, 194534

Metals by EPA 200 Series Methods

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
WC-Down (18L0968-02) Water Sampled: 12/18/18 13:25 Received: 12/18/18 16:00									
Nickel	3.4	5.0	µg/L	1	1810721	12/19/18	12/21/18	EPA 200.8	J
Selenium	ND	5.0	"	"	"	"	"	"	
Silver	ND	1.0	"	"	"	"	12/26/18	"	
Thallium	ND	1.0	"	"	"	"	12/26/18	"	
Zinc	4.7	10	"	"	1810760	12/20/18	12/21/18	EPA 200.7	J
WC-Mid (18L0968-03) Water Sampled: 12/18/18 12:02 Received: 12/18/18 16:00									
Aluminum	130	50	µg/L	1	1810760	12/20/18	12/21/18	EPA 200.7	
Antimony	ND	5.0	"	"	1810721	12/19/18	12/21/18	EPA 200.8	
Arsenic	1.8	1.0	"	"	"	"	"	"	
Beryllium	ND	1.0	"	"	1810760	12/20/18	12/21/18	EPA 200.7	
Boron	10	50	"	"	"	"	"	"	J
Cadmium	ND	0.25	"	"	1810721	12/19/18	12/21/18	EPA 200.8	
Chromium	0.67	2.0	"	"	"	"	"	"	J
Copper	1.3	0.50	"	"	"	"	"	"	
Iron	250	100	"	"	1810760	12/20/18	12/21/18	EPA 200.7	
Lead	ND	0.50	"	"	1810721	12/19/18	12/21/18	EPA 200.8	
Manganese	16	20	"	"	1810760	12/20/18	12/21/18	EPA 200.7	J
Mercury	ND	0.050	"	"	1810775	12/20/18	12/20/18	EPA 245.1	
Nickel	3.2	5.0	"	"	1810721	12/19/18	12/21/18	EPA 200.8	J
Selenium	ND	5.0	"	"	"	"	"	"	
Silver	ND	1.0	"	"	"	"	12/26/18	"	
Thallium	ND	1.0	"	"	"	"	12/21/18	"	
Zinc	3.2	10	"	"	1810760	12/20/18	12/21/18	EPA 200.7	J



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EMKO Environmental, Inc.
551 Lakecrest Dr.
El Dorado Hills, CA 95762

Project: Brunswick NPDES
Project Number: [none]
Project Manager: Dr. Andrew Kopania

CLS Work Order #: 18L0968
COC #: 194536, 194533, 194691, 194534

Metals by EPA 200 Series Methods

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
WC-Up (18L0968-04) Water Sampled: 12/18/18 12:46 Received: 12/18/18 16:00									
Aluminum	110	50	µg/L	1	1810760	12/20/18	12/21/18	EPA 200.7	
Antimony	ND	5.0	"	"	1810721	12/19/18	12/21/18	EPA 200.8	
Arsenic	1.3	1.0	"	"	"	"	"	"	
Beryllium	ND	1.0	"	"	1810760	12/20/18	12/21/18	EPA 200.7	
Boron	10	50	"	"	"	"	"	"	J
Cadmium	ND	0.25	"	"	1810721	12/19/18	12/21/18	EPA 200.8	
Chromium	0.77	2.0	"	"	"	"	"	"	J
Copper	2.0	0.50	"	"	"	"	"	"	
Iron	240	100	"	"	1810760	12/20/18	12/21/18	EPA 200.7	
Lead	ND	0.50	"	"	1810721	12/19/18	12/21/18	EPA 200.8	
Manganese	15	20	"	"	1810760	12/20/18	12/21/18	EPA 200.7	J
Mercury	ND	0.050	"	"	1810775	12/20/18	12/20/18	EPA 245.1	
Nickel	4.5	5.0	"	"	1810721	12/19/18	12/21/18	EPA 200.8	J
Selenium	ND	5.0	"	"	"	"	"	"	
Silver	ND	1.0	"	"	"	"	12/26/18	"	
Thallium	ND	1.0	"	"	"	"	12/21/18	"	
Zinc	7.2	10	"	"	1810760	12/20/18	12/21/18	EPA 200.7	J



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EMKO Environmental, Inc.
551 Lakecrest Dr.
El Dorado Hills, CA 95762

Project: Brunswick NPDES
Project Number: [none]
Project Manager: Dr. Andrew Kopania

CLS Work Order #: 18L0968
COC #: 194536, 194533, 194691, 194534

Organochlorine Pesticides by EPA Method 608

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
NBS-Pump (18L0968-01) Water Sampled: 12/18/18 11:04 Received: 12/18/18 16:00									
4,4'-DDD	ND	0.050	µg/L	1	1810754	12/19/18	12/20/18	EPA 608M	
4,4'-DDE	ND	0.050	"	"	"	"	"	"	
4,4'-DDT	ND	0.010	"	"	"	"	"	"	
Aldrin	ND	0.0050	"	"	"	"	"	"	
alpha-BHC	ND	0.010	"	"	"	"	"	"	
Aroclor 1016	ND	0.50	"	"	"	"	"	"	
Aroclor 1221	ND	0.50	"	"	"	"	"	"	
Aroclor 1232	ND	0.50	"	"	"	"	"	"	
Aroclor 1242	ND	0.50	"	"	"	"	"	"	
Aroclor 1248	ND	0.50	"	"	"	"	"	"	
Aroclor 1254	ND	0.50	"	"	"	"	"	"	
Aroclor 1260	ND	0.50	"	"	"	"	"	"	
beta-BHC	ND	0.0050	"	"	"	"	"	"	
Chlordane	ND	0.10	"	"	"	"	"	"	
delta-BHC	ND	0.0050	"	"	"	"	"	"	
Dieldrin	ND	0.010	"	"	"	"	"	"	
Endosulfan I	ND	0.020	"	"	"	"	"	"	
Endosulfan II	ND	0.010	"	"	"	"	"	"	
Endosulfan sulfate	ND	0.050	"	"	"	"	"	"	
Endrin	ND	0.010	"	"	"	"	"	"	
Endrin aldehyde	ND	0.010	"	"	"	"	"	"	
gamma-BHC (Lindane)	ND	0.020	"	"	"	"	"	"	
Heptachlor	ND	0.010	"	"	"	"	"	"	
Heptachlor epoxide	ND	0.010	"	"	"	"	"	"	
Methoxychlor	ND	10	"	"	"	"	"	"	
Toxaphene	ND	0.50	"	"	"	"	"	"	
Surrogate: Decachlorobiphenyl		56 %		43-139	"	"	"	"	
Surrogate: Tetrachloro-meta-xylene		77 %		43-147	"	"	"	"	



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EMKO Environmental, Inc.
551 Lakecrest Dr.
El Dorado Hills, CA 95762

Project: Brunswick NPDES
Project Number: [none]
Project Manager: Dr. Andrew Kopania

CLS Work Order #: 18L0968
COC #: 194536, 194533, 194691, 194534

Organochlorine Pesticides by EPA Method 608

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
WC-Down (18L0968-02) Water Sampled: 12/18/18 13:25 Received: 12/18/18 16:00									
4,4'-DDD	ND	0.050	µg/L	1	1810754	12/19/18	12/20/18	EPA 608M	
4,4'-DDE	ND	0.050	"	"	"	"	"	"	
4,4'-DDT	ND	0.010	"	"	"	"	"	"	
Aldrin	ND	0.0050	"	"	"	"	"	"	
alpha-BHC	ND	0.010	"	"	"	"	"	"	
Aroclor 1016	ND	0.50	"	"	"	"	"	"	
Aroclor 1221	ND	0.50	"	"	"	"	"	"	
Aroclor 1232	ND	0.50	"	"	"	"	"	"	
Aroclor 1242	ND	0.50	"	"	"	"	"	"	
Aroclor 1248	ND	0.50	"	"	"	"	"	"	
Aroclor 1254	ND	0.50	"	"	"	"	"	"	
Aroclor 1260	ND	0.50	"	"	"	"	"	"	
beta-BHC	ND	0.0050	"	"	"	"	"	"	
Chlordane	ND	0.10	"	"	"	"	"	"	
delta-BHC	ND	0.0050	"	"	"	"	"	"	
Dieldrin	ND	0.010	"	"	"	"	"	"	
Endosulfan I	ND	0.020	"	"	"	"	"	"	
Endosulfan II	ND	0.010	"	"	"	"	"	"	
Endosulfan sulfate	ND	0.050	"	"	"	"	"	"	
Endrin	ND	0.010	"	"	"	"	"	"	
Endrin aldehyde	ND	0.010	"	"	"	"	"	"	
gamma-BHC (Lindane)	ND	0.020	"	"	"	"	"	"	
Heptachlor	ND	0.010	"	"	"	"	"	"	
Heptachlor epoxide	ND	0.010	"	"	"	"	"	"	
Methoxychlor	ND	10	"	"	"	"	"	"	
Toxaphene	ND	0.50	"	"	"	"	"	"	

Surrogate: Decachlorobiphenyl

87 % 43-139

" " " "

Surrogate: Tetrachloro-meta-xylene

85 % 43-147

" " " "



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EMKO Environmental, Inc.
551 Lakecrest Dr.
El Dorado Hills, CA 95762

Project: Brunswick NPDES
Project Number: [none]
Project Manager: Dr. Andrew Kopania

CLS Work Order #: 18L0968
COC #: 194536, 194533, 194691, 194534

Organochlorine Pesticides by EPA Method 608

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
WC-Mid (18L0968-03) Water Sampled: 12/18/18 12:02 Received: 12/18/18 16:00									
4,4'-DDD	ND	0.050	µg/L	1	1810754	12/19/18	12/20/18	EPA 608M	
4,4'-DDE	ND	0.050	"	"	"	"	"	"	
4,4'-DDT	ND	0.010	"	"	"	"	"	"	
Aldrin	ND	0.0050	"	"	"	"	"	"	
alpha-BHC	ND	0.010	"	"	"	"	"	"	
Aroclor 1016	ND	0.50	"	"	"	"	"	"	
Aroclor 1221	ND	0.50	"	"	"	"	"	"	
Aroclor 1232	ND	0.50	"	"	"	"	"	"	
Aroclor 1242	ND	0.50	"	"	"	"	"	"	
Aroclor 1248	ND	0.50	"	"	"	"	"	"	
Aroclor 1254	ND	0.50	"	"	"	"	"	"	
Aroclor 1260	ND	0.50	"	"	"	"	"	"	
beta-BHC	ND	0.0050	"	"	"	"	"	"	
Chlordane	ND	0.10	"	"	"	"	"	"	
delta-BHC	ND	0.0050	"	"	"	"	"	"	
Dieldrin	ND	0.010	"	"	"	"	"	"	
Endosulfan I	ND	0.020	"	"	"	"	"	"	
Endosulfan II	ND	0.010	"	"	"	"	"	"	
Endosulfan sulfate	ND	0.050	"	"	"	"	"	"	
Endrin	ND	0.010	"	"	"	"	"	"	
Endrin aldehyde	ND	0.010	"	"	"	"	"	"	
gamma-BHC (Lindane)	ND	0.020	"	"	"	"	"	"	
Heptachlor	ND	0.010	"	"	"	"	"	"	
Heptachlor epoxide	ND	0.010	"	"	"	"	"	"	
Methoxychlor	ND	10	"	"	"	"	"	"	
Toxaphene	ND	0.50	"	"	"	"	"	"	

Surrogate: Decachlorobiphenyl

90 % 43-139

" " " "

Surrogate: Tetrachloro-meta-xylene

87 % 43-147

" " " "



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EMKO Environmental, Inc.
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El Dorado Hills, CA 95762

Project: Brunswick NPDES
Project Number: [none]
Project Manager: Dr. Andrew Kopania

CLS Work Order #: 18L0968
COC #: 194536, 194533, 194691, 194534

Organochlorine Pesticides by EPA Method 608

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
WC-Up (18L0968-04) Water Sampled: 12/18/18 12:46 Received: 12/18/18 16:00									
4,4'-DDD	ND	0.050	µg/L	1	1810754	12/19/18	12/20/18	EPA 608M	
4,4'-DDE	ND	0.050	"	"	"	"	"	"	
4,4'-DDT	ND	0.010	"	"	"	"	"	"	
Aldrin	ND	0.0050	"	"	"	"	"	"	
alpha-BHC	ND	0.010	"	"	"	"	"	"	
Aroclor 1016	ND	0.50	"	"	"	"	"	"	
Aroclor 1221	ND	0.50	"	"	"	"	"	"	
Aroclor 1232	ND	0.50	"	"	"	"	"	"	
Aroclor 1242	ND	0.50	"	"	"	"	"	"	
Aroclor 1248	ND	0.50	"	"	"	"	"	"	
Aroclor 1254	ND	0.50	"	"	"	"	"	"	
Aroclor 1260	ND	0.50	"	"	"	"	"	"	
beta-BHC	ND	0.0050	"	"	"	"	"	"	
Chlordane	ND	0.10	"	"	"	"	"	"	
delta-BHC	ND	0.0050	"	"	"	"	"	"	
Dieldrin	ND	0.010	"	"	"	"	"	"	
Endosulfan I	ND	0.020	"	"	"	"	"	"	
Endosulfan II	ND	0.010	"	"	"	"	"	"	
Endosulfan sulfate	ND	0.050	"	"	"	"	"	"	
Endrin	ND	0.010	"	"	"	"	"	"	
Endrin aldehyde	ND	0.010	"	"	"	"	"	"	
gamma-BHC (Lindane)	ND	0.020	"	"	"	"	"	"	
Heptachlor	ND	0.010	"	"	"	"	"	"	
Heptachlor epoxide	ND	0.010	"	"	"	"	"	"	
Methoxychlor	ND	10	"	"	"	"	"	"	
Toxaphene	ND	0.50	"	"	"	"	"	"	

Surrogate: Decachlorobiphenyl

86 % 43-139

" " " "

Surrogate: Tetrachloro-meta-xylene

80 % 43-147

" " " "



CLS Work Order #: 18L0968
COC #: 194536, 194533, 194691, 194534

Polynuclear Aromatic Hydrocarbons by EPA Method 610 (HPLC)

Surrogate: Terphenyl-d14	99 %	70-130	"	"	"	"

Acenaphthene	ND	0.50	µg/L	1	1810758	12/19/18	12/21/18	EPA 610
Acenaphthylene	ND	0.20	"	"	"	"	"	"
Anthracene	ND	0.20	"	"	"	"	"	"
Benzo (a) anthracene	ND	0.20	"	"	"	"	"	"
Benzo (a) pyrene	ND	0.10	"	"	"	"	"	"
Benzo (b) fluoranthene	ND	0.50	"	"	"	"	"	"
Benzo (g,h,i) perylene	ND	0.20	"	"	"	"	"	"
Benzo (k) fluoranthene	ND	0.20	"	"	"	"	"	"
Chrysene	ND	0.20	"	"	"	"	"	"
Dibenz (a,h) anthracene	ND	0.10	"	"	"	"	"	"
Fluoranthene	ND	0.20	"	"	"	"	"	"



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EMKO Environmental, Inc.
551 Lakecrest Dr.
El Dorado Hills, CA 95762

Project: Brunswick NPDES
Project Number: [none]
Project Manager: Dr. Andrew Kopania

CLS Work Order #: 18L0968
COC #: 194536, 194533, 194691, 194534

Polynuclear Aromatic Hydrocarbons by EPA Method 610 (HPLC)

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
WC-Down (18L0968-02) Water Sampled: 12/18/18 13:25 Received: 12/18/18 16:00									
Fluorene	ND	0.20	µg/L	1	1810758	"	12/21/18	EPA 610	
Indeno (1,2,3-cd) pyrene	ND	0.050	"	"	"	"	"	"	
Naphthalene	ND	0.20	"	"	"	"	"	"	
Phenanthrene	ND	0.20	"	"	"	"	"	"	
Pyrene	ND	0.20	"	"	"	"	"	"	
<i>Surrogate: Terphenyl-d14</i>									
		96 %	70-130		"	"	"	"	
WC-Mid (18L0968-03) Water Sampled: 12/18/18 12:02 Received: 12/18/18 16:00									
Acenaphthene	ND	0.50	µg/L	1	1810758	12/19/18	12/21/18	EPA 610	
Acenaphthylene	ND	0.20	"	"	"	"	"	"	
Anthracene	ND	0.20	"	"	"	"	"	"	
Benzo (a) anthracene	ND	0.20	"	"	"	"	"	"	
Benzo (a) pyrene	ND	0.10	"	"	"	"	"	"	
Benzo (b) fluoranthene	ND	0.50	"	"	"	"	"	"	
Benzo (g,h,i) perylene	ND	0.20	"	"	"	"	"	"	
Benzo (k) fluoranthene	ND	0.20	"	"	"	"	"	"	
Chrysene	ND	0.20	"	"	"	"	"	"	
Dibenz (a,h) anthracene	ND	0.10	"	"	"	"	"	"	
Fluoranthene	ND	0.20	"	"	"	"	"	"	
Fluorene	ND	0.20	"	"	"	"	"	"	
Indeno (1,2,3-cd) pyrene	ND	0.050	"	"	"	"	"	"	
Naphthalene	ND	0.20	"	"	"	"	"	"	
Phenanthrene	ND	0.20	"	"	"	"	"	"	
Pyrene	ND	0.20	"	"	"	"	"	"	
<i>Surrogate: Terphenyl-d14</i>									
		94 %	70-130		"	"	"	"	



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EMKO Environmental, Inc.
551 Lakecrest Dr.
El Dorado Hills, CA 95762

Project: Brunswick NPDES
Project Number: [none]
Project Manager: Dr. Andrew Kopania

CLS Work Order #: 18L0968
COC #: 194536, 194533, 194691, 194534

Polynuclear Aromatic Hydrocarbons by EPA Method 610 (HPLC)

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
WC-Up (18L0968-04) Water Sampled: 12/18/18 12:46 Received: 12/18/18 16:00									
Acenaphthene	ND	0.50	µg/L	1	1810758	12/19/18	12/21/18	EPA 610	
Acenaphthylene	ND	0.20	"	"	"	"	"	"	
Anthracene	ND	0.20	"	"	"	"	"	"	
Benzo (a) anthracene	ND	0.20	"	"	"	"	"	"	
Benzo (a) pyrene	ND	0.10	"	"	"	"	"	"	
Benzo (b) fluoranthene	ND	0.50	"	"	"	"	"	"	
Benzo (g,h,i) perylene	ND	0.20	"	"	"	"	"	"	
Benzo (k) fluoranthene	ND	0.20	"	"	"	"	"	"	
Chrysene	ND	0.20	"	"	"	"	"	"	
Dibenz (a,h) anthracene	ND	0.10	"	"	"	"	"	"	
Fluoranthene	ND	0.20	"	"	"	"	"	"	
Fluorene	ND	0.20	"	"	"	"	"	"	
Indeno (1,2,3-cd) pyrene	ND	0.050	"	"	"	"	"	"	
Naphthalene	ND	0.20	"	"	"	"	"	"	
Phenanthrene	ND	0.20	"	"	"	"	"	"	
Pyrene	ND	0.20	"	"	"	"	"	"	

Surrogate: Terphenyl-d14

97 %

70-130

"

"

"

"



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EMKO Environmental, Inc.
551 Lakecrest Dr.
El Dorado Hills, CA 95762

Project: Brunswick NPDES
Project Number: [none]
Project Manager: Dr. Andrew Kopania

CLS Work Order #: 18L0968
COC #: 194536, 194533, 194691, 194534

Purgeables by EPA Method 624

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
NBS-Pump (18L0968-01) Water Sampled: 12/18/18 11:04 Received: 12/18/18 16:00									
1,1,1-Trichloroethane	ND	0.50	µg/L	1	1810803	12/20/18	12/20/18	EPA 624M	
1,1,2,2-Tetrachloroethane	ND	0.50	"	"	"	"	"	"	
1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113)	ND	10	"	"	"	"	"	"	
1,1,2-Trichloroethane	ND	0.50	"	"	"	"	"	"	
1,1-Dichloroethane	ND	0.50	"	"	"	"	"	"	
1,1-Dichloroethene	ND	0.50	"	"	"	"	"	"	
1,2,4-Trichlorobenzene	ND	5.0	"	"	"	"	"	"	
1,2-Dichlorobenzene	ND	0.50	"	"	"	"	"	"	
1,2-Dichloroethane	ND	0.50	"	"	"	"	"	"	
1,2-Dichloropropane	ND	0.50	"	"	"	"	"	"	
1,3-Dichlorobenzene	ND	2.0	"	"	"	"	"	"	
1,3-Dichloropropene (total)	ND	0.50	"	"	"	"	"	"	
1,4-Dichlorobenzene	ND	0.50	"	"	"	"	"	"	
2-Chloroethylvinyl ether	ND	1.0	"	"	"	"	"	"	
Acrolein	ND	2.0	"	"	"	"	"	"	
Acrylonitrile	ND	2.0	"	"	"	"	"	"	
Benzene	ND	0.50	"	"	"	"	"	"	
Bromodichloromethane	ND	0.50	"	"	"	"	"	"	
Bromoform	ND	0.50	"	"	"	"	"	"	
Bromomethane	ND	0.50	"	"	"	"	"	"	
Carbon tetrachloride	ND	0.50	"	"	"	"	"	"	
Chlorobenzene	ND	0.50	"	"	"	"	"	"	
Chloroethane	ND	0.50	"	"	"	"	"	"	
Chloroform	ND	0.50	"	"	"	"	"	"	
Chloromethane	ND	2.0	"	"	"	"	"	"	
cis-1,2-Dichloroethene	4.2	0.50	"	"	"	"	"	"	
Dibromochloromethane	ND	0.50	"	"	"	"	"	"	
Ethylbenzene	ND	2.0	"	"	"	"	"	"	
Hexachlorobutadiene	ND	1.0	"	"	"	"	"	"	
Methyl tert-butyl ether	ND	3.0	"	"	"	"	"	"	



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EMKO Environmental, Inc.
551 Lakecrest Dr.
El Dorado Hills, CA 95762

Project: Brunswick NPDES
Project Number: [none]
Project Manager: Dr. Andrew Kopania

CLS Work Order #: 18L0968
COC #: 194536, 194533, 194691, 194534

Purgeables by EPA Method 624

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
NBS-Pump (18L0968-01) Water Sampled: 12/18/18 11:04 Received: 12/18/18 16:00									
Methylene chloride	ND	2.0	µg/L	1	1810803	"	12/20/18	EPA 624M	
Naphthalene	ND	1.0	"	"	"	"	"	"	
Styrene	ND	0.50	"	"	"	"	"	"	
Tetrachloroethene	ND	0.50	"	"	"	"	"	"	
Toluene	ND	2.0	"	"	"	"	"	"	
Total Trihalomethanes (THM)	ND	0.50	"	"	"	"	"	"	
trans-1,2-Dichloroethene	ND	1.0	"	"	"	"	"	"	
Trichloroethene	ND	2.0	"	"	"	"	"	"	
Trichlorofluoromethane	ND	5.0	"	"	"	"	"	"	
Vinyl chloride	ND	0.50	"	"	"	"	"	"	
Xylenes (total)	ND	0.50	"	"	"	"	"	"	
Surrogate: 1,2-Dichloroethane-d4		91 %	66-135		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		111 %	73-125		"	"	"	"	
Surrogate: Toluene-d8		112 %	72-125		"	"	"	"	
WC-Down (18L0968-02) Water Sampled: 12/18/18 13:25 Received: 12/18/18 16:00									
1,1,1-Trichloroethane	ND	0.50	µg/L	1	1810803	12/20/18	12/20/18	EPA 624M	
1,1,2,2-Tetrachloroethane	ND	0.50	"	"	"	"	"	"	
1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113)	ND	10	"	"	"	"	"	"	
1,1,2-Trichloroethane	ND	0.50	"	"	"	"	"	"	
1,1-Dichloroethane	ND	0.50	"	"	"	"	"	"	
1,1-Dichloroethene	ND	0.50	"	"	"	"	"	"	
1,2,4-Trichlorobenzene	ND	5.0	"	"	"	"	"	"	
1,2-Dichlorobenzene	ND	0.50	"	"	"	"	"	"	
1,2-Dichloroethane	ND	0.50	"	"	"	"	"	"	
1,2-Dichloropropane	ND	0.50	"	"	"	"	"	"	
1,3-Dichlorobenzene	ND	2.0	"	"	"	"	"	"	
1,3-Dichloropropene (total)	ND	0.50	"	"	"	"	"	"	
1,4-Dichlorobenzene	ND	0.50	"	"	"	"	"	"	
2-Chloroethylvinyl ether	ND	1.0	"	"	"	"	"	"	



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EMKO Environmental, Inc.
551 Lakecrest Dr.
El Dorado Hills, CA 95762

Project: Brunswick NPDES
Project Number: [none]
Project Manager: Dr. Andrew Kopania

CLS Work Order #: 18L0968
COC #: 194536, 194533, 194691, 194534

Purgeables by EPA Method 624

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
WC-Down (18L0968-02) Water Sampled: 12/18/18 13:25 Received: 12/18/18 16:00									
Acrolein	ND	2.0	µg/L	1	1810803	"	12/20/18	EPA 624M	
Acrylonitrile	ND	2.0	"	"	"	"	"	"	
Benzene	ND	0.50	"	"	"	"	"	"	
Bromodichloromethane	ND	0.50	"	"	"	"	"	"	
Bromoform	ND	0.50	"	"	"	"	"	"	
Bromomethane	ND	0.50	"	"	"	"	"	"	
Carbon tetrachloride	ND	0.50	"	"	"	"	"	"	
Chlorobenzene	ND	0.50	"	"	"	"	"	"	
Chloroethane	ND	0.50	"	"	"	"	"	"	
Chloroform	ND	0.50	"	"	"	"	"	"	
Chloromethane	ND	2.0	"	"	"	"	"	"	
cis-1,2-Dichloroethene	ND	0.50	"	"	"	"	"	"	
Dibromochloromethane	ND	0.50	"	"	"	"	"	"	
Ethylbenzene	ND	2.0	"	"	"	"	"	"	
Hexachlorobutadiene	ND	1.0	"	"	"	"	"	"	
Methyl tert-butyl ether	ND	3.0	"	"	"	"	"	"	
Methylene chloride	ND	2.0	"	"	"	"	"	"	
Naphthalene	ND	1.0	"	"	"	"	"	"	
Styrene	ND	0.50	"	"	"	"	"	"	
Tetrachloroethene	ND	0.50	"	"	"	"	"	"	
Toluene	ND	2.0	"	"	"	"	"	"	
Total Trihalomethanes (THM)	ND	0.50	"	"	"	"	"	"	
trans-1,2-Dichloroethene	ND	1.0	"	"	"	"	"	"	
Trichloroethene	ND	2.0	"	"	"	"	"	"	
Trichlorofluoromethane	ND	5.0	"	"	"	"	"	"	
Vinyl chloride	ND	0.50	"	"	"	"	"	"	
Xylenes (total)	ND	0.50	"	"	"	"	"	"	

Surrogate: 1,2-Dichloroethane-d4	96 %	66-135	"	"	"	"
Surrogate: 4-Bromofluorobenzene	114 %	73-125	"	"	"	"
Surrogate: Toluene-d8	113 %	72-125	"	"	"	"



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EMKO Environmental, Inc.
551 Lakecrest Dr.
El Dorado Hills, CA 95762

Project: Brunswick NPDES
Project Number: [none]
Project Manager: Dr. Andrew Kopania

CLS Work Order #: 18L0968
COC #: 194536, 194533, 194691, 194534

Purgeables by EPA Method 624

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
WC-Mid (18L0968-03) Water Sampled: 12/18/18 12:02 Received: 12/18/18 16:00									
1,1,1-Trichloroethane	ND	0.50	µg/L	1	1810803	12/20/18	12/20/18	EPA 624M	
1,1,2,2-Tetrachloroethane	ND	0.50	"	"	"	"	"	"	
1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113)	ND	10	"	"	"	"	"	"	
1,1,2-Trichloroethane	ND	0.50	"	"	"	"	"	"	
1,1-Dichloroethane	ND	0.50	"	"	"	"	"	"	
1,1-Dichloroethene	ND	0.50	"	"	"	"	"	"	
1,2,4-Trichlorobenzene	ND	5.0	"	"	"	"	"	"	
1,2-Dichlorobenzene	ND	0.50	"	"	"	"	"	"	
1,2-Dichloroethane	ND	0.50	"	"	"	"	"	"	
1,2-Dichloropropane	ND	0.50	"	"	"	"	"	"	
1,3-Dichlorobenzene	ND	2.0	"	"	"	"	"	"	
1,3-Dichloropropene (total)	ND	0.50	"	"	"	"	"	"	
1,4-Dichlorobenzene	ND	0.50	"	"	"	"	"	"	
2-Chloroethylvinyl ether	ND	1.0	"	"	"	"	"	"	
Acrolein	ND	2.0	"	"	"	"	"	"	
Acrylonitrile	ND	2.0	"	"	"	"	"	"	
Benzene	ND	0.50	"	"	"	"	"	"	
Bromodichloromethane	ND	0.50	"	"	"	"	"	"	
Bromoform	ND	0.50	"	"	"	"	"	"	
Bromomethane	ND	0.50	"	"	"	"	"	"	
Carbon tetrachloride	ND	0.50	"	"	"	"	"	"	
Chlorobenzene	ND	0.50	"	"	"	"	"	"	
Chloroethane	ND	0.50	"	"	"	"	"	"	
Chloroform	ND	0.50	"	"	"	"	"	"	
Chloromethane	ND	2.0	"	"	"	"	"	"	
cis-1,2-Dichloroethene	ND	0.50	"	"	"	"	"	"	
Dibromochloromethane	ND	0.50	"	"	"	"	"	"	
Ethylbenzene	ND	2.0	"	"	"	"	"	"	
Hexachlorobutadiene	ND	1.0	"	"	"	"	"	"	
Methyl tert-butyl ether	ND	3.0	"	"	"	"	"	"	



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EMKO Environmental, Inc.
551 Lakecrest Dr.
El Dorado Hills, CA 95762

Project: Brunswick NPDES
Project Number: [none]
Project Manager: Dr. Andrew Kopania

CLS Work Order #: 18L0968
COC #: 194536, 194533, 194691, 194534

Purgeables by EPA Method 624

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
WC-Mid (18L0968-03) Water Sampled: 12/18/18 12:02 Received: 12/18/18 16:00									
Methylene chloride	ND	2.0	µg/L	1	1810803	"	12/20/18	EPA 624M	
Naphthalene	ND	1.0	"	"	"	"	"	"	
Styrene	ND	0.50	"	"	"	"	"	"	
Tetrachloroethene	ND	0.50	"	"	"	"	"	"	
Toluene	ND	2.0	"	"	"	"	"	"	
Total Trihalomethanes (THM)	ND	0.50	"	"	"	"	"	"	
trans-1,2-Dichloroethene	ND	1.0	"	"	"	"	"	"	
Trichloroethene	ND	2.0	"	"	"	"	"	"	
Trichlorofluoromethane	ND	5.0	"	"	"	"	"	"	
Vinyl chloride	ND	0.50	"	"	"	"	"	"	
Xylenes (total)	ND	0.50	"	"	"	"	"	"	
<i>Surrogate: 1,2-Dichloroethane-d4</i>									
		99 %	66-135		"	"	"	"	
<i>Surrogate: 4-Bromofluorobenzene</i>									
		114 %	73-125		"	"	"	"	
<i>Surrogate: Toluene-d8</i>									
		83 %	72-125		"	"	"	"	
WC-Up (18L0968-04) Water Sampled: 12/18/18 12:46 Received: 12/18/18 16:00									
1,1,1-Trichloroethane	ND	0.50	µg/L	1	1810803	12/20/18	12/20/18	EPA 624M	
1,1,2,2-Tetrachloroethane	ND	0.50	"	"	"	"	"	"	
1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113)	ND	10	"	"	"	"	"	"	
1,1,2-Trichloroethane	ND	0.50	"	"	"	"	"	"	
1,1-Dichloroethane	ND	0.50	"	"	"	"	"	"	
1,1-Dichloroethene	ND	0.50	"	"	"	"	"	"	
1,2,4-Trichlorobenzene	ND	5.0	"	"	"	"	"	"	
1,2-Dichlorobenzene	ND	0.50	"	"	"	"	"	"	
1,2-Dichloroethane	ND	0.50	"	"	"	"	"	"	
1,2-Dichloropropane	ND	0.50	"	"	"	"	"	"	
1,3-Dichlorobenzene	ND	2.0	"	"	"	"	"	"	
1,3-Dichloropropene (total)	ND	0.50	"	"	"	"	"	"	
1,4-Dichlorobenzene	ND	0.50	"	"	"	"	"	"	
2-Chloroethylvinyl ether	ND	1.0	"	"	"	"	"	"	



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EMKO Environmental, Inc.
551 Lakecrest Dr.
El Dorado Hills, CA 95762

Project: Brunswick NPDES
Project Number: [none]
Project Manager: Dr. Andrew Kopania

CLS Work Order #: 18L0968
COC #: 194536, 194533, 194691, 194534

Purgeables by EPA Method 624

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
WC-Up (18L0968-04) Water Sampled: 12/18/18 12:46 Received: 12/18/18 16:00									
Acrolein	ND	2.0	µg/L	1	1810803	"	12/20/18	EPA 624M	
Acrylonitrile	ND	2.0	"	"	"	"	"	"	
Benzene	ND	0.50	"	"	"	"	"	"	
Bromodichloromethane	ND	0.50	"	"	"	"	"	"	
Bromoform	ND	0.50	"	"	"	"	"	"	
Bromomethane	ND	0.50	"	"	"	"	"	"	
Carbon tetrachloride	ND	0.50	"	"	"	"	"	"	
Chlorobenzene	ND	0.50	"	"	"	"	"	"	
Chloroethane	ND	0.50	"	"	"	"	"	"	
Chloroform	ND	0.50	"	"	"	"	"	"	
Chloromethane	ND	2.0	"	"	"	"	"	"	
cis-1,2-Dichloroethene	ND	0.50	"	"	"	"	"	"	
Dibromochloromethane	ND	0.50	"	"	"	"	"	"	
Ethylbenzene	ND	2.0	"	"	"	"	"	"	
Hexachlorobutadiene	ND	1.0	"	"	"	"	"	"	
Methyl tert-butyl ether	ND	3.0	"	"	"	"	"	"	
Methylene chloride	ND	2.0	"	"	"	"	"	"	
Naphthalene	ND	1.0	"	"	"	"	"	"	
Styrene	ND	0.50	"	"	"	"	"	"	
Tetrachloroethene	ND	0.50	"	"	"	"	"	"	
Toluene	ND	2.0	"	"	"	"	"	"	
Total Trihalomethanes (THM)	ND	0.50	"	"	"	"	"	"	
trans-1,2-Dichloroethene	ND	1.0	"	"	"	"	"	"	
Trichloroethene	ND	2.0	"	"	"	"	"	"	
Trichlorofluoromethane	ND	5.0	"	"	"	"	"	"	
Vinyl chloride	ND	0.50	"	"	"	"	"	"	
Xylenes (total)	ND	0.50	"	"	"	"	"	"	

Surrogate: 1,2-Dichloroethane-d4	98 %	66-135	"	"	"	"
Surrogate: 4-Bromofluorobenzene	113 %	73-125	"	"	"	"
Surrogate: Toluene-d8	113 %	72-125	"	"	"	"



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El Dorado Hills, CA 95762

Project: Brunswick NPDES
Project Number: [none]
Project Manager: Dr. Andrew Kopania

CLS Work Order #: 18L0968
COC #: 194536, 194533, 194691, 194534

Acid and Base/Neutral Extractables by EPA Method 625 - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes

Batch 1810715 - EPA 3510B GCMS

Blank (1810715-BLK1)

Prepared & Analyzed: 12/19/18

2-Chlorophenol	ND	2.0	µg/L							
2,4-Dichlorophenol	ND	1.0	"							
2,4-Dimethylphenol	ND	2.0	"							
4,6-Dinitro-2-methylphenol	ND	10	"							
2,4-Dinitrophenol	ND	5.0	"							
2-Nitrophenol	ND	10	"							
4-Nitrophenol	2.05	10	"							J
4-Chloro-3-methylphenol	ND	1.0	"							
Pentachlorophenol	ND	5.0	"							
Phenol	0.790	1.0	"							J
2,4,6-Trichlorophenol	ND	10	"							
Benzidine	ND	5.0	"							
Bis(2-chloroethoxy)methane	ND	5.0	"							
Bis(2-chloroethyl)ether	ND	1.0	"							
Bis(2-chloroisopropyl)ether	ND	2.0	"							
Bis(2-ethylhexyl)phthalate	ND	1.5	"							
4-Bromophenyl phenyl ether	ND	5.0	"							
Butyl benzyl phthalate	ND	10	"							
2-Chloronaphthalene	ND	10	"							
4-Chlorophenyl phenyl ether	ND	5.0	"							
3,3'-Dichlorobenzidine	ND	5.0	"							
Diethyl phthalate	ND	2.0	"							
Dimethyl phthalate	ND	2.0	"							
Di-n-butyl phthalate	ND	10	"							
2,4-Dinitrotoluene (2,4-DNT)	ND	5.0	"							
2,6-Dinitrotoluene (2,6-DNT)	ND	5.0	"							
Di-n-octyl phthalate	ND	10	"							
1,2-Diphenylhydrazine	ND	1.0	"							
Hexachlorobenzene	ND	1.0	"							
Hexachlorocyclopentadiene	ND	5.0	"							
Hexachloroethane	ND	1.0	"							



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Project: Brunswick NPDES
Project Number: [none]
Project Manager: Dr. Andrew Kopania

CLS Work Order #: 18L0968
COC #: 194536, 194533, 194691, 194534

Acid and Base/Neutral Extractables by EPA Method 625 - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes

Batch 1810715 - EPA 3510B GCMS

Blank (1810715-BLK1)

Prepared & Analyzed: 12/19/18

Isophorone	ND	1.0	µg/L							
Nitrobenzene (NB)	ND	1.0	"							
N-Nitrosodimethylamine	ND	5.0	"							
N-Nitrosodi-n-propylamine	ND	5.0	"							
N-Nitrosodiphenylamine	ND	1.0	"							
Bis(2-ethylhexyl)adipate	ND	5.0	"							
Surrogate: 2-Fluorophenol	29.6		"	40.0		74	21-110			
Surrogate: Phenol-d6	19.6		"	40.0		49	10-110			
Surrogate: Nitrobenzene-d5	35.7		"	40.0		89	35-114			
Surrogate: 2-Fluorobiphenyl	31.0		"	40.0		78	43-116			
Surrogate: 2,4,6-Tribromophenol	39.3		"	40.0		98	10-123			
Surrogate: Terphenyl-d14	33.2		"	40.0		83	33-141			

LCS (1810715-BS1)

Prepared & Analyzed: 12/19/18

2-Chlorophenol	38.2	2.0	µg/L	50.0		76	23-134			
4-Nitrophenol	19.0	10	"	50.0		38	10-108			
4-Chloro-3-methylphenol	42.2	1.0	"	50.0		84	23-117			
Pentachlorophenol	34.8	5.0	"	50.0		70	10-113			
Phenol	19.9	1.0	"	50.0		40	5-112			
Bis(2-ethylhexyl)phthalate	9.69	1.5	"	10.0		97	40-130			
2,4-Dinitrotoluene (2,4-DNT)	32.2	5.0	"	40.0		80	24-116			
N-Nitrosodi-n-propylamine	30.1	5.0	"	40.0		75	41-126			
1,4-Dichlorobenzene	23.1	5.0	"	40.0		58	36-117			
1,2,4-Trichlorobenzene	24.3	5.0	"	40.0		61	39-118			
Acenaphthene	30.4	5.0	"	40.0		76	46-118			
Pyrene	28.3	5.0	"	40.0		71	26-127			
Surrogate: 2-Fluorophenol	31.1		"	40.0		78	21-110			
Surrogate: Phenol-d6	20.7		"	40.0		52	10-110			
Surrogate: Nitrobenzene-d5	38.5		"	40.0		96	35-114			
Surrogate: 2-Fluorobiphenyl	33.5		"	40.0		84	43-116			
Surrogate: 2,4,6-Tribromophenol	45.2		"	40.0		113	10-123			



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551 Lakecrest Dr.
El Dorado Hills, CA 95762

Project: Brunswick NPDES
Project Number: [none]
Project Manager: Dr. Andrew Kopania

CLS Work Order #: 18L0968
COC #: 194536, 194533, 194691, 194534

Acid and Base/Neutral Extractables by EPA Method 625 - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes

Batch 1810715 - EPA 3510B GCMS

LCS (1810715-BS1)

Prepared & Analyzed: 12/19/18

Surrogate: Terphenyl-d14	37.9		µg/L	40.0		95	33-141			

LCS Dup (1810715-BSD1)

Prepared & Analyzed: 12/19/18

2-Chlorophenol	40.2	2.0	µg/L	50.0		80	23-134	5	40	
4-Nitrophenol	19.7	10	"	50.0		39	10-108	3	45	
4-Chloro-3-methylphenol	43.8	1.0	"	50.0		88	23-117	4	42	
Pentachlorophenol	35.7	5.0	"	50.0		71	10-113	3	45	
Phenol	22.0	1.0	"	50.0		44	5-112	10	42	
Bis(2-ethylhexyl)phthalate	10.0	1.5	"	10.0		100	40-130	3	30	
2,4-Dinitrotoluene (2,4-DNT)	33.1	5.0	"	40.0		83	24-116	3	38	
N-Nitrosodi-n-propylamine	31.5	5.0	"	40.0		79	41-126	4	38	
1,4-Dichlorobenzene	24.9	5.0	"	40.0		62	36-117	7	28	
1,2,4-Trichlorobenzene	26.0	5.0	"	40.0		65	39-118	7	28	
Acenaphthene	32.1	5.0	"	40.0		80	46-118	6	31	
Pyrene	29.4	5.0	"	40.0		73	26-127	4	31	

Surrogate: 2-Fluorophenol	32.7		"	40.0		82	21-110			

Surrogate: Phenol-d6	22.0		"	40.0		55	10-110			

Surrogate: Nitrobenzene-d5	39.4		"	40.0		98	35-114			

Surrogate: 2-Fluorobiphenyl	35.1		"	40.0		88	43-116			

Surrogate: 2,4,6-Tribromophenol	46.0		"	40.0		115	10-123			

Surrogate: Terphenyl-d14	38.3		"	40.0		96	33-141			



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Project: Brunswick NPDES
Project Number: [none]
Project Manager: Dr. Andrew Kopania

CLS Work Order #: 18L0968
COC #: 194536, 194533, 194691, 194534

Conventional Chemistry Parameters by APHA/EPA Methods - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 1810712 - General Preparation										
Blank (1810712-BLK1)				Prepared & Analyzed: 12/19/18						
Chloride	ND	0.50	mg/L							
LCS (1810712-BS1)				Prepared & Analyzed: 12/19/18						
Chloride	4.48	0.50	mg/L	5.00		90	80-120			
LCS Dup (1810712-BSD1)				Prepared & Analyzed: 12/19/18						
Chloride	4.50	0.50	mg/L	5.00		90	80-120	0.5	20	
Matrix Spike (1810712-MS1)				Source: 18L0968-03		Prepared & Analyzed: 12/19/18				
Chloride	7.76	0.50	mg/L	5.00	3.05	94	80-120			
Matrix Spike Dup (1810712-MSD1)				Source: 18L0968-03		Prepared & Analyzed: 12/19/18				
Chloride	7.75	0.50	mg/L	5.00	3.05	94	80-120	0.1	20	
Batch 1810713 - General Prep										
Blank (1810713-BLK1)				Prepared: 12/19/18 Analyzed: 12/20/18						
Hexavalent Chromium	ND	1.0	µg/L							
LCS (1810713-BS1)				Prepared: 12/19/18 Analyzed: 12/20/18						
Hexavalent Chromium	9.71	1.0	µg/L	10.0		97	80-120			
LCS Dup (1810713-BSD1)				Prepared: 12/19/18 Analyzed: 12/20/18						
Hexavalent Chromium	10.5	1.0	µg/L	10.0		105	80-120	8	20	
Matrix Spike (1810713-MS1)				Source: 18L0982-04		Prepared: 12/19/18 Analyzed: 12/20/18				
Hexavalent Chromium	12.4	1.0	µg/L	10.0	5.25	71	80-120			QM-7



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551 Lakecrest Dr.
El Dorado Hills, CA 95762

Project: Brunswick NPDES
Project Number: [none]
Project Manager: Dr. Andrew Kopania

CLS Work Order #: 18L0968
COC #: 194536, 194533, 194691, 194534

Conventional Chemistry Parameters by APHA/EPA Methods - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes

Batch 1810713 - General Prep

Matrix Spike Dup (1810713-MSD1)

Source: 18L0982-04

Prepared: 12/19/18 Analyzed: 12/20/18

Hexavalent Chromium	12.8	1.0	µg/L	10.0	5.25	75	80-120	3	20	QM-7

Batch 1810743 - General Prep

Blank (1810743-BLK1)

Prepared & Analyzed: 12/19/18

Specific Conductance (EC)	ND	1.0	µmhos/cm

Duplicate (1810743-DUP1)

Source: 18L0949-03

Prepared & Analyzed: 12/19/18

Specific Conductance (EC)	345	1.0	µmhos/cm	355	2.86	20

Batch 1810746 - General Preparation

Blank (1810746-BLK1)

Prepared & Analyzed: 12/19/18

Total Phosphorus as P	ND	50	µg/L

LCS (1810746-BS1)

Prepared & Analyzed: 12/19/18

Total Phosphorus as P	298	50	µg/L	300	99	80-120

LCS Dup (1810746-BSD1)

Prepared & Analyzed: 12/19/18

Total Phosphorus as P	301	50	µg/L	300	100	80-120	0.9	20

Matrix Spike (1810746-MS1)

Source: 18L0968-01

Prepared & Analyzed: 12/19/18

Total Phosphorus as P	305	50	µg/L	300	ND	102	75-125

Matrix Spike Dup (1810746-MSD1)

Source: 18L0968-01

Prepared & Analyzed: 12/19/18

Total Phosphorus as P	311	50	µg/L	300	ND	104	75-125	2	25



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El Dorado Hills, CA 95762

Project: Brunswick NPDES
Project Number: [none]
Project Manager: Dr. Andrew Kopania

CLS Work Order #: 18L0968
COC #: 194536, 194533, 194691, 194534

Conventional Chemistry Parameters by APHA/EPA Methods - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes

Batch 1810752 - General

Blank (1810752-BLK1)

Prepared & Analyzed: 12/19/18

Turbidity	ND	0.10	NTU

Duplicate (1810752-DUP1)

Source: 18L0968-01

Prepared & Analyzed: 12/19/18

Turbidity	4.68	0.10	NTU	4.71	0.7	20

Batch 1810753 - General Preparation

Blank (1810753-BLK1)

Prepared & Analyzed: 12/19/18

Total Alkalinity	ND	5.0	mg/L
Bicarbonate as CaCO ₃	ND	5.0	"
Carbonate as CaCO ₃	ND	5.0	"
Hydroxide as CaCO ₃	ND	5.0	"

Duplicate (1810753-DUP1)

Source: 18L0955-02

Prepared & Analyzed: 12/19/18

Total Alkalinity	113	5.0	mg/L	112	0.5	20
Bicarbonate as CaCO ₃	113	5.0	"	112	0.5	20
Carbonate as CaCO ₃	ND	5.0	"	ND		20
Hydroxide as CaCO ₃	ND	5.0	"	ND		20

Batch 1810760 - EPA 200 Series

Blank (1810760-BLK1)

Prepared: 12/20/18 Analyzed: 12/21/18

Calcium	ND	1.0	mg/L
Hardness as CaCO ₃	ND	1.0	"
Magnesium	ND	1.0	"
Potassium	ND	1.0	"
Sodium	ND	1.0	"



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551 Lakecrest Dr.
El Dorado Hills, CA 95762

Project: Brunswick NPDES
Project Number: [none]
Project Manager: Dr. Andrew Kopania

CLS Work Order #: 18L0968
COC #: 194536, 194533, 194691, 194534

Conventional Chemistry Parameters by APHA/EPA Methods - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes

Batch 1810760 - EPA 200 Series

LCS (1810760-BS1)

Prepared: 12/20/18 Analyzed: 12/21/18

Calcium	4.37	1.0	mg/L	5.00		87	85-115			
Magnesium	4.36	1.0	"	5.00		87	85-115			
Potassium	4.51	1.0	"	5.00		90	85-115			
Sodium	4.51	1.0	"	5.00		90	85-115			

Matrix Spike (1810760-MS1)

Source: 18L0968-01

Prepared: 12/20/18 Analyzed: 12/21/18

Calcium	52.3	1.0	mg/L	5.00	50.9	29	70-130			QM-7
Magnesium	17.0	1.0	"	5.00	13.5	69	70-130			QM-7
Potassium	6.06	1.0	"	5.00	1.39	93	70-130			
Sodium	11.8	1.0	"	5.00	7.70	83	70-130			

Matrix Spike (1810760-MS2)

Source: 18L0948-01

Prepared: 12/20/18 Analyzed: 12/21/18

Calcium	73.0	1.0	mg/L	5.00	73.9	NR	70-130			QM-7
Magnesium	27.5	1.0	"	5.00	25.8	35	70-130			QM-7
Potassium	7.02	1.0	"	5.00	2.58	89	70-130			
Sodium	67.8	1.0	"	5.00	68.1	NR	70-130			QM-7

Batch 1810777 - General Preparation

Blank (1810777-BLK1)

Prepared: 12/20/18 Analyzed: 12/21/18

Total Dissolved Solids	ND	10	mg/L							

Duplicate (1810777-DUP1)

Source: 18L0968-01

Prepared: 12/20/18 Analyzed: 12/21/18

Total Dissolved Solids	212	10	mg/L		214			0.9	20	

Batch 1810779 - General Preparation

Blank (1810779-BLK1)

Prepared & Analyzed: 12/20/18

Cyanide (total)	2.20	5.0	µg/L							J



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EMKO Environmental, Inc.
551 Lakecrest Dr.
El Dorado Hills, CA 95762

Project: Brunswick NPDES
Project Number: [none]
Project Manager: Dr. Andrew Kopania

CLS Work Order #: 18L0968
COC #: 194536, 194533, 194691, 194534

Conventional Chemistry Parameters by APHA/EPA Methods - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes

Batch 1810779 - General Preparation

LCS (1810779-BS1)

Prepared & Analyzed: 12/20/18

Cyanide (total)	88.3	5.0	µg/L	100	88	75-125

LCS Dup (1810779-BSD1)

Prepared & Analyzed: 12/20/18

Cyanide (total)	89.5	5.0	µg/L	100	90	75-125	1	25

Matrix Spike (1810779-MS1)

Source: 18L0968-01

Prepared & Analyzed: 12/20/18

Cyanide (total)	94.2	5.0	µg/L	100	2.20	92	75-125

Matrix Spike Dup (1810779-MSD1)

Source: 18L0968-01

Prepared & Analyzed: 12/20/18

Cyanide (total)	88.3	5.0	µg/L	100	2.20	86	75-125	6	25



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551 Lakecrest Dr.
El Dorado Hills, CA 95762

Project: Brunswick NPDES
Project Number: [none]
Project Manager: Dr. Andrew Kopania

CLS Work Order #: 18L0968
COC #: 194536, 194533, 194691, 194534

Metals by EPA 200 Series Methods - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes

Batch 1810721 - EPA 200 Series

Blank (1810721-BLK1)

Prepared: 12/19/18 Analyzed: 12/21/18

Antimony	ND	5.0	µg/L
Arsenic	ND	1.0	"
Cadmium	ND	0.25	"
Chromium	ND	2.0	"
Copper	ND	0.50	"
Lead	ND	0.50	"
Nickel	ND	5.0	"
Selenium	ND	5.0	"
Silver	ND	1.0	"
Thallium	ND	1.0	"

LCS (1810721-BS1)

Prepared: 12/19/18 Analyzed: 12/21/18

Antimony	102	5.0	µg/L	100	102	85-115
Arsenic	98.6	1.0	"	100	99	85-115
Cadmium	107	0.25	"	100	107	85-115
Chromium	104	2.0	"	100	104	85-115
Copper	104	0.50	"	100	104	85-115
Lead	99.0	0.50	"	100	99	85-115
Nickel	103	5.0	"	100	103	85-115
Selenium	109	5.0	"	100	109	85-115
Silver	98.6	1.0	"	100	99	85-115
Thallium	101	1.0	"	100	101	85-115

Matrix Spike (1810721-MS1)

Source: 18L0855-01

Prepared: 12/19/18 Analyzed: 12/21/18

Antimony	98.0	5.0	µg/L	100	0.910	97	70-130
Arsenic	98.2	1.0	"	100	1.20	97	70-130
Cadmium	103	0.25	"	100	ND	103	70-130
Chromium	107	2.0	"	100	0.800	106	70-130
Copper	138	0.50	"	100	42.0	96	70-130
Lead	106	0.50	"	100	5.29	101	70-130
Nickel	98.5	5.0	"	100	0.570	98	70-130
Selenium	107	5.0	"	100	2.50	105	70-130



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El Dorado Hills, CA 95762

Project: Brunswick NPDES
Project Number: [none]
Project Manager: Dr. Andrew Kopania

CLS Work Order #: 18L0968
COC #: 194536, 194533, 194691, 194534

Metals by EPA 200 Series Methods - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes

Batch 1810721 - EPA 200 Series

Matrix Spike (1810721-MS1)		Source: 18L0855-01		Prepared: 12/19/18 Analyzed: 12/26/18						
Silver	26.4	1.0	µg/L	100	ND	26	70-130			QM-7
Thallium	102	1.0	"	100	0.150	102	70-130			

Matrix Spike (1810721-MS2)		Source: 18L0968-04		Prepared: 12/19/18 Analyzed: 12/21/18						
Antimony	98.7	5.0	µg/L	100	ND	99	70-130			
Arsenic	105	1.0	"	100	1.30	104	70-130			
Cadmium	107	0.25	"	100	ND	107	70-130			
Chromium	113	2.0	"	100	0.770	112	70-130			
Copper	109	0.50	"	100	2.00	107	70-130			
Lead	106	0.50	"	100	ND	106	70-130			
Nickel	110	5.0	"	100	4.47	106	70-130			
Selenium	113	5.0	"	100	ND	113	70-130			
Silver	29.7	1.0	"	100	ND	30	70-130			QM-7
Thallium	107	1.0	"	100	ND	107	70-130			

Batch 1810760 - EPA 200 Series

Blank (1810760-BLK1)				Prepared: 12/20/18 Analyzed: 12/21/18						
Aluminum	ND	50	µg/L							
Beryllium	ND	1.0	"							
Iron	13.1	100	"							J
Manganese	ND	20	"							
Zinc	ND	10	"							
Boron	ND	50	"							

LCS (1810760-BS1)				Prepared: 12/20/18 Analyzed: 12/21/18						
Aluminum	4400	50	µg/L	5000		88	85-115			
Beryllium	909	1.0	"	1000		91	85-115			
Iron	907	100	"	1000		91	85-115			
Manganese	968	20	"	1000		97	85-115			
Zinc	908	10	"	1000		91	85-115			
Boron	918	50	"	1000		92	85-115			



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EMKO Environmental, Inc.
551 Lakecrest Dr.
El Dorado Hills, CA 95762

Project: Brunswick NPDES
Project Number: [none]
Project Manager: Dr. Andrew Kopania

CLS Work Order #: 18L0968
COC #: 194536, 194533, 194691, 194534

Metals by EPA 200 Series Methods - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes

Batch 1810760 - EPA 200 Series

Matrix Spike (1810760-MS1)		Source: 18L0968-01		Prepared: 12/20/18 Analyzed: 12/21/18						
Aluminum	4550	50	µg/L	5000	15.9	91	70-130			
Beryllium	959	1.0	"	1000	ND	96	70-130			
Iron	2210	100	"	1000	1400	81	70-130			
Manganese	1210	20	"	1000	228	98	70-130			
Zinc	944	10	"	1000	5.54	94	70-130			
Boron	985	50	"	1000	26.4	96	70-130			

Matrix Spike (1810760-MS2)		Source: 18L0948-01		Prepared: 12/20/18 Analyzed: 12/21/18						
Aluminum	16100	50	µg/L	5000	12200	78	70-130			
Beryllium	917	1.0	"	1000	ND	92	70-130			
Iron	12100	100	"	1000	12000	11	70-130			QM-7
Manganese	1080	20	"	1000	158	92	70-130			
Zinc	933	10	"	1000	36.4	90	70-130			
Boron	1510	50	"	1000	610	90	70-130			

Batch 1810775 - EPA 7470A

Blank (1810775-BLK1)		Prepared & Analyzed: 12/20/18								
Mercury	ND	0.050	µg/L							

LCS (1810775-BS1)		Prepared & Analyzed: 12/20/18								
Mercury	4.96	0.050	µg/L	5.00		99	85-115			

Matrix Spike (1810775-MS1)		Source: 18L0925-01		Prepared & Analyzed: 12/20/18						
Mercury	4.67	0.050	µg/L	5.00	ND	93	70-130			

Matrix Spike (1810775-MS2)		Source: 18L0976-01		Prepared & Analyzed: 12/20/18						
Mercury	4.89	0.050	µg/L	5.00	0.0491	97	70-130			



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Project: Brunswick NPDES
Project Number: [none]
Project Manager: Dr. Andrew Kopania

CLS Work Order #: 18L0968
COC #: 194536, 194533, 194691, 194534

Organochlorine Pesticides by EPA Method 608 - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 1810754 - EPA 3510B GCNV										
Blank (1810754-BLK1)				Prepared: 12/19/18 Analyzed: 12/20/18						
Aldrin	ND	0.0050	µg/L							
alpha-BHC	ND	0.010	"							
beta-BHC	ND	0.0050	"							
delta-BHC	ND	0.0050	"							
gamma-BHC (Lindane)	ND	0.020	"							
Chlordane	ND	0.10	"							
4,4'-DDD	ND	0.050	"							
4,4'-DDE	ND	0.050	"							
4,4'-DDT	ND	0.010	"							
Dieldrin	ND	0.010	"							
Endosulfan I	ND	0.020	"							
Endosulfan II	ND	0.010	"							
Endosulfan sulfate	ND	0.050	"							
Endrin	ND	0.010	"							
Endrin aldehyde	ND	0.010	"							
Heptachlor	ND	0.010	"							
Heptachlor epoxide	ND	0.010	"							
Methoxychlor	ND	10	"							
Aroclor 1016	ND	0.50	"							
Aroclor 1221	ND	0.50	"							
Aroclor 1232	ND	0.50	"							
Aroclor 1242	ND	0.50	"							
Aroclor 1248	ND	0.50	"							
Aroclor 1254	ND	0.50	"							
Aroclor 1260	ND	0.50	"							
Toxaphene	ND	0.50	"							
Surrogate: Tetrachloro-meta-xylene	0.216		"	0.250		87	43-147			
Surrogate: Decachlorobiphenyl	0.231		"	0.250		92	43-139			



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551 Lakecrest Dr.
El Dorado Hills, CA 95762

Project: Brunswick NPDES
Project Number: [none]
Project Manager: Dr. Andrew Kopania

CLS Work Order #: 18L0968
COC #: 194536, 194533, 194691, 194534

Organochlorine Pesticides by EPA Method 608 - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes

Batch 1810754 - EPA 3510B GCNV

LCS (1810754-BS1)

Prepared: 12/19/18 Analyzed: 12/20/18

Aldrin	0.435	0.0050	µg/L	0.500		87	50-130			
gamma-BHC (Lindane)	0.421	0.020	"	0.500		84	50-130			
4,4'-DDT	0.413	0.010	"	0.500		83	50-134			
Dieldrin	0.455	0.010	"	0.500		91	48-129			
Endrin	0.447	0.010	"	0.500		89	30-147			
Heptachlor	0.429	0.010	"	0.500		86	34-137			
Surrogate: Tetrachloro-meta-xylene	0.184		"	0.250		74	43-147			
Surrogate: Decachlorobiphenyl	0.220		"	0.250		88	43-139			

LCS Dup (1810754-BSD1)

Prepared: 12/19/18 Analyzed: 12/20/18

Aldrin	0.495	0.0050	µg/L	0.500		99	50-130	13	30	
gamma-BHC (Lindane)	0.516	0.020	"	0.500		103	50-130	20	30	
4,4'-DDT	0.528	0.010	"	0.500		106	50-134	24	30	
Dieldrin	0.560	0.010	"	0.500		112	48-129	21	30	
Endrin	0.570	0.010	"	0.500		114	30-147	24	30	
Heptachlor	0.497	0.010	"	0.500		99	34-137	15	30	
Surrogate: Tetrachloro-meta-xylene	0.206		"	0.250		82	43-147			
Surrogate: Decachlorobiphenyl	0.250		"	0.250		100	43-139			

Matrix Spike (1810754-MS1)

Source: 18L0919-01

Prepared: 12/19/18 Analyzed: 12/20/18

Aldrin	0.440	0.0050	µg/L	0.500	ND	88	48-143			
gamma-BHC (Lindane)	0.446	0.020	"	0.500	ND	89	37-146			
4,4'-DDT	0.452	0.010	"	0.500	ND	90	56-161			
Dieldrin	0.467	0.010	"	0.500	ND	93	42-146			
Endrin	0.421	0.010	"	0.500	ND	84	28-137			
Heptachlor	0.444	0.010	"	0.500	ND	89	36-135			
Surrogate: Tetrachloro-meta-xylene	0.193		"	0.250		77	43-147			
Surrogate: Decachlorobiphenyl	0.231		"	0.250		93	43-139			



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El Dorado Hills, CA 95762

Project: Brunswick NPDES
Project Number: [none]
Project Manager: Dr. Andrew Kopania

CLS Work Order #: 18L0968
COC #: 194536, 194533, 194691, 194534

Organochlorine Pesticides by EPA Method 608 - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes

Batch 1810754 - EPA 3510B GCNV

Matrix Spike Dup (1810754-MSD1)	Source: 18L0919-01			Prepared: 12/19/18 Analyzed: 12/20/18						
Aldrin	0.411	0.0050	µg/L	0.500	ND	82	48-143	7	30	
gamma-BHC (Lindane)	0.420	0.020	"	0.500	ND	84	37-146	6	30	
4,4'-DDT	0.427	0.010	"	0.500	ND	85	56-161	6	30	
Dieldrin	0.442	0.010	"	0.500	ND	88	42-146	5	30	
Endrin	0.395	0.010	"	0.500	ND	79	28-137	7	30	
Heptachlor	0.414	0.010	"	0.500	ND	83	36-135	7	30	
Surrogate: Tetrachloro-meta-xylene	0.183		"	0.250		73	43-147			
Surrogate: Decachlorobiphenyl	0.223		"	0.250		89	43-139			



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El Dorado Hills, CA 95762

Project: Brunswick NPDES
Project Number: [none]
Project Manager: Dr. Andrew Kopania

CLS Work Order #: 18L0968
COC #: 194536, 194533, 194691, 194534

Polynuclear Aromatic Hydrocarbons by EPA Method 610 (HPLC) - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes

Batch 1810758 - EPA 3510B HPLC

Blank (1810758-BLK1)

Prepared: 12/19/18 Analyzed: 12/21/18

Acenaphthene	ND	0.50	µg/L							
Acenaphthylene	ND	0.20	"							
Anthracene	ND	0.20	"							
Benzo (a) anthracene	ND	0.20	"							
Benzo (a) pyrene	ND	0.10	"							
Benzo (g,h,i) perylene	ND	0.20	"							
Benzo (b) fluoranthene	ND	0.50	"							
Benzo (k) fluoranthene	ND	0.20	"							
Chrysene	ND	0.20	"							
Dibenz (a,h) anthracene	ND	0.10	"							
Fluoranthene	ND	0.20	"							
Fluorene	ND	0.20	"							
Indeno (1,2,3-cd) pyrene	ND	0.050	"							
Naphthalene	ND	0.20	"							
Phenanthrene	ND	0.20	"							
Pyrene	ND	0.20	"							
Surrogate: Terphenyl-dl4	0.959		"	1.00		96	70-130			

LCS (1810758-BS1)

Prepared: 12/19/18 Analyzed: 12/21/18

Benzo (g,h,i) perylene	1.25	0.20	µg/L	1.00		125	60-140			
Chrysene	1.07	0.20	"	1.00		107	60-140			
Phenanthrene	0.998	0.20	"	1.00		100	50-150			
Surrogate: Terphenyl-dl4	1.00		"	1.00		100	70-130			

LCS Dup (1810758-BSD1)

Prepared: 12/19/18 Analyzed: 12/21/18

Benzo (g,h,i) perylene	1.21	0.20	µg/L	1.00		121	60-140	3	35	
Chrysene	1.11	0.20	"	1.00		111	60-140	3	35	
Phenanthrene	1.08	0.20	"	1.00		108	50-150	8	35	
Surrogate: Terphenyl-dl4	1.01		"	1.00		101	70-130			



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551 Lakecrest Dr.
El Dorado Hills, CA 95762

Project: Brunswick NPDES
Project Number: [none]
Project Manager: Dr. Andrew Kopania

CLS Work Order #: 18L0968
COC #: 194536, 194533, 194691, 194534

Polynuclear Aromatic Hydrocarbons by EPA Method 610 (HPLC) - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes

Batch 1810758 - EPA 3510B HPLC

Matrix Spike (1810758-MS1)		Source: 18L1047-01		Prepared: 12/20/18 Analyzed: 12/21/18						
Benzo (g,h,i) perylene	1.22	0.20	µg/L	1.00	ND	122	60-140			
Chrysene	1.06	0.20	"	1.00	ND	106	60-140			
Phenanthrene	1.12	0.20	"	1.00	ND	112	50-150			
Surrogate: Terphenyl-d14	0.986		"	1.00		99	70-130			
Matrix Spike Dup (1810758-MSD1)		Source: 18L1047-01		Prepared: 12/20/18 Analyzed: 12/21/18						
Benzo (g,h,i) perylene	1.13	0.20	µg/L	1.00	ND	113	60-140	7	35	
Chrysene	0.998	0.20	"	1.00	ND	100	60-140	6	35	
Phenanthrene	1.00	0.20	"	1.00	ND	100	50-150	11	35	
Surrogate: Terphenyl-d14	0.903		"	1.00		90	70-130			



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El Dorado Hills, CA 95762

Project: Brunswick NPDES
Project Number: [none]
Project Manager: Dr. Andrew Kopania

CLS Work Order #: 18L0968
COC #: 194536, 194533, 194691, 194534

Purgeables by EPA Method 624 - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes

Batch 1810803 - EPA 5030 Water MS

Blank (1810803-BLK1)

Prepared & Analyzed: 12/20/18

Acrolein	ND	2.0	µg/L
Acrylonitrile	ND	2.0	"
Benzene	ND	0.50	"
Bromoform	ND	0.50	"
Carbon tetrachloride	ND	0.50	"
Chlorobenzene	ND	0.50	"
Dibromochloromethane	ND	0.50	"
Chloroethane	ND	0.50	"
2-Chloroethylvinyl ether	ND	1.0	"
Chloroform	ND	0.50	"
Bromodichloromethane	ND	0.50	"
1,1-Dichloroethane	ND	0.50	"
1,2-Dichloroethane	ND	0.50	"
1,1-Dichloroethene	ND	0.50	"
1,2-Dichloropropane	ND	0.50	"
1,3-Dichloropropene (total)	ND	0.50	"
Ethylbenzene	ND	2.0	"
Bromomethane	ND	0.50	"
Chloromethane	ND	2.0	"
Methylene chloride	ND	2.0	"
1,1,2,2-Tetrachloroethane	ND	0.50	"
Tetrachloroethene	ND	0.50	"
Toluene	ND	2.0	"
trans-1,2-Dichloroethene	ND	1.0	"
1,1,1-Trichloroethane	ND	0.50	"
1,1,2-Trichloroethane	ND	0.50	"
Trichloroethene	ND	2.0	"
Vinyl chloride	ND	0.50	"
1,2-Dichlorobenzene	ND	0.50	"
1,3-Dichlorobenzene	ND	2.0	"
1,4-Dichlorobenzene	ND	0.50	"



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Project: Brunswick NPDES
Project Number: [none]
Project Manager: Dr. Andrew Kopania

CLS Work Order #: 18L0968
COC #: 194536, 194533, 194691, 194534

Purgeables by EPA Method 624 - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes

Batch 1810803 - EPA 5030 Water MS

Blank (1810803-BLK1)

Prepared & Analyzed: 12/20/18

Hexachlorobutadiene	ND	1.0	µg/L							
1,2,4-Trichlorobenzene	ND	5.0	"							
Xylenes (total)	ND	0.50	"							
Styrene	ND	0.50	"							
1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113)	ND	10	"							
cis-1,2-Dichloroethene	ND	0.50	"							
Naphthalene	ND	1.0	"							
Trichlorofluoromethane	ND	5.0	"							
Total Trihalomethanes (THM)	ND	0.50	"							
Methyl tert-butyl ether	ND	3.0	"							
Surrogate: 1,2-Dichloroethane-d4	9.07		"	10.0		91	66-135			
Surrogate: Toluene-d8	11.0		"	10.0		110	72-125			
Surrogate: 4-Bromofluorobenzene	11.8		"	10.0		118	73-125			

LCS (1810803-BS1)

Prepared & Analyzed: 12/20/18

Benzene	20.6	0.50	µg/L	20.0		103	60-135			
Chlorobenzene	17.4	0.50	"	20.0		87	60-133			
1,1-Dichloroethene	22.1	0.50	"	20.0		111	42-150			
Toluene	17.8	2.0	"	20.0		89	60-137			
Trichloroethene	22.2	2.0	"	20.0		111	62-140			
Surrogate: 1,2-Dichloroethane-d4	9.01		"	10.0		90	66-135			
Surrogate: Toluene-d8	11.4		"	10.0		114	72-125			
Surrogate: 4-Bromofluorobenzene	11.3		"	10.0		113	73-125			

LCS Dup (1810803-BSD1)

Prepared & Analyzed: 12/20/18

Benzene	22.9	0.50	µg/L	20.0		115	60-135	11	25	
Chlorobenzene	17.8	0.50	"	20.0		89	60-133	2	25	
1,1-Dichloroethene	21.9	0.50	"	20.0		110	42-150	0.9	25	
Toluene	17.0	2.0	"	20.0		85	60-137	5	25	
Trichloroethene	21.3	2.0	"	20.0		107	62-140	4	25	
Surrogate: 1,2-Dichloroethane-d4	8.30		"	10.0		83	66-135			



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551 Lakecrest Dr.
El Dorado Hills, CA 95762

Project: Brunswick NPDES
Project Number: [none]
Project Manager: Dr. Andrew Kopania

CLS Work Order #: 18L0968
COC #: 194536, 194533, 194691, 194534

Purgeables by EPA Method 624 - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes

Batch 1810803 - EPA 5030 Water MS

LCS Dup (1810803-BSD1)

Prepared & Analyzed: 12/20/18

Surrogate: Toluene-d8	12.0		µg/L	10.0		120	72-125			
Surrogate: 4-Bromofluorobenzene	10.8		"	10.0		108	73-125			

Matrix Spike (1810803-MS1)

Source: 18L1047-01

Prepared & Analyzed: 12/20/18

Benzene	25.6	0.50	µg/L	20.0	ND	128	32-152			
Chlorobenzene	23.6	0.50	"	20.0	ND	118	62-134			
1,1-Dichloroethene	23.8	0.50	"	20.0	ND	119	32-152			
Toluene	18.8	2.0	"	20.0	3.53	76	58-139			
Trichloroethene	22.5	2.0	"	20.0	ND	113	55-138			
Surrogate: 1,2-Dichloroethane-d4	9.46		"	10.0		95	66-135			
Surrogate: Toluene-d8	11.6		"	10.0		116	72-125			
Surrogate: 4-Bromofluorobenzene	10.8		"	10.0		108	73-125			

Matrix Spike Dup (1810803-MSD1)

Source: 18L1047-01

Prepared & Analyzed: 12/20/18

Benzene	22.0	0.50	µg/L	20.0	ND	110	32-152	15	25	
Chlorobenzene	21.7	0.50	"	20.0	ND	109	62-134	8	25	
1,1-Dichloroethene	22.9	0.50	"	20.0	ND	114	32-152	4	25	
Toluene	17.7	2.0	"	20.0	3.53	71	58-139	6	25	
Trichloroethene	22.5	2.0	"	20.0	ND	113	55-138	0	25	
Surrogate: 1,2-Dichloroethane-d4	11.6		"	10.0		116	66-135			
Surrogate: Toluene-d8	11.0		"	10.0		110	72-125			
Surrogate: 4-Bromofluorobenzene	8.57		"	10.0		86	73-125			



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EMKO Environmental, Inc.
551 Lakecrest Dr.
El Dorado Hills, CA 95762

Project: Brunswick NPDES
Project Number: [none]
Project Manager: Dr. Andrew Kopania

CLS Work Order #: 18L0968
COC #: 194536, 194533, 194691, 194534

Notes and Definitions

QM-7	The spike recovery was outside acceptance limits for the MS and/or MSD. The batch was accepted based on acceptable LCS and/or LCSD recovery.
J	Detected but below the Reporting Limit; therefore, result is an estimated concentration.
Cr3	The result was obtained based upon the assumption that total chromium is the summation of trivalent chromium and hexavalent chromium.
DET	Analyte DETECTED
ND	Analyte NOT DETECTED at or above the reporting limit (or method detection limit when specified)
NR	Not Reported
dry	Sample results reported on a dry weight basis
RPD	Relative Percent Difference



McC Campbell Analytical, Inc.

"When Quality Counts"

Analytical Report

WorkOrder: 1812967

Report Created for: CLS Labs

3249 Fitzgerald Road
Rancho Cordova, CA 95742

Project Contact: Mark Smith

Project P.O.:

Project: 18L0968

Project Received: 12/19/2018

Analytical Report reviewed & approved for release on 12/26/2018 by:

Christine Askari
Project 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: CLS Labs

Project: 18L0968

WorkOrder: 1812967

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
ERS	External reference sample. Second source calibration verification.
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
TZA	TimeZone Net Adjustment for sample collected outside of MAI's UTC.
WET (STLC)	Waste Extraction Test (Soluble Threshold Limit Concentration)



Glossary of Terms & Qualifier Definitions

Client: CLS Labs
Project: 18L0968
WorkOrder: 1812967

Aquatic Toxicity Test Abbreviation

--	No Data, Cell Intended to be Blank
ANOVA	Analysis of Variance
ASTM	American Society for Testing and Materials
AUX	Auxiliary Control
Aux Control	Method Blank or Lab Control water subjected to same treatment as the 100% sample.
BLK	Treatment Blank
CFR	Code of Federal Regulations
CTL	Laboratory Control
CV	Coefficient of Variation
EPA	U.S. Environmental Protection Agency
IC25	Inhibition Concentration, 25 percent
IWC	Instream Waste Concentration
LC50	Lethal Concentration, 50 percent
LOEC	Lowest Observed Effect Concentration
MDL	Maximum Daily Limit
MSD	Minimum Significant Difference
N/A	Not Applicable
NELAP	National Environment Laboratory Accreditation Program
NM	Not Measured
NOEC	No Observed Effect Concentration
NPDES	National Pollutant Discharge Elimination System
PMSD	Percent Minimum Significant Difference
QA	Quality Assurance
QC	Quality Control
RW	Receiving Water
RWC	Receiving Water Concentration
TAC	Test Acceptability Criteria
TIE	Toxicity Identification Evaluation
TMDL	Total Maximum Daily Load
TRE	Toxicity Reduction Evaluation
TSD	EPA's Technical Support Document for Water Quality-based Toxics Control
TU	Toxic Unit (T _{ua} = acute toxicity; T _{uc} = chronic toxicity)
VF	Variability Factor
WLA	Waste Load Allocation



Analytical Report

Client: CLS Labs
Date Received: 12/19/18 10:10
Project: 18L0968

WorkOrder: 1812967
Analytical Method: EPA 2019.0
Sample Matrix: Water

Acute (96hr) 100% Concentration Only Fish Bioassay with a 48hr Renewal Using Rainbow Trout

Lab ID		1812967-001A		Species		Oncorhynchus mykiss		Organism Age (Days)		23	
Client ID		NBS-Pump		Common Name		Rainbow Trout		T0 Feed		N/A	
Control Water Batch#		EPAMH 156		Organism Supplier		TFC		T48 Feed		N/A	
Control Water		Moderately hard synthetic water		Organism Log#		181218RBT		Sample Type		Effluent	
Randomization No		2.2.A		BatchID		170234		Test Location		TR1.2B	
Concentration	Temperature (°C)	pH		D. O. (mg/L)		EC (µS/cm)		Survival		Comments	
	Initial	Initial	Final	Initial	Final	Initial	Final	A	B		
Control	12.8	7.89		9.20		341		10	10	DateTime:	12/19/18 16:47
100%	12.7	7.46		9.90		405		10	10	SampleID:	1812967-001A
Meter ID	1AT	MM02		MM02		MM02				Soln Prep:	AA
										New WQ:	AA
										Test Init.:	CP
Control	12.1		7.49		8.90		346	10	10	DateTime:	12/20/18 11:15
100%	12.3		7.50		8.76		408	10	10	Test Maint:	CP
Meter ID	1AT		MM02		MM02		MM02			Old WQ:	CP
Control	12.2	8.07	7.73	9.43	8.56	341	349	10	10	DateTime:	12/21/18 14:55
100%	12.3	7.54	7.75	10.1	7.97	403	408	10	10	SampleID:	1812967-001A
Meter ID	1AT	MM02	MM02	MM02	MM02	MM02	MM02			Soln Prep:	CP
										New WQ:	RAP
										Test Maint:	CP
										Old WQ:	CP
Control	12.4		7.56		8.65		345	10	10	DateTime:	12/22/18 9:07
100%	12.3		7.79		8.40		407	10	10	Test Maint:	AA
Meter ID	1AT		MM02		MM02		MM02			Old WQ:	AA
Control	12.1		7.51		8.46		350	10	10	DateTime:	12/23/18 14:55
100%	12.2		7.97		7.97		412	10	10	Test Term.:	RAP
Meter ID	1AT		MM02		MM02		MM02			Old WQ:	RAP

(Cont.)



Analytical Report

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WorkOrder: 1812967
Analytical Method: EPA 2019.0
Sample Matrix: Water

Acute (96hr) 100% Concentration Only Fish Bioassay with a 48hr Renewal Using Rainbow Trout

Lab ID	1812967-001A	Species	<i>Oncorhynchus mykiss</i>	Organism Age (Days)	23
Client ID	NBS-Pump	Common Name	Rainbow Trout	T0 Feed	N/A
Control Water Batch#	EPAMH 156	Organism Supplier	TFC	T48 Feed	N/A
Control Water	Moderately hard synthetic water	Organism Log#	181218RBT	Sample Type	Effluent
Randomization No	2.2.A	BatchID	170234	Test Location	TR1.2B

Sample LogIn Water Quality Characteristics

Sample ID	Sample Collected DateTime	Sample Received DateTime	Temp (°C)	pH	Dissolved O ₂ (mg/L)	Specific Conductivity (uS/cm)	Bulk WQ Scientist	Total Chlorine (mg Cl ₂ /L)	Total Ammonia (mg NH ₃ -N/L)	Hardness (mg CaCO ₃ /L)	Total Alkalinity (mg CaCO ₃ /L)
1812967-001A	12/18/18 11:04	12/19/18 10:10	1.4	7.22	8.63	405.8	CP	<0.03	<0.05	197	217
--	--	--	--	--	--	--	--	--	--	--	--

Result: This sample passed the effluent toxicity test. There was 100% survival in the Control treatment and 100% survival in the 100% effluent treatment after 96hrs.

12/21/18: Only one 10 Liter effluent sample was provided for initiation & renewal, therefore could only preform a 25% renewal on day 2. Client was notified regarding the limited volume for the test solution renewal prior to test initiation. -CP



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Client: CLS Labs
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WorkOrder: 1812967
Analytical Method: EPA 2019.0
Sample Matrix: Water

Acute (96hr) 100% Concentration Only Fish Bioassay with a 48hr Renewal Using Rainbow Trout

Lab ID		1812967-002A		Species		Oncorhynchus mykiss		Organism Age (Days)		23	
Client ID		WC-Down		Common Name		Rainbow Trout		T0 Feed		N/A	
Control Water Batch#		EPAMH 156		Organism Supplier		TFC		T48 Feed		N/A	
Control Water		Moderately hard synthetic water		Organism Log#		181218RBT		Sample Type		Effluent	
Randomization No		2.2.A		BatchID		170234		Test Location		TR1.2B	
Concentration	Temperature (°C)	pH		D. O. (mg/L)		EC (µS/cm)		Survival		Comments	
	Initial	Initial	Final	Initial	Final	Initial	Final	A	B		
Control	12.8	7.89		9.20		341		10	10	DateTime:	12/19/18 16:47
100%	12.7	7.56		11.8		163		10	10	SampleID:	1812967-002A
Meter ID	1AT	MM02		MM02		MM02				Soln Prep:	AA
										New WQ:	AA
										Test Init.:	CP
Control	12.1		7.49		8.90		346	10	10	DateTime:	12/20/18 11:15
100%	12.3		7.41		9.71		162	10	10	Test Maint:	CP
Meter ID	1AT		MM02		MM02		MM02			Old WQ:	CP
Control	12.2	8.07	7.73	9.43	8.56	341	349	10	10	DateTime:	12/21/18 14:55
100%	12.3	7.61	7.63	10.5	8.30	159	164	10	10	SampleID:	1812967-002A
Meter ID	1AT	MM02	MM02	MM02	MM02	MM02	MM02			Soln Prep:	CP
										New WQ:	RAP
										Test Maint:	CP
										Old WQ:	CP
Control	12.4		7.56		8.65		345	10	10	DateTime:	12/22/18 9:07
100%	12.3		7.48		7.85		163	10	10	Test Maint:	AA
Meter ID	1AT		MM02		MM02		MM02			Old WQ:	AA
Control	12.1		7.51		8.46		350	10	10	DateTime:	12/23/18 14:55
100%	12.3		7.52		8.22		167	10	10	Test Term.:	RAP
Meter ID	1AT		MM02		MM02		MM02			Old WQ:	RAP

(Cont.)



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Acute (96hr) 100% Concentration Only Fish Bioassay with a 48hr Renewal Using Rainbow Trout

Lab ID	1812967-002A	Species	<i>Oncorhynchus mykiss</i>	Organism Age (Days)	23
Client ID	WC-Down	Common Name	Rainbow Trout	T0 Feed	N/A
Control Water Batch#	EPAMH 156	Organism Supplier	TFC	T48 Feed	N/A
Control Water	Moderately hard synthetic water	Organism Log#	181218RBT	Sample Type	Effluent
Randomization No	2.2.A	BatchID	170234	Test Location	TR1.2B

Sample LogIn Water Quality Characteristics

Sample ID	Sample Collected DateTime	Sample Received DateTime	Temp (°C)	pH	Dissolved O ₂ (mg/L)	Specific Conductivity (uS/cm)	Bulk WQ Scientist	Total Chlorine (mg Cl ₂ /L)	Total Ammonia (mg NH ₃ -N/L)	Hardness (mg CaCO ₃ /L)	Total Alkalinity (mg CaCO ₃ /L)
1812967-002A	12/18/18 13:25	12/19/18 10:10	1.4	7.25	11.47	158.6	CP	<0.03	<0.05	76	77
--	--	--	--	--	--	--	--	--	--	--	--

Result: This sample passed the effluent toxicity test. There was 100% survival in the Control treatment and 100% survival in the 100% effluent treatment after 96hrs.

12/21/18: Only one 10 Liter effluent sample was provided for initiation & renewal, therefore could only preform a 25% renewal on day 2. Client was notified regarding the limited volume for the test solution renewal prior to test initiation. -CP



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Sample Matrix: Water

Acute (96hr) 100% Concentration Only Fish Bioassay with a 48hr Renewal Using Rainbow Trout

Lab ID		1812967-003A		Species		Oncorhynchus mykiss		Organism Age (Days)		23	
Client ID		WC-Mid		Common Name		Rainbow Trout		T0 Feed		N/A	
Control Water Batch#		EPAMH 156		Organism Supplier		TFC		T48 Feed		N/A	
Control Water		Moderately hard synthetic water		Organism Log#		181218RBT		Sample Type		Effluent	
Randomization No		2.2.A		BatchID		170234		Test Location		TR1.2B	
Concentration	Temperature (°C)	pH		D. O. (mg/L)		EC (µS/cm)		Survival		Comments	
	Initial	Initial	Final	Initial	Final	Initial	Final	A	B		
Control	12.8	7.89		9.20		341		10	10	DateTime:	12/19/18 16:47
100%	12.8	7.70		11.6		135		10	10	SampleID:	1812967-003A
Meter ID	1AT	MM02		MM02		MM02				Soln Prep:	AA
										New WQ:	AA
										Test Init.:	CP
Control	12.1		7.49		8.90		346	10	10	DateTime:	12/20/18 11:15
100%	12.3		7.41		9.61		135	10	10	Test Maint:	CP
Meter ID	1AT		MM02		MM02		MM02			Old WQ:	CP
Control	12.2	8.07	7.73	9.43	8.56	341	349	10	10	DateTime:	12/21/18 14:55
100%	12.3	7.69	7.43	11.1	8.42	134	136	10	10	SampleID:	1812967-003A
Meter ID	1AT	MM02	MM02	MM02	MM02	MM02	MM02			Soln Prep:	CP
										New WQ:	RAP
										Test Maint:	CP
										Old WQ:	CP
Control	12.4		7.56		8.65		345	10	10	DateTime:	12/22/18 9:07
100%	12.3		7.41		8.27		136	10	10	Test Maint:	AA
Meter ID	1AT		MM02		MM02		MM02			Old WQ:	AA
Control	12.1		7.51		8.46		350	10	10	DateTime:	12/23/18 14:55
100%	12.3		7.39		8.56		139	10	10	Test Term.:	RAP
Meter ID	1AT		MM02		MM02		MM02			Old WQ:	RAP

(Cont.)



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Lab ID	1812967-003A	Species	<i>Oncorhynchus mykiss</i>	Organism Age (Days)	23
Client ID	WC-Mid	Common Name	Rainbow Trout	T0 Feed	N/A
Control Water Batch#	EPAMH 156	Organism Supplier	TFC	T48 Feed	N/A
Control Water	Moderately hard synthetic water	Organism Log#	181218RBT	Sample Type	Effluent
Randomization No	2.2.A	BatchID	170234	Test Location	TR1.2B

Sample LogIn Water Quality Characteristics

Sample ID	Sample Collected DateTime	Sample Received DateTime	Temp (°C)	pH	Dissolved O ₂ (mg/L)	Specific Conductivity (uS/cm)	Bulk WQ Scientist	Total Chlorine (mg Cl ₂ /L)	Total Ammonia (mg NH ₃ -N/L)	Hardness (mg CaCO ₃ /L)	Total Alkalinity (mg CaCO ₃ /L)
1812967-003A	12/18/18 12:02	12/19/18 10:10	1.4	7.42	11.8	133	CP	<0.03	<0.05	61	61
--	--	--	--	--	--	--	--	--	--	--	--

Result: This sample passed the effluent toxicity test. There was 100% survival in the Control treatment and 100% survival in the 100% effluent treatment after 96hrs.

12/21/18: Only one 10 Liter effluent sample was provided for initiation & renewal, therefore could only preform a 25% renewal on day 2. Client was notified regarding the limited volume for the test solution renewal prior to test initiation. -CP



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Acute (96hr) 100% Concentration Only Fish Bioassay with a 48hr Renewal Using Rainbow Trout

Lab ID		1812967-004A		Species		Oncorhynchus mykiss		Organism Age (Days)		23	
Client ID		WC-Up		Common Name		Rainbow Trout		T0 Feed		N/A	
Control Water Batch#		EPAMH 156		Organism Supplier		TFC		T48 Feed		N/A	
Control Water		Moderately hard synthetic water		Organism Log#		181218RBT		Sample Type		Effluent	
Randomization No		2.2.A		BatchID		170234		Test Location		TR1.2B	
Concentration	Temperature (°C)	pH		D. O. (mg/L)		EC (µS/cm)		Survival		Comments	
	Initial	Initial	Final	Initial	Final	Initial	Final	A	B		
Control	12.8	7.89		9.20		341		10	10	DateTime:	12/19/18 16:47
100%	12.7	7.76		11.7		202		10	10	SampleID:	1812967-004A
Meter ID	1AT	MM02		MM02		MM02				Soln Prep:	AA
										New WQ:	AA
										Test Init.:	CP
Control	12.1		7.49		8.90		346	10	10	DateTime:	12/20/18 11:15
100%	12.2		7.59		9.74		210	10	10	Test Maint:	CP
Meter ID	1AT		MM02		MM02		MM02			Old WQ:	CP
Control	12.2	8.07	7.73	9.43	8.56	341	349	10	10	DateTime:	12/21/18 14:55
100%	12.3	7.79	7.44	11.1	8.50	202	212	10	10	SampleID:	1812967-004A
Meter ID	1AT	MM02	MM02	MM02	MM02	MM02	MM02			Soln Prep:	CP
										New WQ:	RAP
										Test Maint:	CP
										Old WQ:	CP
Control	12.4		7.56		8.65		345	10	10	DateTime:	12/22/18 9:07
100%	12.3		7.50		8.17		209	10	10	Test Maint:	AA
Meter ID	1AT		MM02		MM02		MM02			Old WQ:	AA
Control	12.1		7.51		8.46		350	10	10	DateTime:	12/23/18 14:55
100%	12.3		7.51		8.30		212	10	10	Test Term.:	RAP
Meter ID	1AT		MM02		MM02		MM02			Old WQ:	RAP

(Cont.)



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WorkOrder: 1812967
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Acute (96hr) 100% Concentration Only Fish Bioassay with a 48hr Renewal Using Rainbow Trout

Lab ID	1812967-004A	Species	<i>Oncorhynchus mykiss</i>	Organism Age (Days)	23
Client ID	WC-Up	Common Name	Rainbow Trout	T0 Feed	N/A
Control Water Batch#	EPAMH 156	Organism Supplier	TFC	T48 Feed	N/A
Control Water	Moderately hard synthetic water	Organism Log#	181218RBT	Sample Type	Effluent
Randomization No	2.2.A	BatchID	170234	Test Location	TR1.2B

Sample LogIn Water Quality Characteristics

Sample ID	Sample Collected DateTime	Sample Received DateTime	Temp (°C)	pH	Dissolved O ₂ (mg/L)	Specific Conductivity (uS/cm)	Bulk WQ Scientist	Total Chlorine (mg Cl ₂ /L)	Total Ammonia (mg NH ₃ -N/L)	Hardness (mg CaCO ₃ /L)	Total Alkalinity (mg CaCO ₃ /L)
1812967-004A	12/18/18 12:46	12/19/18 10:10	1.4	7.47	11.91	202.2	CP	<0.03	<0.05	95	89
--	--	--	--	--	--	--	--	--	--	--	--

Result: This sample passed the effluent toxicity test. There was 100% survival in the Control treatment and 100% survival in the 100% effluent treatment after 96hrs.

12/21/18: Only one 10 Liter effluent sample was provided for initiation & renewal, therefore could only preform a 25% renewal on day 2. Client was notified regarding the limited volume for the test solution renewal prior to test initiation. -CP



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

CHAIN-OF-CUSTODY RECORD

WorkOrder: 1812967

ClientCode: CLSR

☐ WaterTrax☐ WriteOn☐ EDF☐ Excel☒ EQulS☒ Email☐ HardCopy☐ ThirdParty☐ J-flag☒ Detection Summary☐ Dry-Weight

Report to:

Mark Smith

CLS Labs

3249 Fitzgerald Road

Rancho Cordova, CA 95742

(916) 638-7301 FAX: (916) 638-4510

Email: marks@californialab.com; dataroom@calif

cc/3rd Party:

PO:

Project: 18L0968

Bill to:

Accounts Payable

CLS Labs

3249 Fitzgerald Road

Rancho Cordova, CA 95742

Requested TAT: 10 days;

Date Received: 12/19/2018**Date Logged: 12/19/2018**

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
1812967-001	NBS-Pump	Water	12/18/2018 11:04	☐	A											
1812967-002	WC-Down	Water	12/18/2018 13:25	☐	A											
1812967-003	WC-Mid	Water	12/18/2018 12:02	☐	A											
1812967-004	WC-Up	Water	12/18/2018 12:46	☐	A											

Test Legend:

1	AAOM_Scn_96_R2
5	
9	

2	
6	
10	

3	
7	
11	

4	
8	
12	

Prepared by: Jena Alfaro

Comments:

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.



McC Campbell Analytical, Inc.

"When Quality Counts"

1534 Willow Pass Road, Pittsburg, CA 94565-1701
Toll Free Telephone: (877) 252-9262 / Fax: (925) 252-9269
http://www.mccampbell.com / E-mail: main@mccampbell.com

WORK ORDER SUMMARY

Client Name: CLS LABS

Project: 18L0968

Work Order: 1812967

Client Contact: Mark Smith

QC Level: LEVEL 2

Contact's Email: marks@californialab.com; dataroom@californialab.com

Comments:

Date Logged: 12/19/2018

☐ WaterTrax ☐ WriteOn ☐ EDF ☐ Excel ☐ EQUIS ☒ 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
1812967-001A	NBS-Pump	Water	Acute 96-hr Static 48-hr Renewal Screen w/ RBT	2	2.5 G HDPE	☐	12/18/2018 11:04	10 days		☐	
1812967-002A	WC-Down	Water	Acute 96-hr Static 48-hr Renewal Screen w/ RBT	2	2.5 G HDPE	☐	12/18/2018 13:25	10 days		☐	
1812967-003A	WC-Mid	Water	Acute 96-hr Static 48-hr Renewal Screen w/ RBT	2	2.5 G HDPE	☐	12/18/2018 12:02	10 days		☐	
1812967-004A	WC-Up	Water	Acute 96-hr Static 48-hr Renewal Screen w/ RBT	2	2.5 G HDPE	☐	12/18/2018 12:46	10 days		☐	

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).

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

SUBCONTRACT ORDER

18L0968

1812967
QUOTE ID-
182034SENDING LABORATORY:

CLS Labs
3249 Fitzgerald Rd.
Rancho Cordova, CA 95742
Phone: 916-638-7301
Fax: 916-638-4510
Project Manager: Mark Smith
~~Project: Brunswick NPDES~~

RECEIVING LABORATORY:

McCampbell Analytical Inc.
1534 Willow Pass Road
Pittsburg, CA 94565-1701
Phone : (925) 252-9262
Fax: (925) 252-9269

Analysis	TAT	Due	Expires	Laboratory ID	Sample Date	Received	Matrix
Bioassay-Acute Tox, Rainbow Trout SUB	10	01/04/19 12:00	12/19/18 23:04	18L0968-01	12/18/18 11:04	12/18/18 16:00	Water

Client sample ID: NBS-Pump

~~Sampler:~~

Laboratory sample ID: 18L0968-01

Please use client sample ID on all reports

Containers Supplied:

2.5 gal Cubitainer (S)

Bioassay-Acute Tox, Rainbow Trout SUB	10	01/04/19 12:00	12/20/18 01:25	18L0968-02	12/18/18 13:25	12/18/18 16:00	Water

Client sample ID: WC-Down

~~Sampler:~~

Laboratory sample ID: 18L0968-02

Please use client sample ID on all reports

Containers Supplied:

2.5 gal Cubitainer (S)

Bioassay-Acute Tox, Rainbow Trout SUB	10	01/04/19 12:00	12/20/18 00:02	18L0968-03	12/18/18 12:02	12/18/18 16:00	Water

Client sample ID: WC-Mid

~~Sampler:~~

Laboratory sample ID: 18L0968-03

Please use client sample ID on all reports

Containers Supplied:

2.5 gal Cubitainer (S)

Relinquished By

Date

Received By

Date

Relinquished By

Date

Received By

Date

Shipped By

Airbill Number

Page 5 of 6

SUBCONTRACT ORDER

18L0968

Analysis	TAT	Due	Expires	Laboratory ID	Sample Date	Received	Matrix
Bioassay-Acute Tox, Rainbow Trout SUB	10	01/04/19 12:00	12/20/18 00:46	18L0968-04	12/18/18 12:46	12/18/18 16:00	Water

Client sample ID: WC-Up

~~Sampler~~

Laboratory sample ID: 18L0968-04

Please use client sample ID on all reports

Containers Supplied:

2.5 gal Cubitainer (S)

Relinquished By

Date

Received By

Date

Relinquished By

Date

Received By

Date

Shipped By

Airbill Number

Page 6 of 6



Sample Receipt Checklist

Client Name: **CLS Labs**
Project: **18L0968**

Date and Time Received **12/19/2018 10:10**

Date Logged: **12/19/2018**

Received by: **Jena Alfaro**

Logged by: **Jena Alfaro**

WorkOrder No: **1812967** Matrix: Water
Carrier: Client Drop-In

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 ☒	
COC agrees with Quote?	Yes ☐	No ☐	NA ☒

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 ☐	NA ☐
Samples Received on Ice?	Yes ☒	No ☐	

(Ice Type: WET ICE)

Sample/Temp Blank temperature	Temp: 1.4°C	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; Nitrate 353.2/4500NO3: <2; 522: <4; 218.7: >8)?	Yes ☐ No ☐	NA ☒

UCMR Samples:

pH tested and acceptable upon receipt (200.8: ≤2; 525.3: ≤4; 530: ≤7; 541: <3; 544: <6.5 & 7.5)?	Yes ☐ No ☐	NA ☒
Free Chlorine tested and acceptable upon receipt (<0.1mg/L)?	Yes ☐ No ☐	NA ☒

Comments:



EMSL Analytical, Inc.

464 McCormick Street San Leandro, CA 94577
Phone/Fax: (510) 895-3675 / (510) 895-3680
<http://www.EMSL.com> / sanleandrolab@emsl.com

EMSL Order ID: 091826975
Customer ID: CALI52
Customer PO: 18L0968
Project ID:

Attn: Mark Smith
California Laboratory Services
3249 Fitzgerald Road
Rancho Cordova, CA 95742

Phone: (916) 638-7301
Fax: (916) 638-4510
Received: 12/19/2018
Analyzed: 01/02/2019

Proj: 18L0968

Test Report: Determination of Asbestos Structures >10µm in Drinking Water Performed by the 100.2 Method (EPA 600/R-94/134)

Sample ID Client / EMSL	Sample Filtration Date/Time	Original Sample Vol. Filtered (ml)	Effective Filter Area (mm ²)	Area Analyzed (mm ²)	ASBESTOS				
					Asbestos Types	Fibers Detected	Analytical Sensitivity	Concentration	Confidence Limits
					MFL (million fibers per liter)				
NBS-PUMP 091826975-0001	12/19/2018 02:17 PM	10	1298	0.2460	None Detected	ND	0.53	<0.53	0.00 - 1.90
Collection Date/Time: 12/18/2018 16:00									
Due to excessive particulate the analytical sensitivity of 0.2 MFL as required by the method was not reached.									
WC-DOWN 091826975-0002	12/19/2018 02:17 PM	50	1298	0.1353	None Detected	ND	0.19	<0.19	0.00 - 0.71
Collection Date/Time: 12/18/2018 16:00									
WC-MID 091826975-0003	12/19/2018 02:17 PM	50	1298	0.1353	None Detected	ND	0.19	<0.19	0.00 - 0.71
Collection Date/Time: 12/18/2018 16:00									
WC-UP 091826975-0004	12/19/2018 02:17 PM	50	1298	0.1353	None Detected	ND	0.19	<0.19	0.00 - 0.71
Collection Date/Time: 12/18/2018 16:00									

Analyst(s)

Vicky Zhao

(4)

Matthew Batongbacal
or Other Approved Signatory

Any questions please contact Matthew Batongbacal.

Initial report from: 01/02/2019 11:04:49

Sample collection and containers provided by the client, acceptable bottle blank level is defined as ≤ 0.01 MFL > 10µm. ND=None Detected. This report may not be reproduced, except in full, without written permission by EMSL Analytical, Inc. This report relates only to those items tested. Samples received in good condition unless otherwise noted.

Samples analyzed by EMSL Analytical, Inc San Leandro, CA CA ELAP 1620, HI reciprocity, ID CA 01477, WA C884

SUBCONTRACT ORDER

18L0968

091826975

SENDING LABORATORY:

CLS Labs
3249 Fitzgerald Rd.
Rancho Cordova, CA 95742
Phone: 916-638-7301
Fax: 916-638-4510
Project Manager: Mark Smith
Project: Brunswick NPDES

RECEIVING LABORATORY:

EMSL Analytical
464 McCormick Street
San Leandro, CA 94577
Phone: (510) 895-3675
Fax: (510) 895-3680

Analysis	TAT	Due	Expires	Laboratory ID	Sample Date	Received	Matrix
NPDES	10	01/04/19 12:00	12/20/18 11:04	18L0968-01	12/18/18 11:04	12/18/18 16:00	Water

Asbestos-Water SUB

Client sample ID: NBS-Pump

Laboratory sample ID: 18L0968-01

Please use client sample ID on all reports

Containers Supplied:

1L Amber- Unpres. (H)

NPDES	10	01/04/19 12:00	12/20/18 13:25	18L0968-02	12/18/18 13:25	12/18/18 16:00	Water

Asbestos-Water SUB

Client sample ID: WC-Down

Laboratory sample ID: 18L0968-02

Please use client sample ID on all reports

Containers Supplied:

1L Amber- Unpres. (H)

NPDES	10	01/04/19 12:00	12/20/18 12:02	18L0968-03	12/18/18 12:02	12/18/18 16:00	Water

Asbestos-Water SUB

Client sample ID: WC-Mid

Laboratory sample ID: 18L0968-03

Please use client sample ID on all reports

Containers Supplied:

1L Amber- Unpres. (H)

Relinquished By

Date

Received By

Date

Relinquished By

Date

Received By

Date

Shipped By

Airbill Number

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SUBCONTRACT ORDER

18L0968

091826975

Analysis	TAT	Due	Expires	Laboratory ID	Sample Date	Received	Matrix
NPDES Asbestos-Water SUB	10	01/04/19 12:00	12/20/18 12:46	18L0968-04	12/18/18 12:46	12/18/18 16:00	Water

Client sample ID: WC-Up

Sampler:

Laboratory sample ID: 18L0968-04

Please use client sample ID on all reports

Containers Supplied:

1L Amber- Unpres. (H)

Relinquished By

Date

Received By

Date

Relinquished By

Date

Received By

Date

Shipped By

Airbill Number

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January 8, 2019

FAL Project ID: 12089

Mr. Mark Smith
California Laboratory Services
3249 Fitzgerald Road
Rancho Cordova, CA 95742

Dear Mr. Smith,

The following results are associated with Frontier Analytical Laboratory project **12089**. This corresponds to your subcontract order number **18L0968**. Four aqueous samples were received on 12/19/2018 in good condition. These samples were extracted and analyzed by EPA Method 1613 for 2,3,7,8-TCDD only. Frontier Analytical Laboratory's standard turnaround time of ten business days was provided for project **12089**.

The following report consists of an Analytical Data section and a Sample Receipt section. The Analytical Data section contains our sample tracking log and the analytical results. The Sample Receipt section contains your chain of custody, our sample login form and a sample photo. The attached results are specifically for the samples referenced in this report only. These results meet all National Environmental Laboratory Accreditation Program (NELAP) requirements and shall not be reproduced except in full. Frontier Analytical Laboratory's State of Oregon NELAP certificate number is **4041** and our State of California ELAP certificate number is **2934**. This report has been emailed to you as a portable document format (PDF) file. A hardcopy will not be sent to you unless specifically requested.

If you have any questions regarding project **12089**, please feel free to contact me at (916) 934-0900. Thank you for choosing Frontier Analytical Laboratory for your analytical testing needs.

Sincerely,

A handwritten signature in black ink, appearing to read "Bradley B. Silverbush".

Bradley B. Silverbush
Director of Operations

Frontier Analytical Laboratory

Sample Tracking Log

FAL Project ID: 12089

Received on: 12/19/2018

Project Due: 01/07/2019 Storage: R-3

FAL Sample ID	Dup	Client Project ID	Client Sample ID	Requested Method	Matrix	Sampling Date	Sampling Time	Hold Time Due Date
12089-001-SA	0	18L0968	NBS-Pump	EPA 1613 TCDD	Aqueous	12/18/2018	11:04 am	12/18/2019
12089-002-SA	0	18L0968	WC-Down	EPA 1613 TCDD	Aqueous	12/18/2018	01:25 pm	12/18/2019
12089-003-SA	0	18L0968	WC-Mid	EPA 1613 TCDD	Aqueous	12/18/2018	12:02 pm	12/18/2019
12089-004-SA	0	18L0968	WC-Up	EPA 1613 TCDD	Aqueous	12/18/2018	12:46 pm	12/18/2019

EPA Method 1613
TCDD



FAL ID: 12089-001-MB
Client ID: Method Blank
Matrix: Aqueous
Batch No: X4756

Date Extracted: 01-03-2019
Date Received: NA
Amount: 1.000 L

ICal: PCDDFAL4-1-7-19
GC Column: DB5MS
Units: pg/L

Acquired: 01-07-2019
WHO TEQ: NA

Compound	Conc	DL	Qual	MDL
2,3,7,8-TCDD	ND	0.687		0.233

Internal Standards	% Rec	QC Limits	Qual
13C-2,3,7,8-TCDD	89.1	31.0 - 137	

Cleanup Surrogate	% Rec	QC Limits
37Cl-2,3,7,8-TCDD	83.5	42.0 - 164

A Isotopic Labeled Standard outside QC range but signal to noise ratio is >10:1
B Analyte is present in Method Blank
C Chemical Interference
D Presence of Diphenyl Ethers
DNQ Analyte concentration is below calibration range
E Analyte concentration is above calibration range
F Analyte confirmation on secondary column
J Analyte concentration is below calibration range
M Maximum possible concentration
ND Analyte Not Detected at Detection Limit Level
NP Not Provided
P Pre-filtered through a Whatman 0.7um GF/F filter
S Sample acceptance criteria not met
X Matrix interferences
* Result taken from dilution or reinjection

Analyst: 

Date: 1/8/2019

Reviewed By: 

Date: 1/8/2019

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EPA Method 1613
TCDD



FAL ID: 12089-001-OPR
Client ID: OPR
Matrix: Aqueous
Batch No: X4756

Date Extracted: 01-03-2019
Date Received: NA
Amount: 1.000 L

ICal: PCDDFAL4-1-7-19
GC Column: DB5MS
Units: ng/ml

Acquired: 01-07-2019
WHO TEQ: NA

Compound	Conc	QC Limits
2,3,7,8-TCDD	9.90	7.30 - 14.6

Internal Standards	% Rec	QC Limits
13C-2,3,7,8-TCDD	86.4	25.0 - 141

Cleanup Surrogate		
37Cl-2,3,7,8-TCDD	89.5	37.0 - 158

A Isotopic Labeled Standard outside QC range but signal to noise ratio is >10:1
B Analyte is present in Method Blank
C Chemical Interference
D Presence of Diphenyl Ethers
DNQ Analyte concentration is below calibration range
E Analyte concentration is above calibration range
F Analyte confirmation on secondary column
J Analyte concentration is below calibration range
M Maximum possible concentration
ND Analyte Not Detected at Detection Limit Level
NP Not Provided
P Pre-filtered through a Whatman 0.7um GF/F filter
S Sample acceptance criteria not met
X Matrix interferences
* Result taken from dilution or reinjection

Analyst:  _____

Date: 1/8/2019

Reviewed By:  _____

Date: 1/8/2019

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EPA Method 1613
TCDD



FAL ID: 12089-001-SA
Client ID: NBS-Pump
Matrix: Aqueous
Batch No: X4756

Date Extracted: 01-03-2019
Date Received: 12-19-2018
Amount: 0.980 L

ICal: PCDDFAL4-1-7-19
GC Column: DB5MS
Units: pg/L

Acquired: 01-07-2019
WHO TEQ: NA

Compound	Conc	DL	Qual	MDL
2,3,7,8-TCDD	ND	0.735		0.233

Internal Standards	% Rec	QC Limits	Qual
13C-2,3,7,8-TCDD	80.4	31.0 - 137	

Cleanup Surrogate	% Rec	QC Limits
37Cl-2,3,7,8-TCDD	83.4	42.0 - 164

A Isotopic Labeled Standard outside QC range but signal to noise ratio is >10:1
B Analyte is present in Method Blank
C Chemical Interference
D Presence of Diphenyl Ethers
DNQ Analyte concentration is below calibration range
E Analyte concentration is above calibration range
F Analyte confirmation on secondary column
J Analyte concentration is below calibration range
M Maximum possible concentration
ND Analyte Not Detected at Detection Limit Level
NP Not Provided
P Pre-filtered through a Whatman 0.7um GF/F filter
S Sample acceptance criteria not met
X Matrix interferences
* Result taken from dilution or reinjection

Analyst: 

Date: 1/8/2019

Reviewed By: 

Date: 1/8/2019

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EPA Method 1613 TCDD



FAL ID: 12089-002-SA
Client ID: WC-Down
Matrix: Aqueous
Batch No: X4756

Date Extracted: 01-03-2019
Date Received: 12-19-2018
Amount: 0.975 L

ICal: PCDDFAL4-1-7-19
GC Column: DB5MS
Units: pg/L

Acquired: 01-07-2019
WHO TEQ: NA

Compound	Conc	DL	Qual	MDL
2,3,7,8-TCDD	ND	0.749		0.233

Internal Standards	% Rec	QC Limits	Qual
13C-2,3,7,8-TCDD	85.3	31.0 - 137	

Cleanup Surrogate	% Rec	QC Limits
37Cl-2,3,7,8-TCDD	86.6	42.0 - 164

A Isotopic Labeled Standard outside QC range but signal to noise ratio is >10:1
B Analyte is present in Method Blank
C Chemical Interference
D Presence of Diphenyl Ethers
DNQ Analyte concentration is below calibration range
E Analyte concentration is above calibration range
F Analyte confirmation on secondary column
J Analyte concentration is below calibration range
M Maximum possible concentration
ND Analyte Not Detected at Detection Limit Level
NP Not Provided
P Pre-filtered through a Whatman 0.7um GF/F filter
S Sample acceptance criteria not met
X Matrix interferences
* Result taken from dilution or reinjection

Analyst: 
Date: 1/8/2019

Reviewed By: 
Date: 1/8/2019

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EPA Method 1613 TCDD



FAL ID: 12089-003-SA
Client ID: WC-Mid
Matrix: Aqueous
Batch No: X4756

Date Extracted: 01-03-2019
Date Received: 12-19-2018
Amount: 0.956 L

ICal: PCDDFAL4-1-7-19
GC Column: DB5MS
Units: pg/L

Acquired: 01-07-2019
WHO TEQ: NA

Compound	Conc	DL	Qual	MDL
2,3,7,8-TCDD	ND	0.738		0.233

Internal Standards	% Rec	QC Limits	Qual
13C-2,3,7,8-TCDD	90.9	31.0 - 137	

Cleanup Surrogate	% Rec	QC Limits
37Cl-2,3,7,8-TCDD	90.7	42.0 - 164

A Isotopic Labeled Standard outside QC range but signal to noise ratio is >10:1
B Analyte is present in Method Blank
C Chemical Interference
D Presence of Diphenyl Ethers
DNQ Analyte concentration is below calibration range
E Analyte concentration is above calibration range
F Analyte confirmation on secondary column
J Analyte concentration is below calibration range
M Maximum possible concentration
ND Analyte Not Detected at Detection Limit Level
NP Not Provided
P Pre-filtered through a Whatman 0.7um GF/F filter
S Sample acceptance criteria not met
X Matrix interferences
* Result taken from dilution or reinjection

Analyst: 

Date: 1/8/2019

Reviewed By: 

Date: 1/8/2019

000007 of 000012

EPA Method 1613
TCDD



FAL ID: 12089-004-SA
Client ID: WC-Up
Matrix: Aqueous
Batch No: X4756

Date Extracted: 01-03-2019
Date Received: 12-19-2018
Amount: 0.960 L

ICal: PCDDFAL4-1-7-19
GC Column: DB5MS
Units: pg/L

Acquired: 01-07-2019
WHO TEQ: NA

Compound	Conc	DL	Qual	MDL
2,3,7,8-TCDD	ND	0.772		0.233

Internal Standards	% Rec	QC Limits	Qual
13C-2,3,7,8-TCDD	89.3	31.0 - 137	

Cleanup Surrogate	% Rec	QC Limits
37Cl-2,3,7,8-TCDD	90.7	42.0 - 164

A Isotopic Labeled Standard outside QC range but signal to noise ratio is >10:1
B Analyte is present in Method Blank
C Chemical Interference
D Presence of Diphenyl Ethers
DNQ Analyte concentration is below calibration range
E Analyte concentration is above calibration range
F Analyte confirmation on secondary column
J Analyte concentration is below calibration range
M Maximum possible concentration
ND Analyte Not Detected at Detection Limit Level
NP Not Provided
P Pre-filtered through a Whatman 0.7um GF/F filter
S Sample acceptance criteria not met
X Matrix interferences
* Result taken from dilution or reinjection

Analyst: 

Date: 1/8/2019

Reviewed By: 

Date: 1/8/2019

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SUBCONTRACT ORDER

18L0968

12089
00cSENDING LABORATORY:

CLS Labs
3249 Fitzgerald Rd.
Rancho Cordova, CA 95742
Phone: 916-638-7301
Fax: 916-638-4510
Project Manager: Mark Smith
[REDACTED]

RECEIVING LABORATORY:

Frontier Analytical
5172 Hillsdale Circle
El Dorado Hills, CA 95762
Phone : (916) 934-0900
Fax: (916) 934-0999

Analysis	TAT	Due	Expires	Laboratory ID	Sample Date	Received	Matrix
Dioxin 1613 SUB	10	01/04/19 12:00	12/18/19 11:04	18L0968-01	12/18/18 11:04	12/18/18 16:00	Water

Client sample ID: NBS-Pump[REDACTED]
2,3,7,8-TCDD**Laboratory sample ID: 18L0968-01****Please use client sample ID on all reports***Containers Supplied:*

1L Amber- Unpres. (G)

Dioxin 1613 SUB	10	01/04/19 12:00	12/18/19 13:25	18L0968-02	12/18/18 13:25	12/18/18 16:00	Water

Client sample ID: WC-Down[REDACTED]
2,3,7,8-TCDD**Laboratory sample ID: 18L0968-02****Please use client sample ID on all reports***Containers Supplied:*

1L Amber- Unpres. (G)

Dioxin 1613 SUB	10	01/04/19 12:00	12/18/19 12:02	18L0968-03	12/18/18 12:02	12/18/18 16:00	Water

Client sample ID: WC-Mid[REDACTED]
2,3,7,8-TCDD**Laboratory sample ID: 18L0968-03****Please use client sample ID on all reports***Containers Supplied:*

1L Amber- Unpres. (G)

Relinquished By

Date

Received By

Date

Relinquished By

Date

Received By

Date

Shipped By

Airbill Number

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SUBCONTRACT ORDER

18L0968

12089
OEC

Analysis	TAT	Due	Expires	Laboratory ID	Sample Date	Received	Matrix
Dioxin 1613 SUB	10	01/04/19 12:00	12/18/19 12:46	18L0968-04	12/18/18 12:46	12/18/18 16:00	Water

Client sample ID: WC-Up

Laboratory sample ID: 18L0968-04

Please use client sample ID on all reports

2,3,7,8-TCDD

Containers Supplied:

1L Amber- Unpres. (G)

Relinquished By

Date

Received By

Date

Relinquished By

Date

Received By

Date

Shipped By

Airbill Number

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Frontier Analytical Laboratory

Sample Login Form

FAL Project ID: **12089**

Client:	California Laboratory Services
Client Project ID:	18L0968
Date Received:	12/19/2018
Time Received:	12:55 pm
Received By:	KZ
Logged In By:	KZ
# of Samples Received:	4
Duplicates:	0
Storage Location:	R-3

Method of Delivery:	Courier
Tracking Number:	NA
Shipping Container Received Intact	Yes
Custody seals(s) present?	No
Custody seals(s) intact?	No
Sample Arrival Temperature (C)	0
Cooling Method	Ice
Chain Of Custody Present?	Yes
Return Shipping Container To Client	Yes
Test aqueous sample for residual Chlorine	Yes
Sodium Thiosulfate Added	No
Adequate Sample Volume	Yes
Appropriate Sample Container	Yes
pH Range of Aqueous Sample	Between 4 and 9
Anomalies or additional comments:	



2018/12/20

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CALIFORNIA LABORATORY SERVICES

Committed. Responsive. Flexible.

May 06, 2019

CLS Work Order #: 19D1152

COC #: 198230

Dr. Andrew Kopania
EMKO Environmental, Inc.
551 Lakecrest Dr.
El Dorado Hills, CA 95762

Project Name: Wolf Creek

Enclosed are the results of analyses for samples received by the laboratory on 04/18/19 08:10. Samples were analyzed pursuant to client request utilizing EPA or other ELAP approved methodologies. I certify that the results are in compliance both technically and for completeness.

Analytical results are attached to this letter. Please call if we can provide additional assistance.

Sincerely,

James Liang, Ph.D.
Laboratory Director

CA SWRCB ELAP Accreditation/Registration number 1233



CLS ID No.: 19D1152

LOG № 198230

HIGHLIGHTED AREAS MUST BE FILLED OUT PRIOR TO ACCEPTANCE

REPORT TO:			CLIENT JOB NUMBER			ANALYSIS REQUESTED					GEOTHRACKER: EDF REPORT ☐ YES ☒ NO GLOBAL ID: _____						
NAME AND ADDRESS			DESTINATION LABORATORY			PRESERVATIVES					CDPH WRITE ON EDT TRANSMISSION? ☐ YES ☒ NO STATE SYSTEM NUMBER _____ IF "YES" PLEASE ENTER THE SOURCE NUMBER(S).						
PROJECT MANAGER			OTHER								COMPOSITE:						
EMKO Environmental, Inc. 551 Lakewood Dr. El Dorado Hills, CA 95762			CLS (916) 638-7301 3249 FITZGERALD RD. RANCHO CORDOVA, CA 95742			General Minerals Drinking Water Metals Ammonia - 2.5 ug/L					COMPOSITE:						
PROJECT NAME: Wolf Creek																	
SAMPLED BY: Andy Kopania																	
JOB DESCRIPTION																	
SITE LOCATION: Grass Valley																	
DATE		TIME		SAMPLE IDENTIFICATION		MATRIX		CONTAINER NO.		TYPE		TURN AROUND TIME				SPECIAL INSTRUCTIONS	
												1 DAY 2 DAY 3 DAY 5 DAY				OR ALT. ID:	
4/17/19		10:35		1MD-1-419		W		1		1L		3		X		Ammonia Reporting Limit - 2.5 ug/L	
4/17/19		10:35		1MD-1-419		W		1		500mL		2		X			
4/17/19		10:35		1MD-1-419		W		1		125mL		5		X			
4/17/19		13:15		SF-Culvert		W		1		1L		3		X			
		13:15		SF-Culvert		W		1		500mL		2		X			
		13:15		SF-Culvert		W		1		125mL		5		X			
		13:55		SF-Pad		W		1		1L		3		X			
		13:55		SF-Pad		W		1		500mL		2		X			
		13:55		SF-Pad		W		1		125mL		5		X			
		15:45		WC-D		W		1		1L		3		X			
		15:45		WC-D		W		1		500mL		2		X			
		15:45		WC-D		W		1		125mL		5		X			
Email/Address: akopania@sbcglobal.net										PRESERVATIVES: (1) HCL (2) HNO3 (3) = COLD (4) = NaOH (5) = H2SO4 (6) = Na2S2O8 (7) =							
RELINQUISHED BY (SIGN)			PRINT NAME / COMPANY			DATE / TIME			RECEIVED BY (SIGN)			PRINT NAME / COMPANY					
			Andy Kopania / EMKO			4/18/19 8:10 AM											
RECD AT LAB BY:			DATE / TIME: 4.18.19			CONDITIONS / COMMENTS: 0.6											
SHIPPED BY: ☐ FED X ☐ UPS ☐ OTHER						AIR BILL #											

White-Lab/Terms and conditions	Yellow-Lab file copy/Terms and Conditions	Pink- Origin/Terms and Conditions	Gold-Project Mgr./Field Samples/Terms and conditions

CLS LABS
SAMPLE RECEIVING EXCEPTION REPORTS

CLS Labs Job # 1901152

Problem discovered by: Grace

Date: 9, 18, 19

Nature of problem

Sulfite

Chlorine, Total

Chlorine, Residual

Ph

Dissolved O2

(Circle analysis above) Received out of HOLD time.

Client contacted? Yes _____ No _____ Spoke With: _____

By whom: _____ Date: ____/____/____ Time: _____ HRS

Client instructions:

Resolution of problem:

Logged in regardless and will be ran for analysis requested.



CALIFORNIA LABORATORY SERVICES

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EMKO Environmental, Inc.
551 Lakecrest Dr.
El Dorado Hills, CA 95762

Project: Wolf Creek
Project Number: [none]
Project Manager: Dr. Andrew Kopania

CLS Work Order #: 19D1152
COC #: 198230

Conventional Chemistry Parameters by APHA/EPA Methods

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
1MD-1-419 (19D1152-01) Water Sampled: 04/17/19 10:35 Received: 04/18/19 08:10									
Ammonia as N	0.087	0.025	mg/L	1	1903235	04/22/19	04/22/19	SM4500-NH3F-1997	
Bicarbonate as CaCO ₃	240	5.0	"	"	1903230	04/22/19	04/22/19	SM2320B	
Calcium	46	1.0	"	"	1903170	04/19/19	04/24/19	200.7/2340B	
Carbonate as CaCO ₃	ND	5.0	"	"	1903230	04/22/19	04/22/19	SM2320B	
Chloride	2.3	0.50	"	"	1903119	04/18/19	04/18/19	EPA 300.0	
Fluoride	ND	0.10	"	"	"	"	"	"	
Hardness as CaCO ₃	120	1.0	"	"	1903170	04/19/19	04/24/19	200.7/2340B	
Hydroxide as CaCO ₃	ND	5.0	"	"	1903230	04/22/19	04/22/19	SM2320B	
Magnesium	18	1.0	"	"	1903170	04/19/19	04/24/19	200.7/2340B	
MBAS as LAS, mol wt 340	ND	0.10	"	"	1903140	04/18/19	04/18/19	SM5540 C	
Nitrate as N	ND	0.40	"	"	1903119	04/18/19	04/18/19	EPA 300.0	
pH	7.20	0.01	pH Units	"	1903121	04/18/19	04/18/19	SM4500-H B	HT-F
Potassium	2.4	1.0	mg/L	"	1903170	04/19/19	04/24/19	200.7/2340B	
Sodium	11	1.0	"	"	"	"	"	"	
Specific Conductance (EC)	450	1.0	µmhos/cm	"	1903186	04/19/19	04/19/19	EPA 120.1	
Sulfate as SO ₄	0.91	0.50	mg/L	"	1903119	04/18/19	04/18/19	EPA 300.0	
Total Alkalinity	240	5.0	"	"	1903230	04/22/19	04/22/19	SM2320B	
Total Dissolved Solids	250	10	"	"	1903164	04/18/19	04/22/19	SM2540C	
SF-Culvert (19D1152-02) Water Sampled: 04/17/19 13:15 Received: 04/18/19 08:10									
Ammonia as N	0.040	0.025	mg/L	1	1903235	04/22/19	04/22/19	SM4500-NH3F-1997	
Bicarbonate as CaCO ₃	23	5.0	"	"	1903230	04/22/19	04/22/19	SM2320B	
Calcium	4.6	1.0	"	"	1903170	04/19/19	04/24/19	200.7/2340B	
Carbonate as CaCO ₃	ND	5.0	"	"	1903230	04/22/19	04/22/19	SM2320B	
Chloride	2.7	0.50	"	"	1903119	04/18/19	04/18/19	EPA 300.0	
Fluoride	ND	0.10	"	"	"	"	"	"	
Hardness as CaCO ₃	11	1.0	"	"	1903170	04/19/19	04/24/19	200.7/2340B	
Hydroxide as CaCO ₃	ND	5.0	"	"	1903230	04/22/19	04/22/19	SM2320B	
Magnesium	1.8	1.0	"	"	1903170	04/19/19	04/24/19	200.7/2340B	
MBAS as LAS, mol wt 340	ND	0.10	"	"	1903140	04/18/19	04/18/19	SM5540 C	



CALIFORNIA LABORATORY SERVICES

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EMKO Environmental, Inc.
551 Lakecrest Dr.
El Dorado Hills, CA 95762

Project: Wolf Creek
Project Number: [none]
Project Manager: Dr. Andrew Kopania

CLS Work Order #: 19D1152
COC #: 198230

Conventional Chemistry Parameters by APHA/EPA Methods

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
SF-Culvert (19D1152-02) Water Sampled: 04/17/19 13:15 Received: 04/18/19 08:10									
Nitrate as N	ND	0.40	mg/L	1	1903119	04/18/19	04/18/19	EPA 300.0	
pH	6.82	0.01	pH Units	"	1903121	"	"	SM4500-H B	HT-F
Potassium	1.7	1.0	mg/L	"	1903170	04/19/19	04/24/19	200.7/2340B	
Sodium	3.1	1.0	"	"	"	"	"	"	
Specific Conductance (EC)	68	1.0	µmhos/cm	"	1903186	04/19/19	04/19/19	EPA 120.1	
Sulfate as SO4	1.3	0.50	mg/L	"	1903119	04/18/19	04/18/19	EPA 300.0	
Total Alkalinity	23	5.0	"	"	1903230	04/22/19	04/22/19	SM2320B	
Total Dissolved Solids	58	10	"	"	1903164	04/18/19	04/22/19	SM2540C	
SF-Pad (19D1152-03) Water Sampled: 04/17/19 13:55 Received: 04/18/19 08:10									
Ammonia as N	ND	0.10	mg/L	1	1903235	04/22/19	04/22/19	SM4500-NH3F-1997	
Bicarbonate as CaCO3	32	5.0	"	"	1903230	04/22/19	04/22/19	SM2320B	
Calcium	7.1	1.0	"	"	1903170	04/19/19	04/24/19	200.7/2340B	
Carbonate as CaCO3	ND	5.0	"	"	1903230	04/22/19	04/22/19	SM2320B	
Chloride	2.4	0.50	"	"	1903119	04/18/19	04/18/19	EPA 300.0	
Fluoride	ND	0.10	"	"	"	"	"	"	
Hardness as CaCO3	18	1.0	"	"	1903170	04/19/19	04/24/19	200.7/2340B	
Hydroxide as CaCO3	ND	5.0	"	"	1903230	04/22/19	04/22/19	SM2320B	
Magnesium	2.9	1.0	"	"	1903170	04/19/19	04/24/19	200.7/2340B	
MBAS as LAS, mol wt 340	ND	0.10	"	"	1903140	04/18/19	04/18/19	SM5540 C	
Nitrate as N	ND	0.40	"	"	1903119	04/18/19	04/18/19	EPA 300.0	
pH	7.38	0.01	pH Units	"	1903121	"	04/18/19	SM4500-H B	HT-F
Potassium	1.5	1.0	mg/L	"	1903170	04/19/19	04/24/19	200.7/2340B	
Sodium	2.9	1.0	"	"	"	"	"	"	
Specific Conductance (EC)	82	1.0	µmhos/cm	"	1903186	04/19/19	04/19/19	EPA 120.1	
Sulfate as SO4	2.5	0.50	mg/L	"	1903119	04/18/19	04/18/19	EPA 300.0	
Total Alkalinity	32	5.0	"	"	1903230	04/22/19	04/22/19	SM2320B	
Total Dissolved Solids	64	10	"	"	1903164	04/18/19	04/22/19	SM2540C	



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EMKO Environmental, Inc.
551 Lakecrest Dr.
El Dorado Hills, CA 95762

Project: Wolf Creek
Project Number: [none]
Project Manager: Dr. Andrew Kopania

CLS Work Order #: 19D1152
COC #: 198230

Conventional Chemistry Parameters by APHA/EPA Methods

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
WC-D (19D1152-04) Water Sampled: 04/17/19 15:45 Received: 04/18/19 08:10									
Ammonia as N	ND	0.10	mg/L	1	1903235	04/22/19	04/22/19	SM4500-NH3F-1997	
Bicarbonate as CaCO₃	27	5.0	"	"	1903230	04/22/19	04/22/19	SM2320B	
Calcium	5.1	1.0	"	"	1903170	04/19/19	04/24/19	200.7/2340B	
Carbonate as CaCO ₃	ND	5.0	"	"	1903230	04/22/19	04/22/19	SM2320B	
Chloride	2.0	0.50	"	"	1903119	04/18/19	04/18/19	EPA 300.0	
Fluoride	ND	0.10	"	"	"	"	"	"	
Hardness as CaCO₃	13	1.0	"	"	1903170	04/19/19	04/24/19	200.7/2340B	
Hydroxide as CaCO ₃	ND	5.0	"	"	1903230	04/22/19	04/22/19	SM2320B	
Magnesium	2.8	1.0	"	"	1903170	04/19/19	04/24/19	200.7/2340B	
MBAS as LAS, mol wt 340	ND	0.10	"	"	1903140	04/18/19	04/18/19	SM5540 C	
Nitrate as N	ND	0.40	"	"	1903119	04/18/19	04/18/19	EPA 300.0	
pH	7.55	0.01	pH Units	"	1903121	"	04/18/19	SM4500-H B	HT-F
Potassium	ND	1.0	mg/L	"	1903170	04/19/19	04/24/19	200.7/2340B	
Sodium	2.5	1.0	"	"	"	"	"	"	
Specific Conductance (EC)	69	1.0	µmhos/cm	"	1903186	04/19/19	04/19/19	EPA 120.1	
Sulfate as SO₄	2.3	0.50	mg/L	"	1903119	04/18/19	04/18/19	EPA 300.0	
Total Alkalinity	27	5.0	"	"	1903230	04/22/19	04/22/19	SM2320B	
Total Dissolved Solids	56	10	"	"	1903164	04/18/19	04/22/19	SM2540C	



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EMKO Environmental, Inc.
551 Lakecrest Dr.
El Dorado Hills, CA 95762

Project: Wolf Creek
Project Number: [none]
Project Manager: Dr. Andrew Kopania

CLS Work Order #: 19D1152
COC #: 198230

Metals (Drinking Water) by EPA 200 Series Methods

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
1MD-1-419 (19D1152-01) Water Sampled: 04/17/19 10:35 Received: 04/18/19 08:10									
Aluminum	ND	50	µg/L	1	1903170	04/19/19	04/24/19	EPA 200.7	
Antimony	ND	4.0	"	"	1903169	04/19/19	04/19/19	EPA 200.8	
Arsenic	38	2.0	"	"	"	"	"	"	
Barium	130	100	"	"	1903170	04/19/19	04/24/19	EPA 200.7	
Beryllium	ND	1.0	"	"	"	"	"	"	
Boron	110	100	"	"	"	"	"	"	
Cadmium	ND	1.0	"	"	1903169	04/19/19	04/19/19	EPA 200.8	
Chromium	ND	10	"	"	1903170	04/19/19	04/24/19	EPA 200.7	
Copper	ND	50	"	"	"	"	"	"	
Iron	1800	100	"	"	"	"	"	"	
Lead	ND	5.0	"	"	1903169	04/19/19	04/19/19	EPA 200.8	
Manganese	180	20	"	"	1903170	04/19/19	04/24/19	EPA 200.7	
Mercury	ND	1.0	"	"	1903159	04/18/19	04/19/19	EPA 245.1	
Nickel	ND	10	"	"	1903170	04/19/19	04/24/19	EPA 200.7	
Selenium	ND	5.0	"	"	1903169	04/19/19	04/19/19	EPA 200.8	
Silver	ND	10	"	"	1903170	04/19/19	04/24/19	EPA 200.7	
Thallium	ND	1.0	"	"	1903169	04/19/19	04/19/19	EPA 200.8	
Vanadium	ND	3.0	"	"	"	"	"	"	
Zinc	ND	50	"	"	1903170	04/19/19	04/24/19	EPA 200.7	
SF-Culvert (19D1152-02) Water Sampled: 04/17/19 13:15 Received: 04/18/19 08:10									
Aluminum	210	50	µg/L	1	1903170	04/19/19	04/24/19	EPA 200.7	
Antimony	ND	4.0	"	"	1903169	04/19/19	04/19/19	EPA 200.8	
Arsenic	ND	2.0	"	"	"	"	"	"	
Barium	ND	100	"	"	1903170	04/19/19	04/24/19	EPA 200.7	
Beryllium	ND	1.0	"	"	"	"	"	"	
Boron	ND	100	"	"	"	"	"	"	
Cadmium	ND	1.0	"	"	1903169	04/19/19	04/19/19	EPA 200.8	
Chromium	ND	10	"	"	1903170	04/19/19	04/24/19	EPA 200.7	
Copper	ND	50	"	"	"	"	"	"	
Iron	940	100	"	"	"	"	"	"	



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EMKO Environmental, Inc.
551 Lakecrest Dr.
El Dorado Hills, CA 95762

Project: Wolf Creek
Project Number: [none]
Project Manager: Dr. Andrew Kopania

CLS Work Order #: 19D1152
COC #: 198230

Metals (Drinking Water) by EPA 200 Series Methods

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
SF-Culvert (19D1152-02) Water Sampled: 04/17/19 13:15 Received: 04/18/19 08:10									
Lead	ND	5.0	µg/L	1	1903169	04/19/19	04/19/19	EPA 200.8	
Manganese	140	20	"	"	1903170	04/19/19	04/24/19	EPA 200.7	
Mercury	ND	1.0	"	"	1903159	04/18/19	04/19/19	EPA 245.1	
Nickel	ND	10	"	"	1903170	04/19/19	04/24/19	EPA 200.7	
Selenium	ND	5.0	"	"	1903169	04/19/19	04/19/19	EPA 200.8	
Silver	ND	10	"	"	1903170	04/19/19	04/24/19	EPA 200.7	
Thallium	ND	1.0	"	"	1903169	04/19/19	04/19/19	EPA 200.8	
Vanadium	ND	3.0	"	"	"	"	"	"	
Zinc	ND	50	"	"	1903170	04/19/19	04/24/19	EPA 200.7	
SF-Pad (19D1152-03) Water Sampled: 04/17/19 13:55 Received: 04/18/19 08:10									
Aluminum	130	50	µg/L	1	1903170	04/19/19	04/24/19	EPA 200.7	
Antimony	ND	4.0	"	"	1903169	04/19/19	04/19/19	EPA 200.8	
Arsenic	ND	2.0	"	"	"	"	"	"	
Barium	ND	100	"	"	1903170	04/19/19	04/24/19	EPA 200.7	
Beryllium	ND	1.0	"	"	"	"	"	"	
Boron	ND	100	"	"	"	"	"	"	
Cadmium	ND	1.0	"	"	1903169	04/19/19	04/19/19	EPA 200.8	
Chromium	ND	10	"	"	1903170	04/19/19	04/24/19	EPA 200.7	
Copper	ND	50	"	"	"	"	"	"	
Iron	310	100	"	"	"	"	"	"	
Lead	ND	5.0	"	"	1903169	04/19/19	04/19/19	EPA 200.8	
Manganese	57	20	"	"	1903170	04/19/19	04/24/19	EPA 200.7	
Mercury	ND	1.0	"	"	1903159	04/18/19	04/19/19	EPA 245.1	
Nickel	ND	10	"	"	1903170	04/19/19	04/24/19	EPA 200.7	
Selenium	ND	5.0	"	"	1903169	04/19/19	04/19/19	EPA 200.8	
Silver	ND	10	"	"	1903170	04/19/19	04/24/19	EPA 200.7	
Thallium	ND	1.0	"	"	1903169	04/19/19	04/19/19	EPA 200.8	
Vanadium	ND	3.0	"	"	"	"	"	"	
Zinc	ND	50	"	"	1903170	04/19/19	04/24/19	EPA 200.7	



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EMKO Environmental, Inc.
551 Lakecrest Dr.
El Dorado Hills, CA 95762

Project: Wolf Creek
Project Number: [none]
Project Manager: Dr. Andrew Kopania

CLS Work Order #: 19D1152
COC #: 198230

Metals (Drinking Water) by EPA 200 Series Methods

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
WC-D (19D1152-04) Water Sampled: 04/17/19 15:45 Received: 04/18/19 08:10									
Aluminum	130	50	µg/L	1	1903170	04/19/19	04/24/19	EPA 200.7	
Antimony	ND	4.0	"	"	1903169	04/19/19	04/22/19	EPA 200.8	
Arsenic	ND	2.0	"	"	"	"	"	"	
Barium	ND	100	"	"	1903170	04/19/19	04/24/19	EPA 200.7	
Beryllium	ND	1.0	"	"	"	"	"	"	
Boron	ND	100	"	"	"	"	"	"	
Cadmium	ND	1.0	"	"	1903169	04/19/19	04/22/19	EPA 200.8	
Chromium	ND	10	"	"	1903170	04/19/19	04/24/19	EPA 200.7	
Copper	ND	50	"	"	"	"	"	"	
Iron	220	100	"	"	"	"	"	"	
Lead	ND	5.0	"	"	1903169	04/19/19	04/22/19	EPA 200.8	
Manganese	21	20	"	"	1903170	04/19/19	04/24/19	EPA 200.7	
Mercury	ND	1.0	"	"	1903159	04/18/19	04/19/19	EPA 245.1	
Nickel	ND	10	"	"	1903170	04/19/19	04/24/19	EPA 200.7	
Selenium	ND	5.0	"	"	1903169	04/19/19	04/22/19	EPA 200.8	
Silver	ND	10	"	"	1903170	04/19/19	04/24/19	EPA 200.7	
Thallium	ND	1.0	"	"	1903169	04/19/19	04/22/19	EPA 200.8	
Vanadium	ND	3.0	"	"	"	"	"	"	
Zinc	ND	50	"	"	1903170	04/19/19	04/24/19	EPA 200.7	



CALIFORNIA LABORATORY SERVICES

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EMKO Environmental, Inc.
551 Lakecrest Dr.
El Dorado Hills, CA 95762

Project: Wolf Creek
Project Number: [none]
Project Manager: Dr. Andrew Kopania

CLS Work Order #: 19D1152
COC #: 198230

Conventional Chemistry Parameters by APHA/EPA Methods - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes

Batch 1903119 - General Prep

Blank (1903119-BLK1)

Prepared & Analyzed: 04/18/19

Fluoride	ND	0.10	mg/L
Sulfate as SO ₄	ND	0.50	"
Chloride	ND	0.50	"
Nitrate as N	ND	0.40	"

LCS (1903119-BS1)

Prepared & Analyzed: 04/18/19

Chloride	4.78	0.50	mg/L	5.00	96	80-120
Sulfate as SO ₄	5.12	0.50	"	5.00	102	80-120
Fluoride	2.17	0.10	"	2.00	108	80-120
Nitrate as N	1.98	0.40	"	2.00	99	80-120

LCS Dup (1903119-BSD1)

Prepared & Analyzed: 04/18/19

Chloride	4.69	0.50	mg/L	5.00	94	80-120	2	20
Fluoride	2.08	0.10	"	2.00	104	80-120	4	20
Sulfate as SO ₄	5.03	0.50	"	5.00	101	80-120	2	20
Nitrate as N	1.94	0.40	"	2.00	97	80-120	2	20

Matrix Spike (1903119-MS1)

Source: 19D1124-04

Prepared & Analyzed: 04/18/19

Chloride	56.5	1.0	mg/L	10.0	49.9	66	80-120			QM-4X
Sulfate as SO ₄	40.7	1.0	"	10.0	31.4	94	80-120			
Fluoride	4.52	0.20	"	4.00	ND	113	80-120			
Nitrate as N	14.5	0.80	"	4.00	11.1	83	80-120			

Matrix Spike Dup (1903119-MSD1)

Source: 19D1124-04

Prepared & Analyzed: 04/18/19

Sulfate as SO ₄	40.7	1.0	mg/L	10.0	31.4	94	80-120	0.06	20	
Fluoride	4.43	0.20	"	4.00	ND	111	80-120	2	20	
Chloride	56.8	1.0	"	10.0	49.9	69	80-120	0.4	20	QM-4X
Nitrate as N	14.5	0.80	"	4.00	11.1	84	80-120	0.08	20	



CALIFORNIA LABORATORY SERVICES

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EMKO Environmental, Inc.
551 Lakecrest Dr.
El Dorado Hills, CA 95762

Project: Wolf Creek
Project Number: [none]
Project Manager: Dr. Andrew Kopania

CLS Work Order #: 19D1152
COC #: 198230

Conventional Chemistry Parameters by APHA/EPA Methods - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes

Batch 1903121 - General Prep

Duplicate (1903121-DUP1) Source: 19D1107-01 Prepared & Analyzed: 04/18/19

pH	7.99	0.01	pH Units	7.98	0.125	20

Batch 1903140 - General Preparation

Blank (1903140-BLK1) Prepared & Analyzed: 04/18/19

MBAS as LAS, mol wt 340	ND	0.10	mg/L

LCS (1903140-BS1) Prepared & Analyzed: 04/18/19

MBAS as LAS, mol wt 340	0.518	0.10	mg/L	0.500	104	80-120

LCS Dup (1903140-BSD1) Prepared & Analyzed: 04/18/19

MBAS as LAS, mol wt 340	0.519	0.10	mg/L	0.500	104	80-120	0.2	20

Matrix Spike (1903140-MS1) Source: 19D1152-01 Prepared & Analyzed: 04/18/19

MBAS as LAS, mol wt 340	0.549	0.10	mg/L	0.500	ND	110	75-125

Matrix Spike Dup (1903140-MSD1) Source: 19D1152-01 Prepared & Analyzed: 04/18/19

MBAS as LAS, mol wt 340	0.539	0.10	mg/L	0.500	ND	108	75-125	2	25

Batch 1903164 - General Preparation

Blank (1903164-BLK1) Prepared: 04/18/19 Analyzed: 04/22/19

Total Dissolved Solids	ND	10	mg/L

Duplicate (1903164-DUP1) Source: 19D1176-01 Prepared: 04/18/19 Analyzed: 04/22/19

Total Dissolved Solids	236	10	mg/L	230	3	20



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EMKO Environmental, Inc.
551 Lakecrest Dr.
El Dorado Hills, CA 95762

Project: Wolf Creek
Project Number: [none]
Project Manager: Dr. Andrew Kopania

CLS Work Order #: 19D1152
COC #: 198230

Conventional Chemistry Parameters by APHA/EPA Methods - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes

Batch 1903170 - EPA 200 Series

Blank (1903170-BLK1)

Prepared: 04/19/19 Analyzed: 04/22/19

Calcium	ND	1.0	mg/L
Hardness as CaCO ₃	ND	1.0	"
Magnesium	ND	1.0	"
Potassium	ND	1.0	"
Sodium	ND	1.0	"

LCS (1903170-BS1)

Prepared: 04/19/19 Analyzed: 04/22/19

Calcium	4.68	1.0	mg/L	5.00	94	85-115	
Magnesium	4.37	1.0	"	5.00	87	85-115	
Potassium	5.78	1.0	"	5.00	116	85-115	QM-1
Sodium	5.22	1.0	"	5.00	104	85-115	

Matrix Spike (1903170-MS1)

Source: 19D1176-01

Prepared: 04/19/19 Analyzed: 04/22/19

Calcium	21.1	1.0	mg/L	5.00	17.5	73	70-130	
Magnesium	19.9	1.0	"	5.00	16.7	63	70-130	QM-5
Potassium	7.34	1.0	"	5.00	2.63	94	70-130	
Sodium	41.9	1.0	"	5.00	39.5	49	70-130	QM-5

Matrix Spike (1903170-MS2)

Source: 19D1081-01

Prepared: 04/19/19 Analyzed: 04/22/19

Calcium	26.0	1.0	mg/L	5.00	21.7	88	70-130
Magnesium	35.2	1.0	"	5.00	31.6	72	70-130
Potassium	7.11	1.0	"	5.00	2.04	101	70-130
Sodium	61.0	1.0	"	5.00	56.6	89	70-130

Batch 1903186 - General Preparation

Blank (1903186-BLK1)

Prepared & Analyzed: 04/19/19

Specific Conductance (EC)	ND	1.0	µmhos/cm



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EMKO Environmental, Inc.
551 Lakecrest Dr.
El Dorado Hills, CA 95762

Project: Wolf Creek
Project Number: [none]
Project Manager: Dr. Andrew Kopania

CLS Work Order #: 19D1152
COC #: 198230

Conventional Chemistry Parameters by APHA/EPA Methods - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes

Batch 1903186 - General Preparation

Duplicate (1903186-DUP1)

Source: 19D1193-05

Prepared & Analyzed: 04/19/19

Specific Conductance (EC)	530	1.0	µmhos/cm		550			3.70	20	

Batch 1903230 - General Prep

Blank (1903230-BLK1)

Prepared & Analyzed: 04/22/19

Total Alkalinity	ND	5.0	mg/L							
Bicarbonate as CaCO ₃	ND	5.0	"							
Carbonate as CaCO ₃	ND	5.0	"							
Hydroxide as CaCO ₃	ND	5.0	"							

Duplicate (1903230-DUP1)

Source: 19D1176-01

Prepared & Analyzed: 04/22/19

Total Alkalinity	108	5.0	mg/L		112			4	20	
Bicarbonate as CaCO ₃	108	5.0	"		112			4	20	
Carbonate as CaCO ₃	ND	5.0	"		ND				20	
Hydroxide as CaCO ₃	ND	5.0	"		ND				20	

Batch 1903235 - General Preparation

Blank (1903235-BLK1)

Prepared & Analyzed: 04/22/19

Ammonia as N	ND	0.10	mg/L							

LCS (1903235-BS1)

Prepared & Analyzed: 04/22/19

Ammonia as N	0.434	0.10	mg/L	0.500	87	80-120				

LCS Dup (1903235-BSD1)

Prepared & Analyzed: 04/22/19

Ammonia as N	0.429	0.10	mg/L	0.500	86	80-120	1	25		



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EMKO Environmental, Inc.
551 Lakecrest Dr.
El Dorado Hills, CA 95762

Project: Wolf Creek
Project Number: [none]
Project Manager: Dr. Andrew Kopania

CLS Work Order #: 19D1152
COC #: 198230

Conventional Chemistry Parameters by APHA/EPA Methods - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes

Batch 1903235 - General Preparation

Matrix Spike (1903235-MS1)

Source: 19D1242-01

Prepared & Analyzed: 04/22/19

Ammonia as N	0.421	0.10	mg/L	0.500	0.0440	75	75-125			

Matrix Spike Dup (1903235-MSD1)

Source: 19D1242-01

Prepared & Analyzed: 04/22/19

Ammonia as N	0.417	0.10	mg/L	0.500	0.0440	75	75-125	1	25	



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EMKO Environmental, Inc.
551 Lakecrest Dr.
El Dorado Hills, CA 95762

Project: Wolf Creek
Project Number: [none]
Project Manager: Dr. Andrew Kopania

CLS Work Order #: 19D1152
COC #: 198230

Metals (Drinking Water) by EPA 200 Series Methods - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes

Batch 1903159 - EPA 7470A

Blank (1903159-BLK1)

Prepared: 04/18/19 Analyzed: 04/19/19

Mercury	ND	1.0	µg/L

LCS (1903159-BS1)

Prepared: 04/18/19 Analyzed: 04/19/19

Mercury	4.47	1.0	µg/L	5.00	89	85-115

Matrix Spike (1903159-MS1)

Source: 19D1152-01

Prepared: 04/18/19 Analyzed: 04/19/19

Mercury	5.04	1.0	µg/L	5.00	0.182	97	70-130

Matrix Spike (1903159-MS2)

Source: 19D1176-04

Prepared: 04/18/19 Analyzed: 04/19/19

Mercury	4.67	1.0	µg/L	5.00	0.274	88	70-130

Matrix Spike Dup (1903159-MSD1)

Source: 19D1152-01

Prepared: 04/18/19 Analyzed: 04/19/19

Mercury	5.09	1.0	µg/L	5.00	0.182	98	70-130	1	25

Batch 1903169 - EPA 200 Series

Blank (1903169-BLK1)

Prepared & Analyzed: 04/19/19

Antimony	ND	4.0	µg/L
Arsenic	ND	2.0	"
Cadmium	ND	1.0	"
Lead	ND	5.0	"
Nickel	ND	10	"
Selenium	ND	5.0	"
Silver	ND	10	"
Vanadium	ND	3.0	"
Thallium	1.13	1.0	"

QB-2



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EMKO Environmental, Inc.
551 Lakecrest Dr.
El Dorado Hills, CA 95762

Project: Wolf Creek
Project Number: [none]
Project Manager: Dr. Andrew Kopania

CLS Work Order #: 19D1152
COC #: 198230

Metals (Drinking Water) by EPA 200 Series Methods - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes

Batch 1903169 - EPA 200 Series

LCS (1903169-BS1)

Prepared & Analyzed: 04/19/19

Antimony	94.6	4.0	µg/L	100		95	85-115			
Arsenic	97.7	2.0	"	100		98	85-115			
Cadmium	91.1	1.0	"	100		91	85-115			
Lead	95.9	5.0	"	100		96	85-115			
Nickel	104	10	"	100		104	85-115			
Selenium	102	5.0	"	100		102	85-115			
Silver	137	10	"	100		137	85-115			QM-1
Vanadium	93.4	3.0	"	100		93	85-115			
Thallium	113	1.0	"	100		113	85-115			

Matrix Spike (1903169-MS1)

Source: 19D1176-01

Prepared & Analyzed: 04/19/19

Antimony	91.3	4.0	µg/L	100	ND	91	70-130			
Arsenic	92.7	2.0	"	100	ND	93	70-130			
Cadmium	88.9	1.0	"	100	ND	89	70-130			
Lead	93.5	5.0	"	100	ND	94	70-130			
Nickel	97.3	10	"	100	ND	97	70-130			
Selenium	95.3	5.0	"	100	ND	95	70-130			
Silver	79.0	10	"	100	ND	79	70-130			
Vanadium	91.9	3.0	"	100	0.786	91	70-130			
Thallium	110	1.0	"	100	0.449	110	70-130			

Matrix Spike (1903169-MS2)

Source: 19D1081-01

Prepared & Analyzed: 04/19/19

Antimony	91.8	4.0	µg/L	100	ND	92	70-130			
Arsenic	96.2	2.0	"	100	3.49	93	70-130			
Cadmium	89.1	1.0	"	100	ND	89	70-130			
Lead	93.5	5.0	"	100	ND	94	70-130			
Nickel	101	10	"	100	2.18	99	70-130			
Selenium	96.3	5.0	"	100	1.09	95	70-130			
Silver	99.4	10	"	100	ND	99	70-130			
Vanadium	102	3.0	"	100	11.6	91	70-130			
Thallium	110	1.0	"	100	0.185	110	70-130			



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EMKO Environmental, Inc.
551 Lakecrest Dr.
El Dorado Hills, CA 95762

Project: Wolf Creek
Project Number: [none]
Project Manager: Dr. Andrew Kopania

CLS Work Order #: 19D1152
COC #: 198230

Metals (Drinking Water) by EPA 200 Series Methods - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes

Batch 1903170 - EPA 200 Series

Blank (1903170-BLK1)

Prepared: 04/19/19 Analyzed: 04/22/19

Aluminum	ND	50	µg/L
Barium	ND	100	"
Boron	ND	100	"
Beryllium	ND	1.0	"
Chromium	ND	10	"
Copper	ND	50	"
Iron	ND	100	"
Manganese	ND	20	"
Zinc	ND	50	"

LCS (1903170-BS1)

Prepared: 04/19/19 Analyzed: 04/22/19

Aluminum	4520	50	µg/L	5000	90	85-115
Barium	1080	100	"	1000	108	85-115
Boron	1060	100	"	1000	106	85-115
Beryllium	1010	1.0	"	1000	101	85-115
Chromium	1140	10	"	1000	114	85-115
Copper	1090	50	"	1000	109	85-115
Iron	964	100	"	1000	96	85-115
Manganese	1090	20	"	1000	109	85-115
Zinc	1030	50	"	1000	103	85-115

Matrix Spike (1903170-MS1)

Source: 19D1176-01

Prepared: 04/19/19 Analyzed: 04/22/19

Aluminum	5440	50	µg/L	5000	1120	87	70-130
Barium	1080	100	"	1000	47.3	103	70-130
Boron	1190	100	"	1000	179	101	70-130
Beryllium	973	1.0	"	1000	ND	97	70-130
Chromium	1070	10	"	1000	ND	107	70-130
Copper	1360	50	"	1000	383	98	70-130
Iron	948	100	"	1000	12.9	94	70-130
Manganese	1010	20	"	1000	ND	101	70-130
Zinc	1010	50	"	1000	31.6	98	70-130



CALIFORNIA LABORATORY SERVICES

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EMKO Environmental, Inc.
551 Lakecrest Dr.
El Dorado Hills, CA 95762

Project: Wolf Creek
Project Number: [none]
Project Manager: Dr. Andrew Kopania

CLS Work Order #: 19D1152
COC #: 198230

Metals (Drinking Water) by EPA 200 Series Methods - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes

Batch 1903170 - EPA 200 Series

Matrix Spike (1903170-MS2)

Source: 19D1081-01

Prepared: 04/19/19 Analyzed: 04/22/19

Aluminum	4450	50	µg/L	5000	29.0	88	70-130			
Barium	1100	100	"	1000	96.8	101	70-130			
Boron	2410	100	"	1000	1410	99	70-130			
Beryllium	957	1.0	"	1000	ND	96	70-130			
Chromium	1030	10	"	1000	ND	103	70-130			
Copper	976	50	"	1000	ND	98	70-130			
Iron	1260	100	"	1000	149	112	70-130			
Manganese	1060	20	"	1000	56.7	100	70-130			
Zinc	1190	50	"	1000	211	98	70-130			



CALIFORNIA LABORATORY SERVICES

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05/06/19 10:11

EMKO Environmental, Inc.
551 Lakecrest Dr.
El Dorado Hills, CA 95762

Project: Wolf Creek
Project Number: [none]
Project Manager: Dr. Andrew Kopania

CLS Work Order #: 19D1152
COC #: 198230

Notes and Definitions

QM-5	The spike recovery was outside acceptance limits for the MS and/or MSD due to matrix interference. The LCS and/or LCSD were within acceptance limits showing that the laboratory is in control and the data is acceptable.
QM-4X	The spike recovery was outside of QC acceptance limits for the MS and/or MSD due to analyte concentration at 4 times or greater the spike concentration. The QC batch was accepted based on LCS and/or LCSD recoveries within the acceptance limits.
QM-1	The spike recovery was outside acceptance limits for the LCS or LCSD. The batch was accepted based on acceptable MS/MSD recoveries & RPD's.
QB-2	The analyte was detected in the method blank or calibration verification blank. A re-analysis was not performed since all sample results for the analyte are ND.
HT-F	This is a field test method and it is performed in the lab outside holding time.
DET	Analyte DETECTED
ND	Analyte NOT DETECTED at or above the reporting limit (or method detection limit when specified)
NR	Not Reported
dry	Sample results reported on a dry weight basis
RPD	Relative Percent Difference

Appendix D – Laboratory Analytical Reports - Geochemistry

December 18, 2019

Report to:

Ben Mossman
Rise Grass Valley Inc.
Suite 215 - 333 Crown Point Circle
Grass Valley, CA 95945

Bill to:

Ben Mossman
Rise Grass Valley Inc.
Suite 215 - 333 Crown Point Circle
Grass Valley, CA 95945

cc: Andy Kopania

Project ID:

ACZ Project ID: L55806

Ben Mossman:

Enclosed are the analytical results for sample(s) submitted to ACZ Laboratories, Inc. (ACZ) on November 11, 2019. This project has been assigned to ACZ's project number, L55806. Please reference this number in all future inquiries.

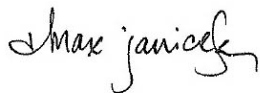
All analyses were performed according to ACZ's Quality Assurance Plan. The enclosed results relate only to the samples received under L55806. Each section of this report has been reviewed and approved by the appropriate Laboratory Supervisor, or a qualified substitute.

Except as noted, the test results for the methods and parameters listed on ACZ's current NELAC certificate letter (#ACZ) meet all requirements of NELAC.

This report shall be used or copied only in its entirety. ACZ is not responsible for the consequences arising from the use of a partial report.

All samples and sub-samples associated with this project will be disposed of after January 17, 2020. If the samples are determined to be hazardous, additional charges apply for disposal (typically \$11/sample). If you would like the samples to be held longer than ACZ's stated policy or to be returned, please contact your Project Manager or Customer Service Representative for further details and associated costs. ACZ retains analytical raw data reports for ten years.

If you have any questions or other needs, please contact your Project Manager.



Max Janicek has reviewed and approved this report.



Rise Grass Valley Inc.

Project ID:

Sample ID: MA-1

ACZ Sample ID: **L55806-01**

Date Sampled: 10/29/19 10:45

Date Received: 11/11/19

Sample Matrix: Soil

Metals Analysis

Parameter	EPA Method	Dilution	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Aluminum (WET DI)	6010D ICP	1	0.94		*	mg/L	0.05	0.3	11/26/19 10:18	kja
Aluminum, total (3050)	M6010D ICP	100	23000		*	mg/Kg	5	30	12/03/19 0:25	kja
Antimony (WET DI)	6020B ICP-MS	1	0.0006	B	*	mg/L	0.0004	0.002	11/27/19 15:12	mfm
Antimony, total (3050)	M6020B ICP-MS	500		U	*	mg/Kg	0.2	1	12/04/19 13:49	bsu
Arsenic (WET DI)	6020B ICP-MS	1		U	*	mg/L	0.0002	0.001	11/27/19 15:12	mfm
Arsenic, total (3050)	M6020B ICP-MS	500	0.2	B		mg/Kg	0.1	0.5	12/04/19 13:49	bsu
Barium (WET DI)	6010D ICP	1		U	*	mg/L	0.007	0.04	11/26/19 10:18	kja
Barium, total (3050)	M6010D ICP	100	2.3	B		mg/Kg	0.7	4	12/03/19 0:25	kja
Beryllium (WET DI)	6020B ICP-MS	1		U	*	mg/L	0.00008	0.0003	11/27/19 15:12	mfm
Beryllium, total (3050)	M6020B ICP-MS	500	0.07	B		mg/Kg	0.04	0.1	12/04/19 13:49	bsu
Boron (WET DI)	6010D ICP	1		U	*	mg/L	0.02	0.1	11/26/19 10:18	kja
Boron, total (3050)	M6010D ICP	100		U		mg/Kg	2	10	12/03/19 0:25	kja
Cadmium (WET DI)	6020B ICP-MS	1		U	*	mg/L	0.00005	0.0003	11/27/19 15:12	mfm
Cadmium, total (3050)	M6020B ICP-MS	500	0.29			mg/Kg	0.03	0.1	12/04/19 13:49	bsu
Calcium (WET DI)	6010D ICP	1	6.0			mg/L	0.1	0.5	11/26/19 10:18	kja
Chromium (WET DI)	6010D ICP	1		U	*	mg/L	0.01	0.05	11/26/19 10:18	kja
Chromium, total (3050)	M6010D ICP	100	144			mg/Kg	1	5	12/03/19 0:25	kja
Cobalt (WET DI)	6010D ICP	1		U	*	mg/L	0.01	0.05	11/26/19 10:18	kja
Cobalt, total (3050)	M6010D ICP	100	24		*	mg/Kg	1	5	12/03/19 0:25	kja
Copper (WET DI)	6010D ICP	1		U	*	mg/L	0.01	0.05	11/26/19 10:18	kja
Copper, total (3050)	M6010D ICP	100	141			mg/Kg	1	5	12/03/19 0:25	kja
Iron (WET DI)	6010D ICP	1	0.05	B	*	mg/L	0.03	0.08	11/26/19 10:18	kja
Iron, total (3050)	M6010D ICP	100	45600		*	mg/Kg	3	8	12/03/19 0:25	kja
Lead (WET DI)	6020B ICP-MS	1	0.0001	B	*	mg/L	0.0001	0.0005	11/27/19 15:12	mfm
Lead, total (3050)	M6020B ICP-MS	500	1.45			mg/Kg	0.05	0.3	12/04/19 13:49	bsu
Magnesium (WET DI)	6010D ICP	1	0.6	B		mg/L	0.2	1	11/26/19 10:18	kja
Manganese (WET DI)	6010D ICP	1		U	*	mg/L	0.01	0.05	11/26/19 10:18	kja
Manganese, total (3050)	M6010D ICP	100	604		*	mg/Kg	1	5	12/03/19 0:25	kja
Mercury (WET DI)	M7470 CVAA	1		U	*	mg/L	0.0002	0.001	11/25/19 14:49	slm
Mercury by Direct Combustion AA	M7473 CVAAS	1	25.9		*	ng/g	1.57	7.85	11/19/19 13:29	slm
Molybdenum (WET DI)	6010D ICP	1		U	*	mg/L	0.02	0.1	11/26/19 10:18	kja
Molybdenum, total (3050)	M6010D ICP	100		U	*	mg/Kg	2	10	12/03/19 0:25	kja
Nickel (WET DI)	6010D ICP	1		U	*	mg/L	0.008	0.04	11/26/19 10:18	kja
Nickel, total (3050)	M6010D ICP	100	51.0		*	mg/Kg	0.8	4	12/03/19 0:25	kja
Potassium (WET DI)	6010D ICP	1	1.2			mg/L	0.2	1	11/26/19 10:18	kja
Selenium (WET DI)	6020B ICP-MS	1	0.0001	B	*	mg/L	0.0001	0.0003	11/27/19 15:12	mfm
Selenium, total (3050)	M6020B ICP-MS	500	1.07			mg/Kg	0.05	0.1	12/04/19 13:49	bsu
Silver (WET DI)	6020B ICP-MS	1		U	*	mg/L	0.0001	0.0005	11/27/19 15:12	mfm
Silver, total (3050)	M6020B ICP-MS	500	0.12	B		mg/Kg	0.05	0.3	12/04/19 13:49	bsu
Sodium (WET DI)	M6010D ICP	1	4.9			mg/L	0.2	1	11/26/19 10:18	kja
Thallium (WET DI)	6020B ICP-MS	1		U	*	mg/L	0.0001	0.0005	11/27/19 15:12	mfm

Rise Grass Valley Inc.

Project ID:

Sample ID: MA-1

ACZ Sample ID: **L55806-01**

Date Sampled: 10/29/19 10:45

Date Received: 11/11/19

Sample Matrix: Soil

Thallium, total (3050)	M6020B ICP-MS	500		U		mg/Kg	0.05	0.3	12/04/19 13:49	bsu
Vanadium (WET DI)	6010D ICP	1	0.030		*	mg/L	0.005	0.03	11/26/19 10:18	kja
Vanadium, total (3050)	M6010D ICP	200	126		*	mg/Kg	1	5	12/04/19 3:38	jlw
Zinc (WET DI)	6010D ICP	1		U	*	mg/L	0.01	0.05	11/26/19 10:18	kja
Zinc, total (3050)	M6010D ICP	100	60			mg/Kg	1	5	12/03/19 0:25	kja

Soil Analysis

Parameter	EPA Method	Dilution	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
pH, (WET-DI)	M9045D/M9040C									
pH		1	9.7			units	0.1	0.1	11/21/19 0:00	llr
Temperature		1	20.3			C	0.1	0.1	11/21/19 0:00	llr
Solids, Percent	D2216-80	1	99.9		*	%	0.1	0.5	12/02/19 19:30	ms/mlp

Soil Preparation

Parameter	EPA Method	Dilution	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Air Dry at 34 Degrees C	USDA No. 1, 1972								11/19/19 8:15	llr
Crush and Pulverize	EPA-600/2-78-054 3.1.3								11/19/19 8:15	llr
Digestion - Hot Plate	M3050B ICP								11/26/19 13:34	mlp
Digestion - Hot Plate	M3050B ICP-MS								11/26/19 13:34	mlp
Waste Extraction Test - DI H2O	California Method, Title 22								11/20/19 1:14	llr

Wet Chemistry

Parameter	EPA Method	Dilution	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Alkalinity (WET DI)	SM2320B - Titration									
Bicarbonate as CaCO3		1	21.6			mg/L	2	20	11/25/19 0:00	emk
Carbonate as CaCO3		1	2.8	B		mg/L	2	20	11/25/19 0:00	emk
Hydroxide as CaCO3		1		U		mg/L	2	20	11/25/19 0:00	emk
Total Alkalinity		1	24.4			mg/L	2	20	11/25/19 0:00	emk
Chloride (WET DI)	SM4500Cl-E	1	4.4		*	mg/L	0.5	2	12/17/19 11:23	ttg
Conductivity @25C (WET-DI)	SM2510B	1	61			umhos/cm	1	10	11/25/19 14:24	emk
Fluoride (WET DI)	SM4500F-C	1	0.2	B	*	mg/L	0.1	0.4	11/26/19 12:52	emk
Hardness as CaCO3 (WET-DI)	SM2340B - Calculation		18			mg/L	0.2	5	12/18/19 0:00	calc
Nitrate (WET-DI)	Calculation: NO3NO2 minus NO2			UH		mg/L	0.02	0.1	12/18/19 0:00	calc
Nitrate/Nitrite as N (WET DI)	M353.2 - Automated Cadmium Reduction	1		UH	*	mg/L	0.02	0.1	11/21/19 23:54	pjb
Nitrite as N (WET DI)	M353.2 - Automated Cadmium Reduction	1		U	*	mg/L	0.01	0.05	11/21/19 23:54	pjb
Residue, Filterable (TDS) @180C (WET DI)	SM2540C	2	76	B	*	mg/L	40	80	11/22/19 12:21	emk
Sulfate (WET DI)	D516-07 - Turbidimetric	1	3.3	B	*	mg/L	1	5	12/12/19 16:05	ttg

Rise Grass Valley Inc.

Project ID:

Sample ID: MA-2

ACZ Sample ID: **L55806-02**

Date Sampled: 10/29/19 11:05

Date Received: 11/11/19

Sample Matrix: Soil

Metals Analysis

Parameter	EPA Method	Dilution	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Aluminum (WET DI)	6010D ICP	1	1.08		*	mg/L	0.05	0.3	11/26/19 10:22	kja
Aluminum, total (3050)	M6010D ICP	100	24400		*	mg/Kg	5	30	12/03/19 0:29	kja
Antimony (WET DI)	6020B ICP-MS	1	0.0041		*	mg/L	0.0004	0.002	11/27/19 15:14	mfm
Antimony, total (3050)	M6020B ICP-MS	500		U	*	mg/Kg	0.2	1	12/04/19 13:51	bsu
Arsenic (WET DI)	6020B ICP-MS	1	0.0051		*	mg/L	0.0002	0.001	11/27/19 15:14	mfm
Arsenic, total (3050)	M6020B ICP-MS	500	6.1			mg/Kg	0.1	0.5	12/04/19 13:51	bsu
Barium (WET DI)	6010D ICP	1		U	*	mg/L	0.007	0.04	11/26/19 10:22	kja
Barium, total (3050)	M6010D ICP	100	9.4			mg/Kg	0.7	4	12/03/19 0:29	kja
Beryllium (WET DI)	6020B ICP-MS	1		U	*	mg/L	0.00008	0.0003	11/27/19 15:14	mfm
Beryllium, total (3050)	M6020B ICP-MS	500	0.16			mg/Kg	0.04	0.1	12/04/19 13:51	bsu
Boron (WET DI)	6010D ICP	1		U	*	mg/L	0.02	0.1	11/26/19 10:22	kja
Boron, total (3050)	M6010D ICP	100		U		mg/Kg	2	10	12/03/19 0:29	kja
Cadmium (WET DI)	6020B ICP-MS	1		U	*	mg/L	0.00005	0.0003	11/27/19 15:14	mfm
Cadmium, total (3050)	M6020B ICP-MS	500	0.18			mg/Kg	0.03	0.1	12/04/19 13:51	bsu
Calcium (WET DI)	6010D ICP	1	4.6			mg/L	0.1	0.5	11/26/19 10:22	kja
Chromium (WET DI)	6010D ICP	1		U	*	mg/L	0.01	0.05	11/26/19 10:22	kja
Chromium, total (3050)	M6010D ICP	100	43			mg/Kg	1	5	12/03/19 0:29	kja
Cobalt (WET DI)	6010D ICP	1		U	*	mg/L	0.01	0.05	11/26/19 10:22	kja
Cobalt, total (3050)	M6010D ICP	100	18		*	mg/Kg	1	5	12/03/19 0:29	kja
Copper (WET DI)	6010D ICP	1		U	*	mg/L	0.01	0.05	11/26/19 10:22	kja
Copper, total (3050)	M6010D ICP	100	43			mg/Kg	1	5	12/03/19 0:29	kja
Iron (WET DI)	6010D ICP	1	0.08		*	mg/L	0.03	0.08	11/26/19 10:22	kja
Iron, total (3050)	M6010D ICP	100	42100		*	mg/Kg	3	8	12/03/19 0:29	kja
Lead (WET DI)	6020B ICP-MS	1		U	*	mg/L	0.0001	0.0005	11/27/19 15:14	mfm
Lead, total (3050)	M6020B ICP-MS	500	4.44			mg/Kg	0.05	0.3	12/04/19 13:51	bsu
Magnesium (WET DI)	6010D ICP	1	0.6	B		mg/L	0.2	1	11/26/19 10:22	kja
Manganese (WET DI)	6010D ICP	1		U	*	mg/L	0.01	0.05	11/26/19 10:22	kja
Manganese, total (3050)	M6010D ICP	100	747		*	mg/Kg	1	5	12/03/19 0:29	kja
Mercury (WET DI)	M7470 CVAA	1		U	*	mg/L	0.0002	0.001	11/25/19 14:50	slm
Mercury by Direct Combustion AA	M7473 CVAAS	1	35.1		*	ng/g	1.59	7.95	11/19/19 13:36	slm
Molybdenum (WET DI)	6010D ICP	1		U	*	mg/L	0.02	0.1	11/26/19 10:22	kja
Molybdenum, total (3050)	M6010D ICP	100		U	*	mg/Kg	2	10	12/03/19 0:29	kja
Nickel (WET DI)	6010D ICP	1		U	*	mg/L	0.008	0.04	11/26/19 10:22	kja
Nickel, total (3050)	M6010D ICP	100	26.8		*	mg/Kg	0.8	4	12/03/19 0:29	kja
Potassium (WET DI)	6010D ICP	1	3.0			mg/L	0.2	1	11/26/19 10:22	kja
Selenium (WET DI)	6020B ICP-MS	1		U	*	mg/L	0.0001	0.0003	11/27/19 15:14	mfm
Selenium, total (3050)	M6020B ICP-MS	500	0.12			mg/Kg	0.05	0.1	12/04/19 13:51	bsu
Silver (WET DI)	6020B ICP-MS	1		U	*	mg/L	0.0001	0.0005	11/27/19 15:14	mfm
Silver, total (3050)	M6020B ICP-MS	500	0.42			mg/Kg	0.05	0.3	12/04/19 13:51	bsu
Sodium (WET DI)	M6010D ICP	1	6.9			mg/L	0.2	1	11/26/19 10:22	kja
Thallium (WET DI)	6020B ICP-MS	1		U	*	mg/L	0.0001	0.0005	11/27/19 15:14	mfm

Rise Grass Valley Inc.

Project ID:

Sample ID: MA-2

ACZ Sample ID: **L55806-02**

Date Sampled: 10/29/19 11:05

Date Received: 11/11/19

Sample Matrix: Soil

Thallium, total (3050)	M6020B ICP-MS	500		U		mg/Kg	0.05	0.3	12/04/19 13:51	bsu
Vanadium (WET DI)	6010D ICP	1	0.035		*	mg/L	0.005	0.03	11/26/19 10:22	kja
Vanadium, total (3050)	M6010D ICP	200	167		*	mg/Kg	1	5	12/04/19 3:42	jlw
Zinc (WET DI)	6010D ICP	1		U	*	mg/L	0.01	0.05	11/26/19 10:22	kja
Zinc, total (3050)	M6010D ICP	100	59			mg/Kg	1	5	12/03/19 0:29	kja

Soil Analysis

Parameter	EPA Method	Dilution	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
pH, (WET-DI)	M9045D/M9040C									
pH		1	9.6			units	0.1	0.1	11/21/19 0:00	llr
Temperature		1	20.3			C	0.1	0.1	11/21/19 0:00	llr
Solids, Percent	D2216-80	1	99.9		*	%	0.1	0.5	12/02/19 21:03	ms/mlp

Soil Preparation

Parameter	EPA Method	Dilution	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Air Dry at 34 Degrees C	USDA No. 1, 1972								11/19/19 8:23	llr
Crush and Pulverize	EPA-600/2-78-054 3.1.3								11/19/19 8:23	llr
Digestion - Hot Plate	M3050B ICP								11/26/19 13:53	mlp
Digestion - Hot Plate	M3050B ICP-MS								11/26/19 13:53	mlp
Waste Extraction Test - DI H2O	California Method, Title 22								11/20/19 4:22	llr

Wet Chemistry

Parameter	EPA Method	Dilution	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Alkalinity (WET DI)	SM2320B - Titration									
Bicarbonate as CaCO3		1	26.2			mg/L	2	20	11/25/19 0:00	emk
Carbonate as CaCO3		1	4.4	B		mg/L	2	20	11/25/19 0:00	emk
Hydroxide as CaCO3		1		U		mg/L	2	20	11/25/19 0:00	emk
Total Alkalinity		1	30.6			mg/L	2	20	11/25/19 0:00	emk
Chloride (WET DI)	SM4500Cl-E	1	3.3		*	mg/L	0.5	2	12/17/19 11:23	ttg
Conductivity @25C (WET-DI)	SM2510B	1	67			umhos/cm	1	10	11/25/19 14:33	emk
Fluoride (WET DI)	SM4500F-C	1	0.2	B	*	mg/L	0.1	0.4	11/26/19 12:56	emk
Hardness as CaCO3 (WET-DI)	SM2340B - Calculation		14.0			mg/L	0.2	5	12/18/19 0:00	calc
Nitrate (WET-DI)	Calculation: NO3NO2 minus NO2			UH		mg/L	0.02	0.1	12/18/19 0:00	calc
Nitrate/Nitrite as N (WET DI)	M353.2 - Automated Cadmium Reduction	1		UH	*	mg/L	0.02	0.1	11/21/19 23:56	pjb
Nitrite as N (WET DI)	M353.2 - Automated Cadmium Reduction	1		U	*	mg/L	0.01	0.05	11/21/19 23:56	pjb
Residue, Filterable (TDS) @180C (WET DI)	SM2540C	1	72		*	mg/L	20	40	11/22/19 12:24	emk
Sulfate (WET DI)	D516-07 - Turbidimetric	1	1.4	B	*	mg/L	1	5	12/12/19 16:05	ttg

Rise Grass Valley Inc.

Project ID:

Sample ID: MA-3

ACZ Sample ID: **L55806-03**

Date Sampled: 10/29/19 11:45

Date Received: 11/11/19

Sample Matrix: Soil

Metals Analysis

Parameter	EPA Method	Dilution	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Aluminum (WET DI)	6010D ICP	1	0.60		*	mg/L	0.05	0.3	11/26/19 10:25	kja
Aluminum, total (3050)	M6010D ICP	198	31100		*	mg/Kg	10	50	12/04/19 3:46	jlw
Antimony (WET DI)	6020B ICP-MS	1	0.0016	B	*	mg/L	0.0004	0.002	11/27/19 15:17	mfm
Antimony, total (3050)	M6020B ICP-MS	495		U	*	mg/Kg	0.2	1	12/04/19 13:53	bsu
Arsenic (WET DI)	6020B ICP-MS	1	0.0014		*	mg/L	0.0002	0.001	11/27/19 15:17	mfm
Arsenic, total (3050)	M6020B ICP-MS	495	0.5			mg/Kg	0.1	0.5	12/04/19 13:53	bsu
Barium (WET DI)	6010D ICP	1	0.230		*	mg/L	0.007	0.04	11/26/19 10:25	kja
Barium, total (3050)	M6010D ICP	99	122			mg/Kg	0.7	3	12/03/19 0:33	kja
Beryllium (WET DI)	6020B ICP-MS	1		U	*	mg/L	0.00008	0.0003	11/27/19 15:17	mfm
Beryllium, total (3050)	M6020B ICP-MS	495	0.09	B		mg/Kg	0.04	0.1	12/04/19 13:53	bsu
Boron (WET DI)	6010D ICP	1		U	*	mg/L	0.02	0.1	11/26/19 10:25	kja
Boron, total (3050)	M6010D ICP	99		U		mg/Kg	2	10	12/03/19 0:33	kja
Cadmium (WET DI)	6020B ICP-MS	1		U	*	mg/L	0.00005	0.0003	11/27/19 15:17	mfm
Cadmium, total (3050)	M6020B ICP-MS	495	0.25			mg/Kg	0.02	0.1	12/04/19 13:53	bsu
Calcium (WET DI)	6010D ICP	1	4.5			mg/L	0.1	0.5	11/26/19 10:25	kja
Chromium (WET DI)	6010D ICP	1		U	*	mg/L	0.01	0.05	11/26/19 10:25	kja
Chromium, total (3050)	M6010D ICP	99	152			mg/Kg	1	5	12/03/19 0:33	kja
Cobalt (WET DI)	6010D ICP	1		U	*	mg/L	0.01	0.05	11/26/19 10:25	kja
Cobalt, total (3050)	M6010D ICP	99	27		*	mg/Kg	1	5	12/03/19 0:33	kja
Copper (WET DI)	6010D ICP	1		U	*	mg/L	0.01	0.05	11/26/19 10:25	kja
Copper, total (3050)	M6010D ICP	99	87			mg/Kg	1	5	12/03/19 0:33	kja
Iron (WET DI)	6010D ICP	1	0.20		*	mg/L	0.03	0.08	11/26/19 10:25	kja
Iron, total (3050)	M6010D ICP	198	54900		*	mg/Kg	6	10	12/04/19 3:46	jlw
Lead (WET DI)	6020B ICP-MS	1		U	*	mg/L	0.0001	0.0005	11/27/19 15:17	mfm
Lead, total (3050)	M6020B ICP-MS	495	0.59			mg/Kg	0.05	0.2	12/04/19 13:53	bsu
Magnesium (WET DI)	6010D ICP	1	0.9	B		mg/L	0.2	1	11/26/19 10:25	kja
Manganese (WET DI)	6010D ICP	1		U	*	mg/L	0.01	0.05	11/26/19 10:25	kja
Manganese, total (3050)	M6010D ICP	99	1230		*	mg/Kg	1	5	12/03/19 0:33	kja
Mercury (WET DI)	M7470 CVAA	1		U	*	mg/L	0.0002	0.001	11/25/19 14:53	slm
Mercury by Direct Combustion AA	M7473 CVAAS	1	11.4		*	ng/g	1.57	7.85	11/19/19 13:43	slm
Molybdenum (WET DI)	6010D ICP	1		U	*	mg/L	0.02	0.1	11/26/19 10:25	kja
Molybdenum, total (3050)	M6010D ICP	99		U	*	mg/Kg	2	10	12/03/19 0:33	kja
Nickel (WET DI)	6010D ICP	1		U	*	mg/L	0.008	0.04	11/26/19 10:25	kja
Nickel, total (3050)	M6010D ICP	99	52.5		*	mg/Kg	0.8	4	12/03/19 0:33	kja
Potassium (WET DI)	6010D ICP	1	1.8			mg/L	0.2	1	11/26/19 10:25	kja
Selenium (WET DI)	6020B ICP-MS	1		U	*	mg/L	0.0001	0.0003	11/27/19 15:17	mfm
Selenium, total (3050)	M6020B ICP-MS	495	0.26			mg/Kg	0.05	0.1	12/04/19 13:53	bsu
Silver (WET DI)	6020B ICP-MS	1		U	*	mg/L	0.0001	0.0005	11/27/19 15:17	mfm
Silver, total (3050)	M6020B ICP-MS	495	0.74			mg/Kg	0.05	0.2	12/04/19 13:53	bsu
Sodium (WET DI)	M6010D ICP	1	8.6			mg/L	0.2	1	11/26/19 10:25	kja
Thallium (WET DI)	6020B ICP-MS	1	0.001		*	mg/L	0.0001	0.0005	11/27/19 15:17	mfm

Rise Grass Valley Inc.

Project ID:

Sample ID: MA-3

ACZ Sample ID: **L55806-03**

Date Sampled: 10/29/19 11:45

Date Received: 11/11/19

Sample Matrix: Soil

Thallium, total (3050)	M6020B ICP-MS	495		U		mg/Kg	0.05	0.2	12/04/19 13:53	bsu
Vanadium (WET DI)	6010D ICP	1	0.029	B	*	mg/L	0.005	0.03	11/26/19 10:25	kja
Vanadium, total (3050)	M6010D ICP	198	147		*	mg/Kg	1	5	12/04/19 3:46	jlw
Zinc (WET DI)	6010D ICP	1		U	*	mg/L	0.01	0.05	11/26/19 10:25	kja
Zinc, total (3050)	M6010D ICP	99	82			mg/Kg	1	5	12/03/19 0:33	kja

Soil Analysis

Parameter	EPA Method	Dilution	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
pH, (WET-DI)	M9045D/M9040C									
pH		1	9.7			units	0.1	0.1	11/21/19 0:00	llr
Temperature		1	20.3			C	0.1	0.1	11/21/19 0:00	llr
Solids, Percent	D2216-80	1	99.8		*	%	0.1	0.5	12/02/19 22:37	ms/mlp

Soil Preparation

Parameter	EPA Method	Dilution	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Air Dry at 34 Degrees C	USDA No. 1, 1972								11/19/19 8:31	llr
Crush and Pulverize	EPA-600/2-78-054 3.1.3								11/19/19 8:31	llr
Digestion - Hot Plate	M3050B ICP-MS								11/26/19 14:13	mlp
Digestion - Hot Plate	M3050B ICP								11/26/19 14:13	mlp
Waste Extraction Test - DI H2O	California Method, Title 22								11/20/19 7:31	llr

Wet Chemistry

Parameter	EPA Method	Dilution	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Alkalinity (WET DI)	SM2320B - Titration									
Bicarbonate as CaCO3		1	28.0			mg/L	2	20	11/25/19 0:00	emk
Carbonate as CaCO3		1	3.0	B		mg/L	2	20	11/25/19 0:00	emk
Hydroxide as CaCO3		1		U		mg/L	2	20	11/25/19 0:00	emk
Total Alkalinity		1	31.0			mg/L	2	20	11/25/19 0:00	emk
Chloride (WET DI)	SM4500Cl-E	1	0.7	B	*	mg/L	0.5	2	12/17/19 11:23	ttg
Conductivity @25C (WET-DI)	SM2510B	1	74			umhos/cm	1	10	11/25/19 14:43	emk
Fluoride (WET DI)	SM4500F-C	1	0.1	B	*	mg/L	0.1	0.4	11/26/19 13:03	emk
Hardness as CaCO3 (WET-DI)	SM2340B - Calculation		15			mg/L	0.2	5	12/18/19 0:00	calc
Nitrate (WET-DI)	Calculation: NO3NO2 minus NO2		0.04	BH		mg/L	0.02	0.1	12/18/19 0:00	calc
Nitrate/Nitrite as N (WET DI)	M353.2 - Automated Cadmium Reduction	1	0.05	BH	*	mg/L	0.02	0.1	11/21/19 23:58	pjb
Nitrite as N (WET DI)	M353.2 - Automated Cadmium Reduction	1	0.01	B	*	mg/L	0.01	0.05	11/21/19 23:58	pjb
Residue, Filterable (TDS) @180C (WET DI)	SM2540C	1	68		*	mg/L	20	40	11/22/19 12:26	emk
Sulfate (WET DI)	D516-07 - Turbidimetric	1	6.6		*	mg/L	1	5	12/12/19 16:05	ttg

Rise Grass Valley Inc.

Project ID:

Sample ID: MAA-1

ACZ Sample ID: **L55806-04**

Date Sampled: 10/29/19 11:20

Date Received: 11/11/19

Sample Matrix: Soil

Metals Analysis

Parameter	EPA Method	Dilution	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Aluminum (WET DI)	6010D ICP	1	0.49		*	mg/L	0.05	0.3	11/26/19 10:29	kja
Aluminum, total (3050)	M6010D ICP	100	421		*	mg/Kg	5	30	12/03/19 0:37	kja
Antimony (WET DI)	6020B ICP-MS	1	0.0104		*	mg/L	0.0004	0.002	11/27/19 15:19	mfm
Antimony, total (3050)	M6020B ICP-MS	500	1.1		*	mg/Kg	0.2	1	12/04/19 13:55	bsu
Arsenic (WET DI)	6020B ICP-MS	1	0.0148		*	mg/L	0.0002	0.001	11/27/19 15:19	mfm
Arsenic, total (3050)	M6020B ICP-MS	500	34.8			mg/Kg	0.1	0.5	12/04/19 13:55	bsu
Barium (WET DI)	6010D ICP	1		U	*	mg/L	0.007	0.04	11/26/19 10:29	kja
Barium, total (3050)	M6010D ICP	100	1.6	B		mg/Kg	0.7	4	12/03/19 0:37	kja
Beryllium (WET DI)	6020B ICP-MS	1		U	*	mg/L	0.00008	0.0003	11/27/19 15:19	mfm
Beryllium, total (3050)	M6020B ICP-MS	500		U		mg/Kg	0.04	0.1	12/04/19 13:55	bsu
Boron (WET DI)	6010D ICP	1		U	*	mg/L	0.02	0.1	11/26/19 10:29	kja
Boron, total (3050)	M6010D ICP	100		U		mg/Kg	2	10	12/03/19 0:37	kja
Cadmium (WET DI)	6020B ICP-MS	1		U	*	mg/L	0.00005	0.0003	11/27/19 15:19	mfm
Cadmium, total (3050)	M6020B ICP-MS	500	0.35			mg/Kg	0.03	0.1	12/04/19 13:55	bsu
Calcium (WET DI)	6010D ICP	1	8.8			mg/L	0.1	0.5	11/26/19 10:29	kja
Chromium (WET DI)	6010D ICP	1		U	*	mg/L	0.01	0.05	11/26/19 10:29	kja
Chromium, total (3050)	M6010D ICP	100		U		mg/Kg	1	5	12/03/19 0:37	kja
Cobalt (WET DI)	6010D ICP	1		U	*	mg/L	0.01	0.05	11/26/19 10:29	kja
Cobalt, total (3050)	M6010D ICP	100	6		*	mg/Kg	1	5	12/03/19 0:37	kja
Copper (WET DI)	6010D ICP	1		U	*	mg/L	0.01	0.05	11/26/19 10:29	kja
Copper, total (3050)	M6010D ICP	100	27			mg/Kg	1	5	12/03/19 0:37	kja
Iron (WET DI)	6010D ICP	1		U	*	mg/L	0.03	0.08	11/26/19 10:29	kja
Iron, total (3050)	M6010D ICP	100	15500		*	mg/Kg	3	8	12/03/19 0:37	kja
Lead (WET DI)	6020B ICP-MS	1	0.0001	B	*	mg/L	0.0001	0.0005	11/27/19 15:19	mfm
Lead, total (3050)	M6020B ICP-MS	500	22.8			mg/Kg	0.05	0.3	12/04/19 13:55	bsu
Magnesium (WET DI)	6010D ICP	1	3.9			mg/L	0.2	1	11/26/19 10:29	kja
Manganese (WET DI)	6010D ICP	1		U	*	mg/L	0.01	0.05	11/26/19 10:29	kja
Manganese, total (3050)	M6010D ICP	100	311		*	mg/Kg	1	5	12/03/19 0:37	kja
Mercury (WET DI)	M7470 CVAA	1		U	*	mg/L	0.0002	0.001	11/25/19 14:54	slm
Mercury by Direct Combustion AA	M7473 CVAAS	1	43.4		*	ng/g	1.6	8	11/19/19 13:49	slm
Molybdenum (WET DI)	6010D ICP	1	0.06	B	*	mg/L	0.02	0.1	11/26/19 10:29	kja
Molybdenum, total (3050)	M6010D ICP	200	271			mg/Kg	4	20	12/04/19 3:53	jlw
Nickel (WET DI)	6010D ICP	1		U	*	mg/L	0.008	0.04	11/26/19 10:29	kja
Nickel, total (3050)	M6010D ICP	100	3.0	B	*	mg/Kg	0.8	4	12/03/19 0:37	kja
Potassium (WET DI)	6010D ICP	1		U		mg/L	0.2	1	11/26/19 10:29	kja
Selenium (WET DI)	6020B ICP-MS	1	0.0004		*	mg/L	0.0001	0.0003	11/27/19 15:19	mfm
Selenium, total (3050)	M6020B ICP-MS	500	0.96			mg/Kg	0.05	0.1	12/04/19 13:55	bsu
Silver (WET DI)	6020B ICP-MS	1		U	*	mg/L	0.0001	0.0005	11/27/19 15:19	mfm
Silver, total (3050)	M6020B ICP-MS	500	0.59			mg/Kg	0.05	0.3	12/04/19 13:55	bsu
Sodium (WET DI)	M6010D ICP	1	7.4			mg/L	0.2	1	11/26/19 10:29	kja
Thallium (WET DI)	6020B ICP-MS	1	0.0002	B	*	mg/L	0.0001	0.0005	11/27/19 15:19	mfm

Rise Grass Valley Inc.

Project ID:

Sample ID: MAA-1

ACZ Sample ID: **L55806-04**

Date Sampled: 10/29/19 11:20

Date Received: 11/11/19

Sample Matrix: Soil

Thallium, total (3050)	M6020B ICP-MS	500		U		mg/Kg	0.05	0.3	12/04/19 13:55	bsu
Vanadium (WET DI)	6010D ICP	1	0.007	B	*	mg/L	0.005	0.03	11/26/19 10:29	kja
Vanadium, total (3050)	M6010D ICP	100	4.9			mg/Kg	0.5	3	12/03/19 0:37	kja
Zinc (WET DI)	6010D ICP	1		U	*	mg/L	0.01	0.05	11/26/19 10:29	kja
Zinc, total (3050)	M6010D ICP	100	11			mg/Kg	1	5	12/03/19 0:37	kja

Soil Analysis

Parameter	EPA Method	Dilution	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
pH, (WET-DI)	M9045D/M9040C									
pH		1	9.7			units	0.1	0.1	11/21/19 0:00	llr
Temperature		1	20.3			C	0.1	0.1	11/21/19 0:00	llr
Solids, Percent	D2216-80	1	99.9		*	%	0.1	0.5	12/03/19 0:11	ms/mlp

Soil Preparation

Parameter	EPA Method	Dilution	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Air Dry at 34 Degrees C	USDA No. 1, 1972								11/19/19 8:40	llr
Crush and Pulverize	EPA-600/2-78-054 3.1.3								11/19/19 8:40	llr
Digestion - Hot Plate	M3050B ICP-MS								11/26/19 14:33	mlp
Digestion - Hot Plate	M3050B ICP								11/26/19 14:33	mlp
Waste Extraction Test - DI H2O	California Method, Title 22								11/20/19 10:40	llr

Wet Chemistry

Parameter	EPA Method	Dilution	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Alkalinity (WET DI)	SM2320B - Titration									
Bicarbonate as CaCO3		1	32.4			mg/L	2	20	11/25/19 0:00	emk
Carbonate as CaCO3		1	14.4	B		mg/L	2	20	11/25/19 0:00	emk
Hydroxide as CaCO3		1		U		mg/L	2	20	11/25/19 0:00	emk
Total Alkalinity		1	46.7			mg/L	2	20	11/25/19 0:00	emk
Chloride (WET DI)	SM4500Cl-E	1	6.6		*	mg/L	0.5	2	12/17/19 11:23	ttg
Conductivity @25C (WET-DI)	SM2510B	1	106			umhos/cm	1	10	11/25/19 14:53	emk
Fluoride (WET DI)	SM4500F-C	1		U	*	mg/L	0.1	0.4	11/26/19 13:09	emk
Hardness as CaCO3 (WET-DI)	SM2340B - Calculation		38.0			mg/L	0.2	5	12/18/19 0:00	calc
Nitrate (WET-DI)	Calculation: NO3NO2 minus NO2			UH		mg/L	0.02	0.1	12/18/19 0:00	calc
Nitrate/Nitrite as N (WET DI)	M353.2 - Automated Cadmium Reduction	1		UH	*	mg/L	0.02	0.1	11/21/19 23:59	pjb
Nitrite as N (WET DI)	M353.2 - Automated Cadmium Reduction	1		U	*	mg/L	0.01	0.05	11/21/19 23:59	pjb
Residue, Filterable (TDS) @180C (WET DI)	SM2540C	1	86		*	mg/L	20	40	11/22/19 12:28	emk
Sulfate (WET DI)	D516-07 - Turbidimetric	1	1.9	B	*	mg/L	1	5	12/12/19 16:05	ttg

Rise Grass Valley Inc.

Project ID:

Sample ID: MS-1

ACZ Sample ID: **L55806-05**

Date Sampled: 10/29/19 11:00

Date Received: 11/11/19

Sample Matrix: Soil

Metals Analysis

Parameter	EPA Method	Dilution	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Aluminum (WET DI)	6010D ICP	1	0.99		*	mg/L	0.05	0.3	11/26/19 10:40	kja
Aluminum, total (3050)	M6010D ICP	99	22900		*	mg/Kg	5	20	12/03/19 0:41	kja
Antimony (WET DI)	6020B ICP-MS	1	0.0021		*	mg/L	0.0004	0.002	11/27/19 15:21	mfm
Antimony, total (3050)	M6020B ICP-MS	495		U	*	mg/Kg	0.2	1	12/04/19 14:00	bsu
Arsenic (WET DI)	6020B ICP-MS	1	0.0005	B	*	mg/L	0.0002	0.001	11/27/19 15:21	mfm
Arsenic, total (3050)	M6020B ICP-MS	495	0.7			mg/Kg	0.1	0.5	12/04/19 14:00	bsu
Barium (WET DI)	6010D ICP	1		U	*	mg/L	0.007	0.04	11/26/19 10:40	kja
Barium, total (3050)	M6010D ICP	99	18.3			mg/Kg	0.7	3	12/03/19 0:41	kja
Beryllium (WET DI)	6020B ICP-MS	1		U	*	mg/L	0.00008	0.0003	11/27/19 15:21	mfm
Beryllium, total (3050)	M6020B ICP-MS	495	0.13			mg/Kg	0.04	0.1	12/04/19 14:00	bsu
Boron (WET DI)	6010D ICP	1		U	*	mg/L	0.02	0.1	11/26/19 10:40	kja
Boron, total (3050)	M6010D ICP	99		U		mg/Kg	2	10	12/03/19 0:41	kja
Cadmium (WET DI)	6020B ICP-MS	1		U	*	mg/L	0.00005	0.0003	11/27/19 15:21	mfm
Cadmium, total (3050)	M6020B ICP-MS	495	0.37			mg/Kg	0.02	0.1	12/04/19 14:00	bsu
Calcium (WET DI)	6010D ICP	1	4.1			mg/L	0.1	0.5	11/26/19 10:40	kja
Chromium (WET DI)	6010D ICP	1		U	*	mg/L	0.01	0.05	11/26/19 10:40	kja
Chromium, total (3050)	M6010D ICP	99	54			mg/Kg	1	5	12/03/19 0:41	kja
Cobalt (WET DI)	6010D ICP	1		U	*	mg/L	0.01	0.05	11/26/19 10:40	kja
Cobalt, total (3050)	M6010D ICP	99	22		*	mg/Kg	1	5	12/03/19 0:41	kja
Copper (WET DI)	6010D ICP	1		U	*	mg/L	0.01	0.05	11/26/19 10:40	kja
Copper, total (3050)	M6010D ICP	99	89			mg/Kg	1	5	12/03/19 0:41	kja
Iron (WET DI)	6010D ICP	1		U	*	mg/L	0.03	0.08	11/26/19 10:40	kja
Iron, total (3050)	M6010D ICP	99	33700		*	mg/Kg	3	7	12/03/19 0:41	kja
Lead (WET DI)	6020B ICP-MS	1		U	*	mg/L	0.0001	0.0005	11/27/19 15:21	mfm
Lead, total (3050)	M6020B ICP-MS	495	1.08			mg/Kg	0.05	0.2	12/04/19 14:00	bsu
Magnesium (WET DI)	6010D ICP	1	0.3	B		mg/L	0.2	1	11/26/19 10:40	kja
Manganese (WET DI)	6010D ICP	1		U	*	mg/L	0.01	0.05	11/26/19 10:40	kja
Manganese, total (3050)	M6010D ICP	99	696		*	mg/Kg	1	5	12/03/19 0:41	kja
Mercury (WET DI)	M7470 CVAA	1		U	*	mg/L	0.0002	0.001	11/25/19 14:56	slm
Mercury by Direct Combustion AA	M7473 CVAAS	1	19		*	ng/g	1.58	7.9	11/19/19 13:56	slm
Molybdenum (WET DI)	6010D ICP	1		U	*	mg/L	0.02	0.1	11/26/19 10:40	kja
Molybdenum, total (3050)	M6010D ICP	99		U	*	mg/Kg	2	10	12/03/19 0:41	kja
Nickel (WET DI)	6010D ICP	1		U	*	mg/L	0.008	0.04	11/26/19 10:40	kja
Nickel, total (3050)	M6010D ICP	99	32.4		*	mg/Kg	0.8	4	12/03/19 0:41	kja
Potassium (WET DI)	6010D ICP	1	1.6			mg/L	0.2	1	11/26/19 10:40	kja
Selenium (WET DI)	6020B ICP-MS	1	0.0003		*	mg/L	0.0001	0.0003	11/27/19 15:21	mfm
Selenium, total (3050)	M6020B ICP-MS	495	0.40			mg/Kg	0.05	0.1	12/04/19 14:00	bsu
Silver (WET DI)	6020B ICP-MS	1		U	*	mg/L	0.0001	0.0005	11/27/19 15:21	mfm
Silver, total (3050)	M6020B ICP-MS	495	0.17	B		mg/Kg	0.05	0.2	12/04/19 14:00	bsu
Sodium (WET DI)	M6010D ICP	1	6.7			mg/L	0.2	1	11/26/19 10:40	kja
Thallium (WET DI)	6020B ICP-MS	1	0.0001	B	*	mg/L	0.0001	0.0005	11/27/19 15:21	mfm

Rise Grass Valley Inc.

Project ID:

Sample ID: MS-1

ACZ Sample ID: **L55806-05**

Date Sampled: 10/29/19 11:00

Date Received: 11/11/19

Sample Matrix: Soil

Thallium, total (3050)	M6020B ICP-MS	495		U		mg/Kg	0.05	0.2	12/04/19 14:00	bsu
Vanadium (WET DI)	6010D ICP	1	0.040		*	mg/L	0.005	0.03	11/26/19 10:40	kja
Vanadium, total (3050)	M6010D ICP	198	129		*	mg/Kg	1	5	12/04/19 3:57	jlw
Zinc (WET DI)	6010D ICP	1		U	*	mg/L	0.01	0.05	11/26/19 10:40	kja
Zinc, total (3050)	M6010D ICP	99	47			mg/Kg	1	5	12/03/19 0:41	kja

Soil Analysis

Parameter	EPA Method	Dilution	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
pH, (WET-DI)	M9045D/M9040C									
pH		1	10.0			units	0.1	0.1	11/21/19 0:00	llr
Temperature		1	20.3			C	0.1	0.1	11/21/19 0:00	llr
Solids, Percent	D2216-80	1	99.9		*	%	0.1	0.5	12/03/19 1:45	ms/mlp

Soil Preparation

Parameter	EPA Method	Dilution	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Air Dry at 34 Degrees C	USDA No. 1, 1972								11/19/19 8:48	llr
Crush and Pulverize	EPA-600/2-78-054 3.1.3								11/19/19 8:48	llr
Digestion - Hot Plate	M3050B ICP-MS								11/26/19 14:52	mlp
Digestion - Hot Plate	M3050B ICP								11/26/19 14:52	mlp
Waste Extraction Test - DI H2O	California Method, Title 22								11/20/19 13:49	llr

Wet Chemistry

Parameter	EPA Method	Dilution	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Alkalinity (WET DI)	SM2320B - Titration									
Bicarbonate as CaCO3		1	19.9	B		mg/L	2	20	11/25/19 0:00	emk
Carbonate as CaCO3		1	9.9	B		mg/L	2	20	11/25/19 0:00	emk
Hydroxide as CaCO3		1		U		mg/L	2	20	11/25/19 0:00	emk
Total Alkalinity		1	29.8			mg/L	2	20	11/25/19 0:00	emk
Chloride (WET DI)	SM4500Cl-E	1	1.4	B	*	mg/L	0.5	2	12/17/19 11:23	ttg
Conductivity @25C (WET-DI)	SM2510B	1	57			umhos/cm	1	10	11/25/19 15:03	emk
Fluoride (WET DI)	SM4500F-C	1	0.2	B	*	mg/L	0.1	0.4	11/26/19 13:14	emk
Hardness as CaCO3 (WET-DI)	SM2340B - Calculation		12			mg/L	0.2	5	12/18/19 0:00	calc
Nitrate (WET-DI)	Calculation: NO3NO2 minus NO2			UH		mg/L	0.02	0.1	12/18/19 0:00	calc
Nitrate/Nitrite as N (WET DI)	M353.2 - Automated Cadmium Reduction	1		UH	*	mg/L	0.02	0.1	11/22/19 0:00	pjb
Nitrite as N (WET DI)	M353.2 - Automated Cadmium Reduction	1		U	*	mg/L	0.01	0.05	11/22/19 0:00	pjb
Residue, Filterable (TDS) @180C (WET DI)	SM2540C	1	54		*	mg/L	20	40	11/22/19 12:31	emk
Sulfate (WET DI)	D516-07 - Turbidimetric	1	1.1	B	*	mg/L	1	5	12/12/19 16:05	ttg

Rise Grass Valley Inc.

Project ID:

Sample ID: S-1

ACZ Sample ID: **L55806-06**

Date Sampled: 10/29/19 11:25

Date Received: 11/11/19

Sample Matrix: Soil

Metals Analysis

Parameter	EPA Method	Dilution	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Aluminum (WET DI)	6010D ICP	1	0.32		*	mg/L	0.05	0.3	11/26/19 10:44	kja
Aluminum, total (3050)	M6010D ICP	1000	41300		*	mg/Kg	50	300	12/04/19 4:01	jlw
Antimony (WET DI)	6020B ICP-MS	20	0.105		*	mg/L	0.008	0.04	12/03/19 20:37	bsu
Antimony, total (3050)	M6020B ICP-MS	500	0.6	B	*	mg/Kg	0.2	1	12/04/19 14:02	bsu
Arsenic (WET DI)	6020B ICP-MS	1	0.169		*	mg/L	0.0002	0.001	11/27/19 15:23	mfm
Arsenic, total (3050)	M6020B ICP-MS	500	36.8			mg/Kg	0.1	0.5	12/04/19 14:02	bsu
Barium (WET DI)	6010D ICP	1		U	*	mg/L	0.007	0.04	11/26/19 10:44	kja
Barium, total (3050)	M6010D ICP	100	1.1	B		mg/Kg	0.7	4	12/03/19 0:45	kja
Beryllium (WET DI)	6020B ICP-MS	1		U	*	mg/L	0.00008	0.0003	11/27/19 15:23	mfm
Beryllium, total (3050)	M6020B ICP-MS	500		U		mg/Kg	0.04	0.1	12/04/19 14:02	bsu
Boron (WET DI)	6010D ICP	1	0.13		*	mg/L	0.02	0.1	11/26/19 10:44	kja
Boron, total (3050)	M6010D ICP	100	7	B		mg/Kg	2	10	12/03/19 0:45	kja
Cadmium (WET DI)	6020B ICP-MS	1		U	*	mg/L	0.00005	0.0003	11/27/19 15:23	mfm
Cadmium, total (3050)	M6020B ICP-MS	500		U		mg/Kg	0.03	0.1	12/04/19 14:02	bsu
Calcium (WET DI)	6010D ICP	1		U		mg/L	0.1	0.5	11/26/19 10:44	kja
Chromium (WET DI)	6010D ICP	1		U	*	mg/L	0.01	0.05	11/26/19 10:44	kja
Chromium, total (3050)	M6010D ICP	1000	1740			mg/Kg	10	50	12/04/19 4:01	jlw
Cobalt (WET DI)	6010D ICP	1		U	*	mg/L	0.01	0.05	11/26/19 10:44	kja
Cobalt, total (3050)	M6010D ICP	100	76		*	mg/Kg	1	5	12/03/19 0:45	kja
Copper (WET DI)	6010D ICP	1		U	*	mg/L	0.01	0.05	11/26/19 10:44	kja
Copper, total (3050)	M6010D ICP	100	30			mg/Kg	1	5	12/03/19 0:45	kja
Iron (WET DI)	6010D ICP	1	0.33		*	mg/L	0.03	0.08	11/26/19 10:44	kja
Iron, total (3050)	M6010D ICP	100	36800		*	mg/Kg	3	8	12/03/19 0:45	kja
Lead (WET DI)	6020B ICP-MS	1	0.0002	B	*	mg/L	0.0001	0.0005	11/27/19 15:23	mfm
Lead, total (3050)	M6020B ICP-MS	500	1.92			mg/Kg	0.05	0.3	12/04/19 14:02	bsu
Magnesium (WET DI)	6010D ICP	1	1.1			mg/L	0.2	1	11/26/19 10:44	kja
Manganese (WET DI)	6010D ICP	1		U	*	mg/L	0.01	0.05	11/26/19 10:44	kja
Manganese, total (3050)	M6010D ICP	100	176		*	mg/Kg	1	5	12/03/19 0:45	kja
Mercury (WET DI)	M7470 CVAA	1		U	*	mg/L	0.0002	0.001	11/25/19 14:57	slm
Mercury by Direct Combustion AA	M7473 CVAAS	1	25.7		*	ng/g	1.6	8	11/19/19 14:03	slm
Molybdenum (WET DI)	6010D ICP	1		U	*	mg/L	0.02	0.1	11/26/19 10:44	kja
Molybdenum, total (3050)	M6010D ICP	100	3	B	*	mg/Kg	2	10	12/03/19 0:45	kja
Nickel (WET DI)	6010D ICP	1	0.012	B	*	mg/L	0.008	0.04	11/26/19 10:44	kja
Nickel, total (3050)	M6010D ICP	1000	1810			mg/Kg	8	40	12/04/19 4:01	jlw
Potassium (WET DI)	6010D ICP	1	2.7			mg/L	0.2	1	11/26/19 10:44	kja
Selenium (WET DI)	6020B ICP-MS	1		U	*	mg/L	0.0001	0.0003	11/27/19 15:23	mfm
Selenium, total (3050)	M6020B ICP-MS	500	0.20			mg/Kg	0.05	0.1	12/04/19 14:02	bsu
Silver (WET DI)	6020B ICP-MS	1		U	*	mg/L	0.0001	0.0005	11/27/19 15:23	mfm
Silver, total (3050)	M6020B ICP-MS	500		U		mg/Kg	0.05	0.3	12/04/19 14:02	bsu
Sodium (WET DI)	M6010D ICP	1	38.7			mg/L	0.2	1	11/26/19 10:44	kja
Thallium (WET DI)	6020B ICP-MS	1		U	*	mg/L	0.0001	0.0005	11/27/19 15:23	mfm

Rise Grass Valley Inc.

Project ID:

Sample ID: S-1

ACZ Sample ID: **L55806-06**

Date Sampled: 10/29/19 11:25

Date Received: 11/11/19

Sample Matrix: Soil

Thallium, total (3050)	M6020B ICP-MS	500		U		mg/Kg	0.05	0.3	12/04/19 14:02	bsu
Vanadium (WET DI)	6010D ICP	1	0.031		*	mg/L	0.005	0.03	11/26/19 10:44	kja
Vanadium, total (3050)	M6010D ICP	100	63.4			mg/Kg	0.5	3	12/03/19 0:45	kja
Zinc (WET DI)	6010D ICP	1		U	*	mg/L	0.01	0.05	11/26/19 10:44	kja
Zinc, total (3050)	M6010D ICP	100	17			mg/Kg	1	5	12/03/19 0:45	kja

Soil Analysis

Parameter	EPA Method	Dilution	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
pH, (WET-DI)	M9045D/M9040C									
pH		1	10.6		*	units	0.1	0.1	11/21/19 0:00	llr
Temperature		1	20.3			C	0.1	0.1	11/21/19 0:00	llr
Solids, Percent	D2216-80	1	99.5		*	%	0.1	0.5	12/03/19 3:19	ms/mlp

Soil Preparation

Parameter	EPA Method	Dilution	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Air Dry at 34 Degrees C	USDA No. 1, 1972								11/19/19 8:56	llr
Crush and Pulverize	EPA-600/2-78-054 3.1.3								11/19/19 8:56	llr
Digestion - Hot Plate	M3050B ICP								11/26/19 9:58	mlp
Digestion - Hot Plate	M3050B ICP-MS								11/26/19 9:58	mlp
Waste Extraction Test - DI H2O	California Method, Title 22				*				11/20/19 16:58	llr

Wet Chemistry

Parameter	EPA Method	Dilution	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Alkalinity (WET DI)	SM2320B - Titration									
Bicarbonate as CaCO3		1		U		mg/L	2	20	11/25/19 0:00	emk
Carbonate as CaCO3		1	73.6			mg/L	2	20	11/25/19 0:00	emk
Hydroxide as CaCO3		1	30.0			mg/L	2	20	11/25/19 0:00	emk
Total Alkalinity		1	104			mg/L	2	20	11/25/19 0:00	emk
Chloride (WET DI)	SM4500Cl-E	1	0.7	B	*	mg/L	0.5	2	12/17/19 11:23	ttg
Conductivity @25C (WET-DI)	SM2510B	1	200			umhos/cm	1	10	11/25/19 15:13	emk
Fluoride (WET DI)	SM4500F-C	1		U	*	mg/L	0.1	0.4	11/26/19 13:19	emk
Hardness as CaCO3 (WET-DI)	SM2340B - Calculation		4.5	B		mg/L	0.2	5	12/18/19 0:00	calc
Nitrate (WET-DI)	Calculation: NO3NO2 minus NO2			UH		mg/L	0.02	0.1	12/18/19 0:00	calc
Nitrate/Nitrite as N (WET DI)	M353.2 - Automated Cadmium Reduction	1		UH	*	mg/L	0.02	0.1	11/22/19 0:02	pjb
Nitrite as N (WET DI)	M353.2 - Automated Cadmium Reduction	1		U	*	mg/L	0.01	0.05	11/22/19 0:02	pjb
Residue, Filterable (TDS) @180C (WET DI)	SM2540C	1	178		*	mg/L	20	40	11/22/19 12:33	emk
Sulfate (WET DI)	D516-07 - Turbidimetric	1	2.8	B	*	mg/L	1	5	12/12/19 16:05	ttg



Report Header Explanations

<i>Batch</i>	A distinct set of samples analyzed at a specific time
<i>Found</i>	Value of the QC Type of interest
<i>Limit</i>	Upper limit for RPD, in %.
<i>Lower</i>	Lower Recovery Limit, in % (except for LCSS, mg/Kg)
<i>MDL</i>	Method Detection Limit. Same as Minimum Reporting Limit unless omitted or equal to the PQL (see comment #5). Allows for instrument and annual fluctuations.
<i>PCN/SCN</i>	A number assigned to reagents/standards to trace to the manufacturer's certificate of analysis
<i>PQL</i>	Practical Quantitation Limit. Synonymous with the EPA term "minimum level".
<i>QC</i>	True Value of the Control Sample or the amount added to the Spike
<i>Rec</i>	Recovered amount of the true value or spike added, in % (except for LCSS, mg/Kg)
<i>RPD</i>	Relative Percent Difference, calculation used for Duplicate QC Types
<i>Upper</i>	Upper Recovery Limit, in % (except for LCSS, mg/Kg)
<i>Sample</i>	Value of the Sample of interest

QC Sample Types

<i>AS</i>	Analytical Spike (Post Digestion)	<i>LCSWD</i>	Laboratory Control Sample - Water Duplicate
<i>ASD</i>	Analytical Spike (Post Digestion) Duplicate	<i>LFB</i>	Laboratory Fortified Blank
<i>CCB</i>	Continuing Calibration Blank	<i>LFM</i>	Laboratory Fortified Matrix
<i>CCV</i>	Continuing Calibration Verification standard	<i>LFMD</i>	Laboratory Fortified Matrix Duplicate
<i>DUP</i>	Sample Duplicate	<i>LRB</i>	Laboratory Reagent Blank
<i>ICB</i>	Initial Calibration Blank	<i>MS</i>	Matrix Spike
<i>ICV</i>	Initial Calibration Verification standard	<i>MSD</i>	Matrix Spike Duplicate
<i>ICSAB</i>	Inter-element Correction Standard - A plus B solutions	<i>PBS</i>	Prep Blank - Soil
<i>LCSS</i>	Laboratory Control Sample - Soil	<i>PBW</i>	Prep Blank - Water
<i>LCSSD</i>	Laboratory Control Sample - Soil Duplicate	<i>PQV</i>	Practical Quantitation Verification standard
<i>LCSW</i>	Laboratory Control Sample - Water	<i>SDL</i>	Serial Dilution

QC Sample Type Explanations

Blanks	Verifies that there is no or minimal contamination in the prep method or calibration procedure.
Control Samples	Verifies the accuracy of the method, including the prep procedure.
Duplicates	Verifies the precision of the instrument and/or method.
Spikes/Fortified Matrix	Determines sample matrix interferences, if any.
Standard	Verifies the validity of the calibration.

ACZ Qualifiers (Qual)

B	Analyte concentration detected at a value between MDL and PQL. The associated value is an estimated quantity.
H	Analysis exceeded method hold time. pH is a field test with an immediate hold time.
L	Target analyte response was below the laboratory defined negative threshold.
U	The material was analyzed for, but was not detected above the level of the associated value. The associated value is either the sample quantitation limit or the sample detection limit.

Method References

(1)	EPA 600/4-83-020. Methods for Chemical Analysis of Water and Wastes, March 1983.
(2)	EPA 600/R-93-100. Methods for the Determination of Inorganic Substances in Environmental Samples, August 1993.
(3)	EPA 600/R-94-111. Methods for the Determination of Metals in Environmental Samples - Supplement I, May 1994.
(4)	EPA SW-846. Test Methods for Evaluating Solid Waste.
(5)	Standard Methods for the Examination of Water and Wastewater.

Comments

(1)	QC results calculated from raw data. Results may vary slightly if the rounded values are used in the calculations.
(2)	Soil, Sludge, and Plant matrices for Inorganic analyses are reported on a dry weight basis.
(3)	Animal matrices for Inorganic analyses are reported on an "as received" basis.
(4)	An asterisk in the "XQ" column indicates there is an extended qualifier and/or certification qualifier associated with the result.
(5)	If the MDL equals the PQL or the MDL column is omitted, the PQL is the reporting limit.

For a complete list of ACZ's Extended Qualifiers, please click:

<https://acz.com/wp-content/uploads/2019/04/Ext-Qual-List.pdf>

Rise Grass Valley Inc.

ACZ Project ID: **L55806**

NOTE: If the Rec% column is null, the high/low limits are in the same units as the result. If the Rec% column is not null, then the high/low limits are in % Rec.

Alkalinity as CaCO3

SM2320B - Titration

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec%	Lower	Upper	RPD	Limit	Qual
WG486937													
WG486937PBW	PBW	11/25/19 13:53				U	mg/L		-20	20			
WG486937LCSW2	LCSW	11/25/19 14:08	WC191115-7	820.0001		820	mg/L	100	90	110			
WG486427PBS	PBS	11/25/19 14:16				3	mg/L		-20	20			
L55808-01DUP	DUP	11/25/19 15:32			45.2	43.2	mg/L				5	20	
WG486937LCSW4	LCSW	11/25/19 16:15	WC191115-7	820.0001		823	mg/L	100	90	110			

Aluminum (WET DI)

6010D ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec%	Lower	Upper	RPD	Limit	Qual
WG486811													
WG486811ICV	ICV	11/26/19 9:47	II191121-2	2		2.009	mg/L	100	90	110			
WG486811ICB	ICB	11/26/19 9:51				U	mg/L		-0.15	0.15			
WG486427PBS	PBS	11/26/19 10:14				U	mg/L		-0.15	0.15			
L55806-04AS	AS	11/26/19 10:33	II191106-4	1.0012	.49	1.474	mg/L	98	75	125			
L55806-04ASD	ASD	11/26/19 10:36	II191106-4	1.0012	.49	1.446	mg/L	95	75	125	2	20	
L55808-01DUP	DUP	11/26/19 10:59			.17	.161	mg/L				5	20	RA

Aluminum, total (3050)

M6010D ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec%	Lower	Upper	RPD	Limit	Qual
WG487169													
WG487169ICV	ICV	12/02/19 23:46	II191122-1	2		1.987	mg/L	99	90	110			
WG487169ICB	ICB	12/02/19 23:50				U	mg/L		-0.15	0.15			
WG486958PBS	PBS	12/03/19 0:14				U	mg/Kg		-15	15			
WG486958LCSS	LCSS	12/03/19 0:18	PCN59282	8610		9552	mg/Kg		4410	12800			
WG486958LCSSD	LCSSD	12/03/19 0:22	PCN59282	8610		9199	mg/Kg		4410	12800	4	20	
L55822-21MS	MS	12/03/19 1:20	II191106-4	100.12	26600	27240	mg/Kg	639	75	125			M3
L55822-21MSD	MSD	12/03/19 1:24	II191106-4	100.12	26600	27750	mg/Kg	1149	75	125	2	20	M3
WG487264													
WG487264ICV	ICV	12/04/19 2:59	II191122-1	2		1.972	mg/L	99	90	110			
WG487264ICB	ICB	12/04/19 3:02				U	mg/L		-0.15	0.15			
WG486958PBS	PBS	12/04/19 3:27				U	mg/Kg		-15	15			
WG486958LCSS	LCSS	12/04/19 3:30	PCN59282	8610		9593	mg/Kg		4410	12800			
WG486958LCSSD	LCSSD	12/04/19 3:34	PCN59282	8610		9325	mg/Kg		4410	12800	3	20	
L55822-21MS	MS	12/04/19 4:17	II2XSOIL	100.11	27500	28280	mg/Kg	779	75	125			M3
L55822-21MSD	MSD	12/04/19 4:21	II2XSOIL	100.11	27500	28620	mg/Kg	1119	75	125	1	20	M3

Rise Grass Valley Inc.

ACZ Project ID: **L55806**

NOTE: If the Rec% column is null, the high/low limits are in the same units as the result. If the Rec% column is not null, then the high/low limits are in % Rec.

Antimony (WET DI)

6020B ICP-MS

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec%	Lower	Upper	RPD	Limit	Qual
WG487095													
WG487095ICV	ICV	11/27/19 14:58	MS191014-8	.02004		.01989	mg/L	99	90	110			
WG487095ICB	ICB	11/27/19 15:00				U	mg/L		-0.0012	0.0012			
WG486427PBS	PBS	11/27/19 15:10				U	mg/L		-0.0012	0.0012			
L55806-06AS	AS	11/27/19 15:25	MS191119-5	.01	.1871	.11517	mg/L	-719	75	125			M3
L55806-06ASD	ASD	11/27/19 15:26	MS191119-5	.01	.1871	.13123	mg/L	-559	75	125	13	20	M3
L55808-01DUP	DUP	11/27/19 15:33			.0015	.00134	mg/L				11	20	RA
WG487291													
WG487291ICV	ICV	12/03/19 20:24	MS191014-8	.02004		.02046	mg/L	102	90	110			
WG487291ICB	ICB	12/03/19 20:26				U	mg/L		-0.0012	0.0012			
WG486427PBS	PBS	12/03/19 20:35				U	mg/L		-0.0012	0.0012			
L55806-06AS	AS	12/03/19 20:40	MS191119-5	.2	.105	.2853	mg/L	90	75	125			
L55806-06ASD	ASD	12/03/19 20:42	MS191119-5	.2	.105	.3078	mg/L	101	75	125	8	20	
L55808-01DUP	DUP	12/03/19 20:46			.0014	.00127	mg/L				10	20	RA

Antimony, total (3050)

M6020B ICP-MS

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec%	Lower	Upper	RPD	Limit	Qual
WG487337													
WG487337ICV	ICV	12/04/19 13:33	MS191014-8	.02004		.02018	mg/L	101	90	110			
WG487337ICB	ICB	12/04/19 13:35				U	mg/L		-0.0012	0.0012			
WG486958PBS	PBS	12/04/19 13:44				U	mg/Kg		-0.6	0.6			
WG486958LCSS	LCSS	12/04/19 13:46	PCN59282	68.6		55	mg/Kg		2.03	135			
WG486958LCSSD	LCSSD	12/04/19 13:47	PCN59282	68.6		51.1	mg/Kg		2.03	135	7	20	
L55822-22MS	MS	12/04/19 14:17	MS191112-2	5	U	.54	mg/Kg	11	75	125			M2
L55822-22MSD	MSD	12/04/19 14:22	MS191112-2	5	U	.52	mg/Kg	10	75	125	4	20	M2

Arsenic (WET DI)

6020B ICP-MS

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec%	Lower	Upper	RPD	Limit	Qual
WG487095													
WG487095ICV	ICV	11/27/19 14:58	MS191014-8	.05		.0494	mg/L	99	90	110			
WG487095ICB	ICB	11/27/19 15:00				U	mg/L		-0.0006	0.0006			
WG486427PBS	PBS	11/27/19 15:10				U	mg/L		-0.0006	0.0006			
L55806-06AS	AS	11/27/19 15:25	MS191119-5	.05005	.1689	.23507	mg/L	132	75	125			M1
L55806-06ASD	ASD	11/27/19 15:26	MS191119-5	.05005	.1689	.23995	mg/L	142	75	125	2	20	M1
L55808-01DUP	DUP	11/27/19 15:33			.0018	.00184	mg/L				2	20	RA

Arsenic, total (3050)

M6020B ICP-MS

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec%	Lower	Upper	RPD	Limit	Qual
WG487337													
WG487337ICV	ICV	12/04/19 13:33	MS191014-8	.05		.04988	mg/L	100	90	110			
WG487337ICB	ICB	12/04/19 13:35				U	mg/L		-0.0006	0.0006			
WG486958PBS	PBS	12/04/19 13:44				U	mg/Kg		-0.3	0.3			
WG486958LCSS	LCSS	12/04/19 13:46	PCN59282	69.4		75.2	mg/Kg		57.2	81.5			
WG486958LCSSD	LCSSD	12/04/19 13:47	PCN59282	69.4		73.1	mg/Kg		57.2	81.5	3	20	
L55822-22MS	MS	12/04/19 14:17	MS191112-2	25.025	1.8	25.78	mg/Kg	96	75	125			
L55822-22MSD	MSD	12/04/19 14:22	MS191112-2	25.025	1.8	26.17	mg/Kg	97	75	125	2	20	

Rise Grass Valley Inc.

ACZ Project ID: **L55806**

NOTE: If the Rec% column is null, the high/low limits are in the same units as the result. If the Rec% column is not null, then the high/low limits are in % Rec.

Barium (WET DI)

6010D ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec%	Lower	Upper	RPD	Limit	Qual
WG486811													
WG486811ICV	ICV	11/26/19 9:47	II191121-2	2		2.017	mg/L	101	90	110			
WG486811ICB	ICB	11/26/19 9:51				U	mg/L		-0.021	0.021			
WG486427PBS	PBS	11/26/19 10:14				U	mg/L		-0.021	0.021			
L55806-04AS	AS	11/26/19 10:33	II191106-4	.5005	U	.4838	mg/L	97	75	125			
L55806-04ASD	ASD	11/26/19 10:36	II191106-4	.5005	U	.4853	mg/L	97	75	125	0	20	
L55808-01DUP	DUP	11/26/19 10:59			U	U	mg/L				0	20	RA

Barium, total (3050)

M6010D ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec%	Lower	Upper	RPD	Limit	Qual
WG487169													
WG487169ICV	ICV	12/02/19 23:46	II191122-1	2		1.973	mg/L	99	90	110			
WG487169ICB	ICB	12/02/19 23:50				U	mg/L		-0.021	0.021			
WG486958PBS	PBS	12/03/19 0:14				U	mg/Kg		-2.1	2.1			
WG486958LCSS	LCSS	12/03/19 0:18	PCN59282	362		360.2	mg/Kg		297	427			
WG486958LCSSD	LCSSD	12/03/19 0:22	PCN59282	362		348	mg/Kg		297	427	3	20	
L55822-21MS	MS	12/03/19 1:20	II191106-4	50.05	3.5	49.09	mg/Kg	91	75	125			
L55822-21MSD	MSD	12/03/19 1:24	II191106-4	50.05	3.5	50.03	mg/Kg	93	75	125	2	20	

Beryllium (WET DI)

6020B ICP-MS

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec%	Lower	Upper	RPD	Limit	Qual
WG487095													
WG487095ICV	ICV	11/27/19 14:58	MS191014-8	.05		.049417	mg/L	99	90	110			
WG487095ICB	ICB	11/27/19 15:00				U	mg/L		-0.00024	0.00024			
WG486427PBS	PBS	11/27/19 15:10				U	mg/L		-0.00024	0.00024			
L55806-06AS	AS	11/27/19 15:25	MS191119-5	.05005	U	.052448	mg/L	105	75	125			
L55806-06ASD	ASD	11/27/19 15:26	MS191119-5	.05005	U	.053013	mg/L	106	75	125	1	20	
L55808-01DUP	DUP	11/27/19 15:33			U	U	mg/L				0	20	RA

Beryllium, total (3050)

M6020B ICP-MS

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec%	Lower	Upper	RPD	Limit	Qual
WG487337													
WG487337ICV	ICV	12/04/19 13:33	MS191014-8	.05		.048696	mg/L	97	90	110			
WG487337ICB	ICB	12/04/19 13:35				U	mg/L		-0.00024	0.00024			
WG486958PBS	PBS	12/04/19 13:44				U	mg/Kg		-0.12	0.12			
WG486958LCSS	LCSS	12/04/19 13:46	PCN59282	223		233.15	mg/Kg		185	260			
WG486958LCSSD	LCSSD	12/04/19 13:47	PCN59282	223		228.47	mg/Kg		185	260	2	20	
L55822-22MS	MS	12/04/19 14:17	MS191112-2	25.025	.09	26.614	mg/Kg	106	75	125			
L55822-22MSD	MSD	12/04/19 14:22	MS191112-2	25.025	.09	26.054	mg/Kg	104	75	125	2	20	

Boron (WET DI)

6010D ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec%	Lower	Upper	RPD	Limit	Qual
WG486811													
WG486811ICV	ICV	11/26/19 9:47	II191121-2	2		1.951	mg/L	98	90	110			
WG486811ICB	ICB	11/26/19 9:51				U	mg/L		-0.06	0.06			
WG486427PBS	PBS	11/26/19 10:14				U	mg/L		-0.06	0.06			
L55806-04AS	AS	11/26/19 10:33	II191106-4	.5005	U	.496	mg/L	99	75	125			
L55806-04ASD	ASD	11/26/19 10:36	II191106-4	.5005	U	.495	mg/L	99	75	125	0	20	
L55808-01DUP	DUP	11/26/19 10:59			U	U	mg/L				0	20	RA

Rise Grass Valley Inc.

ACZ Project ID: **L55806**

NOTE: If the Rec% column is null, the high/low limits are in the same units as the result. If the Rec% column is not null, then the high/low limits are in % Rec.

Boron, total (3050)

M6010D ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec%	Lower	Upper	RPD	Limit	Qual
WG487169													
WG487169ICV	ICV	12/02/19 23:46	II191122-1	2		2.02	mg/L	101	90	110			
WG487169ICB	ICB	12/02/19 23:50				U	mg/L		-0.06	0.06			
WG486958PBS	PBS	12/03/19 0:14				U	mg/Kg		-6	6			
WG486958LCSS	LCSS	12/03/19 0:18	PCN59282	79.4		79.5	mg/Kg		57.2	102			
WG486958LCSSD	LCSSD	12/03/19 0:22	PCN59282	79.4		78.3	mg/Kg		57.2	102	2	20	
L55822-21MS	MS	12/03/19 1:20	II191106-4	50.05	U	47.3	mg/Kg	95	75	125			
L55822-21MSD	MSD	12/03/19 1:24	II191106-4	50.05	U	47.6	mg/Kg	95	75	125	1	20	

Cadmium (WET DI)

6020B ICP-MS

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec%	Lower	Upper	RPD	Limit	Qual
WG487095													
WG487095ICV	ICV	11/27/19 14:58	MS191014-8	.05		.047696	mg/L	95	90	110			
WG487095ICB	ICB	11/27/19 15:00				U	mg/L		-0.00015	0.00015			
WG486427PBS	PBS	11/27/19 15:10				U	mg/L		-0.00015	0.00015			
L55806-06AS	AS	11/27/19 15:25	MS191119-5	.05005	U	.048323	mg/L	97	75	125			
L55806-06ASD	ASD	11/27/19 15:26	MS191119-5	.05005	U	.050596	mg/L	101	75	125	5	20	
L55808-01DUP	DUP	11/27/19 15:33			U	U	mg/L				0	20	RA

Cadmium, total (3050)

M6020B ICP-MS

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec%	Lower	Upper	RPD	Limit	Qual
WG487337													
WG487337ICV	ICV	12/04/19 13:33	MS191014-8	.05		.049073	mg/L	98	90	110			
WG487337ICB	ICB	12/04/19 13:35				U	mg/L		-0.00015	0.00015			
WG486958PBS	PBS	12/04/19 13:44				U	mg/Kg		-0.09	0.09			
WG486958LCSS	LCSS	12/04/19 13:46	PCN59282	166		169.14	mg/Kg		138	195			
WG486958LCSSD	LCSSD	12/04/19 13:47	PCN59282	166		176.08	mg/Kg		138	195	4	20	
L55822-22MS	MS	12/04/19 14:17	MS191112-2	25.025	.25	23.716	mg/Kg	94	75	125			
L55822-22MSD	MSD	12/04/19 14:22	MS191112-2	25.025	.25	23.642	mg/Kg	93	75	125	0	20	

Calcium (WET DI)

6010D ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec%	Lower	Upper	RPD	Limit	Qual
WG486811													
WG486811ICV	ICV	11/26/19 9:47	II191121-2	100		98.14	mg/L	98	90	110			
WG486811ICB	ICB	11/26/19 9:51				U	mg/L		-0.3	0.3			
WG486427PBS	PBS	11/26/19 10:14				U	mg/L		-0.3	0.3			
L55806-04AS	AS	11/26/19 10:33	II191106-4	68.00334	8.8	74.72	mg/L	97	75	125			
L55806-04ASD	ASD	11/26/19 10:36	II191106-4	68.00334	8.8	73.19	mg/L	95	75	125	2	20	
L55808-01DUP	DUP	11/26/19 10:59			9	8.78	mg/L				2	20	

Chloride (WET DI)

SM4500Cl-E

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec%	Lower	Upper	RPD	Limit	Qual
WG488294													
WG488294ICB	ICB	12/17/19 8:29				U	mg/L		-1.5	1.5			
WG488294ICV	ICV	12/17/19 8:29	WI190501-1	54.835		53.88	mg/L	98	90	110			
WG488294LFB	LFB	12/17/19 11:23	WI190812-3	30		32.28	mg/L	108	90	110			
WG486427PBS	PBS	12/17/19 11:23				U	mg/L		-1.5	1.5			
L55806-01AS	AS	12/17/19 11:23	WI190812-3	30	4.4	36.52	mg/L	107	90	110			
L55808-01DUP	DUP	12/17/19 11:24			1.7	2.19	mg/L				25	20	RA

Rise Grass Valley Inc.

ACZ Project ID: **L55806**

NOTE: If the Rec% column is null, the high/low limits are in the same units as the result. If the Rec% column is not null, then the high/low limits are in % Rec.

Chromium (WET DI)

6010D ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec%	Lower	Upper	RPD	Limit	Qual
WG486811													
WG486811ICV	ICV	11/26/19 9:47	II191121-2	2		1.954	mg/L	98	90	110			
WG486811ICB	ICB	11/26/19 9:51				U	mg/L		-0.03	0.03			
WG486427PBS	PBS	11/26/19 10:14				U	mg/L		-0.03	0.03			
L55806-04AS	AS	11/26/19 10:33	II191106-4	.501	U	.471	mg/L	94	75	125			
L55806-04ASD	ASD	11/26/19 10:36	II191106-4	.501	U	.474	mg/L	95	75	125	1	20	
L55808-01DUP	DUP	11/26/19 10:59			U	U	mg/L				0	20	RA

Chromium, total (3050)

M6010D ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec%	Lower	Upper	RPD	Limit	Qual
WG487169													
WG487169ICV	ICV	12/02/19 23:46	II191122-1	2		1.979	mg/L	99	90	110			
WG487169ICB	ICB	12/02/19 23:50				U	mg/L		-0.03	0.03			
WG486958PBS	PBS	12/03/19 0:14				U	mg/Kg		-3	3			
WG486958LCSS	LCSS	12/03/19 0:18	PCN59282	249		249.9	mg/Kg		203	295			
WG486958LCSSD	LCSSD	12/03/19 0:22	PCN59282	249		242.2	mg/Kg		203	295	3	20	
L55822-21MS	MS	12/03/19 1:20	II191106-4	50.1	163	208.1	mg/Kg	90	75	125			
L55822-21MSD	MSD	12/03/19 1:24	II191106-4	50.1	163	211.8	mg/Kg	97	75	125	2	20	
WG487264													
WG487264ICV	ICV	12/04/19 2:59	II191122-1	2		1.964	mg/L	98	90	110			
WG487264ICB	ICB	12/04/19 3:02				U	mg/L		-0.03	0.03			
WG486958PBS	PBS	12/04/19 3:27				U	mg/Kg		-3	3			
WG486958LCSS	LCSS	12/04/19 3:30	PCN59282	249		249.6	mg/Kg		203	295			
WG486958LCSSD	LCSSD	12/04/19 3:34	PCN59282	249		244.1	mg/Kg		203	295	2	20	
L55822-21MS	MS	12/04/19 4:17	II2XSOIL	50.1	171	222.4	mg/Kg	103	75	125			
L55822-21MSD	MSD	12/04/19 4:21	II2XSOIL	50.1	171	225.6	mg/Kg	109	75	125	1	20	

Cobalt (WET DI)

6010D ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec%	Lower	Upper	RPD	Limit	Qual
WG486811													
WG486811ICV	ICV	11/26/19 9:47	II191121-2	2.002		1.954	mg/L	98	90	110			
WG486811ICB	ICB	11/26/19 9:51				U	mg/L		-0.03	0.03			
WG486427PBS	PBS	11/26/19 10:14				U	mg/L		-0.03	0.03			
L55806-04AS	AS	11/26/19 10:33	II191106-4	.5	U	.471	mg/L	94	75	125			
L55806-04ASD	ASD	11/26/19 10:36	II191106-4	.5	U	.474	mg/L	95	75	125	1	20	
L55808-01DUP	DUP	11/26/19 10:59			U	U	mg/L				0	20	RA

Cobalt, total (3050)

M6010D ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec%	Lower	Upper	RPD	Limit	Qual
WG487169													
WG487169ICV	ICV	12/02/19 23:46	II191122-1	2.002		1.924	mg/L	96	90	110			
WG487169ICB	ICB	12/02/19 23:50				U	mg/L		-0.03	0.03			
WG486958PBS	PBS	12/03/19 0:14				U	mg/Kg		-3	3			
WG486958LCSS	LCSS	12/03/19 0:18	PCN59282	90.6		88.8	mg/Kg		75.1	106			
WG486958LCSSD	LCSSD	12/03/19 0:22	PCN59282	90.6		86.1	mg/Kg		75.1	106	3	20	
L55822-21MS	MS	12/03/19 1:20	II191106-4	50	23	65.8	mg/Kg	86	75	125			
L55822-21MSD	MSD	12/03/19 1:24	II191106-4	50	23	67.8	mg/Kg	90	75	125	3	20	

Rise Grass Valley Inc.

ACZ Project ID: **L55806**

NOTE: If the Rec% column is null, the high/low limits are in the same units as the result. If the Rec% column is not null, then the high/low limits are in % Rec.

Conductivity @25C (WET-DI)

SM2510B

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec%	Lower	Upper	RPD	Limit	Qual
WG486937													
WG486937PBW	PBW	11/25/19 13:53				U	umhos/cm		-10	10			
WG486937LCSW1	LCSW	11/25/19 13:56	PCN59515	1408		1430	umhos/cm	102	90	110			
WG486427PBS	PBS	11/25/19 14:16				2.7	umhos/cm		-4	4			
L55808-01DUP	DUP	11/25/19 15:32			105	104	umhos/cm				1	20	
WG486937LCSW3	LCSW	11/25/19 16:02	PCN59515	1408		1420	umhos/cm	101	90	110			

Copper (WET DI)

6010D ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec%	Lower	Upper	RPD	Limit	Qual
WG486811													
WG486811ICV	ICV	11/26/19 9:47	II191121-2	2		1.934	mg/L	97	90	110			
WG486811ICB	ICB	11/26/19 9:51				U	mg/L		-0.03	0.03			
WG486427PBS	PBS	11/26/19 10:14				U	mg/L		-0.03	0.03			
L55806-04AS	AS	11/26/19 10:33	II191106-4	.5005	U	.476	mg/L	95	75	125			
L55806-04ASD	ASD	11/26/19 10:36	II191106-4	.5005	U	.481	mg/L	96	75	125	1	20	
L55808-01DUP	DUP	11/26/19 10:59			U	U	mg/L				0	20	RA

Copper, total (3050)

M6010D ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec%	Lower	Upper	RPD	Limit	Qual
WG487169													
WG487169ICV	ICV	12/02/19 23:46	II191122-1	2		1.938	mg/L	97	90	110			
WG487169ICB	ICB	12/02/19 23:50				U	mg/L		-0.03	0.03			
WG486958PBS	PBS	12/03/19 0:14				U	mg/Kg		-3	3			
WG486958LCSS	LCSS	12/03/19 0:18	PCN59282	280		269.7	mg/Kg		233	326			
WG486958LCSSD	LCSSD	12/03/19 0:22	PCN59282	280		264.9	mg/Kg		233	326	2	20	
L55822-21MS	MS	12/03/19 1:20	II191106-4	50.05	60	103.3	mg/Kg	87	75	125			
L55822-21MSD	MSD	12/03/19 1:24	II191106-4	50.05	60	107.5	mg/Kg	95	75	125	4	20	

Fluoride (WET DI)

SM4500F-C

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec%	Lower	Upper	RPD	Limit	Qual
WG486964													
WG486964ICV	ICV	11/26/19 9:32	WC191119-7	2.004		2.1	mg/L	105	90	110			
WG486964ICB	ICB	11/26/19 9:37				U	mg/L		-0.3	0.3			
WG486997													
WG486997ICV	ICV	11/26/19 12:27	WC191126-1	2.004		1.94	mg/L	97	90	110			
WG486997ICB	ICB	11/26/19 12:31				.12	mg/L		-0.3	0.3			
WG486997LFB	LFB	11/26/19 12:43	WC191014-1	5.01		4.65	mg/L	93	90	110			
WG486427PBS	PBS	11/26/19 12:48				.15	mg/L		-0.3	0.3			
L55808-01AS	AS	11/26/19 13:30	WC191014-1	5.01	U	4.82	mg/L	96	90	110			
L55808-01DUP	DUP	11/26/19 13:34			U	.12	mg/L				200	20	RA

Rise Grass Valley Inc.

ACZ Project ID: **L55806**

NOTE: If the Rec% column is null, the high/low limits are in the same units as the result. If the Rec% column is not null, then the high/low limits are in % Rec.

Iron (WET DI)

6010D ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec%	Lower	Upper	RPD	Limit	Qual
WG486811													
WG486811ICV	ICV	11/26/19 9:47	II191121-2	2		1.935	mg/L	97	90	110			
WG486811ICB	ICB	11/26/19 9:51				U	mg/L		-0.09	0.09			
WG486427PBS	PBS	11/26/19 10:14				U	mg/L		-0.09	0.09			
L55806-04AS	AS	11/26/19 10:33	II191106-4	1.0018	U	.969	mg/L	97	75	125			
L55806-04ASD	ASD	11/26/19 10:36	II191106-4	1.0018	U	.98	mg/L	98	75	125	1	20	
L55808-01DUP	DUP	11/26/19 10:59			U	U	mg/L				0	20	RA

Iron, total (3050)

M6010D ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec%	Lower	Upper	RPD	Limit	Qual
WG487169													
WG487169ICV	ICV	12/02/19 23:46	II191122-1	2		1.925	mg/L	96	90	110			
WG487169ICB	ICB	12/02/19 23:50				U	mg/L		-0.09	0.09			
WG486958PBS	PBS	12/03/19 0:14				U	mg/Kg		-9	9			
WG486958LCSS	LCSS	12/03/19 0:18	PCN59282	14000		13230	mg/Kg		8380	19600			
WG486958LCSSD	LCSSD	12/03/19 0:22	PCN59282	14000		12950	mg/Kg		8380	19600	2	20	
L55822-21MS	MS	12/03/19 1:20	II191106-4	100.18	36600	37030	mg/Kg	429	75	125			M3
L55822-21MSD	MSD	12/03/19 1:24	II191106-4	100.18	36600	37770	mg/Kg	1168	75	125	2	20	M3
WG487264													
WG487264ICV	ICV	12/04/19 2:59	II191122-1	2		1.927	mg/L	96	90	110			
WG487264ICB	ICB	12/04/19 3:02				U	mg/L		-0.09	0.09			
WG486958PBS	PBS	12/04/19 3:27				U	mg/Kg		-9	9			
WG486958LCSS	LCSS	12/04/19 3:30	PCN59282	14000		13610	mg/Kg		8380	19600			
WG486958LCSSD	LCSSD	12/04/19 3:34	PCN59282	14000		13380	mg/Kg		8380	19600	2	20	
L55822-21MS	MS	12/04/19 4:17	II2XSOIL	100.14	40000	40860	mg/Kg	859	75	125			M3
L55822-21MSD	MSD	12/04/19 4:21	II2XSOIL	100.14	40000	41440	mg/Kg	1438	75	125	1	20	M3

Lead (WET DI)

6020B ICP-MS

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec%	Lower	Upper	RPD	Limit	Qual
WG487095													
WG487095ICV	ICV	11/27/19 14:58	MS191014-8	.05		.05009	mg/L	100	90	110			
WG487095ICB	ICB	11/27/19 15:00				U	mg/L		-0.0003	0.0003			
WG486427PBS	PBS	11/27/19 15:10				.00012	mg/L		-0.0003	0.0003			
L55806-06AS	AS	11/27/19 15:25	MS191119-5	.05005	.0002	.05087	mg/L	101	75	125			
L55806-06ASD	ASD	11/27/19 15:26	MS191119-5	.05005	.0002	.05183	mg/L	103	75	125	2	20	
L55808-01DUP	DUP	11/27/19 15:33			U	U	mg/L				0	20	RA

Lead, total (3050)

M6020B ICP-MS

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec%	Lower	Upper	RPD	Limit	Qual
WG487337													
WG487337ICV	ICV	12/04/19 13:33	MS191014-8	.05		.05102	mg/L	102	90	110			
WG487337ICB	ICB	12/04/19 13:35				U	mg/L		-0.0003	0.0003			
WG486958PBS	PBS	12/04/19 13:44				U	mg/Kg		-0.15	0.15			
WG486958LCSS	LCSS	12/04/19 13:46	PCN59282	225		242.29	mg/Kg		184	266			
WG486958LCSSD	LCSSD	12/04/19 13:47	PCN59282	225		236.5	mg/Kg		184	266	2	20	
L55822-22MS	MS	12/04/19 14:17	MS191112-2	25.025	.29	24.786	mg/Kg	98	75	125			
L55822-22MSD	MSD	12/04/19 14:22	MS191112-2	25.025	.29	24.658	mg/Kg	97	75	125	1	20	

Rise Grass Valley Inc.

ACZ Project ID: **L55806**

NOTE: If the Rec% column is null, the high/low limits are in the same units as the result. If the Rec% column is not null, then the high/low limits are in % Rec.

Magnesium (WET DI)

6010D ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec%	Lower	Upper	RPD	Limit	Qual
WG486811													
WG486811ICV	ICV	11/26/19 9:47	II191121-2	100		95.84	mg/L	96	90	110			
WG486811ICB	ICB	11/26/19 9:51				U	mg/L		-0.6	0.6			
WG486427PBS	PBS	11/26/19 10:14				U	mg/L		-0.6	0.6			
L55806-04AS	AS	11/26/19 10:33	II191106-4	49.99771	3.9	51.1	mg/L	94	75	125			
L55806-04ASD	ASD	11/26/19 10:36	II191106-4	49.99771	3.9	49.91	mg/L	92	75	125	2	20	
L55808-01DUP	DUP	11/26/19 10:59			3.8	3.66	mg/L				4	20	

Manganese (WET DI)

6010D ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec%	Lower	Upper	RPD	Limit	Qual
WG486811													
WG486811ICV	ICV	11/26/19 9:47	II191121-2	2		1.959	mg/L	98	90	110			
WG486811ICB	ICB	11/26/19 9:51				U	mg/L		-0.03	0.03			
WG486427PBS	PBS	11/26/19 10:14				U	mg/L		-0.03	0.03			
L55806-04AS	AS	11/26/19 10:33	II191106-4	.5015	U	.486	mg/L	97	75	125			
L55806-04ASD	ASD	11/26/19 10:36	II191106-4	.5015	U	.487	mg/L	97	75	125	0	20	
L55808-01DUP	DUP	11/26/19 10:59			U	U	mg/L				0	20	RA

Manganese, total (3050)

M6010D ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec%	Lower	Upper	RPD	Limit	Qual
WG487169													
WG487169ICV	ICV	12/02/19 23:46	II191122-1	2		1.937	mg/L	97	90	110			
WG487169ICB	ICB	12/02/19 23:50				U	mg/L		-0.03	0.03			
WG486958PBS	PBS	12/03/19 0:14				U	mg/Kg		-3	3			
WG486958LCSS	LCSS	12/03/19 0:18	PCN59282	332		324.8	mg/Kg		272	392			
WG486958LCSSD	LCSSD	12/03/19 0:22	PCN59282	332		318.3	mg/Kg		272	392	2	20	
L55822-21MS	MS	12/03/19 1:20	II191106-4	50.15	652	713.1	mg/Kg	122	75	125			
L55822-21MSD	MSD	12/03/19 1:24	II191106-4	50.15	652	727.9	mg/Kg	151	75	125	2	20	M3

Mercury (WET DI)

M7470 CVAA

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec%	Lower	Upper	RPD	Limit	Qual
WG486782													
WG486782ICV	ICV	11/25/19 14:43	HG190911-3	.004995		.00493	mg/L	99	90	110			
WG486782ICB	ICB	11/25/19 14:44				U	mg/L		-0.0006	0.0006			
WG486782PBW	PBW	11/25/19 14:46				U	mg/L		-0.00044	0.00044			
WG486782LCSSW	LCSSW	11/25/19 14:47	HG191125-3	.002002		.00193	mg/L	96	85	115			
WG486427PBS	PBS	11/25/19 14:48				U	mg/L		-0.0006	0.0006			
L55806-02MS	MS	11/25/19 14:51	HG191125-3	.002002	U	.00189	mg/L	94	85	115			
L55806-02MSD	MSD	11/25/19 14:52	HG191125-3	.002002	U	.0019	mg/L	95	85	115	1	20	
L55808-01DUP	DUP	11/25/19 14:59			U	U	mg/L				0	20	RA

Rise Grass Valley Inc.

ACZ Project ID: **L55806**

NOTE: If the Rec% column is null, the high/low limits are in the same units as the result. If the Rec% column is not null, then the high/low limits are in % Rec.

Mercury by Direct Combustion AA

M7473 CVAAS

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec%	Lower	Upper	RPD	Limit	Qual
WG486193													
WG486193ICV1	ICV	11/14/19 11:38	HG191112-8	100		99.3	ng/g	99	90	110			
WG486193ICV2	ICV	11/14/19 11:50	HG191112-10	100		98.2	ng/g	98	90	110			
WG486193ICV3	ICV	11/14/19 12:02	HG191112-7	1000		1070	ng/g	107	90	110			
WG486193ICV4	ICV	11/14/19 12:13	HG191112-7	1000		1090	ng/g	109	90	110			
WG486482													
WG486482ICV1	ICV	11/19/19 8:20	HG191112-8	100		92.7	ng/g	93	90	110			
WG486482ICV2	ICV	11/19/19 8:29	HG191112-10	100		99.3	ng/g	99	90	110			
WG486482ICV3	ICV	11/19/19 9:05	HG191112-7	1000		1090	ng/g	109	90	110			
WG486482ICV4	ICV	11/19/19 9:44	HG191112-7	1000		909	ng/g	91	90	110			
WG486482PBS	PBS	11/19/19 10:38				2.3	ng/g		-6	6			
WG486482LCSS	LCSS	11/19/19 10:45	PCN56165	80		82.3	ng/g		80	120			
WG486482LCSSD	LCSSD	11/19/19 10:51	PCN56165	80		85.7	ng/g		80	120	4	20	
L55782-01MS	MS	11/19/19 12:35	PCN56165				ng/g	100	80	120			
L55782-02DUP	DUP	11/19/19 12:49			3.86	2.3	ng/g				51	20	RA

Molybdenum (WET DI)

6010D ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec%	Lower	Upper	RPD	Limit	Qual
WG486811													
WG486811ICV	ICV	11/26/19 9:47	II191121-2	2		1.974	mg/L	99	90	110			
WG486811ICB	ICB	11/26/19 9:51				U	mg/L		-0.06	0.06			
WG486427PBS	PBS	11/26/19 10:14				U	mg/L		-0.06	0.06			
L55806-04AS	AS	11/26/19 10:33	II191106-4	.4975	.06	.552	mg/L	99	75	125			
L55806-04ASD	ASD	11/26/19 10:36	II191106-4	.4975	.06	.541	mg/L	97	75	125	2	20	
L55808-01DUP	DUP	11/26/19 10:59			U	U	mg/L				0	20	RA

Molybdenum, total (3050)

M6010D ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec%	Lower	Upper	RPD	Limit	Qual
WG487169													
WG487169ICV	ICV	12/02/19 23:46	II191122-1	2		1.98	mg/L	99	90	110			
WG487169ICB	ICB	12/02/19 23:50				U	mg/L		-0.06	0.06			
WG486958PBS	PBS	12/03/19 0:14				U	mg/Kg		-6	6			
WG486958LCSS	LCSS	12/03/19 0:18	PCN59282	158		161.1	mg/Kg		127	190			
WG486958LCSSD	LCSSD	12/03/19 0:22	PCN59282	158		156.1	mg/Kg		127	190	3	20	
L55822-21MS	MS	12/03/19 1:20	II191106-4	49.75	U	44	mg/Kg	88	75	125			
L55822-21MSD	MSD	12/03/19 1:24	II191106-4	49.75	U	44.8	mg/Kg	90	75	125	2	20	
WG487264													
WG487264ICV	ICV	12/04/19 2:59	II191122-1	2		1.966	mg/L	98	90	110			
WG487264ICB	ICB	12/04/19 3:02				U	mg/L		-0.06	0.06			
WG486958PBS	PBS	12/04/19 3:27				U	mg/Kg		-6	6			
WG486958LCSS	LCSS	12/04/19 3:30	PCN59282	158		162.1	mg/Kg		127	190			
WG486958LCSSD	LCSSD	12/04/19 3:34	PCN59282	158		159.2	mg/Kg		127	190	2	20	
L55822-21MS	MS	12/04/19 4:17	II2XSOIL	49.95	U	46.4	mg/Kg	93	75	125			
L55822-21MSD	MSD	12/04/19 4:21	II2XSOIL	49.95	U	47.7	mg/Kg	95	75	125	3	20	

Rise Grass Valley Inc.

ACZ Project ID: **L55806**

NOTE: If the Rec% column is null, the high/low limits are in the same units as the result. If the Rec% column is not null, then the high/low limits are in % Rec.

Nickel (WET DI)

6010D ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec%	Lower	Upper	RPD	Limit	Qual
WG486811													
WG486811ICV	ICV	11/26/19 9:47	II191121-2	2		1.954	mg/L	98	90	110			
WG486811ICB	ICB	11/26/19 9:51				U	mg/L		-0.024	0.024			
WG486427PBS	PBS	11/26/19 10:14				U	mg/L		-0.024	0.024			
L55806-04AS	AS	11/26/19 10:33	II191106-4	.501	U	.48	mg/L	96	75	125			
L55806-04ASD	ASD	11/26/19 10:36	II191106-4	.501	U	.4765	mg/L	95	75	125	1	20	
L55808-01DUP	DUP	11/26/19 10:59			U	U	mg/L				0	20	RA

Nickel, total (3050)

M6010D ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec%	Lower	Upper	RPD	Limit	Qual
WG487169													
WG487169ICV	ICV	12/02/19 23:46	II191122-1	2		1.984	mg/L	99	90	110			
WG487169ICB	ICB	12/02/19 23:50				U	mg/L		-0.024	0.024			
WG486958PBS	PBS	12/03/19 0:14				U	mg/Kg		-2.4	2.4			
WG486958LCSS	LCSS	12/03/19 0:18	PCN59282	114		114.2	mg/Kg		93.9	134			
WG486958LCSSD	LCSSD	12/03/19 0:22	PCN59282	114		112	mg/Kg		93.9	134	2	20	
L55822-21MS	MS	12/03/19 1:20	II191106-4	50.1	53.4	96.55	mg/Kg	86	75	125			
L55822-21MSD	MSD	12/03/19 1:24	II191106-4	50.1	53.4	98.37	mg/Kg	90	75	125	2	20	
WG487264													
WG487264ICV	ICV	12/04/19 2:59	II191122-1	2		1.942	mg/L	97	90	110			
WG487264ICB	ICB	12/04/19 3:02				U	mg/L		-0.024	0.024			
WG486958PBS	PBS	12/04/19 3:27				U	mg/Kg		-2.4	2.4			
WG486958LCSS	LCSS	12/04/19 3:30	PCN59282	114		114.2	mg/Kg		93.9	134			
WG486958LCSSD	LCSSD	12/04/19 3:34	PCN59282	114		111.3	mg/Kg		93.9	134	3	20	
L55822-21MS	MS	12/04/19 4:17	II2XSOIL	50	57	103.9	mg/Kg	94	75	125			
L55822-21MSD	MSD	12/04/19 4:21	II2XSOIL	50	57	106	mg/Kg	98	75	125	2	20	

Nitrate/Nitrite as N (WET DI)

M353.2 - Automated Cadmium Reduction

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec%	Lower	Upper	RPD	Limit	Qual
WG486755													
WG486755ICV	ICV	11/21/19 22:24	WI191112-1	2.416		2.505	mg/L	104	90	110			
WG486755ICB	ICB	11/21/19 22:25				U	mg/L		-0.02	0.02			
WG486756													
WG486756LFB	LFB	11/21/19 23:51	WI191004-3	2		2.028	mg/L	101	90	110			
WG486427PBS	PBS	11/21/19 23:53				U	mg/L		-0.02	0.02			
L55806-01AS	AS	11/21/19 23:55	WI191004-3	2	U	2.148	mg/L	107	90	110			
L55808-01DUP	DUP	11/22/19 0:08			.06	.058	mg/L				3	20	RA

Rise Grass Valley Inc.

ACZ Project ID: **L55806**

NOTE: If the Rec% column is null, the high/low limits are in the same units as the result. If the Rec% column is not null, then the high/low limits are in % Rec.

Nitrite as N (WET DI)

M353.2 - Automated Cadmium Reduction

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec%	Lower	Upper	RPD	Limit	Qual
WG486755													
WG486755ICV	ICV	11/21/19 22:24	WI191112-1	.609		.601	mg/L	99	90	110			
WG486755ICB	ICB	11/21/19 22:25				U	mg/L		-0.01	0.01			
WG486756													
WG486756LFB	LFB	11/21/19 23:51	WI191004-3	1		1.004	mg/L	100	90	110			
WG486427PBS	PBS	11/21/19 23:53				U	mg/L		-0.01	0.01			
L55806-01AS	AS	11/21/19 23:55	WI191004-3	1	U	1.047	mg/L	105	90	110			
L55808-01DUP	DUP	11/22/19 0:08			.03	.028	mg/L				7	20	RA

Ph

M9045D/M9040C

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec%	Lower	Upper	RPD	Limit	Qual
WG487845													
WG487845ICV	ICV	11/21/19 13:21	PCN58503	4		4	units	100	3.9	4.1			
L55808-01DUP	DUP	11/21/19 14:24			9.4	9.4	units				0	20	

Potassium (WET DI)

6010D ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec%	Lower	Upper	RPD	Limit	Qual
WG486811													
WG486811ICV	ICV	11/26/19 9:47	II191121-2	20		19.91	mg/L	100	90	110			
WG486811ICB	ICB	11/26/19 9:51				U	mg/L		-0.6	0.6			
WG486427PBS	PBS	11/26/19 10:14				U	mg/L		-0.6	0.6			
L55806-04AS	AS	11/26/19 10:33	II191106-4	99.95798	U	97.96	mg/L	98	75	125			
L55806-04ASD	ASD	11/26/19 10:36	II191106-4	99.95798	U	95.96	mg/L	96	75	125	2	20	
L55808-01DUP	DUP	11/26/19 10:59			3.8	3.74	mg/L				2	20	

Residue, Filterable (TDS) @180C (WET DI) SM2540C

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec%	Lower	Upper	RPD	Limit	Qual
WG486804													
WG486804PBS	PBS	11/22/19 12:15				20	mg/L		-60	60			
WG486804LCSW	LCSW	11/22/19 12:17	PCN59803	1000		990	mg/L	99	80	120			
WG486427PBS	PBS	11/22/19 12:19				20	mg/L		-60	60			
L55808-01DUP	DUP	11/22/19 12:38			64	72	mg/L				12	10	RA

Selenium (WET DI)

6020B ICP-MS

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec%	Lower	Upper	RPD	Limit	Qual
WG487095													
WG487095ICV	ICV	11/27/19 14:58	MS191014-8	.05		.04859	mg/L	97	90	110			
WG487095ICB	ICB	11/27/19 15:00				U	mg/L		-0.0003	0.0003			
WG486427PBS	PBS	11/27/19 15:10				.00022	mg/L		-0.0003	0.0003			
L55806-06AS	AS	11/27/19 15:25	MS191119-5	.05005	U	.05274	mg/L	105	75	125			
L55806-06ASD	ASD	11/27/19 15:26	MS191119-5	.05005	U	.05272	mg/L	105	75	125	0	20	
L55808-01DUP	DUP	11/27/19 15:33			.0003	.00024	mg/L				22	20	RA

Rise Grass Valley Inc.

ACZ Project ID: **L55806**

NOTE: If the Rec% column is null, the high/low limits are in the same units as the result. If the Rec% column is not null, then the high/low limits are in % Rec.

Selenium, total (3050)

M6020B ICP-MS

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec%	Lower	Upper	RPD	Limit	Qual
WG487337													
WG487337ICV	ICV	12/04/19 13:33	MS191014-8	.05		.04942	mg/L	99	90	110			
WG487337ICB	ICB	12/04/19 13:35				U	mg/L		-0.0003	0.0003			
WG486958PBS	PBS	12/04/19 13:44				.053	mg/Kg		-0.15	0.15			
WG486958LCSS	LCSS	12/04/19 13:46	PCN59282	195		210.19	mg/Kg		154	237			
WG486958LCSSD	LCSSD	12/04/19 13:47	PCN59282	195		200.58	mg/Kg		154	237	5	20	
L55822-22MS	MS	12/04/19 14:17	MS191112-2	12.5125	.18	12.345	mg/Kg	97	75	125			
L55822-22MSD	MSD	12/04/19 14:22	MS191112-2	12.5125	.18	12.476	mg/Kg	98	75	125	1	20	

Silver (WET DI)

6020B ICP-MS

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec%	Lower	Upper	RPD	Limit	Qual
WG487095													
WG487095ICV	ICV	11/27/19 14:58	MS191014-8	.02004		.0215	mg/L	107	90	110			
WG487095ICB	ICB	11/27/19 15:00				U	mg/L		-0.0003	0.0003			
WG486427PBS	PBS	11/27/19 15:10				U	mg/L		-0.0003	0.0003			
L55806-06AS	AS	11/27/19 15:25	MS191119-5	.01002	U	.01074	mg/L	107	75	125			
L55806-06ASD	ASD	11/27/19 15:26	MS191119-5	.01002	U	.01071	mg/L	107	75	125	0	20	
L55808-01DUP	DUP	11/27/19 15:33			.0001	U	mg/L				200	20	RA

Silver, total (3050)

M6020B ICP-MS

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec%	Lower	Upper	RPD	Limit	Qual
WG487337													
WG487337ICV	ICV	12/04/19 13:33	MS191014-8	.02004		.02011	mg/L	100	90	110			
WG487337ICB	ICB	12/04/19 13:35				U	mg/L		-0.0003	0.0003			
WG486958PBS	PBS	12/04/19 13:44				U	mg/Kg		-0.15	0.15			
WG486958LCSS	LCSS	12/04/19 13:46	PCN59282	61.8		65.02	mg/Kg		49.2	74.4			
WG486958LCSSD	LCSSD	12/04/19 13:47	PCN59282	61.8		62.73	mg/Kg		49.2	74.4	4	20	
L55822-22MS	MS	12/04/19 14:17	MS191112-2	5.01	U	4.472	mg/Kg	89	75	125			
L55822-22MSD	MSD	12/04/19 14:22	MS191112-2	5.01	U	4.416	mg/Kg	88	75	125	1	20	

Sodium (WET DI)

M6010D ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec%	Lower	Upper	RPD	Limit	Qual
WG486811													
WG486811ICV	ICV	11/26/19 9:47	II191121-2	100		97.18	mg/L	97	90	110			
WG486811ICB	ICB	11/26/19 9:51				U	mg/L		-0.6	0.6			
WG486427PBS	PBS	11/26/19 10:14				.39	mg/L		-0.6	0.6			
L55806-04AS	AS	11/26/19 10:33	II191106-4	100.0046	7.4	103.8	mg/L	96	75	125			
L55806-04ASD	ASD	11/26/19 10:36	II191106-4	100.0046	7.4	101.7	mg/L	94	75	125	2	20	
L55808-01DUP	DUP	11/26/19 10:59			3.7	3.64	mg/L				2	20	

Solids, Percent

D2216-80

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec%	Lower	Upper	RPD	Limit	Qual
WG487194													
L55808-04DUP	DUP	12/03/19 11:09			100	99.97	%				0	20	
WG487194PBS	PBS	12/03/19 12:43				U	%		-0.1	0.1			

Rise Grass Valley Inc.

ACZ Project ID: **L55806**

NOTE: If the Rec% column is null, the high/low limits are in the same units as the result. If the Rec% column is not null, then the high/low limits are in % Rec.

Sulfate (WET DI)

D516-07 - Turbidimetric

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec%	Lower	Upper	RPD	Limit	Qual
WG488017													
WG488017ICB	ICB	12/12/19 12:55				U	mg/L		-3	3			
WG488017ICV	ICV	12/12/19 12:55	WI191204-6	20		20.6	mg/L	103	90	110			
WG488017LFB	LFB	12/12/19 16:05	WI190801-3	10.01		10.7	mg/L	107	90	110			
WG486427PBS	PBS	12/12/19 16:05				U	mg/L		-3	3			
L55806-01AS	AS	12/12/19 16:05	WI190801-3	10.01	3.3	14.6	mg/L	113	90	110			M1
L55808-01DUP	DUP	12/12/19 16:06			8.4	7.6	mg/L				10	20	RA

Thallium (WET DI)

6020B ICP-MS

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec%	Lower	Upper	RPD	Limit	Qual
WG487095													
WG487095ICV	ICV	11/27/19 14:58	MS191014-8	.05		.04968	mg/L	99	90	110			
WG487095ICB	ICB	11/27/19 15:00				U	mg/L		-0.0003	0.0003			
WG486427PBS	PBS	11/27/19 15:10				.00016	mg/L		-0.0003	0.0003			
L55806-06AS	AS	11/27/19 15:25	MS191119-5	.0501	U	.0493	mg/L	98	75	125			
L55806-06ASD	ASD	11/27/19 15:26	MS191119-5	.0501	U	.05122	mg/L	102	75	125	4	20	
L55808-01DUP	DUP	11/27/19 15:33			U	U	mg/L				0	20	RA

Thallium, total (3050)

M6020B ICP-MS

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec%	Lower	Upper	RPD	Limit	Qual
WG487337													
WG487337ICV	ICV	12/04/19 13:33	MS191014-8	.05		.05153	mg/L	103	90	110			
WG487337ICB	ICB	12/04/19 13:35				U	mg/L		-0.0003	0.0003			
WG486958PBS	PBS	12/04/19 13:44				U	mg/Kg		-0.15	0.15			
WG486958LCSS	LCSS	12/04/19 13:46	PCN59282	135		147.23	mg/Kg		109	161			
WG486958LCSSD	LCSSD	12/04/19 13:47	PCN59282	135		146.45	mg/Kg		109	161	1	20	
L55822-22MS	MS	12/04/19 14:17	MS191112-2	25.05	U	24.466	mg/Kg	98	75	125			
L55822-22MSD	MSD	12/04/19 14:22	MS191112-2	25.05	U	24.369	mg/Kg	97	75	125	0	20	

Vanadium (WET DI)

6010D ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec%	Lower	Upper	RPD	Limit	Qual
WG486811													
WG486811ICV	ICV	11/26/19 9:47	II191121-2	2		1.996	mg/L	100	90	110			
WG486811ICB	ICB	11/26/19 9:51				U	mg/L		-0.015	0.015			
WG486427PBS	PBS	11/26/19 10:14				U	mg/L		-0.015	0.015			
L55806-04AS	AS	11/26/19 10:33	II191106-4	.4995	.007	.5198	mg/L	103	75	125			
L55806-04ASD	ASD	11/26/19 10:36	II191106-4	.4995	.007	.4969	mg/L	98	75	125	5	20	
L55808-01DUP	DUP	11/26/19 10:59			.008	.0101	mg/L				23	20	RA

Rise Grass Valley Inc.

ACZ Project ID: **L55806**

NOTE: If the Rec% column is null, the high/low limits are in the same units as the result. If the Rec% column is not null, then the high/low limits are in % Rec.

Vanadium, total (3050)

M6010D ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec%	Lower	Upper	RPD	Limit	Qual
WG487169													
WG487169ICV	ICV	12/02/19 23:46	II191122-1	2		2.049	mg/L	102	90	110			
WG487169ICB	ICB	12/02/19 23:50				U	mg/L		-0.015	0.015			
WG486958PBS	PBS	12/03/19 0:14				U	mg/Kg		-1.5	1.5			
WG486958LCSS	LCSS	12/03/19 0:18	PCN59282	86.4		92.69	mg/Kg		67.4	105			
WG486958LCSSD	LCSSD	12/03/19 0:22	PCN59282	86.4		90.38	mg/Kg		67.4	105	3	20	
L55822-21MS	MS	12/03/19 1:20	II191106-4	49.95	124	183.1	mg/Kg	118	75	125			
L55822-21MSD	MSD	12/03/19 1:24	II191106-4	49.95	124	186.4	mg/Kg	125	75	125	2	20	
WG487264													
WG487264ICV	ICV	12/04/19 2:59	II191122-1	2		2.035	mg/L	102	90	110			
WG487264ICB	ICB	12/04/19 3:02				U	mg/L		-0.015	0.015			
WG486958PBS	PBS	12/04/19 3:27				U	mg/Kg		-1.5	1.5			
WG486958LCSS	LCSS	12/04/19 3:30	PCN59282	86.4		93.43	mg/Kg		67.4	105			
WG486958LCSSD	LCSSD	12/04/19 3:34	PCN59282	86.4		91.55	mg/Kg		67.4	105	2	20	
L55822-21MS	MS	12/04/19 4:17	II2XSOIL	50	131	194.5	mg/Kg	127	75	125			M1
L55822-21MSD	MSD	12/04/19 4:21	II2XSOIL	50	131	196.7	mg/Kg	131	75	125	1	20	M1

Zinc (WET DI)

6010D ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec%	Lower	Upper	RPD	Limit	Qual
WG486811													
WG486811ICV	ICV	11/26/19 9:47	II191121-2	2		1.937	mg/L	97	90	110			
WG486811ICB	ICB	11/26/19 9:51				U	mg/L		-0.03	0.03			
WG486427PBS	PBS	11/26/19 10:14				U	mg/L		-0.03	0.03			
L55806-04AS	AS	11/26/19 10:33	II191106-4	.50075	U	.524	mg/L	105	75	125			
L55806-04ASD	ASD	11/26/19 10:36	II191106-4	.50075	U	.505	mg/L	101	75	125	4	20	
L55808-01DUP	DUP	11/26/19 10:59			U	U	mg/L				0	20	RA

Zinc, total (3050)

M6010D ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec%	Lower	Upper	RPD	Limit	Qual
WG487169													
WG487169ICV	ICV	12/02/19 23:46	II191122-1	2		1.957	mg/L	98	90	110			
WG487169ICB	ICB	12/02/19 23:50				U	mg/L		-0.03	0.03			
WG486958PBS	PBS	12/03/19 0:14				U	mg/Kg		-3	3			
WG486958LCSS	LCSS	12/03/19 0:18	PCN59282	122		120.1	mg/Kg		98.6	145			
WG486958LCSSD	LCSSD	12/03/19 0:22	PCN59282	122		117.9	mg/Kg		98.6	145	2	20	
L55822-21MS	MS	12/03/19 1:20	II191106-4	50.075	36	84	mg/Kg	96	75	125			
L55822-21MSD	MSD	12/03/19 1:24	II191106-4	50.075	36	84.5	mg/Kg	97	75	125	1	20	

Rise Grass Valley Inc.

ACZ Project ID: **L55806**

ACZ ID	WORKNUM	PARAMETER	METHOD	QUAL	DESCRIPTION
L55806-01	WG486811	Aluminum (WET DI)	6010D ICP	RA	Relative Percent Difference (RPD) was not used for data validation because the concentration of the duplicated sample is too low for accurate evaluation (< 10x MDL).
	WG487169	Aluminum, total (3050)	M6010D ICP	M3	The spike recovery value is unusable since the analyte concentration in the sample is disproportionate to the spike level. The recovery of the associated control sample (LCS or LFB) was acceptable.
	WG487095	Antimony (WET DI)	6020B ICP-MS	M3	The spike recovery value is unusable since the analyte concentration in the sample is disproportionate to the spike level. The recovery of the associated control sample (LCS or LFB) was acceptable.
			6020B ICP-MS	RA	Relative Percent Difference (RPD) was not used for data validation because the concentration of the duplicated sample is too low for accurate evaluation (< 10x MDL).
	WG487337	Antimony, total (3050)	M6020B ICP-MS	M2	Matrix spike recovery was low, the recovery of the associated control sample (LCS or LFB) was acceptable.
	WG487095	Arsenic (WET DI)	6020B ICP-MS	M1	Matrix spike recovery was high, the recovery of the associated control sample (LCS or LFB) was acceptable.
			6020B ICP-MS	RA	Relative Percent Difference (RPD) was not used for data validation because the concentration of the duplicated sample is too low for accurate evaluation (< 10x MDL).
	WG486811	Barium (WET DI)	6010D ICP	RA	Relative Percent Difference (RPD) was not used for data validation because the concentration of the duplicated sample is too low for accurate evaluation (< 10x MDL).
	WG487095	Beryllium (WET DI)	6020B ICP-MS	RA	Relative Percent Difference (RPD) was not used for data validation because the concentration of the duplicated sample is too low for accurate evaluation (< 10x MDL).
	WG486811	Boron (WET DI)	6010D ICP	RA	Relative Percent Difference (RPD) was not used for data validation because the concentration of the duplicated sample is too low for accurate evaluation (< 10x MDL).
	WG487095	Cadmium (WET DI)	6020B ICP-MS	RA	Relative Percent Difference (RPD) was not used for data validation because the concentration of the duplicated sample is too low for accurate evaluation (< 10x MDL).
	WG488294	Chloride (WET DI)	SM4500CI-E	HD	Analysis is outside the intended scope of the method, which does not provide hold time information for soil extracts. No hold time is observed for collection to extraction. The referenced method hold time is observed for extraction-to-analysis.
			SM4500CI-E	RA	Relative Percent Difference (RPD) was not used for data validation because the concentration of the duplicated sample is too low for accurate evaluation (< 10x MDL).
	WG486811	Chromium (WET DI)	6010D ICP	RA	Relative Percent Difference (RPD) was not used for data validation because the concentration of the duplicated sample is too low for accurate evaluation (< 10x MDL).
		Cobalt (WET DI)	6010D ICP	RA	Relative Percent Difference (RPD) was not used for data validation because the concentration of the duplicated sample is too low for accurate evaluation (< 10x MDL).
	WG487169	Cobalt, total (3050)	M6010D ICP	ZG	The ICP or ICP-MS Serial Dilution was not used for data validation because the sample concentration was less than 50 times the MDL.
	WG486811	Copper (WET DI)	6010D ICP	RA	Relative Percent Difference (RPD) was not used for data validation because the concentration of the duplicated sample is too low for accurate evaluation (< 10x MDL).
	WG486997	Fluoride (WET DI)	SM4500F-C	RA	Relative Percent Difference (RPD) was not used for data validation because the concentration of the duplicated sample is too low for accurate evaluation (< 10x MDL).
	WG486811	Iron (WET DI)	6010D ICP	RA	Relative Percent Difference (RPD) was not used for data validation because the concentration of the duplicated sample is too low for accurate evaluation (< 10x MDL).
	WG487169	Iron, total (3050)	M6010D ICP	M3	The spike recovery value is unusable since the analyte concentration in the sample is disproportionate to the spike level. The recovery of the associated control sample (LCS or LFB) was acceptable.
	WG487095	Lead (WET DI)	6020B ICP-MS	RA	Relative Percent Difference (RPD) was not used for data validation because the concentration of the duplicated sample is too low for accurate evaluation (< 10x MDL).
	WG486811	Manganese (WET DI)	6010D ICP	RA	Relative Percent Difference (RPD) was not used for data validation because the concentration of the duplicated

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Rise Grass Valley Inc.

ACZ Project ID: **L55806**

ACZ ID	WORKNUM	PARAMETER	METHOD	QUAL	DESCRIPTION
	WG487169	Manganese, total (3050)	M6010D ICP	M3	sample is too low for accurate evaluation (< 10x MDL). The spike recovery value is unusable since the analyte concentration in the sample is disproportionate to the spike level. The recovery of the associated control sample (LCS or LFB) was acceptable.
	WG486782	Mercury (WET DI)	M7470 CVAAS	RA	Relative Percent Difference (RPD) was not used for data validation because the concentration of the duplicated sample is too low for accurate evaluation (< 10x MDL).
	WG486482	Mercury by Direct Combustion AA	M7473 CVAAS M7473 CVAAS	Q6 QR	Sample was received above recommended temperature. Sample matrix is solid rock and a homogenous sample aliquot could not be created for Hg analysis prior to preparation and air drying. Hg analysis was performed on crushed, homogenized, and air dried (40C) sub sample. Some loss of Hg may have occurred. Residual moisture on the prepped sample fraction was used for data correction.
			M7473 CVAAS	RA	Relative Percent Difference (RPD) was not used for data validation because the concentration of the duplicated sample is too low for accurate evaluation (< 10x MDL).
	WG486811	Molybdenum (WET DI)	6010D ICP	RA	Relative Percent Difference (RPD) was not used for data validation because the concentration of the duplicated sample is too low for accurate evaluation (< 10x MDL).
	WG487169	Molybdenum, total (3050)	M6010D ICP	ZG	The ICP or ICP-MS Serial Dilution was not used for data validation because the sample concentration was less than 50 times the MDL.
	WG486811	Nickel (WET DI)	6010D ICP	RA	Relative Percent Difference (RPD) was not used for data validation because the concentration of the duplicated sample is too low for accurate evaluation (< 10x MDL).
	WG487169	Nickel, total (3050)	M6010D ICP	ZG	The ICP or ICP-MS Serial Dilution was not used for data validation because the sample concentration was less than 50 times the MDL.
	WG486756	Nitrate/Nitrite as N (WET DI)	M353.2 - Automated Cadmium Reduction M353.2 - Automated Cadmium Reduction	H3 HD	Sample was received and analyzed past holding time. Analysis is outside the intended scope of the method, which does not provide hold time information for soil extracts. No hold time is observed for collection to extraction. The referenced method hold time is observed for extraction-to-analysis.
			M353.2 - Automated Cadmium Reduction M353.2 - Automated Cadmium Reduction	Q6 RA	Sample was received above recommended temperature. Relative Percent Difference (RPD) was not used for data validation because the concentration of the duplicated sample is too low for accurate evaluation (< 10x MDL).
		Nitrite as N (WET DI)	M353.2 - Automated Cadmium Reduction M353.2 - Automated Cadmium Reduction	H3 HD	Sample was received and analyzed past holding time. Analysis is outside the intended scope of the method, which does not provide hold time information for soil extracts. No hold time is observed for collection to extraction. The referenced method hold time is observed for extraction-to-analysis.
			M353.2 - Automated Cadmium Reduction M353.2 - Automated Cadmium Reduction	Q6 RA	Sample was received above recommended temperature. Relative Percent Difference (RPD) was not used for data validation because the concentration of the duplicated sample is too low for accurate evaluation (< 10x MDL).
	WG486804	Residue, Filterable (TDS) @180C (WET DI)	SM2540C SM2540C	DJ RA	Sample dilution required due to insufficient sample. Relative Percent Difference (RPD) was not used for data validation because the concentration of the duplicated sample is too low for accurate evaluation (< 10x MDL).
			SM2540C	Z3	Sample volume yielded a residue less than 2.5 mg
	WG487095	Selenium (WET DI)	6020B ICP-MS	RA	Relative Percent Difference (RPD) was not used for data validation because the concentration of the duplicated sample is too low for accurate evaluation (< 10x MDL).
		Silver (WET DI)	6020B ICP-MS	RA	Relative Percent Difference (RPD) was not used for data validation because the concentration of the duplicated sample is too low for accurate evaluation (< 10x MDL).
	WG488017	Sulfate (WET DI)	D516-07 - Turbidimetric	HD	Analysis is outside the intended scope of the method, which

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ACZ Project ID: **L55806**

ACZ ID	WORKNUM	PARAMETER	METHOD	QUAL	DESCRIPTION
					does not provide hold time information for soil extracts. No hold time is observed for collection to extraction. The referenced method hold time is observed for extraction-to-analysis.
			D516-07 - Turbidimetric	M1	Matrix spike recovery was high, the recovery of the associated control sample (LCS or LFB) was acceptable.
			D516-07 - Turbidimetric	RA	Relative Percent Difference (RPD) was not used for data validation because the concentration of the duplicated sample is too low for accurate evaluation (< 10x MDL).
	WG487095	Thallium (WET DI)	6020B ICP-MS	RA	Relative Percent Difference (RPD) was not used for data validation because the concentration of the duplicated sample is too low for accurate evaluation (< 10x MDL).
	WG486811	Vanadium (WET DI)	6010D ICP	RA	Relative Percent Difference (RPD) was not used for data validation because the concentration of the duplicated sample is too low for accurate evaluation (< 10x MDL).
	WG487264	Vanadium, total (3050)	M6010D ICP	M1	Matrix spike recovery was high, the recovery of the associated control sample (LCS or LFB) was acceptable.
	WG486811	Zinc (WET DI)	6010D ICP	RA	Relative Percent Difference (RPD) was not used for data validation because the concentration of the duplicated sample is too low for accurate evaluation (< 10x MDL).

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ACZ Project ID: **L55806**

ACZ ID	WORKNUM	PARAMETER	METHOD	QUAL	DESCRIPTION
L55806-02	WG486811	Aluminum (WET DI)	6010D ICP	RA	Relative Percent Difference (RPD) was not used for data validation because the concentration of the duplicated sample is too low for accurate evaluation (< 10x MDL).
	WG487169	Aluminum, total (3050)	M6010D ICP	M3	The spike recovery value is unusable since the analyte concentration in the sample is disproportionate to the spike level. The recovery of the associated control sample (LCS or LFB) was acceptable.
	WG487095	Antimony (WET DI)	6020B ICP-MS	M3	The spike recovery value is unusable since the analyte concentration in the sample is disproportionate to the spike level. The recovery of the associated control sample (LCS or LFB) was acceptable.
			6020B ICP-MS	RA	Relative Percent Difference (RPD) was not used for data validation because the concentration of the duplicated sample is too low for accurate evaluation (< 10x MDL).
	WG487337	Antimony, total (3050)	M6020B ICP-MS	M2	Matrix spike recovery was low, the recovery of the associated control sample (LCS or LFB) was acceptable.
	WG487095	Arsenic (WET DI)	6020B ICP-MS	M1	Matrix spike recovery was high, the recovery of the associated control sample (LCS or LFB) was acceptable.
			6020B ICP-MS	RA	Relative Percent Difference (RPD) was not used for data validation because the concentration of the duplicated sample is too low for accurate evaluation (< 10x MDL).
	WG486811	Barium (WET DI)	6010D ICP	RA	Relative Percent Difference (RPD) was not used for data validation because the concentration of the duplicated sample is too low for accurate evaluation (< 10x MDL).
	WG487095	Beryllium (WET DI)	6020B ICP-MS	RA	Relative Percent Difference (RPD) was not used for data validation because the concentration of the duplicated sample is too low for accurate evaluation (< 10x MDL).
	WG486811	Boron (WET DI)	6010D ICP	RA	Relative Percent Difference (RPD) was not used for data validation because the concentration of the duplicated sample is too low for accurate evaluation (< 10x MDL).
	WG487095	Cadmium (WET DI)	6020B ICP-MS	RA	Relative Percent Difference (RPD) was not used for data validation because the concentration of the duplicated sample is too low for accurate evaluation (< 10x MDL).
	WG488294	Chloride (WET DI)	SM4500CI-E	HD	Analysis is outside the intended scope of the method, which does not provide hold time information for soil extracts. No hold time is observed for collection to extraction. The referenced method hold time is observed for extraction-to-analysis.
			SM4500CI-E	RA	Relative Percent Difference (RPD) was not used for data validation because the concentration of the duplicated sample is too low for accurate evaluation (< 10x MDL).
	WG486811	Chromium (WET DI)	6010D ICP	RA	Relative Percent Difference (RPD) was not used for data validation because the concentration of the duplicated sample is too low for accurate evaluation (< 10x MDL).
		Cobalt (WET DI)	6010D ICP	RA	Relative Percent Difference (RPD) was not used for data validation because the concentration of the duplicated sample is too low for accurate evaluation (< 10x MDL).
	WG487169	Cobalt, total (3050)	M6010D ICP	ZG	The ICP or ICP-MS Serial Dilution was not used for data validation because the sample concentration was less than 50 times the MDL.
	WG486811	Copper (WET DI)	6010D ICP	RA	Relative Percent Difference (RPD) was not used for data validation because the concentration of the duplicated sample is too low for accurate evaluation (< 10x MDL).
	WG486997	Fluoride (WET DI)	SM4500F-C	RA	Relative Percent Difference (RPD) was not used for data validation because the concentration of the duplicated sample is too low for accurate evaluation (< 10x MDL).
	WG486811	Iron (WET DI)	6010D ICP	RA	Relative Percent Difference (RPD) was not used for data validation because the concentration of the duplicated sample is too low for accurate evaluation (< 10x MDL).
	WG487169	Iron, total (3050)	M6010D ICP	M3	The spike recovery value is unusable since the analyte concentration in the sample is disproportionate to the spike level. The recovery of the associated control sample (LCS or LFB) was acceptable.
	WG487095	Lead (WET DI)	6020B ICP-MS	RA	Relative Percent Difference (RPD) was not used for data validation because the concentration of the duplicated sample is too low for accurate evaluation (< 10x MDL).
	WG486811	Manganese (WET DI)	6010D ICP	RA	Relative Percent Difference (RPD) was not used for data validation because the concentration of the duplicated

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ACZ Project ID: **L55806**

ACZ ID	WORKNUM	PARAMETER	METHOD	QUAL	DESCRIPTION
	WG487169	Manganese, total (3050)	M6010D ICP	M3	sample is too low for accurate evaluation (< 10x MDL). The spike recovery value is unusable since the analyte concentration in the sample is disproportionate to the spike level. The recovery of the associated control sample (LCS or LFB) was acceptable.
	WG486782	Mercury (WET DI)	M7470 CVAA	RA	Relative Percent Difference (RPD) was not used for data validation because the concentration of the duplicated sample is too low for accurate evaluation (< 10x MDL).
	WG486482	Mercury by Direct Combustion AA	M7473 CVAAS	Q6	Sample was received above recommended temperature.
			M7473 CVAAS	QR	Sample matrix is solid rock and a homogenous sample aliquot could not be created for Hg analysis prior to preparation and air drying. Hg analysis was performed on crushed, homogenized, and air dried (40C) sub sample. Some loss of Hg may have occurred. Residual moisture on the prepped sample fraction was used for data correction.
			M7473 CVAAS	RA	Relative Percent Difference (RPD) was not used for data validation because the concentration of the duplicated sample is too low for accurate evaluation (< 10x MDL).
	WG486811	Molybdenum (WET DI)	6010D ICP	RA	Relative Percent Difference (RPD) was not used for data validation because the concentration of the duplicated sample is too low for accurate evaluation (< 10x MDL).
	WG487169	Molybdenum, total (3050)	M6010D ICP	ZG	The ICP or ICP-MS Serial Dilution was not used for data validation because the sample concentration was less than 50 times the MDL.
	WG486811	Nickel (WET DI)	6010D ICP	RA	Relative Percent Difference (RPD) was not used for data validation because the concentration of the duplicated sample is too low for accurate evaluation (< 10x MDL).
	WG487169	Nickel, total (3050)	M6010D ICP	ZG	The ICP or ICP-MS Serial Dilution was not used for data validation because the sample concentration was less than 50 times the MDL.
	WG486756	Nitrate/Nitrite as N (WET DI)	M353.2 - Automated Cadmium Reduction	H3	Sample was received and analyzed past holding time.
			M353.2 - Automated Cadmium Reduction	HD	Analysis is outside the intended scope of the method, which does not provide hold time information for soil extracts. No hold time is observed for collection to extraction. The referenced method hold time is observed for extraction-to-analysis.
			M353.2 - Automated Cadmium Reduction	Q6	Sample was received above recommended temperature.
			M353.2 - Automated Cadmium Reduction	RA	Relative Percent Difference (RPD) was not used for data validation because the concentration of the duplicated sample is too low for accurate evaluation (< 10x MDL).
		Nitrite as N (WET DI)	M353.2 - Automated Cadmium Reduction	H3	Sample was received and analyzed past holding time.
			M353.2 - Automated Cadmium Reduction	HD	Analysis is outside the intended scope of the method, which does not provide hold time information for soil extracts. No hold time is observed for collection to extraction. The referenced method hold time is observed for extraction-to-analysis.
			M353.2 - Automated Cadmium Reduction	Q6	Sample was received above recommended temperature.
			M353.2 - Automated Cadmium Reduction	RA	Relative Percent Difference (RPD) was not used for data validation because the concentration of the duplicated sample is too low for accurate evaluation (< 10x MDL).
	WG486804	Residue, Filterable (TDS) @180C (WET DI)	SM2540C	RA	Relative Percent Difference (RPD) was not used for data validation because the concentration of the duplicated sample is too low for accurate evaluation (< 10x MDL).
	WG487095	Selenium (WET DI)	6020B ICP-MS	RA	Relative Percent Difference (RPD) was not used for data validation because the concentration of the duplicated sample is too low for accurate evaluation (< 10x MDL).
		Silver (WET DI)	6020B ICP-MS	RA	Relative Percent Difference (RPD) was not used for data validation because the concentration of the duplicated sample is too low for accurate evaluation (< 10x MDL).
	WG488017	Sulfate (WET DI)	D516-07 - Turbidimetric	HD	Analysis is outside the intended scope of the method, which does not provide hold time information for soil extracts. No hold time is observed for collection to extraction. The referenced method hold time is observed for extraction-to-analysis.

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ACZ ID	WORKNUM	PARAMETER	METHOD	QUAL	DESCRIPTION
			D516-07 - Turbidimetric	M1	Matrix spike recovery was high, the recovery of the associated control sample (LCS or LFB) was acceptable.
			D516-07 - Turbidimetric	RA	Relative Percent Difference (RPD) was not used for data validation because the concentration of the duplicated sample is too low for accurate evaluation (< 10x MDL).
	WG487095	Thallium (WET DI)	6020B ICP-MS	RA	Relative Percent Difference (RPD) was not used for data validation because the concentration of the duplicated sample is too low for accurate evaluation (< 10x MDL).
	WG486811	Vanadium (WET DI)	6010D ICP	RA	Relative Percent Difference (RPD) was not used for data validation because the concentration of the duplicated sample is too low for accurate evaluation (< 10x MDL).
	WG487264	Vanadium, total (3050)	M6010D ICP	M1	Matrix spike recovery was high, the recovery of the associated control sample (LCS or LFB) was acceptable.
	WG486811	Zinc (WET DI)	6010D ICP	RA	Relative Percent Difference (RPD) was not used for data validation because the concentration of the duplicated sample is too low for accurate evaluation (< 10x MDL).

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ACZ Project ID: **L55806**

ACZ ID	WORKNUM	PARAMETER	METHOD	QUAL	DESCRIPTION
L55806-03	WG486811	Aluminum (WET DI)	6010D ICP	RA	Relative Percent Difference (RPD) was not used for data validation because the concentration of the duplicated sample is too low for accurate evaluation (< 10x MDL).
	WG487264	Aluminum, total (3050)	M6010D ICP	M3	The spike recovery value is unusable since the analyte concentration in the sample is disproportionate to the spike level. The recovery of the associated control sample (LCS or LFB) was acceptable.
	WG487095	Antimony (WET DI)	6020B ICP-MS	M3	The spike recovery value is unusable since the analyte concentration in the sample is disproportionate to the spike level. The recovery of the associated control sample (LCS or LFB) was acceptable.
			6020B ICP-MS	RA	Relative Percent Difference (RPD) was not used for data validation because the concentration of the duplicated sample is too low for accurate evaluation (< 10x MDL).
	WG487337	Antimony, total (3050)	M6020B ICP-MS	M2	Matrix spike recovery was low, the recovery of the associated control sample (LCS or LFB) was acceptable.
	WG487095	Arsenic (WET DI)	6020B ICP-MS	M1	Matrix spike recovery was high, the recovery of the associated control sample (LCS or LFB) was acceptable.
			6020B ICP-MS	RA	Relative Percent Difference (RPD) was not used for data validation because the concentration of the duplicated sample is too low for accurate evaluation (< 10x MDL).
	WG486811	Barium (WET DI)	6010D ICP	RA	Relative Percent Difference (RPD) was not used for data validation because the concentration of the duplicated sample is too low for accurate evaluation (< 10x MDL).
	WG487095	Beryllium (WET DI)	6020B ICP-MS	RA	Relative Percent Difference (RPD) was not used for data validation because the concentration of the duplicated sample is too low for accurate evaluation (< 10x MDL).
	WG486811	Boron (WET DI)	6010D ICP	RA	Relative Percent Difference (RPD) was not used for data validation because the concentration of the duplicated sample is too low for accurate evaluation (< 10x MDL).
	WG487095	Cadmium (WET DI)	6020B ICP-MS	RA	Relative Percent Difference (RPD) was not used for data validation because the concentration of the duplicated sample is too low for accurate evaluation (< 10x MDL).
	WG488294	Chloride (WET DI)	SM4500CI-E	HD	Analysis is outside the intended scope of the method, which does not provide hold time information for soil extracts. No hold time is observed for collection to extraction. The referenced method hold time is observed for extraction-to-analysis.
			SM4500CI-E	RA	Relative Percent Difference (RPD) was not used for data validation because the concentration of the duplicated sample is too low for accurate evaluation (< 10x MDL).
	WG486811	Chromium (WET DI)	6010D ICP	RA	Relative Percent Difference (RPD) was not used for data validation because the concentration of the duplicated sample is too low for accurate evaluation (< 10x MDL).
		Cobalt (WET DI)	6010D ICP	RA	Relative Percent Difference (RPD) was not used for data validation because the concentration of the duplicated sample is too low for accurate evaluation (< 10x MDL).
	WG487169	Cobalt, total (3050)	M6010D ICP	ZG	The ICP or ICP-MS Serial Dilution was not used for data validation because the sample concentration was less than 50 times the MDL.
	WG486811	Copper (WET DI)	6010D ICP	RA	Relative Percent Difference (RPD) was not used for data validation because the concentration of the duplicated sample is too low for accurate evaluation (< 10x MDL).
	WG486997	Fluoride (WET DI)	SM4500F-C	RA	Relative Percent Difference (RPD) was not used for data validation because the concentration of the duplicated sample is too low for accurate evaluation (< 10x MDL).
	WG486811	Iron (WET DI)	6010D ICP	RA	Relative Percent Difference (RPD) was not used for data validation because the concentration of the duplicated sample is too low for accurate evaluation (< 10x MDL).
	WG487264	Iron, total (3050)	M6010D ICP	M3	The spike recovery value is unusable since the analyte concentration in the sample is disproportionate to the spike level. The recovery of the associated control sample (LCS or LFB) was acceptable.
	WG487095	Lead (WET DI)	6020B ICP-MS	RA	Relative Percent Difference (RPD) was not used for data validation because the concentration of the duplicated sample is too low for accurate evaluation (< 10x MDL).
	WG486811	Manganese (WET DI)	6010D ICP	RA	Relative Percent Difference (RPD) was not used for data validation because the concentration of the duplicated

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ACZ Project ID: **L55806**

ACZ ID	WORKNUM	PARAMETER	METHOD	QUAL	DESCRIPTION
	WG487169	Manganese, total (3050)	M6010D ICP	M3	sample is too low for accurate evaluation (< 10x MDL). The spike recovery value is unusable since the analyte concentration in the sample is disproportionate to the spike level. The recovery of the associated control sample (LCS or LFB) was acceptable.
	WG486782	Mercury (WET DI)	M7470 CVAA	RA	Relative Percent Difference (RPD) was not used for data validation because the concentration of the duplicated sample is too low for accurate evaluation (< 10x MDL).
	WG486482	Mercury by Direct Combustion AA	M7473 CVAAS	Q6	Sample was received above recommended temperature.
			M7473 CVAAS	QR	Sample matrix is solid rock and a homogenous sample aliquot could not be created for Hg analysis prior to preparation and air drying. Hg analysis was performed on crushed, homogenized, and air dried (40C) sub sample. Some loss of Hg may have occurred. Residual moisture on the prepped sample fraction was used for data correction.
			M7473 CVAAS	RA	Relative Percent Difference (RPD) was not used for data validation because the concentration of the duplicated sample is too low for accurate evaluation (< 10x MDL).
	WG486811	Molybdenum (WET DI)	6010D ICP	RA	Relative Percent Difference (RPD) was not used for data validation because the concentration of the duplicated sample is too low for accurate evaluation (< 10x MDL).
	WG487169	Molybdenum, total (3050)	M6010D ICP	ZG	The ICP or ICP-MS Serial Dilution was not used for data validation because the sample concentration was less than 50 times the MDL.
	WG486811	Nickel (WET DI)	6010D ICP	RA	Relative Percent Difference (RPD) was not used for data validation because the concentration of the duplicated sample is too low for accurate evaluation (< 10x MDL).
	WG487169	Nickel, total (3050)	M6010D ICP	ZG	The ICP or ICP-MS Serial Dilution was not used for data validation because the sample concentration was less than 50 times the MDL.
	WG486756	Nitrate/Nitrite as N (WET DI)	M353.2 - Automated Cadmium Reduction	H3	Sample was received and analyzed past holding time.
			M353.2 - Automated Cadmium Reduction	HD	Analysis is outside the intended scope of the method, which does not provide hold time information for soil extracts. No hold time is observed for collection to extraction. The referenced method hold time is observed for extraction-to-analysis.
			M353.2 - Automated Cadmium Reduction	Q6	Sample was received above recommended temperature.
			M353.2 - Automated Cadmium Reduction	RA	Relative Percent Difference (RPD) was not used for data validation because the concentration of the duplicated sample is too low for accurate evaluation (< 10x MDL).
		Nitrite as N (WET DI)	M353.2 - Automated Cadmium Reduction	H3	Sample was received and analyzed past holding time.
			M353.2 - Automated Cadmium Reduction	HD	Analysis is outside the intended scope of the method, which does not provide hold time information for soil extracts. No hold time is observed for collection to extraction. The referenced method hold time is observed for extraction-to-analysis.
			M353.2 - Automated Cadmium Reduction	Q6	Sample was received above recommended temperature.
			M353.2 - Automated Cadmium Reduction	RA	Relative Percent Difference (RPD) was not used for data validation because the concentration of the duplicated sample is too low for accurate evaluation (< 10x MDL).
	WG486804	Residue, Filterable (TDS) @180C (WET DI)	SM2540C	RA	Relative Percent Difference (RPD) was not used for data validation because the concentration of the duplicated sample is too low for accurate evaluation (< 10x MDL).
	WG487095	Selenium (WET DI)	6020B ICP-MS	RA	Relative Percent Difference (RPD) was not used for data validation because the concentration of the duplicated sample is too low for accurate evaluation (< 10x MDL).
		Silver (WET DI)	6020B ICP-MS	RA	Relative Percent Difference (RPD) was not used for data validation because the concentration of the duplicated sample is too low for accurate evaluation (< 10x MDL).
	WG488017	Sulfate (WET DI)	D516-07 - Turbidimetric	HD	Analysis is outside the intended scope of the method, which does not provide hold time information for soil extracts. No hold time is observed for collection to extraction. The referenced method hold time is observed for extraction-to-analysis.

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ACZ ID	WORKNUM	PARAMETER	METHOD	QUAL	DESCRIPTION
			D516-07 - Turbidimetric	M1	Matrix spike recovery was high, the recovery of the associated control sample (LCS or LFB) was acceptable.
			D516-07 - Turbidimetric	RA	Relative Percent Difference (RPD) was not used for data validation because the concentration of the duplicated sample is too low for accurate evaluation (< 10x MDL).
	WG487095	Thallium (WET DI)	6020B ICP-MS	RA	Relative Percent Difference (RPD) was not used for data validation because the concentration of the duplicated sample is too low for accurate evaluation (< 10x MDL).
	WG486811	Vanadium (WET DI)	6010D ICP	RA	Relative Percent Difference (RPD) was not used for data validation because the concentration of the duplicated sample is too low for accurate evaluation (< 10x MDL).
	WG487264	Vanadium, total (3050)	M6010D ICP	M1	Matrix spike recovery was high, the recovery of the associated control sample (LCS or LFB) was acceptable.
	WG486811	Zinc (WET DI)	6010D ICP	RA	Relative Percent Difference (RPD) was not used for data validation because the concentration of the duplicated sample is too low for accurate evaluation (< 10x MDL).

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ACZ ID	WORKNUM	PARAMETER	METHOD	QUAL	DESCRIPTION
L55806-04	WG486811	Aluminum (WET DI)	6010D ICP	RA	Relative Percent Difference (RPD) was not used for data validation because the concentration of the duplicated sample is too low for accurate evaluation (< 10x MDL).
	WG487169	Aluminum, total (3050)	M6010D ICP	M3	The spike recovery value is unusable since the analyte concentration in the sample is disproportionate to the spike level. The recovery of the associated control sample (LCS or LFB) was acceptable.
	WG487095	Antimony (WET DI)	6020B ICP-MS	M3	The spike recovery value is unusable since the analyte concentration in the sample is disproportionate to the spike level. The recovery of the associated control sample (LCS or LFB) was acceptable.
			6020B ICP-MS	RA	Relative Percent Difference (RPD) was not used for data validation because the concentration of the duplicated sample is too low for accurate evaluation (< 10x MDL).
	WG487337	Antimony, total (3050)	M6020B ICP-MS	M2	Matrix spike recovery was low, the recovery of the associated control sample (LCS or LFB) was acceptable.
	WG487095	Arsenic (WET DI)	6020B ICP-MS	M1	Matrix spike recovery was high, the recovery of the associated control sample (LCS or LFB) was acceptable.
			6020B ICP-MS	RA	Relative Percent Difference (RPD) was not used for data validation because the concentration of the duplicated sample is too low for accurate evaluation (< 10x MDL).
	WG486811	Barium (WET DI)	6010D ICP	RA	Relative Percent Difference (RPD) was not used for data validation because the concentration of the duplicated sample is too low for accurate evaluation (< 10x MDL).
	WG487095	Beryllium (WET DI)	6020B ICP-MS	RA	Relative Percent Difference (RPD) was not used for data validation because the concentration of the duplicated sample is too low for accurate evaluation (< 10x MDL).
	WG486811	Boron (WET DI)	6010D ICP	RA	Relative Percent Difference (RPD) was not used for data validation because the concentration of the duplicated sample is too low for accurate evaluation (< 10x MDL).
	WG487095	Cadmium (WET DI)	6020B ICP-MS	RA	Relative Percent Difference (RPD) was not used for data validation because the concentration of the duplicated sample is too low for accurate evaluation (< 10x MDL).
	WG488294	Chloride (WET DI)	SM4500CI-E	HD	Analysis is outside the intended scope of the method, which does not provide hold time information for soil extracts. No hold time is observed for collection to extraction. The referenced method hold time is observed for extraction-to-analysis.
			SM4500CI-E	RA	Relative Percent Difference (RPD) was not used for data validation because the concentration of the duplicated sample is too low for accurate evaluation (< 10x MDL).
	WG486811	Chromium (WET DI)	6010D ICP	RA	Relative Percent Difference (RPD) was not used for data validation because the concentration of the duplicated sample is too low for accurate evaluation (< 10x MDL).
		Cobalt (WET DI)	6010D ICP	RA	Relative Percent Difference (RPD) was not used for data validation because the concentration of the duplicated sample is too low for accurate evaluation (< 10x MDL).
	WG487169	Cobalt, total (3050)	M6010D ICP	ZG	The ICP or ICP-MS Serial Dilution was not used for data validation because the sample concentration was less than 50 times the MDL.
	WG486811	Copper (WET DI)	6010D ICP	RA	Relative Percent Difference (RPD) was not used for data validation because the concentration of the duplicated sample is too low for accurate evaluation (< 10x MDL).
	WG486997	Fluoride (WET DI)	SM4500F-C	RA	Relative Percent Difference (RPD) was not used for data validation because the concentration of the duplicated sample is too low for accurate evaluation (< 10x MDL).
	WG486811	Iron (WET DI)	6010D ICP	RA	Relative Percent Difference (RPD) was not used for data validation because the concentration of the duplicated sample is too low for accurate evaluation (< 10x MDL).
	WG487169	Iron, total (3050)	M6010D ICP	M3	The spike recovery value is unusable since the analyte concentration in the sample is disproportionate to the spike level. The recovery of the associated control sample (LCS or LFB) was acceptable.
	WG487095	Lead (WET DI)	6020B ICP-MS	RA	Relative Percent Difference (RPD) was not used for data validation because the concentration of the duplicated sample is too low for accurate evaluation (< 10x MDL).
	WG486811	Manganese (WET DI)	6010D ICP	RA	Relative Percent Difference (RPD) was not used for data validation because the concentration of the duplicated

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ACZ ID	WORKNUM	PARAMETER	METHOD	QUAL	DESCRIPTION
	WG487169	Manganese, total (3050)	M6010D ICP	M3	sample is too low for accurate evaluation (< 10x MDL). The spike recovery value is unusable since the analyte concentration in the sample is disproportionate to the spike level. The recovery of the associated control sample (LCS or LFB) was acceptable.
	WG486782	Mercury (WET DI)	M7470 CVAAS	RA	Relative Percent Difference (RPD) was not used for data validation because the concentration of the duplicated sample is too low for accurate evaluation (< 10x MDL).
	WG486482	Mercury by Direct Combustion AA	M7473 CVAAS	Q6	Sample was received above recommended temperature.
			M7473 CVAAS	QR	Sample matrix is solid rock and a homogenous sample aliquot could not be created for Hg analysis prior to preparation and air drying. Hg analysis was performed on crushed, homogenized, and air dried (40C) sub sample. Some loss of Hg may have occurred. Residual moisture on the prepped sample fraction was used for data correction.
			M7473 CVAAS	RA	Relative Percent Difference (RPD) was not used for data validation because the concentration of the duplicated sample is too low for accurate evaluation (< 10x MDL).
	WG486811	Molybdenum (WET DI)	6010D ICP	RA	Relative Percent Difference (RPD) was not used for data validation because the concentration of the duplicated sample is too low for accurate evaluation (< 10x MDL).
		Nickel (WET DI)	6010D ICP	RA	Relative Percent Difference (RPD) was not used for data validation because the concentration of the duplicated sample is too low for accurate evaluation (< 10x MDL).
	WG487169	Nickel, total (3050)	M6010D ICP	ZG	The ICP or ICP-MS Serial Dilution was not used for data validation because the sample concentration was less than 50 times the MDL.
	WG486756	Nitrate/Nitrite as N (WET DI)	M353.2 - Automated Cadmium Reduction	H3	Sample was received and analyzed past holding time.
			M353.2 - Automated Cadmium Reduction	HD	Analysis is outside the intended scope of the method, which does not provide hold time information for soil extracts. No hold time is observed for collection to extraction. The referenced method hold time is observed for extraction-to-analysis.
			M353.2 - Automated Cadmium Reduction	Q6	Sample was received above recommended temperature.
			M353.2 - Automated Cadmium Reduction	RA	Relative Percent Difference (RPD) was not used for data validation because the concentration of the duplicated sample is too low for accurate evaluation (< 10x MDL).
		Nitrite as N (WET DI)	M353.2 - Automated Cadmium Reduction	H3	Sample was received and analyzed past holding time.
			M353.2 - Automated Cadmium Reduction	HD	Analysis is outside the intended scope of the method, which does not provide hold time information for soil extracts. No hold time is observed for collection to extraction. The referenced method hold time is observed for extraction-to-analysis.
			M353.2 - Automated Cadmium Reduction	Q6	Sample was received above recommended temperature.
			M353.2 - Automated Cadmium Reduction	RA	Relative Percent Difference (RPD) was not used for data validation because the concentration of the duplicated sample is too low for accurate evaluation (< 10x MDL).
			SM2540C	RA	Relative Percent Difference (RPD) was not used for data validation because the concentration of the duplicated sample is too low for accurate evaluation (< 10x MDL).
			6020B ICP-MS	RA	Relative Percent Difference (RPD) was not used for data validation because the concentration of the duplicated sample is too low for accurate evaluation (< 10x MDL).
			6020B ICP-MS	RA	Relative Percent Difference (RPD) was not used for data validation because the concentration of the duplicated sample is too low for accurate evaluation (< 10x MDL).
			D516-07 - Turbidimetric	HD	Analysis is outside the intended scope of the method, which does not provide hold time information for soil extracts. No hold time is observed for collection to extraction. The referenced method hold time is observed for extraction-to-analysis.
			D516-07 - Turbidimetric	M1	Matrix spike recovery was high, the recovery of the associated control sample (LCS or LFB) was acceptable.
			D516-07 - Turbidimetric	RA	Relative Percent Difference (RPD) was not used for data
	WG488017	Sulfate (WET DI)	D516-07 - Turbidimetric	RA	Relative Percent Difference (RPD) was not used for data

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ACZ ID	WORKNUM	PARAMETER	METHOD	QUAL	DESCRIPTION
	WG487095	Thallium (WET DI)	6020B ICP-MS	RA	validation because the concentration of the duplicated sample is too low for accurate evaluation (< 10x MDL). Relative Percent Difference (RPD) was not used for data validation because the concentration of the duplicated sample is too low for accurate evaluation (< 10x MDL).
	WG486811	Vanadium (WET DI)	6010D ICP	RA	Relative Percent Difference (RPD) was not used for data validation because the concentration of the duplicated sample is too low for accurate evaluation (< 10x MDL).
		Zinc (WET DI)	6010D ICP	RA	Relative Percent Difference (RPD) was not used for data validation because the concentration of the duplicated sample is too low for accurate evaluation (< 10x MDL).

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ACZ ID	WORKNUM	PARAMETER	METHOD	QUAL	DESCRIPTION
L55806-05	WG486811	Aluminum (WET DI)	6010D ICP	RA	Relative Percent Difference (RPD) was not used for data validation because the concentration of the duplicated sample is too low for accurate evaluation (< 10x MDL).
	WG487169	Aluminum, total (3050)	M6010D ICP	M3	The spike recovery value is unusable since the analyte concentration in the sample is disproportionate to the spike level. The recovery of the associated control sample (LCS or LFB) was acceptable.
	WG487095	Antimony (WET DI)	6020B ICP-MS	M3	The spike recovery value is unusable since the analyte concentration in the sample is disproportionate to the spike level. The recovery of the associated control sample (LCS or LFB) was acceptable.
			6020B ICP-MS	RA	Relative Percent Difference (RPD) was not used for data validation because the concentration of the duplicated sample is too low for accurate evaluation (< 10x MDL).
	WG487337	Antimony, total (3050)	M6020B ICP-MS	M2	Matrix spike recovery was low, the recovery of the associated control sample (LCS or LFB) was acceptable.
	WG487095	Arsenic (WET DI)	6020B ICP-MS	M1	Matrix spike recovery was high, the recovery of the associated control sample (LCS or LFB) was acceptable.
			6020B ICP-MS	RA	Relative Percent Difference (RPD) was not used for data validation because the concentration of the duplicated sample is too low for accurate evaluation (< 10x MDL).
	WG486811	Barium (WET DI)	6010D ICP	RA	Relative Percent Difference (RPD) was not used for data validation because the concentration of the duplicated sample is too low for accurate evaluation (< 10x MDL).
	WG487095	Beryllium (WET DI)	6020B ICP-MS	RA	Relative Percent Difference (RPD) was not used for data validation because the concentration of the duplicated sample is too low for accurate evaluation (< 10x MDL).
	WG486811	Boron (WET DI)	6010D ICP	RA	Relative Percent Difference (RPD) was not used for data validation because the concentration of the duplicated sample is too low for accurate evaluation (< 10x MDL).
	WG487095	Cadmium (WET DI)	6020B ICP-MS	RA	Relative Percent Difference (RPD) was not used for data validation because the concentration of the duplicated sample is too low for accurate evaluation (< 10x MDL).
	WG488294	Chloride (WET DI)	SM4500CI-E	HD	Analysis is outside the intended scope of the method, which does not provide hold time information for soil extracts. No hold time is observed for collection to extraction. The referenced method hold time is observed for extraction-to-analysis.
			SM4500CI-E	RA	Relative Percent Difference (RPD) was not used for data validation because the concentration of the duplicated sample is too low for accurate evaluation (< 10x MDL).
	WG486811	Chromium (WET DI)	6010D ICP	RA	Relative Percent Difference (RPD) was not used for data validation because the concentration of the duplicated sample is too low for accurate evaluation (< 10x MDL).
		Cobalt (WET DI)	6010D ICP	RA	Relative Percent Difference (RPD) was not used for data validation because the concentration of the duplicated sample is too low for accurate evaluation (< 10x MDL).
	WG487169	Cobalt, total (3050)	M6010D ICP	ZG	The ICP or ICP-MS Serial Dilution was not used for data validation because the sample concentration was less than 50 times the MDL.
	WG486811	Copper (WET DI)	6010D ICP	RA	Relative Percent Difference (RPD) was not used for data validation because the concentration of the duplicated sample is too low for accurate evaluation (< 10x MDL).
	WG486997	Fluoride (WET DI)	SM4500F-C	RA	Relative Percent Difference (RPD) was not used for data validation because the concentration of the duplicated sample is too low for accurate evaluation (< 10x MDL).
	WG486811	Iron (WET DI)	6010D ICP	RA	Relative Percent Difference (RPD) was not used for data validation because the concentration of the duplicated sample is too low for accurate evaluation (< 10x MDL).
	WG487169	Iron, total (3050)	M6010D ICP	M3	The spike recovery value is unusable since the analyte concentration in the sample is disproportionate to the spike level. The recovery of the associated control sample (LCS or LFB) was acceptable.
	WG487095	Lead (WET DI)	6020B ICP-MS	RA	Relative Percent Difference (RPD) was not used for data validation because the concentration of the duplicated sample is too low for accurate evaluation (< 10x MDL).
	WG486811	Manganese (WET DI)	6010D ICP	RA	Relative Percent Difference (RPD) was not used for data validation because the concentration of the duplicated

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ACZ ID	WORKNUM	PARAMETER	METHOD	QUAL	DESCRIPTION
	WG487169	Manganese, total (3050)	M6010D ICP	M3	sample is too low for accurate evaluation (< 10x MDL). The spike recovery value is unusable since the analyte concentration in the sample is disproportionate to the spike level. The recovery of the associated control sample (LCS or LFB) was acceptable.
	WG486782	Mercury (WET DI)	M7470 CVAA	RA	Relative Percent Difference (RPD) was not used for data validation because the concentration of the duplicated sample is too low for accurate evaluation (< 10x MDL).
	WG486482	Mercury by Direct Combustion AA	M7473 CVAAS	Q6	Sample was received above recommended temperature.
			M7473 CVAAS	QR	Sample matrix is solid rock and a homogenous sample aliquot could not be created for Hg analysis prior to preparation and air drying. Hg analysis was performed on crushed, homogenized, and air dried (40C) sub sample. Some loss of Hg may have occurred. Residual moisture on the prepped sample fraction was used for data correction.
			M7473 CVAAS	RA	Relative Percent Difference (RPD) was not used for data validation because the concentration of the duplicated sample is too low for accurate evaluation (< 10x MDL).
	WG486811	Molybdenum (WET DI)	6010D ICP	RA	Relative Percent Difference (RPD) was not used for data validation because the concentration of the duplicated sample is too low for accurate evaluation (< 10x MDL).
	WG487169	Molybdenum, total (3050)	M6010D ICP	ZG	The ICP or ICP-MS Serial Dilution was not used for data validation because the sample concentration was less than 50 times the MDL.
	WG486811	Nickel (WET DI)	6010D ICP	RA	Relative Percent Difference (RPD) was not used for data validation because the concentration of the duplicated sample is too low for accurate evaluation (< 10x MDL).
	WG487169	Nickel, total (3050)	M6010D ICP	ZG	The ICP or ICP-MS Serial Dilution was not used for data validation because the sample concentration was less than 50 times the MDL.
	WG486756	Nitrate/Nitrite as N (WET DI)	M353.2 - Automated Cadmium Reduction	H3	Sample was received and analyzed past holding time.
			M353.2 - Automated Cadmium Reduction	HD	Analysis is outside the intended scope of the method, which does not provide hold time information for soil extracts. No hold time is observed for collection to extraction. The referenced method hold time is observed for extraction-to-analysis.
			M353.2 - Automated Cadmium Reduction	Q6	Sample was received above recommended temperature.
			M353.2 - Automated Cadmium Reduction	RA	Relative Percent Difference (RPD) was not used for data validation because the concentration of the duplicated sample is too low for accurate evaluation (< 10x MDL).
		Nitrite as N (WET DI)	M353.2 - Automated Cadmium Reduction	H3	Sample was received and analyzed past holding time.
			M353.2 - Automated Cadmium Reduction	HD	Analysis is outside the intended scope of the method, which does not provide hold time information for soil extracts. No hold time is observed for collection to extraction. The referenced method hold time is observed for extraction-to-analysis.
			M353.2 - Automated Cadmium Reduction	Q6	Sample was received above recommended temperature.
			M353.2 - Automated Cadmium Reduction	RA	Relative Percent Difference (RPD) was not used for data validation because the concentration of the duplicated sample is too low for accurate evaluation (< 10x MDL).
	WG486804	Residue, Filterable (TDS) @180C (WET DI)	SM2540C	RA	Relative Percent Difference (RPD) was not used for data validation because the concentration of the duplicated sample is too low for accurate evaluation (< 10x MDL).
	WG487095	Selenium (WET DI)	6020B ICP-MS	RA	Relative Percent Difference (RPD) was not used for data validation because the concentration of the duplicated sample is too low for accurate evaluation (< 10x MDL).
		Silver (WET DI)	6020B ICP-MS	RA	Relative Percent Difference (RPD) was not used for data validation because the concentration of the duplicated sample is too low for accurate evaluation (< 10x MDL).
	WG488017	Sulfate (WET DI)	D516-07 - Turbidimetric	HD	Analysis is outside the intended scope of the method, which does not provide hold time information for soil extracts. No hold time is observed for collection to extraction. The referenced method hold time is observed for extraction-to-analysis.

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ACZ ID	WORKNUM	PARAMETER	METHOD	QUAL	DESCRIPTION
			D516-07 - Turbidimetric	M1	Matrix spike recovery was high, the recovery of the associated control sample (LCS or LFB) was acceptable.
			D516-07 - Turbidimetric	RA	Relative Percent Difference (RPD) was not used for data validation because the concentration of the duplicated sample is too low for accurate evaluation (< 10x MDL).
	WG487095	Thallium (WET DI)	6020B ICP-MS	RA	Relative Percent Difference (RPD) was not used for data validation because the concentration of the duplicated sample is too low for accurate evaluation (< 10x MDL).
	WG486811	Vanadium (WET DI)	6010D ICP	RA	Relative Percent Difference (RPD) was not used for data validation because the concentration of the duplicated sample is too low for accurate evaluation (< 10x MDL).
	WG487264	Vanadium, total (3050)	M6010D ICP	M1	Matrix spike recovery was high, the recovery of the associated control sample (LCS or LFB) was acceptable.
	WG486811	Zinc (WET DI)	6010D ICP	RA	Relative Percent Difference (RPD) was not used for data validation because the concentration of the duplicated sample is too low for accurate evaluation (< 10x MDL).

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ACZ ID	WORKNUM	PARAMETER	METHOD	QUAL	DESCRIPTION
L55806-06	WG486811	Aluminum (WET DI)	6010D ICP	RA	Relative Percent Difference (RPD) was not used for data validation because the concentration of the duplicated sample is too low for accurate evaluation (< 10x MDL).
	WG487264	Aluminum, total (3050)	M6010D ICP	M3	The spike recovery value is unusable since the analyte concentration in the sample is disproportionate to the spike level. The recovery of the associated control sample (LCS or LFB) was acceptable.
	WG487291	Antimony (WET DI)	6020B ICP-MS	RA	Relative Percent Difference (RPD) was not used for data validation because the concentration of the duplicated sample is too low for accurate evaluation (< 10x MDL).
	WG487337	Antimony, total (3050)	M6020B ICP-MS	M2	Matrix spike recovery was low, the recovery of the associated control sample (LCS or LFB) was acceptable.
	WG487095	Arsenic (WET DI)	6020B ICP-MS	M1	Matrix spike recovery was high, the recovery of the associated control sample (LCS or LFB) was acceptable.
			6020B ICP-MS	RA	Relative Percent Difference (RPD) was not used for data validation because the concentration of the duplicated sample is too low for accurate evaluation (< 10x MDL).
	WG486811	Barium (WET DI)	6010D ICP	RA	Relative Percent Difference (RPD) was not used for data validation because the concentration of the duplicated sample is too low for accurate evaluation (< 10x MDL).
	WG487095	Beryllium (WET DI)	6020B ICP-MS	RA	Relative Percent Difference (RPD) was not used for data validation because the concentration of the duplicated sample is too low for accurate evaluation (< 10x MDL).
	WG486811	Boron (WET DI)	6010D ICP	RA	Relative Percent Difference (RPD) was not used for data validation because the concentration of the duplicated sample is too low for accurate evaluation (< 10x MDL).
	WG487095	Cadmium (WET DI)	6020B ICP-MS	RA	Relative Percent Difference (RPD) was not used for data validation because the concentration of the duplicated sample is too low for accurate evaluation (< 10x MDL).
	WG488294	Chloride (WET DI)	SM4500CI-E	HD	Analysis is outside the intended scope of the method, which does not provide hold time information for soil extracts. No hold time is observed for collection to extraction. The referenced method hold time is observed for extraction-to-analysis.
			SM4500CI-E	RA	Relative Percent Difference (RPD) was not used for data validation because the concentration of the duplicated sample is too low for accurate evaluation (< 10x MDL).
	WG486811	Chromium (WET DI)	6010D ICP	RA	Relative Percent Difference (RPD) was not used for data validation because the concentration of the duplicated sample is too low for accurate evaluation (< 10x MDL).
		Cobalt (WET DI)	6010D ICP	RA	Relative Percent Difference (RPD) was not used for data validation because the concentration of the duplicated sample is too low for accurate evaluation (< 10x MDL).
	WG487169	Cobalt, total (3050)	M6010D ICP	ZG	The ICP or ICP-MS Serial Dilution was not used for data validation because the sample concentration was less than 50 times the MDL.
	WG486811	Copper (WET DI)	6010D ICP	RA	Relative Percent Difference (RPD) was not used for data validation because the concentration of the duplicated sample is too low for accurate evaluation (< 10x MDL).
	WG486997	Fluoride (WET DI)	SM4500F-C	RA	Relative Percent Difference (RPD) was not used for data validation because the concentration of the duplicated sample is too low for accurate evaluation (< 10x MDL).
	WG486811	Iron (WET DI)	6010D ICP	RA	Relative Percent Difference (RPD) was not used for data validation because the concentration of the duplicated sample is too low for accurate evaluation (< 10x MDL).
	WG487169	Iron, total (3050)	M6010D ICP	M3	The spike recovery value is unusable since the analyte concentration in the sample is disproportionate to the spike level. The recovery of the associated control sample (LCS or LFB) was acceptable.
	WG487095	Lead (WET DI)	6020B ICP-MS	RA	Relative Percent Difference (RPD) was not used for data validation because the concentration of the duplicated sample is too low for accurate evaluation (< 10x MDL).
	WG486811	Manganese (WET DI)	6010D ICP	RA	Relative Percent Difference (RPD) was not used for data validation because the concentration of the duplicated sample is too low for accurate evaluation (< 10x MDL).
	WG487169	Manganese, total (3050)	M6010D ICP	M3	The spike recovery value is unusable since the analyte concentration in the sample is disproportionate to the spike level. The recovery of the associated control sample (LCS

REPAD.15.06.05.01

Rise Grass Valley Inc.

ACZ Project ID: **L55806**

ACZ ID	WORKNUM	PARAMETER	METHOD	QUAL	DESCRIPTION
					or LFB) was acceptable.
	WG486782	Mercury (WET DI)	M7470 CVAA	RA	Relative Percent Difference (RPD) was not used for data validation because the concentration of the duplicated sample is too low for accurate evaluation (< 10x MDL).
	WG486482	Mercury by Direct Combustion AA	M7473 CVAAS	Q6	Sample was received above recommended temperature.
			M7473 CVAAS	QR	Sample matrix is solid rock and a homogenous sample aliquot could not be created for Hg analysis prior to preparation and air drying. Hg analysis was performed on crushed, homogenized, and air dried (40C) sub sample. Some loss of Hg may have occurred. Residual moisture on the prepped sample fraction was used for data correction.
			M7473 CVAAS	RA	Relative Percent Difference (RPD) was not used for data validation because the concentration of the duplicated sample is too low for accurate evaluation (< 10x MDL).
	WG486811	Molybdenum (WET DI)	6010D ICP	RA	Relative Percent Difference (RPD) was not used for data validation because the concentration of the duplicated sample is too low for accurate evaluation (< 10x MDL).
	WG487169	Molybdenum, total (3050)	M6010D ICP	ZG	The ICP or ICP-MS Serial Dilution was not used for data validation because the sample concentration was less than 50 times the MDL.
	WG486811	Nickel (WET DI)	6010D ICP	RA	Relative Percent Difference (RPD) was not used for data validation because the concentration of the duplicated sample is too low for accurate evaluation (< 10x MDL).
	WG486756	Nitrate/Nitrite as N (WET DI)	M353.2 - Automated Cadmium Reduction	H3	Sample was received and analyzed past holding time.
			M353.2 - Automated Cadmium Reduction	HD	Analysis is outside the intended scope of the method, which does not provide hold time information for soil extracts. No hold time is observed for collection to extraction. The referenced method hold time is observed for extraction-to-analysis.
			M353.2 - Automated Cadmium Reduction	Q6	Sample was received above recommended temperature.
			M353.2 - Automated Cadmium Reduction	RA	Relative Percent Difference (RPD) was not used for data validation because the concentration of the duplicated sample is too low for accurate evaluation (< 10x MDL).
		Nitrite as N (WET DI)	M353.2 - Automated Cadmium Reduction	H3	Sample was received and analyzed past holding time.
			M353.2 - Automated Cadmium Reduction	HD	Analysis is outside the intended scope of the method, which does not provide hold time information for soil extracts. No hold time is observed for collection to extraction. The referenced method hold time is observed for extraction-to-analysis.
			M353.2 - Automated Cadmium Reduction	Q6	Sample was received above recommended temperature.
			M353.2 - Automated Cadmium Reduction	RA	Relative Percent Difference (RPD) was not used for data validation because the concentration of the duplicated sample is too low for accurate evaluation (< 10x MDL).
	WG487845	pH	M9045D/M9040C	EB	A pH value outside the range of the probe standardization is estimated.
	WG486804	Residue, Filterable (TDS) @180C (WET DI)	SM2540C	RA	Relative Percent Difference (RPD) was not used for data validation because the concentration of the duplicated sample is too low for accurate evaluation (< 10x MDL).
	WG487095	Selenium (WET DI)	6020B ICP-MS	RA	Relative Percent Difference (RPD) was not used for data validation because the concentration of the duplicated sample is too low for accurate evaluation (< 10x MDL).
		Silver (WET DI)	6020B ICP-MS	RA	Relative Percent Difference (RPD) was not used for data validation because the concentration of the duplicated sample is too low for accurate evaluation (< 10x MDL).
	WG488017	Sulfate (WET DI)	D516-07 - Turbidimetric	HD	Analysis is outside the intended scope of the method, which does not provide hold time information for soil extracts. No hold time is observed for collection to extraction. The referenced method hold time is observed for extraction-to-analysis.
			D516-07 - Turbidimetric	M1	Matrix spike recovery was high, the recovery of the associated control sample (LCS or LFB) was acceptable.
			D516-07 - Turbidimetric	RA	Relative Percent Difference (RPD) was not used for data validation because the concentration of the duplicated sample is too low for accurate evaluation (< 10x MDL).

REPAD.15.06.05.01

Rise Grass Valley Inc.

ACZ Project ID: **L55806**

ACZ ID	WORKNUM	PARAMETER	METHOD	QUAL	DESCRIPTION
	WG487095	Thallium (WET DI)	6020B ICP-MS	RA	Relative Percent Difference (RPD) was not used for data validation because the concentration of the duplicated sample is too low for accurate evaluation (< 10x MDL).
	WG486811	Vanadium (WET DI)	6010D ICP	RA	Relative Percent Difference (RPD) was not used for data validation because the concentration of the duplicated sample is too low for accurate evaluation (< 10x MDL).
	WG486427	Waste Extraction Test - DI H2O	California Method, Title 22	EB	A pH value outside the range of the probe standardization is estimated.
	WG486811	Zinc (WET DI)	6010D ICP	RA	Relative Percent Difference (RPD) was not used for data validation because the concentration of the duplicated sample is too low for accurate evaluation (< 10x MDL).

Rise Grass Valley Inc.

ACZ Project ID: **L55806**

Metals Analysis

The following parameters are not offered for certification or are not covered by NELAC certificate #ACZ.

Boron (WET DI)

6010D ICP

Soil Analysis

The following parameters are not offered for certification or are not covered by NELAC certificate #ACZ.

Solids, Percent

D2216-80

Wet Chemistry

The following parameters are not offered for certification or are not covered by NELAC certificate #ACZ.

Sulfate (WET DI)

D516-07 - Turbidimetric

Rise Grass Valley Inc.

ACZ Project ID: L55806

Date Received: 11/11/2019 14:20

Received By: mjj

Date Printed: 11/12/2019

Receipt Verification

	YES	NO	NA
1) Is a foreign soil permit included for applicable samples?	☐	☐	☒
2) Is the Chain of Custody form or other directive shipping papers present?	☒	☐	☐
3) Does this project require special handling procedures such as CLP protocol?	☐	☒	☐
4) Are any samples NRC licensable material?	☐	☐	☒
5) If samples are received past hold time, proceed with requested short hold time analyses?	☒	☐	☐
6) Is the Chain of Custody form complete and accurate?	☒	☐	☐
7) Were any changes made to the Chain of Custody form prior to ACZ receiving the samples?	☐	☒	☐

Samples/Containers

	YES	NO	NA
8) Are all containers intact and with no leaks?	☒	☐	☐
9) Are all labels on containers and are they intact and legible?	☒	☐	☐
10) Do the sample labels and Chain of Custody form match for Sample ID, Date, and Time?	☒	☐	☐
11) For preserved bottle types, was the pH checked and within limits? ¹	☐	☐	☒
12) Is there sufficient sample volume to perform all requested work?	☒	☐	☐
13) Is the custody seal intact on all containers?	☐	☐	☒
14) Are samples that require zero headspace acceptable?	☐	☐	☒
15) Are all sample containers appropriate for analytical requirements?	☐	☒	☐
L55806-02 : Sample container was broken, was placed in ziplock bag.			
16) Is there an Hg-1631 trip blank present?	☐	☐	☒
17) Is there a VOA trip blank present?	☐	☐	☒
18) Were all samples received within hold time?	☐	☒	☐

Some parameters were received past hold time.

NA indicates Not Applicable

Chain of Custody Related Remarks

Client Contact Remarks

Shipping Containers

Cooler Id	Temp (°C)	Temp Criteria (°C)	Rad (µR/Hr)	Custody Seal Intact?
NA31789	18.8	<=6.0	15	N/A

Was ice present in the shipment container(s)?

No - Wet or gel ice was not present in the shipment container(s).

Client must contact an ACZ Project Manager if analysis should not proceed for samples received outside of their thermal preservation acceptance criteria.

Rise Grass Valley Inc.

ACZ Project ID: L55806

Date Received: 11/11/2019 14:20

Received By: mjj

Date Printed: 11/12/2019

¹ The preservation of the following bottle types is not checked at sample receipt: Orange (oil and grease), Purple (total cyanide), Pink (dissolved cyanide), Brown (arsenic speciation), Sterile (fecal coliform), EDTA (sulfite), HCl preserved vial (organics), Na₂S₂O₃ preserved vial (organics), and HG-1631 (total/dissolved mercury by method 1631).

2773 Downhill Drive Steamboat Springs, CO 80487 (800) 334-5493

Report to:

Name: Ben Mossman	Address: 333 Crown Point Circle Suite 215 Grass Valley Ca. 95945 Telephone: 604-219-9072
Company: Rise Gold Corp.	
E-mail: ceo@risegoldcorp.com	

Copy of Report to:

Name: Andy Kopania	E-mail: akopania@sbcglobal.net
Company: EMKO Environmental	Telephone: 916-718-5519

Invoice to:

Name: Ben Mossman		Address: 333 Crown Point Circle Suite 215
Company: Rise Gold Corp.		Grass Valley Ca. 95945
E-mail: ceo@risegoldcorp.com		Telephone: 604-219-9072

If sample(s) received past holding time (HT), or if insufficient HT remains to complete analysis before expiration, shall ACZ proceed with requested short HT analyses?

YES	☒
NO	☐

If "NO" then ACZ will contact client for further instruction. If neither "YES" nor "NO" is indicated, ACZ will proceed with the requested analyses, even if HT is expired, and data will be qualified

Are samples for SDWA Compliance Monitoring?

Yes

No

If yes, please include state forms. Results will be reported to PQL for Colorado.

Sampler's Name: AH Sampler's Site Information State CA Zip code 95945 Time Zone PST

***Sampler's Signature:** _____

PROJECT INFORMATION

ANALYSES REQUESTED (attach list or use quote number)

[illegible]

Matrix	SW (Surface Water) · GW (Ground Water) · WW (Waste Water) · DW (Drinking Water) · SL (Sludge) · SO (Soil) · OL (Oil) · Other (Specify)

REMARKS

R = rock matrix

Please refer to ACZ's terms & conditions located on the reverse side of this COC.

RELINQUISHED BY:	DATE:TIME	RECEIVED BY:	DATE:TIME
<i>ALV</i>	<i>11/11/19</i> <i>2:15pm</i>	<i>ofme</i>	<i>11/11/19 1420</i>

FRMAD050.06.14.14

White - Return with sample. Yellow - Retain for your records.





Laboratories, Inc. L 55806

CHAIN of CUSTODY

2773 Downhill Drive Steamboat Springs, CO 80487 (800) 334-5493

Report to:

Name: Ben Mossman	Address: 333 Crown Point Circle Suite 215
Company: Rise Gold Corp.	Grass Valley Ca. 95945
E-mail: ceo@risegoldcorp.com	Telephone: 604-219-9072

Copy of Report to:

Name: Andy Kopania	E-mail: akopania@sbcglobal.net
Company: EMKO Environmental	Telephone: 916-718-5519

Invoice to:

Name: Ben Mossman	Address: 333 Crown Point Circle Suite 215
Company: Rise Gold Corp.	Grass Valley Ca. 95945
E-mail: ceo@risegoldcorp.com	Telephone: 604-219-9072

If sample(s) received past holding time (HT), or if insufficient HT remains to complete analysis before expiration, shall ACZ proceed with requested short HT analyses? YES ☒ NO ☐

If "NO" then ACZ will contact client for further instruction. If neither "YES" nor "NO" is indicated, ACZ will proceed with the requested analyses, even if HT is expired, and data will be qualified

Are samples for SDWA Compliance Monitoring? Yes ☐ No ☒

If yes, please include state forms. Results will be reported to PQL for Colorado.

Sampler's Name: AH Sampler's Site Information State CA Zip code 95945 Time Zone PST

*Sampler's Signature: _____ *I attest to the authenticity and validity of this sample. I understand that intentionally mislabeling the time/date/location or tampering with the sample in anyway, is considered fraud and punishable by State Law.

PROJECT INFORMATION

ANALYSES REQUESTED (attach list or use quote number)

Quote #:	PO#:	Reporting state for compliance testing:	Check box if samples include NRC licensed material?	SAMPLE IDENTIFICATION	DATE:TIME	Matrix	# of Containers	Metals by ICP & ICP/MS	DI-WET leach	Leachate-Metals by ICP & ICP/MS	PH	Percent Solids	Wet Chemistry		
CORE-Tailings-2		CA	☐	MA-1	10/29/19:10:45 am	R	1	☒	☒	☒	☒	☒	☒	☐	☐
				MA-2	10/29/19:11:05 am	R	1	☒	☒	☒	☒	☒	☒	☐	☐
				MA-3	10/29/19:11:45 am	R	1	☒	☒	☒	☒	☒	☒	☐	☐
				MAA-1	10/29/19:11:20 am	R	1	☒	☒	☒	☒	☒	☒	☐	☐
				MS-1	10/29/19:11:00 am	R	1	☒	☒	☒	☒	☒	☒	☐	☐
				S-1	10/29/19:11:25 am	R	1	☒	☒	☒	☒	☒	☒	☐	☐
								☐	☐	☐	☐	☐	☐	☐	☐
								☐	☐	☐	☐	☐	☐	☐	☐
								☐	☐	☐	☐	☐	☐	☐	☐
								☐	☐	☐	☐	☐	☐	☐	☐

Matrix SW (Surface Water) · GW (Ground Water) · WW (Waste Water) · DW (Drinking Water) · SL (Sludge) · SO (Soil) · OL (Oil) · Other (Specify)

REMARKS

R = rock matrix

Please refer to ACZ's terms & conditions located on the reverse side of this COC.

RELINQUISHED BY:	DATE:TIME	RECEIVED BY:	DATE:TIME
<i>ALY</i>	11/6/19 2:15pm	<i>gme</i>	11/11/19 1420

FRMAD050.06.14.14

White - Return with sample. Yellow - Retain for your records.

55806 Chain of Custody

December 18, 2019

Report to:

Ben Mossman
Rise Grass Valley Inc.
Suite 215 - 333 Crown Point Circle
Grass Valley, CA 95945

Bill to:

Ben Mossman
Rise Grass Valley Inc.
Suite 215 - 333 Crown Point Circle
Grass Valley, CA 95945

cc: Andy Kopania

Project ID:

ACZ Project ID: L55808

Ben Mossman:

Enclosed are the analytical results for sample(s) submitted to ACZ Laboratories, Inc. (ACZ) on November 11, 2019. This project has been assigned to ACZ's project number, L55808. Please reference this number in all future inquiries.

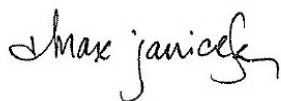
All analyses were performed according to ACZ's Quality Assurance Plan. The enclosed results relate only to the samples received under L55808. Each section of this report has been reviewed and approved by the appropriate Laboratory Supervisor, or a qualified substitute.

Except as noted, the test results for the methods and parameters listed on ACZ's current NELAC certificate letter (#ACZ) meet all requirements of NELAC.

This report shall be used or copied only in its entirety. ACZ is not responsible for the consequences arising from the use of a partial report.

All samples and sub-samples associated with this project will be disposed of after January 17, 2020. If the samples are determined to be hazardous, additional charges apply for disposal (typically \$11/sample). If you would like the samples to be held longer than ACZ's stated policy or to be returned, please contact your Project Manager or Customer Service Representative for further details and associated costs. ACZ retains analytical raw data reports for ten years.

If you have any questions or other needs, please contact your Project Manager.



Max Janicek has reviewed and
approved this report.



Rise Grass Valley Inc.

Project ID:

Sample ID: F-1 (ABC)

ACZ Sample ID: **L55808-01**

Date Sampled: 11/04/19 12:00

Date Received: 11/11/19

Sample Matrix: Soil

Metals Analysis

Parameter	EPA Method	Dilution	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Aluminum (WET DI)	6010D ICP	1	0.17	B	*	mg/L	0.05	0.3	11/26/19 10:48	kja
Aluminum, total (3050)	M6010D ICP	100	16100		*	mg/Kg	5	30	12/03/19 0:49	kja
Antimony (WET DI)	6020B ICP-MS	1	0.0015	B	*	mg/L	0.0004	0.002	11/27/19 15:32	mfm
Antimony, total (3050)	M6020B ICP-MS	500	0.2	B	*	mg/Kg	0.2	1	12/04/19 14:06	bsu
Arsenic (WET DI)	6020B ICP-MS	1	0.0018		*	mg/L	0.0002	0.001	11/27/19 15:32	mfm
Arsenic, total (3050)	M6020B ICP-MS	500	1.7			mg/Kg	0.1	0.5	12/04/19 14:06	bsu
Barium (WET DI)	6010D ICP	1		U	*	mg/L	0.007	0.04	11/26/19 10:48	kja
Barium, total (3050)	M6010D ICP	100	18.4			mg/Kg	0.7	4	12/03/19 0:49	kja
Beryllium (WET DI)	6020B ICP-MS	1		U	*	mg/L	0.00008	0.0003	11/27/19 15:32	mfm
Beryllium, total (3050)	M6020B ICP-MS	500	0.23			mg/Kg	0.04	0.1	12/04/19 14:06	bsu
Boron (WET DI)	6010D ICP	1		U	*	mg/L	0.02	0.1	11/26/19 10:48	kja
Boron, total (3050)	M6010D ICP	100		U		mg/Kg	2	10	12/03/19 0:49	kja
Cadmium (WET DI)	6020B ICP-MS	1		U	*	mg/L	0.00005	0.0003	11/27/19 15:32	mfm
Cadmium, total (3050)	M6020B ICP-MS	500	0.61			mg/Kg	0.03	0.1	12/04/19 14:06	bsu
Calcium (WET DI)	6010D ICP	1	9.0			mg/L	0.1	0.5	11/26/19 10:48	kja
Chromium (WET DI)	6010D ICP	1		U	*	mg/L	0.01	0.05	11/26/19 10:48	kja
Chromium, total (3050)	M6010D ICP	100	73			mg/Kg	1	5	12/03/19 0:49	kja
Cobalt (WET DI)	6010D ICP	1		U	*	mg/L	0.01	0.05	11/26/19 10:48	kja
Cobalt, total (3050)	M6010D ICP	100	13		*	mg/Kg	1	5	12/03/19 0:49	kja
Copper (WET DI)	6010D ICP	1		U	*	mg/L	0.01	0.05	11/26/19 10:48	kja
Copper, total (3050)	M6010D ICP	100	86			mg/Kg	1	5	12/03/19 0:49	kja
Iron (WET DI)	6010D ICP	1		U	*	mg/L	0.03	0.08	11/26/19 10:48	kja
Iron, total (3050)	M6010D ICP	100	35500		*	mg/Kg	3	8	12/03/19 0:49	kja
Lead (WET DI)	6020B ICP-MS	1		U	*	mg/L	0.0001	0.0005	11/27/19 15:32	mfm
Lead, total (3050)	M6020B ICP-MS	500	11.8			mg/Kg	0.05	0.3	12/04/19 14:06	bsu
Magnesium (WET DI)	6010D ICP	1	3.8			mg/L	0.2	1	11/26/19 10:48	kja
Manganese (WET DI)	6010D ICP	1		U	*	mg/L	0.01	0.05	11/26/19 10:48	kja
Manganese, total (3050)	M6010D ICP	100	1000		*	mg/Kg	1	5	12/03/19 0:49	kja
Mercury (WET DI)	M7470 CVAA	1		U	*	mg/L	0.0002	0.001	11/25/19 14:58	slm
Mercury by Direct Combustion AA	M7473 CVAAS	1	39.9		*	ng/g	1.6	8	11/19/19 14:10	slm
Molybdenum (WET DI)	6010D ICP	1		U	*	mg/L	0.02	0.1	11/26/19 10:48	kja
Molybdenum, total (3050)	M6010D ICP	100	22		*	mg/Kg	2	10	12/03/19 0:49	kja
Nickel (WET DI)	6010D ICP	1		U	*	mg/L	0.008	0.04	11/26/19 10:48	kja
Nickel, total (3050)	M6010D ICP	100	31.1		*	mg/Kg	0.8	4	12/03/19 0:49	kja
Potassium (WET DI)	6010D ICP	1	3.8			mg/L	0.2	1	11/26/19 10:48	kja
Selenium (WET DI)	6020B ICP-MS	1	0.0003		*	mg/L	0.0001	0.0003	11/27/19 15:32	mfm
Selenium, total (3050)	M6020B ICP-MS	500	0.11			mg/Kg	0.05	0.1	12/04/19 14:06	bsu
Silver (WET DI)	6020B ICP-MS	1	0.0001	B	*	mg/L	0.0001	0.0005	11/27/19 15:32	mfm
Silver, total (3050)	M6020B ICP-MS	500	0.23	B		mg/Kg	0.05	0.3	12/04/19 14:06	bsu
Sodium (WET DI)	M6010D ICP	1	3.7			mg/L	0.2	1	11/26/19 10:48	kja
Thallium (WET DI)	6020B ICP-MS	1		U	*	mg/L	0.0001	0.0005	11/27/19 15:32	mfm

Rise Grass Valley Inc.

Project ID:

Sample ID: F-1 (ABC)

ACZ Sample ID: **L55808-01**

Date Sampled: 11/04/19 12:00

Date Received: 11/11/19

Sample Matrix: Soil

Thallium, total (3050)	M6020B ICP-MS	500		U		mg/Kg	0.05	0.3	12/04/19 14:06	bsu
Vanadium (WET DI)	6010D ICP	1	0.008	B	*	mg/L	0.005	0.03	11/26/19 10:48	kja
Vanadium, total (3050)	M6010D ICP	100	72.0			mg/Kg	0.5	3	12/03/19 0:49	kja
Zinc (WET DI)	6010D ICP	1		U	*	mg/L	0.01	0.05	11/26/19 10:48	kja
Zinc, total (3050)	M6010D ICP	100	65			mg/Kg	1	5	12/03/19 0:49	kja

Soil Analysis

Parameter	EPA Method	Dilution	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
pH, (WET-DI)	M9045D/M9040C									
pH		1	9.4			units	0.1	0.1	11/21/19 0:00	llr
Temperature		1	20.3			C	0.1	0.1	11/21/19 0:00	llr
Solids, Percent	D2216-80	1	99.9		*	%	0.1	0.5	12/03/19 4:53	ms/mlp

Soil Preparation

Parameter	EPA Method	Dilution	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Air Dry at 34 Degrees C	USDA No. 1, 1972								11/19/19 9:05	llr
Crush and Pulverize	EPA-600/2-78-054 3.1.3								11/19/19 9:05	llr
Digestion - Hot Plate	M3050B ICP-MS								11/26/19 10:17	mlp
Digestion - Hot Plate	M3050B ICP								11/26/19 10:17	mlp
Waste Extraction Test - DI H2O	California Method, Title 22								11/20/19 20:06	llr

Wet Chemistry

Parameter	EPA Method	Dilution	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Alkalinity (WET DI)	SM2320B - Titration									
Bicarbonate as CaCO3		1	40.7			mg/L	2	20	11/25/19 0:00	emk
Carbonate as CaCO3		1	4.5	B		mg/L	2	20	11/25/19 0:00	emk
Hydroxide as CaCO3		1		U		mg/L	2	20	11/25/19 0:00	emk
Total Alkalinity		1	45.2			mg/L	2	20	11/25/19 0:00	emk
Chloride (WET DI)	SM4500Cl-E	1	1.7	B	*	mg/L	0.5	2	12/17/19 11:23	ttg
Conductivity @25C (WET-DI)	SM2510B	1	105			umhos/cm	1	10	11/25/19 15:22	emk
Fluoride (WET DI)	SM4500F-C	1		U	*	mg/L	0.1	0.4	11/26/19 13:26	emk
Hardness as CaCO3 (WET-DI)	SM2340B - Calculation		38			mg/L	0.2	5	12/18/19 0:00	calc
Nitrate (WET-DI)	Calculation: NO3NO2 minus NO2		0.03	BH		mg/L	0.02	0.1	12/18/19 0:00	calc
Nitrate/Nitrite as N (WET DI)	M353.2 - Automated Cadmium Reduction	1	0.06	BH	*	mg/L	0.02	0.1	11/22/19 0:03	pjb
Nitrite as N (WET DI)	M353.2 - Automated Cadmium Reduction	1	0.03	B	*	mg/L	0.01	0.05	11/22/19 0:03	pjb
Residue, Filterable (TDS) @180C (WET DI)	SM2540C	1	64		*	mg/L	20	40	11/22/19 12:35	emk
Sulfate (WET DI)	D516-07 - Turbidimetric	1	8.4		*	mg/L	1	5	12/12/19 16:05	ttg

Rise Grass Valley Inc.

Project ID:

Sample ID: F-2 (ABC)

ACZ Sample ID: **L55808-02**

Date Sampled: 11/04/19 12:00

Date Received: 11/11/19

Sample Matrix: Soil

Metals Analysis

Parameter	EPA Method	Dilution	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Aluminum (WET DI)	6010D ICP	1	0.18	B	*	mg/L	0.05	0.3	11/26/19 11:03	kja
Aluminum, total (3050)	M6010D ICP	100	16300		*	mg/Kg	5	30	12/03/19 1:01	kja
Antimony (WET DI)	6020B ICP-MS	1	0.0015	B	*	mg/L	0.0004	0.002	11/27/19 15:35	mfm
Antimony, total (3050)	M6020B ICP-MS	500		U	*	mg/Kg	0.2	1	12/04/19 14:08	bsu
Arsenic (WET DI)	6020B ICP-MS	1	0.0013		*	mg/L	0.0002	0.001	11/27/19 15:35	mfm
Arsenic, total (3050)	M6020B ICP-MS	500	1.4			mg/Kg	0.1	0.5	12/04/19 14:08	bsu
Barium (WET DI)	6010D ICP	1		U	*	mg/L	0.007	0.04	11/26/19 11:03	kja
Barium, total (3050)	M6010D ICP	100	16.6			mg/Kg	0.7	4	12/03/19 1:01	kja
Beryllium (WET DI)	6020B ICP-MS	1		U	*	mg/L	0.00008	0.0003	11/27/19 15:35	mfm
Beryllium, total (3050)	M6020B ICP-MS	500	0.22			mg/Kg	0.04	0.1	12/04/19 14:08	bsu
Boron (WET DI)	6010D ICP	1		U	*	mg/L	0.02	0.1	11/26/19 11:03	kja
Boron, total (3050)	M6010D ICP	100		U		mg/Kg	2	10	12/03/19 1:01	kja
Cadmium (WET DI)	6020B ICP-MS	1		U	*	mg/L	0.00005	0.0003	11/27/19 15:35	mfm
Cadmium, total (3050)	M6020B ICP-MS	500	0.62			mg/Kg	0.03	0.1	12/04/19 14:08	bsu
Calcium (WET DI)	6010D ICP	1	8.5			mg/L	0.1	0.5	11/26/19 11:03	kja
Chromium (WET DI)	6010D ICP	1		U	*	mg/L	0.01	0.05	11/26/19 11:03	kja
Chromium, total (3050)	M6010D ICP	100	75			mg/Kg	1	5	12/03/19 1:01	kja
Cobalt (WET DI)	6010D ICP	1		U	*	mg/L	0.01	0.05	11/26/19 11:03	kja
Cobalt, total (3050)	M6010D ICP	100	13		*	mg/Kg	1	5	12/03/19 1:01	kja
Copper (WET DI)	6010D ICP	1	0.01	B	*	mg/L	0.01	0.05	11/26/19 11:03	kja
Copper, total (3050)	M6010D ICP	100	86			mg/Kg	1	5	12/03/19 1:01	kja
Iron (WET DI)	6010D ICP	1		U	*	mg/L	0.03	0.08	11/26/19 11:03	kja
Iron, total (3050)	M6010D ICP	100	36000		*	mg/Kg	3	8	12/03/19 1:01	kja
Lead (WET DI)	6020B ICP-MS	1		U	*	mg/L	0.0001	0.0005	11/27/19 15:35	mfm
Lead, total (3050)	M6020B ICP-MS	500	9.34			mg/Kg	0.05	0.3	12/04/19 14:08	bsu
Magnesium (WET DI)	6010D ICP	1	3.5			mg/L	0.2	1	11/26/19 11:03	kja
Manganese (WET DI)	6010D ICP	1		U	*	mg/L	0.01	0.05	11/26/19 11:03	kja
Manganese, total (3050)	M6010D ICP	100	1010		*	mg/Kg	1	5	12/03/19 1:01	kja
Mercury (WET DI)	M7470 CVAA	1		U	*	mg/L	0.0002	0.001	11/25/19 15:00	slm
Mercury by Direct Combustion AA	M7473 CVAAS	1	45.1		*	ng/g	1.54	7.7	11/19/19 14:16	slm
Molybdenum (WET DI)	6010D ICP	1		U	*	mg/L	0.02	0.1	11/26/19 11:03	kja
Molybdenum, total (3050)	M6010D ICP	100	33		*	mg/Kg	2	10	12/03/19 1:01	kja
Nickel (WET DI)	6010D ICP	1		U	*	mg/L	0.008	0.04	11/26/19 11:03	kja
Nickel, total (3050)	M6010D ICP	100	31.5		*	mg/Kg	0.8	4	12/03/19 1:01	kja
Potassium (WET DI)	6010D ICP	1	4.2			mg/L	0.2	1	11/26/19 11:03	kja
Selenium (WET DI)	6020B ICP-MS	1	0.0002	B	*	mg/L	0.0001	0.0003	11/27/19 15:35	mfm
Selenium, total (3050)	M6020B ICP-MS	500	0.12			mg/Kg	0.05	0.1	12/04/19 14:08	bsu
Silver (WET DI)	6020B ICP-MS	1		U	*	mg/L	0.0001	0.0005	11/27/19 15:35	mfm
Silver, total (3050)	M6020B ICP-MS	500	0.21	B		mg/Kg	0.05	0.3	12/04/19 14:08	bsu
Sodium (WET DI)	M6010D ICP	1	3.6			mg/L	0.2	1	11/26/19 11:03	kja
Thallium (WET DI)	6020B ICP-MS	1		U	*	mg/L	0.0001	0.0005	11/27/19 15:35	mfm

Rise Grass Valley Inc.

Project ID:

Sample ID: F-2 (ABC)

ACZ Sample ID: **L55808-02**

Date Sampled: 11/04/19 12:00

Date Received: 11/11/19

Sample Matrix: Soil

Thallium, total (3050)	M6020B ICP-MS	500		U		mg/Kg	0.05	0.3	12/04/19 14:08	bsu
Vanadium (WET DI)	6010D ICP	1	0.010	B	*	mg/L	0.005	0.03	11/26/19 11:03	kja
Vanadium, total (3050)	M6010D ICP	100	73.2			mg/Kg	0.5	3	12/03/19 1:01	kja
Zinc (WET DI)	6010D ICP	1		U	*	mg/L	0.01	0.05	11/26/19 11:03	kja
Zinc, total (3050)	M6010D ICP	100	63			mg/Kg	1	5	12/03/19 1:01	kja

Soil Analysis

Parameter	EPA Method	Dilution	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
pH, (WET-DI)	M9045D/M9040C									
pH		1	9.3			units	0.1	0.1	11/21/19 0:00	llr
Temperature		1	20.3			C	0.1	0.1	11/21/19 0:00	llr
Solids, Percent	D2216-80	1	99.9		*	%	0.1	0.5	12/03/19 6:27	ms/mlp

Soil Preparation

Parameter	EPA Method	Dilution	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Air Dry at 34 Degrees C	USDA No. 1, 1972								11/19/19 9:13	llr
Crush and Pulverize	EPA-600/2-78-054 3.1.3								11/19/19 9:13	llr
Digestion - Hot Plate	M3050B ICP								11/26/19 10:37	mlp
Digestion - Hot Plate	M3050B ICP-MS								11/26/19 10:37	mlp
Waste Extraction Test - DI H2O	California Method, Title 22								11/21/19 2:24	llr

Wet Chemistry

Parameter	EPA Method	Dilution	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Alkalinity (WET DI)	SM2320B - Titration									
Bicarbonate as CaCO ₃		1	40.2			mg/L	2	20	11/25/19 0:00	emk
Carbonate as CaCO ₃		1	3.2	B		mg/L	2	20	11/25/19 0:00	emk
Hydroxide as CaCO ₃		1		U		mg/L	2	20	11/25/19 0:00	emk
Total Alkalinity		1	43.4			mg/L	2	20	11/25/19 0:00	emk
Chloride (WET DI)	SM4500Cl-E	1	1.9	B	*	mg/L	0.5	2	12/17/19 11:24	ttg
Conductivity @25C (WET-DI)	SM2510B	1	100			umhos/cm	1	10	11/25/19 15:41	emk
Fluoride (WET DI)	SM4500F-C	1		U	*	mg/L	0.1	0.4	11/26/19 13:39	emk
Hardness as CaCO ₃ (WET-DI)	SM2340B - Calculation		36			mg/L	0.2	5	12/18/19 0:00	calc
Nitrate (WET-DI)	Calculation: NO ₃ NO ₂ minus NO ₂		0.05	BH		mg/L	0.02	0.1	12/18/19 0:00	calc
Nitrate/Nitrite as N (WET DI)	M353.2 - Automated Cadmium Reduction	1	0.08	BH	*	mg/L	0.02	0.1	11/22/19 0:10	pjb
Nitrite as N (WET DI)	M353.2 - Automated Cadmium Reduction	1	0.03	B	*	mg/L	0.01	0.05	11/22/19 0:10	pjb
Residue, Filterable (TDS) @180C (WET DI)	SM2540C	1	72		*	mg/L	20	40	11/22/19 12:40	emk
Sulfate (WET DI)	D516-07 - Turbidimetric	1	6.3		*	mg/L	1	5	12/12/19 16:06	ttg

Rise Grass Valley Inc.

Project ID:

Sample ID: F-3 (AB)

ACZ Sample ID: **L55808-03**

Date Sampled: 11/04/19 12:00

Date Received: 11/11/19

Sample Matrix: Soil

Metals Analysis

Parameter	EPA Method	Dilution	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Aluminum (WET DI)	6010D ICP	1	0.26	B	*	mg/L	0.05	0.3	11/26/19 11:07	kja
Aluminum, total (3050)	M6010D ICP	99	16300		*	mg/Kg	5	20	12/03/19 1:05	kja
Antimony (WET DI)	6020B ICP-MS	1	0.0031		*	mg/L	0.0004	0.002	11/27/19 15:37	mfm
Antimony, total (3050)	M6020B ICP-MS	495		U	*	mg/Kg	0.2	1	12/04/19 14:09	bsu
Arsenic (WET DI)	6020B ICP-MS	1	0.0019		*	mg/L	0.0002	0.001	11/27/19 15:37	mfm
Arsenic, total (3050)	M6020B ICP-MS	495	2.0			mg/Kg	0.1	0.5	12/04/19 14:09	bsu
Barium (WET DI)	6010D ICP	1		U	*	mg/L	0.007	0.04	11/26/19 11:07	kja
Barium, total (3050)	M6010D ICP	99	17.9			mg/Kg	0.7	3	12/03/19 1:05	kja
Beryllium (WET DI)	6020B ICP-MS	1		U	*	mg/L	0.00008	0.0003	11/27/19 15:37	mfm
Beryllium, total (3050)	M6020B ICP-MS	495	0.22			mg/Kg	0.04	0.1	12/04/19 14:09	bsu
Boron (WET DI)	6010D ICP	1		U	*	mg/L	0.02	0.1	11/26/19 11:07	kja
Boron, total (3050)	M6010D ICP	99		U		mg/Kg	2	10	12/03/19 1:05	kja
Cadmium (WET DI)	6020B ICP-MS	1		U	*	mg/L	0.00005	0.0003	11/27/19 15:37	mfm
Cadmium, total (3050)	M6020B ICP-MS	495	0.62			mg/Kg	0.02	0.1	12/04/19 14:09	bsu
Calcium (WET DI)	6010D ICP	1	7.5			mg/L	0.1	0.5	11/26/19 11:07	kja
Chromium (WET DI)	6010D ICP	1		U	*	mg/L	0.01	0.05	11/26/19 11:07	kja
Chromium, total (3050)	M6010D ICP	99	88			mg/Kg	1	5	12/03/19 1:05	kja
Cobalt (WET DI)	6010D ICP	1		U	*	mg/L	0.01	0.05	11/26/19 11:07	kja
Cobalt, total (3050)	M6010D ICP	99	13		*	mg/Kg	1	5	12/03/19 1:05	kja
Copper (WET DI)	6010D ICP	1	0.02	B	*	mg/L	0.01	0.05	11/26/19 11:07	kja
Copper, total (3050)	M6010D ICP	99	87			mg/Kg	1	5	12/03/19 1:05	kja
Iron (WET DI)	6010D ICP	1		U	*	mg/L	0.03	0.08	11/26/19 11:07	kja
Iron, total (3050)	M6010D ICP	99	35200		*	mg/Kg	3	7	12/03/19 1:05	kja
Lead (WET DI)	6020B ICP-MS	1		U	*	mg/L	0.0001	0.0005	11/27/19 15:37	mfm
Lead, total (3050)	M6020B ICP-MS	495	10.2			mg/Kg	0.05	0.2	12/04/19 14:09	bsu
Magnesium (WET DI)	6010D ICP	1	3.5			mg/L	0.2	1	11/26/19 11:07	kja
Manganese (WET DI)	6010D ICP	1		U	*	mg/L	0.01	0.05	11/26/19 11:07	kja
Manganese, total (3050)	M6010D ICP	99	990		*	mg/Kg	1	5	12/03/19 1:05	kja
Mercury (WET DI)	M7470 CVAA	1		U	*	mg/L	0.0002	0.001	11/25/19 15:01	slm
Mercury by Direct Combustion AA	M7473 CVAAS	1	41.9		*	ng/g	1.55	7.75	11/19/19 14:30	slm
Molybdenum (WET DI)	6010D ICP	1		U	*	mg/L	0.02	0.1	11/26/19 11:07	kja
Molybdenum, total (3050)	M6010D ICP	99	42		*	mg/Kg	2	10	12/03/19 1:05	kja
Nickel (WET DI)	6010D ICP	1		U	*	mg/L	0.008	0.04	11/26/19 11:07	kja
Nickel, total (3050)	M6010D ICP	99	30.3		*	mg/Kg	0.8	4	12/03/19 1:05	kja
Potassium (WET DI)	6010D ICP	1	7.8			mg/L	0.2	1	11/26/19 11:07	kja
Selenium (WET DI)	6020B ICP-MS	1	0.0003		*	mg/L	0.0001	0.0003	11/27/19 15:37	mfm
Selenium, total (3050)	M6020B ICP-MS	495	0.13			mg/Kg	0.05	0.1	12/04/19 14:09	bsu
Silver (WET DI)	6020B ICP-MS	1		U	*	mg/L	0.0001	0.0005	11/27/19 15:37	mfm
Silver, total (3050)	M6020B ICP-MS	495	0.23			mg/Kg	0.05	0.2	12/04/19 14:09	bsu
Sodium (WET DI)	M6010D ICP	1	5.1			mg/L	0.2	1	11/26/19 11:07	kja
Thallium (WET DI)	6020B ICP-MS	1	0.0003	B	*	mg/L	0.0001	0.0005	11/27/19 15:37	mfm

Rise Grass Valley Inc.

Project ID:

Sample ID: F-3 (AB)

ACZ Sample ID: **L55808-03**

Date Sampled: 11/04/19 12:00

Date Received: 11/11/19

Sample Matrix: Soil

Thallium, total (3050)	M6020B ICP-MS	495		U		mg/Kg	0.05	0.2	12/04/19 14:09	bsu
Vanadium (WET DI)	6010D ICP	1	0.018	B	*	mg/L	0.005	0.03	11/26/19 11:07	kja
Vanadium, total (3050)	M6010D ICP	99	73.4			mg/Kg	0.5	2	12/03/19 1:05	kja
Zinc (WET DI)	6010D ICP	1		U	*	mg/L	0.01	0.05	11/26/19 11:07	kja
Zinc, total (3050)	M6010D ICP	99	63			mg/Kg	1	5	12/03/19 1:05	kja

Soil Analysis

Parameter	EPA Method	Dilution	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
pH, (WET-DI)	M9045D/M9040C									
pH		1	9.3			units	0.1	0.1	11/21/19 0:00	llr
Temperature		1	20.3			C	0.1	0.1	11/21/19 0:00	llr
Solids, Percent	D2216-80	1	100		*	%	0.1	0.5	12/03/19 8:01	ms/mlp

Soil Preparation

Parameter	EPA Method	Dilution	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Air Dry at 34 Degrees C	USDA No. 1, 1972								11/19/19 9:21	llr
Crush and Pulverize	EPA-600/2-78-054 3.1.3								11/19/19 9:21	llr
Digestion - Hot Plate	M3050B ICP-MS								11/26/19 10:56	mlp
Digestion - Hot Plate	M3050B ICP								11/26/19 10:56	mlp
Waste Extraction Test - DI H2O	California Method, Title 22								11/21/19 8:42	llr

Wet Chemistry

Parameter	EPA Method	Dilution	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Alkalinity (WET DI)	SM2320B - Titration									
Bicarbonate as CaCO3		1	43.5			mg/L	2	20	11/25/19 0:00	emk
Carbonate as CaCO3		1	2.6	B		mg/L	2	20	11/25/19 0:00	emk
Hydroxide as CaCO3		1		U		mg/L	2	20	11/25/19 0:00	emk
Total Alkalinity		1	46.1			mg/L	2	20	11/25/19 0:00	emk
Chloride (WET DI)	SM4500Cl-E	1	2.8		*	mg/L	0.5	2	12/17/19 11:24	ttg
Conductivity @25C (WET-DI)	SM2510B	1	115			umhos/cm	1	10	11/25/19 15:51	emk
Fluoride (WET DI)	SM4500F-C	1		U	*	mg/L	0.1	0.4	11/26/19 13:45	emk
Hardness as CaCO3 (WET-DI)	SM2340B - Calculation		33			mg/L	0.2	5	12/18/19 0:00	calc
Nitrate (WET-DI)	Calculation: NO3NO2 minus NO2		0.22	H		mg/L	0.02	0.1	12/18/19 0:00	calc
Nitrate/Nitrite as N (WET DI)	M353.2 - Automated Cadmium Reduction	1	0.28	H	*	mg/L	0.02	0.1	11/22/19 0:11	pjb
Nitrite as N (WET DI)	M353.2 - Automated Cadmium Reduction	1	0.06		*	mg/L	0.01	0.05	11/22/19 0:11	pjb
Residue, Filterable (TDS) @180C (WET DI)	SM2540C	1	78		*	mg/L	20	40	11/22/19 12:42	emk
Sulfate (WET DI)	D516-07 - Turbidimetric	1	8.5		*	mg/L	1	5	12/12/19 16:06	ttg

Rise Grass Valley Inc.

Project ID:

Sample ID: F-4 (AB)

ACZ Sample ID: **L55808-04**

Date Sampled: 11/04/19 12:00

Date Received: 11/11/19

Sample Matrix: Soil

Metals Analysis

Parameter	EPA Method	Dilution	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Aluminum (WET DI)	6010D ICP	1	0.28	B	*	mg/L	0.05	0.3	11/26/19 11:10	kja
Aluminum, total (3050)	M6010D ICP	100	16300		*	mg/Kg	5	30	12/03/19 1:08	kja
Antimony (WET DI)	6020B ICP-MS	1	0.002		*	mg/L	0.0004	0.002	11/27/19 15:39	mfm
Antimony, total (3050)	M6020B ICP-MS	500		U	*	mg/Kg	0.2	1	12/04/19 14:11	bsu
Arsenic (WET DI)	6020B ICP-MS	1	0.0014		*	mg/L	0.0002	0.001	11/27/19 15:39	mfm
Arsenic, total (3050)	M6020B ICP-MS	500	1.2			mg/Kg	0.1	0.5	12/04/19 14:11	bsu
Barium (WET DI)	6010D ICP	1		U	*	mg/L	0.007	0.04	11/26/19 11:10	kja
Barium, total (3050)	M6010D ICP	100	17.6			mg/Kg	0.7	4	12/03/19 1:08	kja
Beryllium (WET DI)	6020B ICP-MS	1		U	*	mg/L	0.00008	0.0003	11/27/19 15:39	mfm
Beryllium, total (3050)	M6020B ICP-MS	500	0.22			mg/Kg	0.04	0.1	12/04/19 14:11	bsu
Boron (WET DI)	6010D ICP	1		U	*	mg/L	0.02	0.1	11/26/19 11:10	kja
Boron, total (3050)	M6010D ICP	100		U		mg/Kg	2	10	12/03/19 1:08	kja
Cadmium (WET DI)	6020B ICP-MS	1		U	*	mg/L	0.00005	0.0003	11/27/19 15:39	mfm
Cadmium, total (3050)	M6020B ICP-MS	500	0.59			mg/Kg	0.03	0.1	12/04/19 14:11	bsu
Calcium (WET DI)	6010D ICP	1	8.3			mg/L	0.1	0.5	11/26/19 11:10	kja
Chromium (WET DI)	6010D ICP	1		U	*	mg/L	0.01	0.05	11/26/19 11:10	kja
Chromium, total (3050)	M6010D ICP	100	88			mg/Kg	1	5	12/03/19 1:08	kja
Cobalt (WET DI)	6010D ICP	1		U	*	mg/L	0.01	0.05	11/26/19 11:10	kja
Cobalt, total (3050)	M6010D ICP	100	13		*	mg/Kg	1	5	12/03/19 1:08	kja
Copper (WET DI)	6010D ICP	1	0.09		*	mg/L	0.01	0.05	11/26/19 11:10	kja
Copper, total (3050)	M6010D ICP	100	84			mg/Kg	1	5	12/03/19 1:08	kja
Iron (WET DI)	6010D ICP	1		U	*	mg/L	0.03	0.08	11/26/19 11:10	kja
Iron, total (3050)	M6010D ICP	100	35200		*	mg/Kg	3	8	12/03/19 1:08	kja
Lead (WET DI)	6020B ICP-MS	1		U	*	mg/L	0.0001	0.0005	11/27/19 15:39	mfm
Lead, total (3050)	M6020B ICP-MS	500	8.88			mg/Kg	0.05	0.3	12/04/19 14:11	bsu
Magnesium (WET DI)	6010D ICP	1	3.8			mg/L	0.2	1	11/26/19 11:10	kja
Manganese (WET DI)	6010D ICP	1		U	*	mg/L	0.01	0.05	11/26/19 11:10	kja
Manganese, total (3050)	M6010D ICP	100	994		*	mg/Kg	1	5	12/03/19 1:08	kja
Mercury (WET DI)	M7470 CVAA	1		U	*	mg/L	0.0002	0.001	11/25/19 15:02	slm
Mercury by Direct Combustion AA	M7473 CVAAS	1	71.3		*	ng/g	1.58	7.9	11/19/19 14:37	slm
Molybdenum (WET DI)	6010D ICP	1		U	*	mg/L	0.02	0.1	11/26/19 11:10	kja
Molybdenum, total (3050)	M6010D ICP	100	37		*	mg/Kg	2	10	12/03/19 1:08	kja
Nickel (WET DI)	6010D ICP	1		U	*	mg/L	0.008	0.04	11/26/19 11:10	kja
Nickel, total (3050)	M6010D ICP	100	29.9		*	mg/Kg	0.8	4	12/03/19 1:08	kja
Potassium (WET DI)	6010D ICP	1	7.4			mg/L	0.2	1	11/26/19 11:10	kja
Selenium (WET DI)	6020B ICP-MS	1	0.0003		*	mg/L	0.0001	0.0003	11/27/19 15:39	mfm
Selenium, total (3050)	M6020B ICP-MS	500	0.11			mg/Kg	0.05	0.1	12/04/19 14:11	bsu
Silver (WET DI)	6020B ICP-MS	1		U	*	mg/L	0.0001	0.0005	11/27/19 15:39	mfm
Silver, total (3050)	M6020B ICP-MS	500	0.20	B		mg/Kg	0.05	0.3	12/04/19 14:11	bsu
Sodium (WET DI)	M6010D ICP	1	4.7			mg/L	0.2	1	11/26/19 11:10	kja
Thallium (WET DI)	6020B ICP-MS	1	0.0001	B	*	mg/L	0.0001	0.0005	11/27/19 15:39	mfm

Rise Grass Valley Inc.

Project ID:

Sample ID: F-4 (AB)

ACZ Sample ID: **L55808-04**

Date Sampled: 11/04/19 12:00

Date Received: 11/11/19

Sample Matrix: Soil

Thallium, total (3050)	M6020B ICP-MS	500		U		mg/Kg	0.05	0.3	12/04/19 14:11	bsu
Vanadium (WET DI)	6010D ICP	1	0.014	B	*	mg/L	0.005	0.03	11/26/19 11:10	kja
Vanadium, total (3050)	M6010D ICP	100	73.0			mg/Kg	0.5	3	12/03/19 1:08	kja
Zinc (WET DI)	6010D ICP	1		U	*	mg/L	0.01	0.05	11/26/19 11:10	kja
Zinc, total (3050)	M6010D ICP	100	63			mg/Kg	1	5	12/03/19 1:08	kja

Soil Analysis

Parameter	EPA Method	Dilution	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
pH, (WET-DI)	M9045D/M9040C									
pH		1	9.3			units	0.1	0.1	11/21/19 0:00	llr
Temperature		1	20.3			C	0.1	0.1	11/21/19 0:00	llr
Solids, Percent	D2216-80	1	100		*	%	0.1	0.5	12/03/19 9:35	ms/mlp

Soil Preparation

Parameter	EPA Method	Dilution	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Air Dry at 34 Degrees C	USDA No. 1, 1972								11/19/19 9:30	llr
Crush and Pulverize	EPA-600/2-78-054 3.1.3								11/19/19 9:30	llr
Digestion - Hot Plate	M3050B ICP-MS								11/26/19 11:16	mlp
Digestion - Hot Plate	M3050B ICP								11/26/19 11:16	mlp
Waste Extraction Test - DI H2O	California Method, Title 22								11/21/19 11:51	llr

Wet Chemistry

Parameter	EPA Method	Dilution	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Alkalinity (WET DI)	SM2320B - Titration									
Bicarbonate as CaCO ₃		1	44.6			mg/L	2	20	11/25/19 0:00	emk
Carbonate as CaCO ₃		1	3.1	B		mg/L	2	20	11/25/19 0:00	emk
Hydroxide as CaCO ₃		1		U		mg/L	2	20	11/25/19 0:00	emk
Total Alkalinity		1	47.7			mg/L	2	20	11/25/19 0:00	emk
Chloride (WET DI)	SM4500Cl-E	1	2.5		*	mg/L	0.5	2	12/17/19 11:24	ttg
Conductivity @25C (WET-DI)	SM2510B	1	118			umhos/cm	1	10	11/25/19 16:00	emk
Fluoride (WET DI)	SM4500F-C	1		U	*	mg/L	0.1	0.4	11/26/19 13:49	emk
Hardness as CaCO ₃ (WET-DI)	SM2340B - Calculation		36			mg/L	0.2	5	12/18/19 0:00	calc
Nitrate (WET-DI)	Calculation: NO ₃ NO ₂ minus NO ₂		0.19	H		mg/L	0.02	0.1	12/18/19 0:00	calc
Nitrate/Nitrite as N (WET DI)	M353.2 - Automated Cadmium Reduction	1	0.24	H	*	mg/L	0.02	0.1	11/22/19 0:12	pjb
Nitrite as N (WET DI)	M353.2 - Automated Cadmium Reduction	1	0.05		*	mg/L	0.01	0.05	11/22/19 0:12	pjb
Residue, Filterable (TDS) @180C (WET DI)	SM2540C	1	78		*	mg/L	20	40	11/22/19 12:44	emk
Sulfate (WET DI)	D516-07 - Turbidimetric	1	8.7		*	mg/L	1	5	12/12/19 16:06	ttg



Report Header Explanations

<i>Batch</i>	A distinct set of samples analyzed at a specific time
<i>Found</i>	Value of the QC Type of interest
<i>Limit</i>	Upper limit for RPD, in %.
<i>Lower</i>	Lower Recovery Limit, in % (except for LCSS, mg/Kg)
<i>MDL</i>	Method Detection Limit. Same as Minimum Reporting Limit unless omitted or equal to the PQL (see comment #5). Allows for instrument and annual fluctuations.
<i>PCN/SCN</i>	A number assigned to reagents/standards to trace to the manufacturer's certificate of analysis
<i>PQL</i>	Practical Quantitation Limit. Synonymous with the EPA term "minimum level".
<i>QC</i>	True Value of the Control Sample or the amount added to the Spike
<i>Rec</i>	Recovered amount of the true value or spike added, in % (except for LCSS, mg/Kg)
<i>RPD</i>	Relative Percent Difference, calculation used for Duplicate QC Types
<i>Upper</i>	Upper Recovery Limit, in % (except for LCSS, mg/Kg)
<i>Sample</i>	Value of the Sample of interest

QC Sample Types

<i>AS</i>	Analytical Spike (Post Digestion)	<i>LCSWD</i>	Laboratory Control Sample - Water Duplicate
<i>ASD</i>	Analytical Spike (Post Digestion) Duplicate	<i>LFB</i>	Laboratory Fortified Blank
<i>CCB</i>	Continuing Calibration Blank	<i>LFM</i>	Laboratory Fortified Matrix
<i>CCV</i>	Continuing Calibration Verification standard	<i>LFMD</i>	Laboratory Fortified Matrix Duplicate
<i>DUP</i>	Sample Duplicate	<i>LRB</i>	Laboratory Reagent Blank
<i>ICB</i>	Initial Calibration Blank	<i>MS</i>	Matrix Spike
<i>ICV</i>	Initial Calibration Verification standard	<i>MSD</i>	Matrix Spike Duplicate
<i>ICSAB</i>	Inter-element Correction Standard - A plus B solutions	<i>PBS</i>	Prep Blank - Soil
<i>LCSS</i>	Laboratory Control Sample - Soil	<i>PBW</i>	Prep Blank - Water
<i>LCSSD</i>	Laboratory Control Sample - Soil Duplicate	<i>PQV</i>	Practical Quantitation Verification standard
<i>LCSW</i>	Laboratory Control Sample - Water	<i>SDL</i>	Serial Dilution

QC Sample Type Explanations

Blanks	Verifies that there is no or minimal contamination in the prep method or calibration procedure.
Control Samples	Verifies the accuracy of the method, including the prep procedure.
Duplicates	Verifies the precision of the instrument and/or method.
Spikes/Fortified Matrix	Determines sample matrix interferences, if any.
Standard	Verifies the validity of the calibration.

ACZ Qualifiers (Qual)

B	Analyte concentration detected at a value between MDL and PQL. The associated value is an estimated quantity.
H	Analysis exceeded method hold time. pH is a field test with an immediate hold time.
L	Target analyte response was below the laboratory defined negative threshold.
U	The material was analyzed for, but was not detected above the level of the associated value. The associated value is either the sample quantitation limit or the sample detection limit.

Method References

(1)	EPA 600/4-83-020. Methods for Chemical Analysis of Water and Wastes, March 1983.
(2)	EPA 600/R-93-100. Methods for the Determination of Inorganic Substances in Environmental Samples, August 1993.
(3)	EPA 600/R-94-111. Methods for the Determination of Metals in Environmental Samples - Supplement I, May 1994.
(4)	EPA SW-846. Test Methods for Evaluating Solid Waste.
(5)	Standard Methods for the Examination of Water and Wastewater.

Comments

(1)	QC results calculated from raw data. Results may vary slightly if the rounded values are used in the calculations.
(2)	Soil, Sludge, and Plant matrices for Inorganic analyses are reported on a dry weight basis.
(3)	Animal matrices for Inorganic analyses are reported on an "as received" basis.
(4)	An asterisk in the "XQ" column indicates there is an extended qualifier and/or certification qualifier associated with the result.
(5)	If the MDL equals the PQL or the MDL column is omitted, the PQL is the reporting limit.

For a complete list of ACZ's Extended Qualifiers, please click:

<https://acz.com/wp-content/uploads/2019/04/Ext-Qual-List.pdf>

Rise Grass Valley Inc.

ACZ Project ID: **L55808**

NOTE: If the Rec% column is null, the high/low limits are in the same units as the result. If the Rec% column is not null, then the high/low limits are in % Rec.

Alkalinity as CaCO3

SM2320B - Titration

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec%	Lower	Upper	RPD	Limit	Qual
WG486937													
WG486937PBW	PBW	11/25/19 13:53				U	mg/L		-20	20			
WG486937LCSW2	LCSW	11/25/19 14:08	WC191115-7	820.0001		820	mg/L	100	90	110			
WG486427PBS	PBS	11/25/19 14:16				3	mg/L		-20	20			
L55808-01DUP	DUP	11/25/19 15:32			45.2	43.2	mg/L				5	20	
WG486937LCSW4	LCSW	11/25/19 16:15	WC191115-7	820.0001		823	mg/L	100	90	110			

Aluminum (WET DI)

6010D ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec%	Lower	Upper	RPD	Limit	Qual
WG486811													
WG486811ICV	ICV	11/26/19 9:47	II191121-2	2		2.009	mg/L	100	90	110			
WG486811ICB	ICB	11/26/19 9:51				U	mg/L		-0.15	0.15			
WG486427PBS	PBS	11/26/19 10:14				U	mg/L		-0.15	0.15			
L55806-04AS	AS	11/26/19 10:33	II191106-4	1.0012	.49	1.474	mg/L	98	75	125			
L55806-04ASD	ASD	11/26/19 10:36	II191106-4	1.0012	.49	1.446	mg/L	95	75	125	2	20	
L55808-01DUP	DUP	11/26/19 10:59			.17	.161	mg/L				5	20	RA

Aluminum, total (3050)

M6010D ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec%	Lower	Upper	RPD	Limit	Qual
WG487169													
WG487169ICV	ICV	12/02/19 23:46	II191122-1	2		1.987	mg/L	99	90	110			
WG487169ICB	ICB	12/02/19 23:50				U	mg/L		-0.15	0.15			
WG486958PBS	PBS	12/03/19 0:14				U	mg/Kg		-15	15			
WG486958LCSS	LCSS	12/03/19 0:18	PCN59282	8610		9552	mg/Kg		4410	12800			
WG486958LCSSD	LCSSD	12/03/19 0:22	PCN59282	8610		9199	mg/Kg		4410	12800	4	20	
L55822-21MS	MS	12/03/19 1:20	II191106-4	100.12	26600	27240	mg/Kg	639	75	125			M3
L55822-21MSD	MSD	12/03/19 1:24	II191106-4	100.12	26600	27750	mg/Kg	1149	75	125	2	20	M3

Antimony (WET DI)

6020B ICP-MS

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec%	Lower	Upper	RPD	Limit	Qual
WG487095													
WG487095ICV	ICV	11/27/19 14:58	MS191014-8	.02004		.01989	mg/L	99	90	110			
WG487095ICB	ICB	11/27/19 15:00				U	mg/L		-0.0012	0.0012			
WG486427PBS	PBS	11/27/19 15:10				U	mg/L		-0.0012	0.0012			
L55806-06AS	AS	11/27/19 15:25	MS191119-5	.01	.1871	.11517	mg/L	-719	75	125			M3
L55806-06ASD	ASD	11/27/19 15:26	MS191119-5	.01	.1871	.13123	mg/L	-559	75	125	13	20	M3
L55808-01DUP	DUP	11/27/19 15:33			.0015	.00134	mg/L				11	20	RA

Antimony, total (3050)

M6020B ICP-MS

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec%	Lower	Upper	RPD	Limit	Qual
WG487337													
WG487337ICV	ICV	12/04/19 13:33	MS191014-8	.02004		.02018	mg/L	101	90	110			
WG487337ICB	ICB	12/04/19 13:35				U	mg/L		-0.0012	0.0012			
WG486958PBS	PBS	12/04/19 13:44				U	mg/Kg		-0.6	0.6			
WG486958LCSS	LCSS	12/04/19 13:46	PCN59282	68.6		55	mg/Kg		2.03	135			
WG486958LCSSD	LCSSD	12/04/19 13:47	PCN59282	68.6		51.1	mg/Kg		2.03	135	7	20	
L55822-22MS	MS	12/04/19 14:17	MS191112-2	5	U	.54	mg/Kg	11	75	125			M2
L55822-22MSD	MSD	12/04/19 14:22	MS191112-2	5	U	.52	mg/Kg	10	75	125	4	20	M2

Rise Grass Valley Inc.

ACZ Project ID: **L55808**

NOTE: If the Rec% column is null, the high/low limits are in the same units as the result. If the Rec% column is not null, then the high/low limits are in % Rec.

Arsenic (WET DI)

6020B ICP-MS

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec%	Lower	Upper	RPD	Limit	Qual
WG487095													
WG487095ICV	ICV	11/27/19 14:58	MS191014-8	.05		.0494	mg/L	99	90	110			
WG487095ICB	ICB	11/27/19 15:00				U	mg/L		-0.0006	0.0006			
WG486427PBS	PBS	11/27/19 15:10				U	mg/L		-0.0006	0.0006			
L55806-06AS	AS	11/27/19 15:25	MS191119-5	.05005	.1689	.23507	mg/L	132	75	125			M1
L55806-06ASD	ASD	11/27/19 15:26	MS191119-5	.05005	.1689	.23995	mg/L	142	75	125	2	20	M1
L55808-01DUP	DUP	11/27/19 15:33			.0018	.00184	mg/L				2	20	RA

Arsenic, total (3050)

M6020B ICP-MS

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec%	Lower	Upper	RPD	Limit	Qual
WG487337													
WG487337ICV	ICV	12/04/19 13:33	MS191014-8	.05		.04988	mg/L	100	90	110			
WG487337ICB	ICB	12/04/19 13:35				U	mg/L		-0.0006	0.0006			
WG486958PBS	PBS	12/04/19 13:44				U	mg/Kg		-0.3	0.3			
WG486958LCSS	LCSS	12/04/19 13:46	PCN59282	69.4		75.2	mg/Kg		57.2	81.5			
WG486958LCSSD	LCSSD	12/04/19 13:47	PCN59282	69.4		73.1	mg/Kg		57.2	81.5	3	20	
L55822-22MS	MS	12/04/19 14:17	MS191112-2	25.025	1.8	25.78	mg/Kg	96	75	125			
L55822-22MSD	MSD	12/04/19 14:22	MS191112-2	25.025	1.8	26.17	mg/Kg	97	75	125	2	20	

Barium (WET DI)

6010D ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec%	Lower	Upper	RPD	Limit	Qual
WG486811													
WG486811ICV	ICV	11/26/19 9:47	II191121-2	2		2.017	mg/L	101	90	110			
WG486811ICB	ICB	11/26/19 9:51				U	mg/L		-0.021	0.021			
WG486427PBS	PBS	11/26/19 10:14				U	mg/L		-0.021	0.021			
L55806-04AS	AS	11/26/19 10:33	II191106-4	.5005	U	.4838	mg/L	97	75	125			
L55806-04ASD	ASD	11/26/19 10:36	II191106-4	.5005	U	.4853	mg/L	97	75	125	0	20	
L55808-01DUP	DUP	11/26/19 10:59			U	U	mg/L				0	20	RA

Barium, total (3050)

M6010D ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec%	Lower	Upper	RPD	Limit	Qual
WG487169													
WG487169ICV	ICV	12/02/19 23:46	II191122-1	2		1.973	mg/L	99	90	110			
WG487169ICB	ICB	12/02/19 23:50				U	mg/L		-0.021	0.021			
WG486958PBS	PBS	12/03/19 0:14				U	mg/Kg		-2.1	2.1			
WG486958LCSS	LCSS	12/03/19 0:18	PCN59282	362		360.2	mg/Kg		297	427			
WG486958LCSSD	LCSSD	12/03/19 0:22	PCN59282	362		348	mg/Kg		297	427	3	20	
L55822-21MS	MS	12/03/19 1:20	II191106-4	50.05	3.5	49.09	mg/Kg	91	75	125			
L55822-21MSD	MSD	12/03/19 1:24	II191106-4	50.05	3.5	50.03	mg/Kg	93	75	125	2	20	

Beryllium (WET DI)

6020B ICP-MS

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec%	Lower	Upper	RPD	Limit	Qual
WG487095													
WG487095ICV	ICV	11/27/19 14:58	MS191014-8	.05		.049417	mg/L	99	90	110			
WG487095ICB	ICB	11/27/19 15:00				U	mg/L		-0.00024	0.00024			
WG486427PBS	PBS	11/27/19 15:10				U	mg/L		-0.00024	0.00024			
L55806-06AS	AS	11/27/19 15:25	MS191119-5	.05005	U	.052448	mg/L	105	75	125			
L55806-06ASD	ASD	11/27/19 15:26	MS191119-5	.05005	U	.053013	mg/L	106	75	125	1	20	
L55808-01DUP	DUP	11/27/19 15:33			U	U	mg/L				0	20	RA

Rise Grass Valley Inc.

ACZ Project ID: **L55808**

NOTE: If the Rec% column is null, the high/low limits are in the same units as the result. If the Rec% column is not null, then the high/low limits are in % Rec.

Beryllium, total (3050)

M6020B ICP-MS

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec%	Lower	Upper	RPD	Limit	Qual
WG487337													
WG487337ICV	ICV	12/04/19 13:33	MS191014-8	.05		.048696	mg/L	97	90	110			
WG487337ICB	ICB	12/04/19 13:35				U	mg/L		-0.00024	0.00024			
WG486958PBS	PBS	12/04/19 13:44				U	mg/Kg		-0.12	0.12			
WG486958LCSS	LCSS	12/04/19 13:46	PCN59282	223		233.15	mg/Kg		185	260			
WG486958LCSSD	LCSSD	12/04/19 13:47	PCN59282	223		228.47	mg/Kg		185	260	2	20	
L55822-22MS	MS	12/04/19 14:17	MS191112-2	25.025	.09	26.614	mg/Kg	106	75	125			
L55822-22MSD	MSD	12/04/19 14:22	MS191112-2	25.025	.09	26.054	mg/Kg	104	75	125	2	20	

Boron (WET DI)

6010D ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec%	Lower	Upper	RPD	Limit	Qual
WG486811													
WG486811ICV	ICV	11/26/19 9:47	II191121-2	2		1.951	mg/L	98	90	110			
WG486811ICB	ICB	11/26/19 9:51				U	mg/L		-0.06	0.06			
WG486427PBS	PBS	11/26/19 10:14				U	mg/L		-0.06	0.06			
L55806-04AS	AS	11/26/19 10:33	II191106-4	.5005	U	.496	mg/L	99	75	125			
L55806-04ASD	ASD	11/26/19 10:36	II191106-4	.5005	U	.495	mg/L	99	75	125	0	20	
L55808-01DUP	DUP	11/26/19 10:59			U	U	mg/L				0	20	RA

Boron, total (3050)

M6010D ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec%	Lower	Upper	RPD	Limit	Qual
WG487169													
WG487169ICV	ICV	12/02/19 23:46	II191122-1	2		2.02	mg/L	101	90	110			
WG487169ICB	ICB	12/02/19 23:50				U	mg/L		-0.06	0.06			
WG486958PBS	PBS	12/03/19 0:14				U	mg/Kg		-6	6			
WG486958LCSS	LCSS	12/03/19 0:18	PCN59282	79.4		79.5	mg/Kg		57.2	102			
WG486958LCSSD	LCSSD	12/03/19 0:22	PCN59282	79.4		78.3	mg/Kg		57.2	102	2	20	
L55822-21MS	MS	12/03/19 1:20	II191106-4	50.05	U	47.3	mg/Kg	95	75	125			
L55822-21MSD	MSD	12/03/19 1:24	II191106-4	50.05	U	47.6	mg/Kg	95	75	125	1	20	

Cadmium (WET DI)

6020B ICP-MS

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec%	Lower	Upper	RPD	Limit	Qual
WG487095													
WG487095ICV	ICV	11/27/19 14:58	MS191014-8	.05		.047696	mg/L	95	90	110			
WG487095ICB	ICB	11/27/19 15:00				U	mg/L		-0.00015	0.00015			
WG486427PBS	PBS	11/27/19 15:10				U	mg/L		-0.00015	0.00015			
L55806-06AS	AS	11/27/19 15:25	MS191119-5	.05005	U	.048323	mg/L	97	75	125			
L55806-06ASD	ASD	11/27/19 15:26	MS191119-5	.05005	U	.050596	mg/L	101	75	125	5	20	
L55808-01DUP	DUP	11/27/19 15:33			U	U	mg/L				0	20	RA

Rise Grass Valley Inc.

ACZ Project ID: **L55808**

NOTE: If the Rec% column is null, the high/low limits are in the same units as the result. If the Rec% column is not null, then the high/low limits are in % Rec.

Cadmium, total (3050)

M6020B ICP-MS

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec%	Lower	Upper	RPD	Limit	Qual
WG487337													
WG487337ICV	ICV	12/04/19 13:33	MS191014-8	.05		.049073	mg/L	98	90	110			
WG487337ICB	ICB	12/04/19 13:35				U	mg/L		-0.00015	0.00015			
WG486958PBS	PBS	12/04/19 13:44				U	mg/Kg		-0.09	0.09			
WG486958LCSS	LCSS	12/04/19 13:46	PCN59282	166		169.14	mg/Kg		138	195			
WG486958LCSSD	LCSSD	12/04/19 13:47	PCN59282	166		176.08	mg/Kg		138	195	4	20	
L55822-22MS	MS	12/04/19 14:17	MS191112-2	25.025	.25	23.716	mg/Kg	94	75	125			
L55822-22MSD	MSD	12/04/19 14:22	MS191112-2	25.025	.25	23.642	mg/Kg	93	75	125	0	20	

Calcium (WET DI)

6010D ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec%	Lower	Upper	RPD	Limit	Qual
WG486811													
WG486811ICV	ICV	11/26/19 9:47	II191121-2	100		98.14	mg/L	98	90	110			
WG486811ICB	ICB	11/26/19 9:51				U	mg/L		-0.3	0.3			
WG486427PBS	PBS	11/26/19 10:14				U	mg/L		-0.3	0.3			
L55806-04AS	AS	11/26/19 10:33	II191106-4	68.00334	8.8	74.72	mg/L	97	75	125			
L55806-04ASD	ASD	11/26/19 10:36	II191106-4	68.00334	8.8	73.19	mg/L	95	75	125	2	20	
L55808-01DUP	DUP	11/26/19 10:59			9	8.78	mg/L				2	20	

Chloride (WET DI)

SM4500CI-E

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec%	Lower	Upper	RPD	Limit	Qual
WG488294													
WG488294ICB	ICB	12/17/19 8:29				U	mg/L		-1.5	1.5			
WG488294ICV	ICV	12/17/19 8:29	WI190501-1	54.835		53.88	mg/L	98	90	110			
WG488294LFB	LFB	12/17/19 11:23	WI190812-3	30		32.28	mg/L	108	90	110			
WG486427PBS	PBS	12/17/19 11:23				U	mg/L		-1.5	1.5			
L55806-01AS	AS	12/17/19 11:23	WI190812-3	30	4.4	36.52	mg/L	107	90	110			
L55808-01DUP	DUP	12/17/19 11:24			1.7	2.19	mg/L				25	20	RA

Chromium (WET DI)

6010D ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec%	Lower	Upper	RPD	Limit	Qual
WG486811													
WG486811ICV	ICV	11/26/19 9:47	II191121-2	2		1.954	mg/L	98	90	110			
WG486811ICB	ICB	11/26/19 9:51				U	mg/L		-0.03	0.03			
WG486427PBS	PBS	11/26/19 10:14				U	mg/L		-0.03	0.03			
L55806-04AS	AS	11/26/19 10:33	II191106-4	.501	U	.471	mg/L	94	75	125			
L55806-04ASD	ASD	11/26/19 10:36	II191106-4	.501	U	.474	mg/L	95	75	125	1	20	
L55808-01DUP	DUP	11/26/19 10:59			U	U	mg/L				0	20	RA

Chromium, total (3050)

M6010D ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec%	Lower	Upper	RPD	Limit	Qual
WG487169													
WG487169ICV	ICV	12/02/19 23:46	II191122-1	2		1.979	mg/L	99	90	110			
WG487169ICB	ICB	12/02/19 23:50				U	mg/L		-0.03	0.03			
WG486958PBS	PBS	12/03/19 0:14				U	mg/Kg		-3	3			
WG486958LCSS	LCSS	12/03/19 0:18	PCN59282	249		249.9	mg/Kg		203	295			
WG486958LCSSD	LCSSD	12/03/19 0:22	PCN59282	249		242.2	mg/Kg		203	295	3	20	
L55822-21MS	MS	12/03/19 1:20	II191106-4	50.1	163	208.1	mg/Kg	90	75	125			
L55822-21MSD	MSD	12/03/19 1:24	II191106-4	50.1	163	211.8	mg/Kg	97	75	125	2	20	

Rise Grass Valley Inc.

ACZ Project ID: **L55808**

NOTE: If the Rec% column is null, the high/low limits are in the same units as the result. If the Rec% column is not null, then the high/low limits are in % Rec.

Cobalt (WET DI)

6010D ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec%	Lower	Upper	RPD	Limit	Qual
WG486811													
WG486811ICV	ICV	11/26/19 9:47	II191121-2	2.002		1.954	mg/L	98	90	110			
WG486811ICB	ICB	11/26/19 9:51				U	mg/L		-0.03	0.03			
WG486427PBS	PBS	11/26/19 10:14				U	mg/L		-0.03	0.03			
L55806-04AS	AS	11/26/19 10:33	II191106-4	.5	U	.471	mg/L	94	75	125			
L55806-04ASD	ASD	11/26/19 10:36	II191106-4	.5	U	.474	mg/L	95	75	125	1	20	
L55808-01DUP	DUP	11/26/19 10:59			U	U	mg/L				0	20	RA

Cobalt, total (3050)

M6010D ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec%	Lower	Upper	RPD	Limit	Qual
WG487169													
WG487169ICV	ICV	12/02/19 23:46	II191122-1	2.002		1.924	mg/L	96	90	110			
WG487169ICB	ICB	12/02/19 23:50				U	mg/L		-0.03	0.03			
WG486958PBS	PBS	12/03/19 0:14				U	mg/Kg		-3	3			
WG486958LCSS	LCSS	12/03/19 0:18	PCN59282	90.6		88.8	mg/Kg		75.1	106			
WG486958LCSSD	LCSSD	12/03/19 0:22	PCN59282	90.6		86.1	mg/Kg		75.1	106	3	20	
L55822-21MS	MS	12/03/19 1:20	II191106-4	50	23	65.8	mg/Kg	86	75	125			
L55822-21MSD	MSD	12/03/19 1:24	II191106-4	50	23	67.8	mg/Kg	90	75	125	3	20	

Conductivity @25C (WET-DI)

SM2510B

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec%	Lower	Upper	RPD	Limit	Qual
WG486937													
WG486937PBW	PBW	11/25/19 13:53				U	umhos/cm		-10	10			
WG486937LCSW1	LCSW	11/25/19 13:56	PCN59515	1408		1430	umhos/cm	102	90	110			
WG486427PBS	PBS	11/25/19 14:16				2.7	umhos/cm		-4	4			
L55808-01DUP	DUP	11/25/19 15:32			105	104	umhos/cm				1	20	
WG486937LCSW3	LCSW	11/25/19 16:02	PCN59515	1408		1420	umhos/cm	101	90	110			

Copper (WET DI)

6010D ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec%	Lower	Upper	RPD	Limit	Qual
WG486811													
WG486811ICV	ICV	11/26/19 9:47	II191121-2	2		1.934	mg/L	97	90	110			
WG486811ICB	ICB	11/26/19 9:51				U	mg/L		-0.03	0.03			
WG486427PBS	PBS	11/26/19 10:14				U	mg/L		-0.03	0.03			
L55806-04AS	AS	11/26/19 10:33	II191106-4	.5005	U	.476	mg/L	95	75	125			
L55806-04ASD	ASD	11/26/19 10:36	II191106-4	.5005	U	.481	mg/L	96	75	125	1	20	
L55808-01DUP	DUP	11/26/19 10:59			U	U	mg/L				0	20	RA

Copper, total (3050)

M6010D ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec%	Lower	Upper	RPD	Limit	Qual
WG487169													
WG487169ICV	ICV	12/02/19 23:46	II191122-1	2		1.938	mg/L	97	90	110			
WG487169ICB	ICB	12/02/19 23:50				U	mg/L		-0.03	0.03			
WG486958PBS	PBS	12/03/19 0:14				U	mg/Kg		-3	3			
WG486958LCSS	LCSS	12/03/19 0:18	PCN59282	280		269.7	mg/Kg		233	326			
WG486958LCSSD	LCSSD	12/03/19 0:22	PCN59282	280		264.9	mg/Kg		233	326	2	20	
L55822-21MS	MS	12/03/19 1:20	II191106-4	50.05	60	103.3	mg/Kg	87	75	125			
L55822-21MSD	MSD	12/03/19 1:24	II191106-4	50.05	60	107.5	mg/Kg	95	75	125	4	20	

Rise Grass Valley Inc.

ACZ Project ID: **L55808**

NOTE: If the Rec% column is null, the high/low limits are in the same units as the result. If the Rec% column is not null, then the high/low limits are in % Rec.

Fluoride (WET DI)

SM4500F-C

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec%	Lower	Upper	RPD	Limit	Qual
WG486964													
WG486964ICV	ICV	11/26/19 9:32	WC191119-7	2.004		2.1	mg/L	105	90	110			
WG486964ICB	ICB	11/26/19 9:37				U	mg/L		-0.3	0.3			
WG486997													
WG486997ICV	ICV	11/26/19 12:27	WC191126-1	2.004		1.94	mg/L	97	90	110			
WG486997ICB	ICB	11/26/19 12:31				.12	mg/L		-0.3	0.3			
WG486997LFB	LFB	11/26/19 12:43	WC191014-1	5.01		4.65	mg/L	93	90	110			
WG486427PBS	PBS	11/26/19 12:48				.15	mg/L		-0.3	0.3			
L55808-01AS	AS	11/26/19 13:30	WC191014-1	5.01	U	4.82	mg/L	96	90	110			
L55808-01DUP	DUP	11/26/19 13:34			U	.12	mg/L				200	20	RA

Iron (WET DI)

6010D ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec%	Lower	Upper	RPD	Limit	Qual
WG486811													
WG486811ICV	ICV	11/26/19 9:47	II191121-2	2		1.935	mg/L	97	90	110			
WG486811ICB	ICB	11/26/19 9:51				U	mg/L		-0.09	0.09			
WG486427PBS	PBS	11/26/19 10:14				U	mg/L		-0.09	0.09			
L55806-04AS	AS	11/26/19 10:33	II191106-4	1.0018	U	.969	mg/L	97	75	125			
L55806-04ASD	ASD	11/26/19 10:36	II191106-4	1.0018	U	.98	mg/L	98	75	125	1	20	
L55808-01DUP	DUP	11/26/19 10:59			U	U	mg/L				0	20	RA

Iron, total (3050)

M6010D ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec%	Lower	Upper	RPD	Limit	Qual
WG487169													
WG487169ICV	ICV	12/02/19 23:46	II191122-1	2		1.925	mg/L	96	90	110			
WG487169ICB	ICB	12/02/19 23:50				U	mg/L		-0.09	0.09			
WG486958PBS	PBS	12/03/19 0:14				U	mg/Kg		-9	9			
WG486958LCSS	LCSS	12/03/19 0:18	PCN59282	14000		13230	mg/Kg		8380	19600			
WG486958LCSSD	LCSSD	12/03/19 0:22	PCN59282	14000		12950	mg/Kg		8380	19600	2	20	
L55822-21MS	MS	12/03/19 1:20	II191106-4	100.18	36600	37030	mg/Kg	429	75	125			M3
L55822-21MSD	MSD	12/03/19 1:24	II191106-4	100.18	36600	37770	mg/Kg	1168	75	125	2	20	M3

Lead (WET DI)

6020B ICP-MS

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec%	Lower	Upper	RPD	Limit	Qual
WG487095													
WG487095ICV	ICV	11/27/19 14:58	MS191014-8	.05		.05009	mg/L	100	90	110			
WG487095ICB	ICB	11/27/19 15:00				U	mg/L		-0.0003	0.0003			
WG486427PBS	PBS	11/27/19 15:10				.00012	mg/L		-0.0003	0.0003			
L55806-06AS	AS	11/27/19 15:25	MS191119-5	.05005	.0002	.05087	mg/L	101	75	125			
L55806-06ASD	ASD	11/27/19 15:26	MS191119-5	.05005	.0002	.05183	mg/L	103	75	125	2	20	
L55808-01DUP	DUP	11/27/19 15:33			U	U	mg/L				0	20	RA

Rise Grass Valley Inc.

ACZ Project ID: **L55808**

NOTE: If the Rec% column is null, the high/low limits are in the same units as the result. If the Rec% column is not null, then the high/low limits are in % Rec.

Lead, total (3050)

M6020B ICP-MS

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec%	Lower	Upper	RPD	Limit	Qual
WG487337													
WG487337ICV	ICV	12/04/19 13:33	MS191014-8	.05		.05102	mg/L	102	90	110			
WG487337ICB	ICB	12/04/19 13:35				U	mg/L		-0.0003	0.0003			
WG486958PBS	PBS	12/04/19 13:44				U	mg/Kg		-0.15	0.15			
WG486958LCSS	LCSS	12/04/19 13:46	PCN59282	225		242.29	mg/Kg		184	266			
WG486958LCSSD	LCSSD	12/04/19 13:47	PCN59282	225		236.5	mg/Kg		184	266	2	20	
L55822-22MS	MS	12/04/19 14:17	MS191112-2	25.025	.29	24.786	mg/Kg	98	75	125			
L55822-22MSD	MSD	12/04/19 14:22	MS191112-2	25.025	.29	24.658	mg/Kg	97	75	125	1	20	

Magnesium (WET DI)

6010D ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec%	Lower	Upper	RPD	Limit	Qual
WG486811													
WG486811ICV	ICV	11/26/19 9:47	II191121-2	100		95.84	mg/L	96	90	110			
WG486811ICB	ICB	11/26/19 9:51				U	mg/L		-0.6	0.6			
WG486427PBS	PBS	11/26/19 10:14				U	mg/L		-0.6	0.6			
L55806-04AS	AS	11/26/19 10:33	II191106-4	49.99771	3.9	51.1	mg/L	94	75	125			
L55806-04ASD	ASD	11/26/19 10:36	II191106-4	49.99771	3.9	49.91	mg/L	92	75	125	2	20	
L55808-01DUP	DUP	11/26/19 10:59			3.8	3.66	mg/L				4	20	

Manganese (WET DI)

6010D ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec%	Lower	Upper	RPD	Limit	Qual
WG486811													
WG486811ICV	ICV	11/26/19 9:47	II191121-2	2		1.959	mg/L	98	90	110			
WG486811ICB	ICB	11/26/19 9:51				U	mg/L		-0.03	0.03			
WG486427PBS	PBS	11/26/19 10:14				U	mg/L		-0.03	0.03			
L55806-04AS	AS	11/26/19 10:33	II191106-4	.5015	U	.486	mg/L	97	75	125			
L55806-04ASD	ASD	11/26/19 10:36	II191106-4	.5015	U	.487	mg/L	97	75	125	0	20	
L55808-01DUP	DUP	11/26/19 10:59			U	U	mg/L				0	20	RA

Manganese, total (3050)

M6010D ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec%	Lower	Upper	RPD	Limit	Qual
WG487169													
WG487169ICV	ICV	12/02/19 23:46	II191122-1	2		1.937	mg/L	97	90	110			
WG487169ICB	ICB	12/02/19 23:50				U	mg/L		-0.03	0.03			
WG486958PBS	PBS	12/03/19 0:14				U	mg/Kg		-3	3			
WG486958LCSS	LCSS	12/03/19 0:18	PCN59282	332		324.8	mg/Kg		272	392			
WG486958LCSSD	LCSSD	12/03/19 0:22	PCN59282	332		318.3	mg/Kg		272	392	2	20	
L55822-21MS	MS	12/03/19 1:20	II191106-4	50.15	652	713.1	mg/Kg	122	75	125			
L55822-21MSD	MSD	12/03/19 1:24	II191106-4	50.15	652	727.9	mg/Kg	151	75	125	2	20	M3

Rise Grass Valley Inc.

ACZ Project ID: **L55808**

NOTE: If the Rec% column is null, the high/low limits are in the same units as the result. If the Rec% column is not null, then the high/low limits are in % Rec.

Mercury (WET DI)

M7470 CVAA

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec%	Lower	Upper	RPD	Limit	Qual
WG486782													
WG486782ICV	ICV	11/25/19 14:43	HG190911-3	.004995		.00493	mg/L	99	90	110			
WG486782ICB	ICB	11/25/19 14:44				U	mg/L		-0.0006	0.0006			
WG486782PBW	PBW	11/25/19 14:46				U	mg/L		-0.00044	0.00044			
WG486782LCSW	LCSW	11/25/19 14:47	HG191125-3	.002002		.00193	mg/L	96	85	115			
WG486427PBS	PBS	11/25/19 14:48				U	mg/L		-0.0006	0.0006			
L55806-02MS	MS	11/25/19 14:51	HG191125-3	.002002	U	.00189	mg/L	94	85	115			
L55806-02MSD	MSD	11/25/19 14:52	HG191125-3	.002002	U	.0019	mg/L	95	85	115	1	20	
L55808-01DUP	DUP	11/25/19 14:59			U	U	mg/L				0	20	RA

Mercury by Direct Combustion AA

M7473 CVAAS

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec%	Lower	Upper	RPD	Limit	Qual
WG486193													
WG486193ICV1	ICV	11/14/19 11:38	HG191112-8	100		99.3	ng/g	99	90	110			
WG486193ICV2	ICV	11/14/19 11:50	HG191112-10	100		98.2	ng/g	98	90	110			
WG486193ICV3	ICV	11/14/19 12:02	HG191112-7	1000		1070	ng/g	107	90	110			
WG486193ICV4	ICV	11/14/19 12:13	HG191112-7	1000		1090	ng/g	109	90	110			
WG486482													
WG486482ICV1	ICV	11/19/19 8:20	HG191112-8	100		92.7	ng/g	93	90	110			
WG486482ICV2	ICV	11/19/19 8:29	HG191112-10	100		99.3	ng/g	99	90	110			
WG486482ICV3	ICV	11/19/19 9:05	HG191112-7	1000		1090	ng/g	109	90	110			
WG486482ICV4	ICV	11/19/19 9:44	HG191112-7	1000		909	ng/g	91	90	110			
WG486482PBS	PBS	11/19/19 10:38				2.3	ng/g		-6	6			
WG486482LCSS	LCSS	11/19/19 10:45	PCN56165	80		82.3	ng/g		80	120			
WG486482LCSSD	LCSSD	11/19/19 10:51	PCN56165	80		85.7	ng/g		80	120	4	20	
L55782-01MS	MS	11/19/19 12:35	PCN56165				ng/g	100	80	120			
L55782-02DUP	DUP	11/19/19 12:49			3.86	2.3	ng/g				51	20	RA

Molybdenum (WET DI)

6010D ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec%	Lower	Upper	RPD	Limit	Qual
WG486811													
WG486811ICV	ICV	11/26/19 9:47	II191121-2	2		1.974	mg/L	99	90	110			
WG486811ICB	ICB	11/26/19 9:51				U	mg/L		-0.06	0.06			
WG486427PBS	PBS	11/26/19 10:14				U	mg/L		-0.06	0.06			
L55806-04AS	AS	11/26/19 10:33	II191106-4	.4975	.06	.552	mg/L	99	75	125			
L55806-04ASD	ASD	11/26/19 10:36	II191106-4	.4975	.06	.541	mg/L	97	75	125	2	20	
L55808-01DUP	DUP	11/26/19 10:59			U	U	mg/L				0	20	RA

Molybdenum, total (3050)

M6010D ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec%	Lower	Upper	RPD	Limit	Qual
WG487169													
WG487169ICV	ICV	12/02/19 23:46	II191122-1	2		1.98	mg/L	99	90	110			
WG487169ICB	ICB	12/02/19 23:50				U	mg/L		-0.06	0.06			
WG486958PBS	PBS	12/03/19 0:14				U	mg/Kg		-6	6			
WG486958LCSS	LCSS	12/03/19 0:18	PCN59282	158		161.1	mg/Kg		127	190			
WG486958LCSSD	LCSSD	12/03/19 0:22	PCN59282	158		156.1	mg/Kg		127	190	3	20	
L55822-21MS	MS	12/03/19 1:20	II191106-4	49.75	U	44	mg/Kg	88	75	125			
L55822-21MSD	MSD	12/03/19 1:24	II191106-4	49.75	U	44.8	mg/Kg	90	75	125	2	20	

Rise Grass Valley Inc.

ACZ Project ID: **L55808**

NOTE: If the Rec% column is null, the high/low limits are in the same units as the result. If the Rec% column is not null, then the high/low limits are in % Rec.

Nickel (WET DI)

6010D ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec%	Lower	Upper	RPD	Limit	Qual
WG486811													
WG486811ICV	ICV	11/26/19 9:47	II191121-2	2		1.954	mg/L	98	90	110			
WG486811ICB	ICB	11/26/19 9:51				U	mg/L		-0.024	0.024			
WG486427PBS	PBS	11/26/19 10:14				U	mg/L		-0.024	0.024			
L55806-04AS	AS	11/26/19 10:33	II191106-4	.501	U	.48	mg/L	96	75	125			
L55806-04ASD	ASD	11/26/19 10:36	II191106-4	.501	U	.4765	mg/L	95	75	125	1	20	
L55808-01DUP	DUP	11/26/19 10:59			U	U	mg/L				0	20	RA

Nickel, total (3050)

M6010D ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec%	Lower	Upper	RPD	Limit	Qual
WG487169													
WG487169ICV	ICV	12/02/19 23:46	II191122-1	2		1.984	mg/L	99	90	110			
WG487169ICB	ICB	12/02/19 23:50				U	mg/L		-0.024	0.024			
WG486958PBS	PBS	12/03/19 0:14				U	mg/Kg		-2.4	2.4			
WG486958LCSS	LCSS	12/03/19 0:18	PCN59282	114		114.2	mg/Kg		93.9	134			
WG486958LCSSD	LCSSD	12/03/19 0:22	PCN59282	114		112	mg/Kg		93.9	134	2	20	
L55822-21MS	MS	12/03/19 1:20	II191106-4	50.1	53.4	96.55	mg/Kg	86	75	125			
L55822-21MSD	MSD	12/03/19 1:24	II191106-4	50.1	53.4	98.37	mg/Kg	90	75	125	2	20	

Nitrate/Nitrite as N (WET DI)

M353.2 - Automated Cadmium Reduction

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec%	Lower	Upper	RPD	Limit	Qual
WG486755													
WG486755ICV	ICV	11/21/19 22:24	WI191112-1	2.416		2.505	mg/L	104	90	110			
WG486755ICB	ICB	11/21/19 22:25				U	mg/L		-0.02	0.02			
WG486756													
WG486756LFB	LFB	11/21/19 23:51	WI191004-3	2		2.028	mg/L	101	90	110			
WG486427PBS	PBS	11/21/19 23:53				U	mg/L		-0.02	0.02			
L55806-01AS	AS	11/21/19 23:55	WI191004-3	2	U	2.148	mg/L	107	90	110			
L55808-01DUP	DUP	11/22/19 0:08			.06	.058	mg/L				3	20	RA

Nitrite as N (WET DI)

M353.2 - Automated Cadmium Reduction

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec%	Lower	Upper	RPD	Limit	Qual
WG486755													
WG486755ICV	ICV	11/21/19 22:24	WI191112-1	.609		.601	mg/L	99	90	110			
WG486755ICB	ICB	11/21/19 22:25				U	mg/L		-0.01	0.01			
WG486756													
WG486756LFB	LFB	11/21/19 23:51	WI191004-3	1		1.004	mg/L	100	90	110			
WG486427PBS	PBS	11/21/19 23:53				U	mg/L		-0.01	0.01			
L55806-01AS	AS	11/21/19 23:55	WI191004-3	1	U	1.047	mg/L	105	90	110			
L55808-01DUP	DUP	11/22/19 0:08			.03	.028	mg/L				7	20	RA

Ph

M9045D/M9040C

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec%	Lower	Upper	RPD	Limit	Qual
WG487845													
WG487845ICV	ICV	11/21/19 13:21	PCN58503	4		4	units	100	3.9	4.1			
L55808-01DUP	DUP	11/21/19 14:24			9.4	9.4	units				0	20	

Rise Grass Valley Inc.

ACZ Project ID: **L55808**

NOTE: If the Rec% column is null, the high/low limits are in the same units as the result. If the Rec% column is not null, then the high/low limits are in % Rec.

Potassium (WET DI)

6010D ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec%	Lower	Upper	RPD	Limit	Qual
WG486811													
WG486811ICV	ICV	11/26/19 9:47	II191121-2	20		19.91	mg/L	100	90	110			
WG486811ICB	ICB	11/26/19 9:51				U	mg/L		-0.6	0.6			
WG486427PBS	PBS	11/26/19 10:14				U	mg/L		-0.6	0.6			
L55806-04AS	AS	11/26/19 10:33	II191106-4	99.95798	U	97.96	mg/L	98	75	125			
L55806-04ASD	ASD	11/26/19 10:36	II191106-4	99.95798	U	95.96	mg/L	96	75	125	2	20	
L55808-01DUP	DUP	11/26/19 10:59			3.8	3.74	mg/L				2	20	

Residue, Filterable (TDS) @180C (WET DI) SM2540C

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec%	Lower	Upper	RPD	Limit	Qual
WG486804													
WG486804PBS	PBS	11/22/19 12:15				20	mg/L		-60	60			
WG486804LCSW	LCSW	11/22/19 12:17	PCN59803	1000		990	mg/L	99	80	120			
WG486427PBS	PBS	11/22/19 12:19				20	mg/L		-60	60			
L55808-01DUP	DUP	11/22/19 12:38			64	72	mg/L				12	10	RA

Selenium (WET DI)

6020B ICP-MS

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec%	Lower	Upper	RPD	Limit	Qual
WG487095													
WG487095ICV	ICV	11/27/19 14:58	MS191014-8	.05		.04859	mg/L	97	90	110			
WG487095ICB	ICB	11/27/19 15:00				U	mg/L		-0.0003	0.0003			
WG486427PBS	PBS	11/27/19 15:10				.00022	mg/L		-0.0003	0.0003			
L55806-06AS	AS	11/27/19 15:25	MS191119-5	.05005	U	.05274	mg/L	105	75	125			
L55806-06ASD	ASD	11/27/19 15:26	MS191119-5	.05005	U	.05272	mg/L	105	75	125	0	20	
L55808-01DUP	DUP	11/27/19 15:33			.0003	.00024	mg/L				22	20	RA

Selenium, total (3050)

M6020B ICP-MS

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec%	Lower	Upper	RPD	Limit	Qual
WG487337													
WG487337ICV	ICV	12/04/19 13:33	MS191014-8	.05		.04942	mg/L	99	90	110			
WG487337ICB	ICB	12/04/19 13:35				U	mg/L		-0.0003	0.0003			
WG486958PBS	PBS	12/04/19 13:44				.053	mg/Kg		-0.15	0.15			
WG486958LCSS	LCSS	12/04/19 13:46	PCN59282	195		210.19	mg/Kg		154	237			
WG486958LCSSD	LCSSD	12/04/19 13:47	PCN59282	195		200.58	mg/Kg		154	237	5	20	
L55822-22MS	MS	12/04/19 14:17	MS191112-2	12.5125	.18	12.345	mg/Kg	97	75	125			
L55822-22MSD	MSD	12/04/19 14:22	MS191112-2	12.5125	.18	12.476	mg/Kg	98	75	125	1	20	

Silver (WET DI)

6020B ICP-MS

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec%	Lower	Upper	RPD	Limit	Qual
WG487095													
WG487095ICV	ICV	11/27/19 14:58	MS191014-8	.02004		.0215	mg/L	107	90	110			
WG487095ICB	ICB	11/27/19 15:00				U	mg/L		-0.0003	0.0003			
WG486427PBS	PBS	11/27/19 15:10				U	mg/L		-0.0003	0.0003			
L55806-06AS	AS	11/27/19 15:25	MS191119-5	.01002	U	.01074	mg/L	107	75	125			
L55806-06ASD	ASD	11/27/19 15:26	MS191119-5	.01002	U	.01071	mg/L	107	75	125	0	20	
L55808-01DUP	DUP	11/27/19 15:33			.0001	U	mg/L				200	20	RA

Rise Grass Valley Inc.

ACZ Project ID: **L55808**

NOTE: If the Rec% column is null, the high/low limits are in the same units as the result. If the Rec% column is not null, then the high/low limits are in % Rec.

Silver, total (3050)

M6020B ICP-MS

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec%	Lower	Upper	RPD	Limit	Qual
WG487337													
WG487337ICV	ICV	12/04/19 13:33	MS191014-8	.02004		.02011	mg/L	100	90	110			
WG487337ICB	ICB	12/04/19 13:35				U	mg/L		-0.0003	0.0003			
WG486958PBS	PBS	12/04/19 13:44				U	mg/Kg		-0.15	0.15			
WG486958LCSS	LCSS	12/04/19 13:46	PCN59282	61.8		65.02	mg/Kg		49.2	74.4			
WG486958LCSSD	LCSSD	12/04/19 13:47	PCN59282	61.8		62.73	mg/Kg		49.2	74.4	4	20	
L55822-22MS	MS	12/04/19 14:17	MS191112-2	5.01	U	4.472	mg/Kg	89	75	125			
L55822-22MSD	MSD	12/04/19 14:22	MS191112-2	5.01	U	4.416	mg/Kg	88	75	125	1	20	

Sodium (WET DI)

M6010D ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec%	Lower	Upper	RPD	Limit	Qual
WG486811													
WG486811ICV	ICV	11/26/19 9:47	II191121-2	100		97.18	mg/L	97	90	110			
WG486811ICB	ICB	11/26/19 9:51				U	mg/L		-0.6	0.6			
WG486427PBS	PBS	11/26/19 10:14				.39	mg/L		-0.6	0.6			
L55806-04AS	AS	11/26/19 10:33	II191106-4	100.0046	7.4	103.8	mg/L	96	75	125			
L55806-04ASD	ASD	11/26/19 10:36	II191106-4	100.0046	7.4	101.7	mg/L	94	75	125	2	20	
L55808-01DUP	DUP	11/26/19 10:59			3.7	3.64	mg/L				2	20	

Solids, Percent

D2216-80

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec%	Lower	Upper	RPD	Limit	Qual
WG487194													
L55808-04DUP	DUP	12/03/19 11:09			100	99.97	%				0	20	
WG487194PBS	PBS	12/03/19 12:43				U	%		-0.1	0.1			

Sulfate (WET DI)

D516-07 - Turbidimetric

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec%	Lower	Upper	RPD	Limit	Qual
WG488017													
WG488017ICB	ICB	12/12/19 12:55				U	mg/L		-3	3			
WG488017ICV	ICV	12/12/19 12:55	WI191204-6	20		20.6	mg/L	103	90	110			
WG488017LFB	LFB	12/12/19 16:05	WI190801-3	10.01		10.7	mg/L	107	90	110			
WG486427PBS	PBS	12/12/19 16:05				U	mg/L		-3	3			
L55806-01AS	AS	12/12/19 16:05	WI190801-3	10.01	3.3	14.6	mg/L	113	90	110			M1
L55808-01DUP	DUP	12/12/19 16:06			8.4	7.6	mg/L				10	20	RA

Thallium (WET DI)

6020B ICP-MS

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec%	Lower	Upper	RPD	Limit	Qual
WG487095													
WG487095ICV	ICV	11/27/19 14:58	MS191014-8	.05		.04968	mg/L	99	90	110			
WG487095ICB	ICB	11/27/19 15:00				U	mg/L		-0.0003	0.0003			
WG486427PBS	PBS	11/27/19 15:10				.00016	mg/L		-0.0003	0.0003			
L55806-06AS	AS	11/27/19 15:25	MS191119-5	.0501	U	.0493	mg/L	98	75	125			
L55806-06ASD	ASD	11/27/19 15:26	MS191119-5	.0501	U	.05122	mg/L	102	75	125	4	20	
L55808-01DUP	DUP	11/27/19 15:33			U	U	mg/L				0	20	RA

Rise Grass Valley Inc.

ACZ Project ID: **L55808**

NOTE: If the Rec% column is null, the high/low limits are in the same units as the result. If the Rec% column is not null, then the high/low limits are in % Rec.

Thallium, total (3050)

M6020B ICP-MS

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec%	Lower	Upper	RPD	Limit	Qual
WG487337													
WG487337ICV	ICV	12/04/19 13:33	MS191014-8	.05		.05153	mg/L	103	90	110			
WG487337ICB	ICB	12/04/19 13:35				U	mg/L		-0.0003	0.0003			
WG486958PBS	PBS	12/04/19 13:44				U	mg/Kg		-0.15	0.15			
WG486958LCSS	LCSS	12/04/19 13:46	PCN59282	135		147.23	mg/Kg		109	161			
WG486958LCSSD	LCSSD	12/04/19 13:47	PCN59282	135		146.45	mg/Kg		109	161	1	20	
L55822-22MS	MS	12/04/19 14:17	MS191112-2	25.05	U	24.466	mg/Kg	98	75	125			
L55822-22MSD	MSD	12/04/19 14:22	MS191112-2	25.05	U	24.369	mg/Kg	97	75	125	0	20	

Vanadium (WET DI)

6010D ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec%	Lower	Upper	RPD	Limit	Qual
WG486811													
WG486811ICV	ICV	11/26/19 9:47	II191121-2	2		1.996	mg/L	100	90	110			
WG486811ICB	ICB	11/26/19 9:51				U	mg/L		-0.015	0.015			
WG486427PBS	PBS	11/26/19 10:14				U	mg/L		-0.015	0.015			
L55806-04AS	AS	11/26/19 10:33	II191106-4	.4995	.007	.5198	mg/L	103	75	125			
L55806-04ASD	ASD	11/26/19 10:36	II191106-4	.4995	.007	.4969	mg/L	98	75	125	5	20	
L55808-01DUP	DUP	11/26/19 10:59			.008	.0101	mg/L				23	20	RA

Vanadium, total (3050)

M6010D ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec%	Lower	Upper	RPD	Limit	Qual
WG487169													
WG487169ICV	ICV	12/02/19 23:46	II191122-1	2		2.049	mg/L	102	90	110			
WG487169ICB	ICB	12/02/19 23:50				U	mg/L		-0.015	0.015			
WG486958PBS	PBS	12/03/19 0:14				U	mg/Kg		-1.5	1.5			
WG486958LCSS	LCSS	12/03/19 0:18	PCN59282	86.4		92.69	mg/Kg		67.4	105			
WG486958LCSSD	LCSSD	12/03/19 0:22	PCN59282	86.4		90.38	mg/Kg		67.4	105	3	20	
L55822-21MS	MS	12/03/19 1:20	II191106-4	49.95	124	183.1	mg/Kg	118	75	125			
L55822-21MSD	MSD	12/03/19 1:24	II191106-4	49.95	124	186.4	mg/Kg	125	75	125	2	20	

Zinc (WET DI)

6010D ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec%	Lower	Upper	RPD	Limit	Qual
WG486811													
WG486811ICV	ICV	11/26/19 9:47	II191121-2	2		1.937	mg/L	97	90	110			
WG486811ICB	ICB	11/26/19 9:51				U	mg/L		-0.03	0.03			
WG486427PBS	PBS	11/26/19 10:14				U	mg/L		-0.03	0.03			
L55806-04AS	AS	11/26/19 10:33	II191106-4	.50075	U	.524	mg/L	105	75	125			
L55806-04ASD	ASD	11/26/19 10:36	II191106-4	.50075	U	.505	mg/L	101	75	125	4	20	
L55808-01DUP	DUP	11/26/19 10:59			U	U	mg/L				0	20	RA

Rise Grass Valley Inc.ACZ Project ID: **L55808**

NOTE: If the Rec% column is null, the high/low limits are in the same units as the result. If the Rec% column is not null, then the high/low limits are in % Rec.

Zinc, total (3050)

M6010D ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec%	Lower	Upper	RPD	Limit	Qual
WG487169													
WG487169ICV	ICV	12/02/19 23:46	II191122-1	2		1.957	mg/L	98	90	110			
WG487169ICB	ICB	12/02/19 23:50				U	mg/L		-0.03	0.03			
WG486958PBS	PBS	12/03/19 0:14				U	mg/Kg		-3	3			
WG486958LCSS	LCSS	12/03/19 0:18	PCN59282	122		120.1	mg/Kg		98.6	145			
WG486958LCSSD	LCSSD	12/03/19 0:22	PCN59282	122		117.9	mg/Kg		98.6	145	2	20	
L55822-21MS	MS	12/03/19 1:20	II191106-4	50.075	36	84	mg/Kg	96	75	125			
L55822-21MSD	MSD	12/03/19 1:24	II191106-4	50.075	36	84.5	mg/Kg	97	75	125	1	20	

Rise Grass Valley Inc.

ACZ Project ID: **L55808**

ACZ ID	WORKNUM	PARAMETER	METHOD	QUAL	DESCRIPTION
L55808-01	WG486811	Aluminum (WET DI)	6010D ICP	RA	Relative Percent Difference (RPD) was not used for data validation because the concentration of the duplicated sample is too low for accurate evaluation (< 10x MDL).
	WG487169	Aluminum, total (3050)	M6010D ICP	M3	The spike recovery value is unusable since the analyte concentration in the sample is disproportionate to the spike level. The recovery of the associated control sample (LCS or LFB) was acceptable.
	WG487095	Antimony (WET DI)	6020B ICP-MS	M3	The spike recovery value is unusable since the analyte concentration in the sample is disproportionate to the spike level. The recovery of the associated control sample (LCS or LFB) was acceptable.
			6020B ICP-MS	RA	Relative Percent Difference (RPD) was not used for data validation because the concentration of the duplicated sample is too low for accurate evaluation (< 10x MDL).
	WG487337	Antimony, total (3050)	M6020B ICP-MS	M2	Matrix spike recovery was low, the recovery of the associated control sample (LCS or LFB) was acceptable.
	WG487095	Arsenic (WET DI)	6020B ICP-MS	M1	Matrix spike recovery was high, the recovery of the associated control sample (LCS or LFB) was acceptable.
			6020B ICP-MS	RA	Relative Percent Difference (RPD) was not used for data validation because the concentration of the duplicated sample is too low for accurate evaluation (< 10x MDL).
	WG486811	Barium (WET DI)	6010D ICP	RA	Relative Percent Difference (RPD) was not used for data validation because the concentration of the duplicated sample is too low for accurate evaluation (< 10x MDL).
	WG487095	Beryllium (WET DI)	6020B ICP-MS	RA	Relative Percent Difference (RPD) was not used for data validation because the concentration of the duplicated sample is too low for accurate evaluation (< 10x MDL).
	WG486811	Boron (WET DI)	6010D ICP	RA	Relative Percent Difference (RPD) was not used for data validation because the concentration of the duplicated sample is too low for accurate evaluation (< 10x MDL).
	WG487095	Cadmium (WET DI)	6020B ICP-MS	RA	Relative Percent Difference (RPD) was not used for data validation because the concentration of the duplicated sample is too low for accurate evaluation (< 10x MDL).
	WG488294	Chloride (WET DI)	SM4500CI-E	HD	Analysis is outside the intended scope of the method, which does not provide hold time information for soil extracts. No hold time is observed for collection to extraction. The referenced method hold time is observed for extraction-to-analysis.
			SM4500CI-E	RA	Relative Percent Difference (RPD) was not used for data validation because the concentration of the duplicated sample is too low for accurate evaluation (< 10x MDL).
	WG486811	Chromium (WET DI)	6010D ICP	RA	Relative Percent Difference (RPD) was not used for data validation because the concentration of the duplicated sample is too low for accurate evaluation (< 10x MDL).
		Cobalt (WET DI)	6010D ICP	RA	Relative Percent Difference (RPD) was not used for data validation because the concentration of the duplicated sample is too low for accurate evaluation (< 10x MDL).
	WG487169	Cobalt, total (3050)	M6010D ICP	ZG	The ICP or ICP-MS Serial Dilution was not used for data validation because the sample concentration was less than 50 times the MDL.
	WG486811	Copper (WET DI)	6010D ICP	RA	Relative Percent Difference (RPD) was not used for data validation because the concentration of the duplicated sample is too low for accurate evaluation (< 10x MDL).
	WG486997	Fluoride (WET DI)	SM4500F-C	RA	Relative Percent Difference (RPD) was not used for data validation because the concentration of the duplicated sample is too low for accurate evaluation (< 10x MDL).
	WG486811	Iron (WET DI)	6010D ICP	RA	Relative Percent Difference (RPD) was not used for data validation because the concentration of the duplicated sample is too low for accurate evaluation (< 10x MDL).
	WG487169	Iron, total (3050)	M6010D ICP	M3	The spike recovery value is unusable since the analyte concentration in the sample is disproportionate to the spike level. The recovery of the associated control sample (LCS or LFB) was acceptable.
	WG487095	Lead (WET DI)	6020B ICP-MS	RA	Relative Percent Difference (RPD) was not used for data validation because the concentration of the duplicated sample is too low for accurate evaluation (< 10x MDL).
	WG486811	Manganese (WET DI)	6010D ICP	RA	Relative Percent Difference (RPD) was not used for data validation because the concentration of the duplicated

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					sample is too low for accurate evaluation (< 10x MDL).
	WG487169	Manganese, total (3050)	M6010D ICP	M3	The spike recovery value is unusable since the analyte concentration in the sample is disproportionate to the spike level. The recovery of the associated control sample (LCS or LFB) was acceptable.
	WG486782	Mercury (WET DI)	M7470 CVAAS	RA	Relative Percent Difference (RPD) was not used for data validation because the concentration of the duplicated sample is too low for accurate evaluation (< 10x MDL).
	WG486482	Mercury by Direct Combustion AA	M7473 CVAAS	Q6	Sample was received above recommended temperature.
			M7473 CVAAS	QR	Sample matrix is solid rock and a homogenous sample aliquot could not be created for Hg analysis prior to preparation and air drying. Hg analysis was performed on crushed, homogenized, and air dried (40C) sub sample. Some loss of Hg may have occurred. Residual moisture on the prepped sample fraction was used for data correction.
			M7473 CVAAS	RA	Relative Percent Difference (RPD) was not used for data validation because the concentration of the duplicated sample is too low for accurate evaluation (< 10x MDL).
	WG486811	Molybdenum (WET DI)	6010D ICP	RA	Relative Percent Difference (RPD) was not used for data validation because the concentration of the duplicated sample is too low for accurate evaluation (< 10x MDL).
	WG487169	Molybdenum, total (3050)	M6010D ICP	ZG	The ICP or ICP-MS Serial Dilution was not used for data validation because the sample concentration was less than 50 times the MDL.
	WG486811	Nickel (WET DI)	6010D ICP	RA	Relative Percent Difference (RPD) was not used for data validation because the concentration of the duplicated sample is too low for accurate evaluation (< 10x MDL).
	WG487169	Nickel, total (3050)	M6010D ICP	ZG	The ICP or ICP-MS Serial Dilution was not used for data validation because the sample concentration was less than 50 times the MDL.
	WG486756	Nitrate/Nitrite as N (WET DI)	M353.2 - Automated Cadmium Reduction	H3	Sample was received and analyzed past holding time.
			M353.2 - Automated Cadmium Reduction	HD	Analysis is outside the intended scope of the method, which does not provide hold time information for soil extracts. No hold time is observed for collection to extraction. The referenced method hold time is observed for extraction-to-analysis.
			M353.2 - Automated Cadmium Reduction	Q6	Sample was received above recommended temperature.
			M353.2 - Automated Cadmium Reduction	RA	Relative Percent Difference (RPD) was not used for data validation because the concentration of the duplicated sample is too low for accurate evaluation (< 10x MDL).
		Nitrite as N (WET DI)	M353.2 - Automated Cadmium Reduction	H3	Sample was received and analyzed past holding time.
			M353.2 - Automated Cadmium Reduction	HD	Analysis is outside the intended scope of the method, which does not provide hold time information for soil extracts. No hold time is observed for collection to extraction. The referenced method hold time is observed for extraction-to-analysis.
			M353.2 - Automated Cadmium Reduction	Q6	Sample was received above recommended temperature.
			M353.2 - Automated Cadmium Reduction	RA	Relative Percent Difference (RPD) was not used for data validation because the concentration of the duplicated sample is too low for accurate evaluation (< 10x MDL).
	WG486804	Residue, Filterable (TDS) @180C (WET DI)	SM2540C	RA	Relative Percent Difference (RPD) was not used for data validation because the concentration of the duplicated sample is too low for accurate evaluation (< 10x MDL).
	WG487095	Selenium (WET DI)	6020B ICP-MS	RA	Relative Percent Difference (RPD) was not used for data validation because the concentration of the duplicated sample is too low for accurate evaluation (< 10x MDL).
		Silver (WET DI)	6020B ICP-MS	RA	Relative Percent Difference (RPD) was not used for data validation because the concentration of the duplicated sample is too low for accurate evaluation (< 10x MDL).
	WG488017	Sulfate (WET DI)	D516-07 - Turbidimetric	HD	Analysis is outside the intended scope of the method, which does not provide hold time information for soil extracts. No hold time is observed for collection to extraction. The referenced method hold time is observed for extraction-to-analysis.

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ACZ ID	WORKNUM	PARAMETER	METHOD	QUAL	DESCRIPTION
			D516-07 - Turbidimetric	M1	Matrix spike recovery was high, the recovery of the associated control sample (LCS or LFB) was acceptable.
			D516-07 - Turbidimetric	RA	Relative Percent Difference (RPD) was not used for data validation because the concentration of the duplicated sample is too low for accurate evaluation (< 10x MDL).
	WG487095	Thallium (WET DI)	6020B ICP-MS	RA	Relative Percent Difference (RPD) was not used for data validation because the concentration of the duplicated sample is too low for accurate evaluation (< 10x MDL).
	WG486811	Vanadium (WET DI)	6010D ICP	RA	Relative Percent Difference (RPD) was not used for data validation because the concentration of the duplicated sample is too low for accurate evaluation (< 10x MDL).
		Zinc (WET DI)	6010D ICP	RA	Relative Percent Difference (RPD) was not used for data validation because the concentration of the duplicated sample is too low for accurate evaluation (< 10x MDL).

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ACZ ID	WORKNUM	PARAMETER	METHOD	QUAL	DESCRIPTION
L55808-02	WG486811	Aluminum (WET DI)	6010D ICP	RA	Relative Percent Difference (RPD) was not used for data validation because the concentration of the duplicated sample is too low for accurate evaluation (< 10x MDL).
	WG487169	Aluminum, total (3050)	M6010D ICP	M3	The spike recovery value is unusable since the analyte concentration in the sample is disproportionate to the spike level. The recovery of the associated control sample (LCS or LFB) was acceptable.
	WG487095	Antimony (WET DI)	6020B ICP-MS	M3	The spike recovery value is unusable since the analyte concentration in the sample is disproportionate to the spike level. The recovery of the associated control sample (LCS or LFB) was acceptable.
			6020B ICP-MS	RA	Relative Percent Difference (RPD) was not used for data validation because the concentration of the duplicated sample is too low for accurate evaluation (< 10x MDL).
	WG487337	Antimony, total (3050)	M6020B ICP-MS	M2	Matrix spike recovery was low, the recovery of the associated control sample (LCS or LFB) was acceptable.
	WG487095	Arsenic (WET DI)	6020B ICP-MS	M1	Matrix spike recovery was high, the recovery of the associated control sample (LCS or LFB) was acceptable.
			6020B ICP-MS	RA	Relative Percent Difference (RPD) was not used for data validation because the concentration of the duplicated sample is too low for accurate evaluation (< 10x MDL).
	WG486811	Barium (WET DI)	6010D ICP	RA	Relative Percent Difference (RPD) was not used for data validation because the concentration of the duplicated sample is too low for accurate evaluation (< 10x MDL).
	WG487095	Beryllium (WET DI)	6020B ICP-MS	RA	Relative Percent Difference (RPD) was not used for data validation because the concentration of the duplicated sample is too low for accurate evaluation (< 10x MDL).
	WG486811	Boron (WET DI)	6010D ICP	RA	Relative Percent Difference (RPD) was not used for data validation because the concentration of the duplicated sample is too low for accurate evaluation (< 10x MDL).
	WG487095	Cadmium (WET DI)	6020B ICP-MS	RA	Relative Percent Difference (RPD) was not used for data validation because the concentration of the duplicated sample is too low for accurate evaluation (< 10x MDL).
	WG488294	Chloride (WET DI)	SM4500CI-E	HD	Analysis is outside the intended scope of the method, which does not provide hold time information for soil extracts. No hold time is observed for collection to extraction. The referenced method hold time is observed for extraction-to-analysis.
			SM4500CI-E	RA	Relative Percent Difference (RPD) was not used for data validation because the concentration of the duplicated sample is too low for accurate evaluation (< 10x MDL).
	WG486811	Chromium (WET DI)	6010D ICP	RA	Relative Percent Difference (RPD) was not used for data validation because the concentration of the duplicated sample is too low for accurate evaluation (< 10x MDL).
		Cobalt (WET DI)	6010D ICP	RA	Relative Percent Difference (RPD) was not used for data validation because the concentration of the duplicated sample is too low for accurate evaluation (< 10x MDL).
	WG487169	Cobalt, total (3050)	M6010D ICP	ZG	The ICP or ICP-MS Serial Dilution was not used for data validation because the sample concentration was less than 50 times the MDL.
	WG486811	Copper (WET DI)	6010D ICP	RA	Relative Percent Difference (RPD) was not used for data validation because the concentration of the duplicated sample is too low for accurate evaluation (< 10x MDL).
	WG486997	Fluoride (WET DI)	SM4500F-C	RA	Relative Percent Difference (RPD) was not used for data validation because the concentration of the duplicated sample is too low for accurate evaluation (< 10x MDL).
	WG486811	Iron (WET DI)	6010D ICP	RA	Relative Percent Difference (RPD) was not used for data validation because the concentration of the duplicated sample is too low for accurate evaluation (< 10x MDL).
	WG487169	Iron, total (3050)	M6010D ICP	M3	The spike recovery value is unusable since the analyte concentration in the sample is disproportionate to the spike level. The recovery of the associated control sample (LCS or LFB) was acceptable.
	WG487095	Lead (WET DI)	6020B ICP-MS	RA	Relative Percent Difference (RPD) was not used for data validation because the concentration of the duplicated sample is too low for accurate evaluation (< 10x MDL).
	WG486811	Manganese (WET DI)	6010D ICP	RA	Relative Percent Difference (RPD) was not used for data validation because the concentration of the duplicated

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ACZ ID	WORKNUM	PARAMETER	METHOD	QUAL	DESCRIPTION
					sample is too low for accurate evaluation (< 10x MDL).
	WG487169	Manganese, total (3050)	M6010D ICP	M3	The spike recovery value is unusable since the analyte concentration in the sample is disproportionate to the spike level. The recovery of the associated control sample (LCS or LFB) was acceptable.
	WG486782	Mercury (WET DI)	M7470 CVAAS	RA	Relative Percent Difference (RPD) was not used for data validation because the concentration of the duplicated sample is too low for accurate evaluation (< 10x MDL).
	WG486482	Mercury by Direct Combustion AA	M7473 CVAAS	Q6	Sample was received above recommended temperature.
			M7473 CVAAS	QR	Sample matrix is solid rock and a homogenous sample aliquot could not be created for Hg analysis prior to preparation and air drying. Hg analysis was performed on crushed, homogenized, and air dried (40C) sub sample. Some loss of Hg may have occurred. Residual moisture on the prepped sample fraction was used for data correction.
			M7473 CVAAS	RA	Relative Percent Difference (RPD) was not used for data validation because the concentration of the duplicated sample is too low for accurate evaluation (< 10x MDL).
	WG486811	Molybdenum (WET DI)	6010D ICP	RA	Relative Percent Difference (RPD) was not used for data validation because the concentration of the duplicated sample is too low for accurate evaluation (< 10x MDL).
	WG487169	Molybdenum, total (3050)	M6010D ICP	ZG	The ICP or ICP-MS Serial Dilution was not used for data validation because the sample concentration was less than 50 times the MDL.
	WG486811	Nickel (WET DI)	6010D ICP	RA	Relative Percent Difference (RPD) was not used for data validation because the concentration of the duplicated sample is too low for accurate evaluation (< 10x MDL).
	WG487169	Nickel, total (3050)	M6010D ICP	ZG	The ICP or ICP-MS Serial Dilution was not used for data validation because the sample concentration was less than 50 times the MDL.
	WG486756	Nitrate/Nitrite as N (WET DI)	M353.2 - Automated Cadmium Reduction	H3	Sample was received and analyzed past holding time.
			M353.2 - Automated Cadmium Reduction	HD	Analysis is outside the intended scope of the method, which does not provide hold time information for soil extracts. No hold time is observed for collection to extraction. The referenced method hold time is observed for extraction-to-analysis.
			M353.2 - Automated Cadmium Reduction	Q6	Sample was received above recommended temperature.
			M353.2 - Automated Cadmium Reduction	RA	Relative Percent Difference (RPD) was not used for data validation because the concentration of the duplicated sample is too low for accurate evaluation (< 10x MDL).
		Nitrite as N (WET DI)	M353.2 - Automated Cadmium Reduction	H3	Sample was received and analyzed past holding time.
			M353.2 - Automated Cadmium Reduction	HD	Analysis is outside the intended scope of the method, which does not provide hold time information for soil extracts. No hold time is observed for collection to extraction. The referenced method hold time is observed for extraction-to-analysis.
			M353.2 - Automated Cadmium Reduction	Q6	Sample was received above recommended temperature.
			M353.2 - Automated Cadmium Reduction	RA	Relative Percent Difference (RPD) was not used for data validation because the concentration of the duplicated sample is too low for accurate evaluation (< 10x MDL).
	WG486804	Residue, Filterable (TDS) @180C (WET DI)	SM2540C	RA	Relative Percent Difference (RPD) was not used for data validation because the concentration of the duplicated sample is too low for accurate evaluation (< 10x MDL).
	WG487095	Selenium (WET DI)	6020B ICP-MS	RA	Relative Percent Difference (RPD) was not used for data validation because the concentration of the duplicated sample is too low for accurate evaluation (< 10x MDL).
		Silver (WET DI)	6020B ICP-MS	RA	Relative Percent Difference (RPD) was not used for data validation because the concentration of the duplicated sample is too low for accurate evaluation (< 10x MDL).
	WG488017	Sulfate (WET DI)	D516-07 - Turbidimetric	HD	Analysis is outside the intended scope of the method, which does not provide hold time information for soil extracts. No hold time is observed for collection to extraction. The referenced method hold time is observed for extraction-to-analysis.

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ACZ ID	WORKNUM	PARAMETER	METHOD	QUAL	DESCRIPTION
			D516-07 - Turbidimetric	M1	Matrix spike recovery was high, the recovery of the associated control sample (LCS or LFB) was acceptable.
			D516-07 - Turbidimetric	RA	Relative Percent Difference (RPD) was not used for data validation because the concentration of the duplicated sample is too low for accurate evaluation (< 10x MDL).
	WG487095	Thallium (WET DI)	6020B ICP-MS	RA	Relative Percent Difference (RPD) was not used for data validation because the concentration of the duplicated sample is too low for accurate evaluation (< 10x MDL).
	WG486811	Vanadium (WET DI)	6010D ICP	RA	Relative Percent Difference (RPD) was not used for data validation because the concentration of the duplicated sample is too low for accurate evaluation (< 10x MDL).
		Zinc (WET DI)	6010D ICP	RA	Relative Percent Difference (RPD) was not used for data validation because the concentration of the duplicated sample is too low for accurate evaluation (< 10x MDL).

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ACZ ID	WORKNUM	PARAMETER	METHOD	QUAL	DESCRIPTION
L55808-03	WG486811	Aluminum (WET DI)	6010D ICP	RA	Relative Percent Difference (RPD) was not used for data validation because the concentration of the duplicated sample is too low for accurate evaluation (< 10x MDL).
	WG487169	Aluminum, total (3050)	M6010D ICP	M3	The spike recovery value is unusable since the analyte concentration in the sample is disproportionate to the spike level. The recovery of the associated control sample (LCS or LFB) was acceptable.
	WG487095	Antimony (WET DI)	6020B ICP-MS	M3	The spike recovery value is unusable since the analyte concentration in the sample is disproportionate to the spike level. The recovery of the associated control sample (LCS or LFB) was acceptable.
			6020B ICP-MS	RA	Relative Percent Difference (RPD) was not used for data validation because the concentration of the duplicated sample is too low for accurate evaluation (< 10x MDL).
	WG487337	Antimony, total (3050)	M6020B ICP-MS	M2	Matrix spike recovery was low, the recovery of the associated control sample (LCS or LFB) was acceptable.
	WG487095	Arsenic (WET DI)	6020B ICP-MS	M1	Matrix spike recovery was high, the recovery of the associated control sample (LCS or LFB) was acceptable.
			6020B ICP-MS	RA	Relative Percent Difference (RPD) was not used for data validation because the concentration of the duplicated sample is too low for accurate evaluation (< 10x MDL).
	WG486811	Barium (WET DI)	6010D ICP	RA	Relative Percent Difference (RPD) was not used for data validation because the concentration of the duplicated sample is too low for accurate evaluation (< 10x MDL).
	WG487095	Beryllium (WET DI)	6020B ICP-MS	RA	Relative Percent Difference (RPD) was not used for data validation because the concentration of the duplicated sample is too low for accurate evaluation (< 10x MDL).
	WG486811	Boron (WET DI)	6010D ICP	RA	Relative Percent Difference (RPD) was not used for data validation because the concentration of the duplicated sample is too low for accurate evaluation (< 10x MDL).
	WG487095	Cadmium (WET DI)	6020B ICP-MS	RA	Relative Percent Difference (RPD) was not used for data validation because the concentration of the duplicated sample is too low for accurate evaluation (< 10x MDL).
	WG488294	Chloride (WET DI)	SM4500CI-E	HD	Analysis is outside the intended scope of the method, which does not provide hold time information for soil extracts. No hold time is observed for collection to extraction. The referenced method hold time is observed for extraction-to-analysis.
			SM4500CI-E	RA	Relative Percent Difference (RPD) was not used for data validation because the concentration of the duplicated sample is too low for accurate evaluation (< 10x MDL).
	WG486811	Chromium (WET DI)	6010D ICP	RA	Relative Percent Difference (RPD) was not used for data validation because the concentration of the duplicated sample is too low for accurate evaluation (< 10x MDL).
		Cobalt (WET DI)	6010D ICP	RA	Relative Percent Difference (RPD) was not used for data validation because the concentration of the duplicated sample is too low for accurate evaluation (< 10x MDL).
	WG487169	Cobalt, total (3050)	M6010D ICP	ZG	The ICP or ICP-MS Serial Dilution was not used for data validation because the sample concentration was less than 50 times the MDL.
	WG486811	Copper (WET DI)	6010D ICP	RA	Relative Percent Difference (RPD) was not used for data validation because the concentration of the duplicated sample is too low for accurate evaluation (< 10x MDL).
	WG486997	Fluoride (WET DI)	SM4500F-C	RA	Relative Percent Difference (RPD) was not used for data validation because the concentration of the duplicated sample is too low for accurate evaluation (< 10x MDL).
	WG486811	Iron (WET DI)	6010D ICP	RA	Relative Percent Difference (RPD) was not used for data validation because the concentration of the duplicated sample is too low for accurate evaluation (< 10x MDL).
	WG487169	Iron, total (3050)	M6010D ICP	M3	The spike recovery value is unusable since the analyte concentration in the sample is disproportionate to the spike level. The recovery of the associated control sample (LCS or LFB) was acceptable.
	WG487095	Lead (WET DI)	6020B ICP-MS	RA	Relative Percent Difference (RPD) was not used for data validation because the concentration of the duplicated sample is too low for accurate evaluation (< 10x MDL).
	WG486811	Manganese (WET DI)	6010D ICP	RA	Relative Percent Difference (RPD) was not used for data validation because the concentration of the duplicated

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ACZ ID	WORKNUM	PARAMETER	METHOD	QUAL	DESCRIPTION
					sample is too low for accurate evaluation (< 10x MDL).
	WG487169	Manganese, total (3050)	M6010D ICP	M3	The spike recovery value is unusable since the analyte concentration in the sample is disproportionate to the spike level. The recovery of the associated control sample (LCS or LFB) was acceptable.
	WG486782	Mercury (WET DI)	M7470 CVAAS	RA	Relative Percent Difference (RPD) was not used for data validation because the concentration of the duplicated sample is too low for accurate evaluation (< 10x MDL).
	WG486482	Mercury by Direct Combustion AA	M7473 CVAAS	Q6	Sample was received above recommended temperature.
			M7473 CVAAS	QR	Sample matrix is solid rock and a homogenous sample aliquot could not be created for Hg analysis prior to preparation and air drying. Hg analysis was performed on crushed, homogenized, and air dried (40C) sub sample. Some loss of Hg may have occurred. Residual moisture on the prepped sample fraction was used for data correction.
			M7473 CVAAS	RA	Relative Percent Difference (RPD) was not used for data validation because the concentration of the duplicated sample is too low for accurate evaluation (< 10x MDL).
	WG486811	Molybdenum (WET DI)	6010D ICP	RA	Relative Percent Difference (RPD) was not used for data validation because the concentration of the duplicated sample is too low for accurate evaluation (< 10x MDL).
	WG487169	Molybdenum, total (3050)	M6010D ICP	ZG	The ICP or ICP-MS Serial Dilution was not used for data validation because the sample concentration was less than 50 times the MDL.
	WG486811	Nickel (WET DI)	6010D ICP	RA	Relative Percent Difference (RPD) was not used for data validation because the concentration of the duplicated sample is too low for accurate evaluation (< 10x MDL).
	WG487169	Nickel, total (3050)	M6010D ICP	ZG	The ICP or ICP-MS Serial Dilution was not used for data validation because the sample concentration was less than 50 times the MDL.
	WG486756	Nitrate/Nitrite as N (WET DI)	M353.2 - Automated Cadmium Reduction	H3	Sample was received and analyzed past holding time.
			M353.2 - Automated Cadmium Reduction	HD	Analysis is outside the intended scope of the method, which does not provide hold time information for soil extracts. No hold time is observed for collection to extraction. The referenced method hold time is observed for extraction-to-analysis.
			M353.2 - Automated Cadmium Reduction	Q6	Sample was received above recommended temperature.
			M353.2 - Automated Cadmium Reduction	RA	Relative Percent Difference (RPD) was not used for data validation because the concentration of the duplicated sample is too low for accurate evaluation (< 10x MDL).
		Nitrite as N (WET DI)	M353.2 - Automated Cadmium Reduction	H3	Sample was received and analyzed past holding time.
			M353.2 - Automated Cadmium Reduction	HD	Analysis is outside the intended scope of the method, which does not provide hold time information for soil extracts. No hold time is observed for collection to extraction. The referenced method hold time is observed for extraction-to-analysis.
			M353.2 - Automated Cadmium Reduction	Q6	Sample was received above recommended temperature.
			M353.2 - Automated Cadmium Reduction	RA	Relative Percent Difference (RPD) was not used for data validation because the concentration of the duplicated sample is too low for accurate evaluation (< 10x MDL).
	WG486804	Residue, Filterable (TDS) @180C (WET DI)	SM2540C	RA	Relative Percent Difference (RPD) was not used for data validation because the concentration of the duplicated sample is too low for accurate evaluation (< 10x MDL).
	WG487095	Selenium (WET DI)	6020B ICP-MS	RA	Relative Percent Difference (RPD) was not used for data validation because the concentration of the duplicated sample is too low for accurate evaluation (< 10x MDL).
		Silver (WET DI)	6020B ICP-MS	RA	Relative Percent Difference (RPD) was not used for data validation because the concentration of the duplicated sample is too low for accurate evaluation (< 10x MDL).
	WG488017	Sulfate (WET DI)	D516-07 - Turbidimetric	HD	Analysis is outside the intended scope of the method, which does not provide hold time information for soil extracts. No hold time is observed for collection to extraction. The referenced method hold time is observed for extraction-to-analysis.

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ACZ ID	WORKNUM	PARAMETER	METHOD	QUAL	DESCRIPTION
			D516-07 - Turbidimetric	M1	Matrix spike recovery was high, the recovery of the associated control sample (LCS or LFB) was acceptable.
			D516-07 - Turbidimetric	RA	Relative Percent Difference (RPD) was not used for data validation because the concentration of the duplicated sample is too low for accurate evaluation (< 10x MDL).
	WG487095	Thallium (WET DI)	6020B ICP-MS	RA	Relative Percent Difference (RPD) was not used for data validation because the concentration of the duplicated sample is too low for accurate evaluation (< 10x MDL).
	WG486811	Vanadium (WET DI)	6010D ICP	RA	Relative Percent Difference (RPD) was not used for data validation because the concentration of the duplicated sample is too low for accurate evaluation (< 10x MDL).
		Zinc (WET DI)	6010D ICP	RA	Relative Percent Difference (RPD) was not used for data validation because the concentration of the duplicated sample is too low for accurate evaluation (< 10x MDL).

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ACZ ID	WORKNUM	PARAMETER	METHOD	QUAL	DESCRIPTION
L55808-04	WG486811	Aluminum (WET DI)	6010D ICP	RA	Relative Percent Difference (RPD) was not used for data validation because the concentration of the duplicated sample is too low for accurate evaluation (< 10x MDL).
	WG487169	Aluminum, total (3050)	M6010D ICP	M3	The spike recovery value is unusable since the analyte concentration in the sample is disproportionate to the spike level. The recovery of the associated control sample (LCS or LFB) was acceptable.
	WG487095	Antimony (WET DI)	6020B ICP-MS	M3	The spike recovery value is unusable since the analyte concentration in the sample is disproportionate to the spike level. The recovery of the associated control sample (LCS or LFB) was acceptable.
			6020B ICP-MS	RA	Relative Percent Difference (RPD) was not used for data validation because the concentration of the duplicated sample is too low for accurate evaluation (< 10x MDL).
	WG487337	Antimony, total (3050)	M6020B ICP-MS	M2	Matrix spike recovery was low, the recovery of the associated control sample (LCS or LFB) was acceptable.
	WG487095	Arsenic (WET DI)	6020B ICP-MS	M1	Matrix spike recovery was high, the recovery of the associated control sample (LCS or LFB) was acceptable.
			6020B ICP-MS	RA	Relative Percent Difference (RPD) was not used for data validation because the concentration of the duplicated sample is too low for accurate evaluation (< 10x MDL).
	WG486811	Barium (WET DI)	6010D ICP	RA	Relative Percent Difference (RPD) was not used for data validation because the concentration of the duplicated sample is too low for accurate evaluation (< 10x MDL).
	WG487095	Beryllium (WET DI)	6020B ICP-MS	RA	Relative Percent Difference (RPD) was not used for data validation because the concentration of the duplicated sample is too low for accurate evaluation (< 10x MDL).
	WG486811	Boron (WET DI)	6010D ICP	RA	Relative Percent Difference (RPD) was not used for data validation because the concentration of the duplicated sample is too low for accurate evaluation (< 10x MDL).
	WG487095	Cadmium (WET DI)	6020B ICP-MS	RA	Relative Percent Difference (RPD) was not used for data validation because the concentration of the duplicated sample is too low for accurate evaluation (< 10x MDL).
	WG488294	Chloride (WET DI)	SM4500CI-E	HD	Analysis is outside the intended scope of the method, which does not provide hold time information for soil extracts. No hold time is observed for collection to extraction. The referenced method hold time is observed for extraction-to-analysis.
			SM4500CI-E	RA	Relative Percent Difference (RPD) was not used for data validation because the concentration of the duplicated sample is too low for accurate evaluation (< 10x MDL).
	WG486811	Chromium (WET DI)	6010D ICP	RA	Relative Percent Difference (RPD) was not used for data validation because the concentration of the duplicated sample is too low for accurate evaluation (< 10x MDL).
		Cobalt (WET DI)	6010D ICP	RA	Relative Percent Difference (RPD) was not used for data validation because the concentration of the duplicated sample is too low for accurate evaluation (< 10x MDL).
	WG487169	Cobalt, total (3050)	M6010D ICP	ZG	The ICP or ICP-MS Serial Dilution was not used for data validation because the sample concentration was less than 50 times the MDL.
	WG486811	Copper (WET DI)	6010D ICP	RA	Relative Percent Difference (RPD) was not used for data validation because the concentration of the duplicated sample is too low for accurate evaluation (< 10x MDL).
	WG486997	Fluoride (WET DI)	SM4500F-C	RA	Relative Percent Difference (RPD) was not used for data validation because the concentration of the duplicated sample is too low for accurate evaluation (< 10x MDL).
	WG486811	Iron (WET DI)	6010D ICP	RA	Relative Percent Difference (RPD) was not used for data validation because the concentration of the duplicated sample is too low for accurate evaluation (< 10x MDL).
	WG487169	Iron, total (3050)	M6010D ICP	M3	The spike recovery value is unusable since the analyte concentration in the sample is disproportionate to the spike level. The recovery of the associated control sample (LCS or LFB) was acceptable.
	WG487095	Lead (WET DI)	6020B ICP-MS	RA	Relative Percent Difference (RPD) was not used for data validation because the concentration of the duplicated sample is too low for accurate evaluation (< 10x MDL).
	WG486811	Manganese (WET DI)	6010D ICP	RA	Relative Percent Difference (RPD) was not used for data validation because the concentration of the duplicated

REPAD.15.06.05.01

Rise Grass Valley Inc.

ACZ Project ID: **L55808**

ACZ ID	WORKNUM	PARAMETER	METHOD	QUAL	DESCRIPTION
					sample is too low for accurate evaluation (< 10x MDL).
	WG487169	Manganese, total (3050)	M6010D ICP	M3	The spike recovery value is unusable since the analyte concentration in the sample is disproportionate to the spike level. The recovery of the associated control sample (LCS or LFB) was acceptable.
	WG486782	Mercury (WET DI)	M7470 CVAAS	RA	Relative Percent Difference (RPD) was not used for data validation because the concentration of the duplicated sample is too low for accurate evaluation (< 10x MDL).
	WG486482	Mercury by Direct Combustion AA	M7473 CVAAS	Q6	Sample was received above recommended temperature.
			M7473 CVAAS	QR	Sample matrix is solid rock and a homogenous sample aliquot could not be created for Hg analysis prior to preparation and air drying. Hg analysis was performed on crushed, homogenized, and air dried (40C) sub sample. Some loss of Hg may have occurred. Residual moisture on the prepped sample fraction was used for data correction.
			M7473 CVAAS	RA	Relative Percent Difference (RPD) was not used for data validation because the concentration of the duplicated sample is too low for accurate evaluation (< 10x MDL).
	WG486811	Molybdenum (WET DI)	6010D ICP	RA	Relative Percent Difference (RPD) was not used for data validation because the concentration of the duplicated sample is too low for accurate evaluation (< 10x MDL).
	WG487169	Molybdenum, total (3050)	M6010D ICP	ZG	The ICP or ICP-MS Serial Dilution was not used for data validation because the sample concentration was less than 50 times the MDL.
	WG486811	Nickel (WET DI)	6010D ICP	RA	Relative Percent Difference (RPD) was not used for data validation because the concentration of the duplicated sample is too low for accurate evaluation (< 10x MDL).
	WG487169	Nickel, total (3050)	M6010D ICP	ZG	The ICP or ICP-MS Serial Dilution was not used for data validation because the sample concentration was less than 50 times the MDL.
	WG486756	Nitrate/Nitrite as N (WET DI)	M353.2 - Automated Cadmium Reduction	H3	Sample was received and analyzed past holding time.
			M353.2 - Automated Cadmium Reduction	HD	Analysis is outside the intended scope of the method, which does not provide hold time information for soil extracts. No hold time is observed for collection to extraction. The referenced method hold time is observed for extraction-to-analysis.
			M353.2 - Automated Cadmium Reduction	Q6	Sample was received above recommended temperature.
			M353.2 - Automated Cadmium Reduction	RA	Relative Percent Difference (RPD) was not used for data validation because the concentration of the duplicated sample is too low for accurate evaluation (< 10x MDL).
		Nitrite as N (WET DI)	M353.2 - Automated Cadmium Reduction	H3	Sample was received and analyzed past holding time.
			M353.2 - Automated Cadmium Reduction	HD	Analysis is outside the intended scope of the method, which does not provide hold time information for soil extracts. No hold time is observed for collection to extraction. The referenced method hold time is observed for extraction-to-analysis.
			M353.2 - Automated Cadmium Reduction	Q6	Sample was received above recommended temperature.
			M353.2 - Automated Cadmium Reduction	RA	Relative Percent Difference (RPD) was not used for data validation because the concentration of the duplicated sample is too low for accurate evaluation (< 10x MDL).
	WG486804	Residue, Filterable (TDS) @180C (WET DI)	SM2540C	RA	Relative Percent Difference (RPD) was not used for data validation because the concentration of the duplicated sample is too low for accurate evaluation (< 10x MDL).
	WG487095	Selenium (WET DI)	6020B ICP-MS	RA	Relative Percent Difference (RPD) was not used for data validation because the concentration of the duplicated sample is too low for accurate evaluation (< 10x MDL).
		Silver (WET DI)	6020B ICP-MS	RA	Relative Percent Difference (RPD) was not used for data validation because the concentration of the duplicated sample is too low for accurate evaluation (< 10x MDL).
	WG488017	Sulfate (WET DI)	D516-07 - Turbidimetric	HD	Analysis is outside the intended scope of the method, which does not provide hold time information for soil extracts. No hold time is observed for collection to extraction. The referenced method hold time is observed for extraction-to-analysis.

REPAD.15.06.05.01

Rise Grass Valley Inc.

ACZ Project ID: **L55808**

ACZ ID	WORKNUM	PARAMETER	METHOD	QUAL	DESCRIPTION
			D516-07 - Turbidimetric	M1	Matrix spike recovery was high, the recovery of the associated control sample (LCS or LFB) was acceptable.
			D516-07 - Turbidimetric	RA	Relative Percent Difference (RPD) was not used for data validation because the concentration of the duplicated sample is too low for accurate evaluation (< 10x MDL).
	WG487095	Thallium (WET DI)	6020B ICP-MS	RA	Relative Percent Difference (RPD) was not used for data validation because the concentration of the duplicated sample is too low for accurate evaluation (< 10x MDL).
	WG486811	Vanadium (WET DI)	6010D ICP	RA	Relative Percent Difference (RPD) was not used for data validation because the concentration of the duplicated sample is too low for accurate evaluation (< 10x MDL).
		Zinc (WET DI)	6010D ICP	RA	Relative Percent Difference (RPD) was not used for data validation because the concentration of the duplicated sample is too low for accurate evaluation (< 10x MDL).

Rise Grass Valley Inc.

ACZ Project ID: **L55808**

Metals Analysis

The following parameters are not offered for certification or are not covered by NELAC certificate #ACZ.

Boron (WET DI)

6010D ICP

Soil Analysis

The following parameters are not offered for certification or are not covered by NELAC certificate #ACZ.

Solids, Percent

D2216-80

Wet Chemistry

The following parameters are not offered for certification or are not covered by NELAC certificate #ACZ.

Sulfate (WET DI)

D516-07 - Turbidimetric

Rise Grass Valley Inc.

ACZ Project ID: L55808

Date Received: 11/11/2019 14:21

Received By: mjj

Date Printed: 11/12/2019

Receipt Verification

	YES	NO	NA
1) Is a foreign soil permit included for applicable samples?	☐	☐	☒
2) Is the Chain of Custody form or other directive shipping papers present?	☒	☐	☐
3) Does this project require special handling procedures such as CLP protocol?	☐	☒	☐
4) Are any samples NRC licensable material?	☐	☐	☒
5) If samples are received past hold time, proceed with requested short hold time analyses?	☒	☐	☐
6) Is the Chain of Custody form complete and accurate?	☒	☐	☐
7) Were any changes made to the Chain of Custody form prior to ACZ receiving the samples?	☐	☒	☐

Samples/Containers

	YES	NO	NA
8) Are all containers intact and with no leaks?	☒	☐	☐
9) Are all labels on containers and are they intact and legible?	☒	☐	☐
10) Do the sample labels and Chain of Custody form match for Sample ID, Date, and Time?	☒	☐	☐
11) For preserved bottle types, was the pH checked and within limits? ¹	☐	☐	☒
12) Is there sufficient sample volume to perform all requested work?	☒	☐	☐
13) Is the custody seal intact on all containers?	☐	☐	☒
14) Are samples that require zero headspace acceptable?	☐	☐	☒
15) Are all sample containers appropriate for analytical requirements?	☒	☐	☐
16) Is there an Hg-1631 trip blank present?	☐	☐	☒
17) Is there a VOA trip blank present?	☐	☐	☒
18) Were all samples received within hold time?	☒	☐	☐

NA indicates Not Applicable

Chain of Custody Related Remarks

Client Contact Remarks

Shipping Containers

Cooler Id	Temp (°C)	Temp Criteria (°C)	Rad (µR/Hr)	Custody Seal Intact?
NA31791	19.8	NA	15	N/A

Was ice present in the shipment container(s)?

No - Wet or gel ice was not present in the shipment container(s).

Client must contact an ACZ Project Manager if analysis should not proceed for samples received outside of their thermal preservation acceptance criteria.

Rise Grass Valley Inc.

ACZ Project ID: L55808

Date Received: 11/11/2019 14:21

Received By: mjj

Date Printed: 11/12/2019

¹ The preservation of the following bottle types is not checked at sample receipt: Orange (oil and grease), Purple (total cyanide), Pink (dissolved cyanide), Brown (arsenic speciation), Sterile (fecal coliform), EDTA (sulfite), HCl preserved vial (organics), Na₂S₂O₃ preserved vial (organics), and HG-1631 (total/dissolved mercury by method 1631).



Laboratories, Inc.

2773 Downhill Drive Steamboat Springs, CO 80487 (800) 334-5493

CHAIN of CUSTODY

Report to:

Name: Ben Mossman	Address: 333 Crown Point Circle Suite 215
Company: Rise Gold Corp.	Grass Valley Ca. 95945
E-mail: ceo@risegoldcorp.com	Telephone: 604-219-9072

Copy of Report to:

Name: Andy Kopania	E-mail: akopania@sbcglobal.net
Company: EMKO Environmental	Telephone: 916-718-5519

Invoice to:

Name: Ben Mossman	Address: 333 Crown Point Circle Suite 215
Company: Rise Gold Corp.	Grass Valley Ca. 95945
E-mail: ceo@risegoldcorp.com	Telephone: 604-219-9072

If sample(s) received past holding time (HT), or if insufficient HT remains to complete analysis before expiration, shall ACZ proceed with requested short HT analyses? YES ☒ NO ☐

If "NO" then ACZ will contact client for further instruction. If neither "YES" nor "NO" is indicated, ACZ will proceed with the requested analyses, even if HT is expired, and data will be qualified

Are samples for SDWA Compliance Monitoring? Yes ☐ No ☒

If yes, please include state forms. Results will be reported to PQL for Colorado.

Sampler's Name: BM Sampler's Site Information State CA Zip code 95945 Time Zone PST

*Sampler's Signature: _____ *I attest to the authenticity and validity of this sample. I understand that intentionally mislabeling the time/date/location or tampering with the sample in anyway, is considered fraud and punishable by State Law.

PROJECT INFORMATION

ANALYSES REQUESTED (attach list or use quote number)

Quote #: Core-Tailings-2	# of Containers	Metals by ICP & ICP/MS	DI-WET leach	Leachate-Metals by ICP & ICP/MS	PH	Percent Solids	Wet Chemistry		
PO#:									
Reporting state for compliance testing: CA									
Check box if samples include NRC licensed material? ☐									
SAMPLE IDENTIFICATION	DATE:TIME	Matrix							
F-1 (ABC)	11/4/19:12:00 pm	T	1	☒	☒	☒	☒	☒	☒
F-2 (ABC)	11/4/19:12:00 pm	T	1	☒	☒	☒	☒	☒	☒
F-3 (AB)	11/4/19:12:00 pm	T	1	☒	☒	☒	☒	☒	☒
F-4 (AB)	11/4/19:12:00 pm	T	1	☒	☒	☒	☒	☒	☒
				☐	☐	☐	☐	☐	☐
				☐	☐	☐	☐	☐	☐
				☐	☐	☐	☐	☐	☐
				☐	☐	☐	☐	☐	☐
				☐	☐	☐	☐	☐	☐
				☐	☐	☐	☐	☐	☐
				☐	☐	☐	☐	☐	☐

Matrix SW (Surface Water) · GW (Ground Water) · WW (Waste Water) · DW (Drinking Water) · SL (Sludge) · SO (Soil) · OL (Oil) · Other (Specify)

REMARKS

T = tailings (assay pulp)

Please refer to ACZ's terms & conditions located on the reverse side of this COC.

RELINQUISHED BY:	DATE:TIME	RECEIVED BY:	DATE:TIME

FRMAD050.06.14.14

White - Return with sample. Yellow - Retain for your records.



Laboratories, Inc.

2773 Downhill Drive Steamboat Springs, CO 80487 (800) 334-5493

CHAIN of CUSTODY

Report to:

Name: Ben Mossman	Address: 333 Crown Point Circle Suite 215
Company: Rise Gold Corp.	Grass Valley Ca. 95945
E-mail: ceo@risegoldcorp.com	Telephone: 604-219-9072

Copy of Report to:

Name: Andy Kopania	E-mail: akopania@sbcglobal.net
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Invoice to:

Name: Ben Mossman	Address: 333 Crown Point Circle Suite 215
Company: Rise Gold Corp.	Grass Valley Ca. 95945
E-mail: ceo@risegoldcorp.com	Telephone: 604-219-9072

If sample(s) received past holding time (HT), or if insufficient HT remains to complete analysis before expiration, shall ACZ proceed with requested short HT analyses? YES ☒ NO ☐

If "NO" then ACZ will contact client for further instruction. If neither "YES" nor "NO" is indicated, ACZ will proceed with the requested analyses, even if HT is expired, and data will be qualified

Are samples for SDWA Compliance Monitoring? Yes ☐ No ☒

If yes, please include state forms. Results will be reported to PQL for Colorado.

Sampler's Name: BM Sampler's Site Information State CA Zip code 95945 Time Zone PST

*Sampler's Signature: _____ *I attest to the authenticity and validity of this sample. I understand that intentionally mislabeling the time/date/location or tampering with the sample in anyway, is considered fraud and punishable by State Law.

PROJECT INFORMATION

ANALYSES REQUESTED (attach list or use quote number)

Quote #: Core-Tailings-2	# of Containers	Metals by ICP & ICP/MS	DI-WET leach	Leachate-Metals by ICP & ICP/MS	PH	Percent Solids	Wet Chemistry				
PO#:											
Reporting state for compliance testing: CA											
Check box if samples include NRC licensed material? ☐											
SAMPLE IDENTIFICATION	DATE:TIME	Matrix									
F-1 (ABC)	11/4/19:12:00 pm	T	1	☒	☒	☒	☒	☒	☒	☐	☐
F-2 (ABC)	11/4/19:12:00 pm	T	1	☒	☒	☒	☒	☒	☒	☐	☐
F-3 (AB)	11/4/19:12:00 pm	T	1	☒	☒	☒	☒	☒	☒	☐	☐
F-4 (AB)	11/4/19:12:00 pm	T	1	☒	☒	☒	☒	☒	☒	☐	☐
				☐	☐	☐	☐	☐	☐	☐	☐
				☐	☐	☐	☐	☐	☐	☐	☐
				☐	☐	☐	☐	☐	☐	☐	☐
				☐	☐	☐	☐	☐	☐	☐	☐
				☐	☐	☐	☐	☐	☐	☐	☐
				☐	☐	☐	☐	☐	☐	☐	☐
				☐	☐	☐	☐	☐	☐	☐	☐
Matrix	SW (Surface Water) · GW (Ground Water) · WW (Waste Water) · DW (Drinking Water) · SL (Sludge) · SO (Soil) · OL (Oil) · Other (Specify)										

REMARKS

T = tailings (assay pulp)

Please refer to ACZ's terms & conditions located on the reverse side of this COC.

RELINQUISHED BY:	DATE:TIME	RECEIVED BY:	DATE:TIME

December 06, 2019

Report to:

Ben Mossman
Rise Grass Valley Inc.
Suite 215 - 333 Crown Point Circle
Grass Valley, CA 95945

Bill to:

Ben Mossman
Rise Grass Valley Inc.
Suite 215 - 333 Crown Point Circle
Grass Valley, CA 95945

cc: Andy Kopania

Project ID:

ACZ Project ID: L55821

Ben Mossman:

Enclosed are the analytical results for sample(s) submitted to ACZ Laboratories, Inc. (ACZ) on November 11, 2019. This project has been assigned to ACZ's project number, L55821. Please reference this number in all future inquiries.

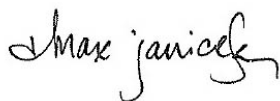
All analyses were performed according to ACZ's Quality Assurance Plan. The enclosed results relate only to the samples received under L55821. Each section of this report has been reviewed and approved by the appropriate Laboratory Supervisor, or a qualified substitute.

Except as noted, the test results for the methods and parameters listed on ACZ's current NELAC certificate letter (#ACZ) meet all requirements of NELAC.

This report shall be used or copied only in its entirety. ACZ is not responsible for the consequences arising from the use of a partial report.

All samples and sub-samples associated with this project will be disposed of after January 05, 2020. If the samples are determined to be hazardous, additional charges apply for disposal (typically \$11/sample). If you would like the samples to be held longer than ACZ's stated policy or to be returned, please contact your Project Manager or Customer Service Representative for further details and associated costs. ACZ retains analytical raw data reports for ten years.

If you have any questions or other needs, please contact your Project Manager.



Max Janicek has reviewed and approved this report.



Rise Grass Valley Inc.

Project ID:

Sample ID: Y973589

ACZ Sample ID: **L55821-01**

Date Sampled: 03/05/19 12:00

Date Received: 11/11/19

Sample Matrix: Soil

Metals Analysis

Parameter	EPA Method	Dilution	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Aluminum, total (3050)	M6010D ICP	200	24500	H	*	mg/Kg	10	50	12/02/19 20:18	kja
Antimony, total (3050)	M6020B ICP-MS	500		UH	*	mg/Kg	0.2	1	12/03/19 15:13	mfm
Arsenic, total (3050)	M6020B ICP-MS	500	1.9	H	*	mg/Kg	0.1	0.5	12/04/19 17:38	mfm
Barium, total (3050)	M6010D ICP	100	14.7	H	*	mg/Kg	0.7	4	11/26/19 5:12	kja
Beryllium, total (3050)	M6020B ICP-MS	500	0.05	BH	*	mg/Kg	0.04	0.1	11/26/19 16:13	mfm
Boron, total (3050)	M6010D ICP	100		UH	*	mg/Kg	2	10	11/26/19 5:12	kja
Cadmium, total (3050)	M6020B ICP-MS	500	0.45	H	*	mg/Kg	0.03	0.1	11/26/19 16:13	mfm
Chromium, total (3050)	M6010D ICP	100	142	H	*	mg/Kg	1	5	11/26/19 5:12	kja
Cobalt, total (3050)	M6010D ICP	100	31	H	*	mg/Kg	1	5	11/26/19 5:12	kja
Copper, total (3050)	M6010D ICP	100	99	H	*	mg/Kg	1	5	11/26/19 5:12	kja
Iron, total (3050)	M6010D ICP	200	39400	H	*	mg/Kg	6	20	12/02/19 20:18	kja
Lead, total (3050)	M6020B ICP-MS	500	0.37	H	*	mg/Kg	0.05	0.3	11/26/19 16:13	mfm
Manganese, total (3050)	M6010D ICP	200	737	H	*	mg/Kg	2	10	11/27/19 3:59	kja
Molybdenum, total (3050)	M6010D ICP	100		UH	*	mg/Kg	2	10	11/26/19 5:12	kja
Nickel, total (3050)	M6010D ICP	100	43.5	H	*	mg/Kg	0.8	4	11/26/19 5:12	kja
Selenium, total (3050)	M6020B ICP-MS	500	0.23	H	*	mg/Kg	0.05	0.1	11/26/19 16:13	mfm
Silver, total (3050)	M6020B ICP-MS	500	0.13	BH	*	mg/Kg	0.05	0.3	12/03/19 15:13	mfm
Thallium, total (3050)	M6020B ICP-MS	500		UH	*	mg/Kg	0.05	0.3	11/26/19 16:13	mfm
Vanadium, total (3050)	M6010D ICP	200	106	H	*	mg/Kg	1	5	11/27/19 3:59	kja
Zinc, total (3050)	M6010D ICP	100	49	H	*	mg/Kg	1	5	11/26/19 5:12	kja

Soil Analysis

Parameter	EPA Method	Dilution	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Solids, Percent	D2216-80	1	99.8	H	*	%	0.1	0.5	11/19/19 16:00	jms

Soil Preparation

Parameter	EPA Method	Dilution	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Digestion - Hot Plate	M3050B ICP								11/22/19 13:30	mlp
Digestion - Hot Plate	M3050B ICP-MS								11/22/19 13:30	mlp

Rise Grass Valley Inc.

Project ID:

Sample ID: Y973588

ACZ Sample ID: **L55821-02**

Date Sampled: 03/05/19 12:00

Date Received: 11/11/19

Sample Matrix: Soil

Metals Analysis

Parameter	EPA Method	Dilution	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Aluminum, total (3050)	M6010D ICP	200	26900	H	*	mg/Kg	10	50	12/02/19 20:30	kja
Antimony, total (3050)	M6020B ICP-MS	500		UH	*	mg/Kg	0.2	1	12/03/19 15:15	mfm
Arsenic, total (3050)	M6020B ICP-MS	500	0.5	H	*	mg/Kg	0.1	0.5	11/26/19 16:15	mfm
Barium, total (3050)	M6010D ICP	100	14.7	H	*	mg/Kg	0.7	4	11/26/19 5:23	kja
Beryllium, total (3050)	M6020B ICP-MS	500	0.05	BH	*	mg/Kg	0.04	0.1	11/26/19 16:15	mfm
Boron, total (3050)	M6010D ICP	100		UH	*	mg/Kg	2	10	11/26/19 5:23	kja
Cadmium, total (3050)	M6020B ICP-MS	500	0.49	H	*	mg/Kg	0.03	0.1	11/26/19 16:15	mfm
Chromium, total (3050)	M6010D ICP	100	93	H	*	mg/Kg	1	5	11/26/19 5:23	kja
Cobalt, total (3050)	M6010D ICP	100	33	H	*	mg/Kg	1	5	11/26/19 5:23	kja
Copper, total (3050)	M6010D ICP	100	98	H	*	mg/Kg	1	5	11/26/19 5:23	kja
Iron, total (3050)	M6010D ICP	200	44300	H	*	mg/Kg	6	20	12/02/19 20:30	kja
Lead, total (3050)	M6020B ICP-MS	500	0.32	H	*	mg/Kg	0.05	0.3	11/26/19 16:15	mfm
Manganese, total (3050)	M6010D ICP	200	768	H	*	mg/Kg	2	10	11/27/19 4:10	kja
Molybdenum, total (3050)	M6010D ICP	100		UH	*	mg/Kg	2	10	11/26/19 5:23	kja
Nickel, total (3050)	M6010D ICP	100	47.7	H	*	mg/Kg	0.8	4	11/26/19 5:23	kja
Selenium, total (3050)	M6020B ICP-MS	500	0.24	H	*	mg/Kg	0.05	0.1	11/26/19 16:15	mfm
Silver, total (3050)	M6020B ICP-MS	500	0.13	BH	*	mg/Kg	0.05	0.3	12/03/19 15:15	mfm
Thallium, total (3050)	M6020B ICP-MS	500		UH	*	mg/Kg	0.05	0.3	11/26/19 16:15	mfm
Vanadium, total (3050)	M6010D ICP	200	129	H	*	mg/Kg	1	5	11/27/19 4:10	kja
Zinc, total (3050)	M6010D ICP	100	50	H	*	mg/Kg	1	5	11/26/19 5:23	kja

Soil Analysis

Parameter	EPA Method	Dilution	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Solids, Percent	D2216-80	1	99.9	H	*	%	0.1	0.5	11/19/19 18:17	jms

Soil Preparation

Parameter	EPA Method	Dilution	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Digestion - Hot Plate	M3050B ICP								11/22/19 14:18	mlp
Digestion - Hot Plate	M3050B ICP-MS								11/22/19 14:18	mlp

Rise Grass Valley Inc.

Project ID:

Sample ID: Y973551

ACZ Sample ID: **L55821-03**

Date Sampled: 03/05/19 12:00

Date Received: 11/11/19

Sample Matrix: Soil

Metals Analysis

Parameter	EPA Method	Dilution	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Aluminum, total (3050)	M6010D ICP	99	19800	H	*	mg/Kg	5	20	12/02/19 20:33	kja
Antimony, total (3050)	M6020B ICP-MS	495		UH	*	mg/Kg	0.2	1	12/03/19 15:20	mfm
Arsenic, total (3050)	M6020B ICP-MS	495	0.4	BH	*	mg/Kg	0.1	0.5	11/26/19 16:20	mfm
Barium, total (3050)	M6010D ICP	99	4.9	H	*	mg/Kg	0.7	3	11/26/19 5:27	kja
Beryllium, total (3050)	M6020B ICP-MS	495	0.05	BH	*	mg/Kg	0.04	0.1	11/26/19 16:20	mfm
Boron, total (3050)	M6010D ICP	99		UH	*	mg/Kg	2	10	11/26/19 5:27	kja
Cadmium, total (3050)	M6020B ICP-MS	495	0.42	H	*	mg/Kg	0.02	0.1	11/26/19 16:20	mfm
Chromium, total (3050)	M6010D ICP	99	100	H	*	mg/Kg	1	5	11/26/19 5:27	kja
Cobalt, total (3050)	M6010D ICP	99	21	H	*	mg/Kg	1	5	11/26/19 5:27	kja
Copper, total (3050)	M6010D ICP	99	54	H	*	mg/Kg	1	5	11/26/19 5:27	kja
Iron, total (3050)	M6010D ICP	99	32900	H	*	mg/Kg	3	7	12/02/19 20:33	kja
Lead, total (3050)	M6020B ICP-MS	495	1.19	H	*	mg/Kg	0.05	0.2	11/26/19 16:20	mfm
Manganese, total (3050)	M6010D ICP	99	590	H	*	mg/Kg	1	5	11/27/19 4:14	kja
Molybdenum, total (3050)	M6010D ICP	99		UH	*	mg/Kg	2	10	11/26/19 5:27	kja
Nickel, total (3050)	M6010D ICP	99	36.0	H	*	mg/Kg	0.8	4	11/26/19 5:27	kja
Selenium, total (3050)	M6020B ICP-MS	495	0.45	H	*	mg/Kg	0.05	0.1	11/26/19 16:20	mfm
Silver, total (3050)	M6020B ICP-MS	495	0.09	BH	*	mg/Kg	0.05	0.2	12/03/19 15:20	mfm
Thallium, total (3050)	M6020B ICP-MS	495		UH	*	mg/Kg	0.05	0.2	11/26/19 16:20	mfm
Vanadium, total (3050)	M6010D ICP	99	97.8	H	*	mg/Kg	0.5	2	11/26/19 5:27	kja
Zinc, total (3050)	M6010D ICP	99	50	H	*	mg/Kg	1	5	11/26/19 5:27	kja

Soil Analysis

Parameter	EPA Method	Dilution	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Solids, Percent	D2216-80	1	100	H	*	%	0.1	0.5	11/19/19 19:25	jms

Soil Preparation

Parameter	EPA Method	Dilution	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Digestion - Hot Plate	M3050B ICP								11/22/19 15:06	mlp
Digestion - Hot Plate	M3050B ICP-MS								11/22/19 15:06	mlp

Rise Grass Valley Inc.

Project ID:

Sample ID: Y973552

ACZ Sample ID: **L55821-04**

Date Sampled: 03/05/19 12:00

Date Received: 11/11/19

Sample Matrix: Soil

Metals Analysis

Parameter	EPA Method	Dilution	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Aluminum, total (3050)	M6010D ICP	198	21700	H	*	mg/Kg	10	50	12/02/19 20:37	kja
Antimony, total (3050)	M6020B ICP-MS	495		UH	*	mg/Kg	0.2	1	12/03/19 15:22	mfm
Arsenic, total (3050)	M6020B ICP-MS	495	0.5	H	*	mg/Kg	0.1	0.5	11/26/19 16:22	mfm
Barium, total (3050)	M6010D ICP	99	6.7	H	*	mg/Kg	0.7	3	11/26/19 5:30	kja
Beryllium, total (3050)	M6020B ICP-MS	495	0.04	BH	*	mg/Kg	0.04	0.1	11/26/19 16:22	mfm
Boron, total (3050)	M6010D ICP	99		UH	*	mg/Kg	2	10	11/26/19 5:30	kja
Cadmium, total (3050)	M6020B ICP-MS	495	0.30	H	*	mg/Kg	0.02	0.1	11/26/19 16:22	mfm
Chromium, total (3050)	M6010D ICP	99	115	H	*	mg/Kg	1	5	11/26/19 5:30	kja
Cobalt, total (3050)	M6010D ICP	99	20	H	*	mg/Kg	1	5	11/26/19 5:30	kja
Copper, total (3050)	M6010D ICP	99	49	H	*	mg/Kg	1	5	11/26/19 5:30	kja
Iron, total (3050)	M6010D ICP	198	28800	H	*	mg/Kg	6	10	12/02/19 20:37	kja
Lead, total (3050)	M6020B ICP-MS	495	0.59	H	*	mg/Kg	0.05	0.2	11/26/19 16:22	mfm
Manganese, total (3050)	M6010D ICP	198	640	H	*	mg/Kg	2	10	11/27/19 4:18	kja
Molybdenum, total (3050)	M6010D ICP	99		UH	*	mg/Kg	2	10	11/26/19 5:30	kja
Nickel, total (3050)	M6010D ICP	99	41.0	H	*	mg/Kg	0.8	4	11/26/19 5:30	kja
Selenium, total (3050)	M6020B ICP-MS	495		UH	*	mg/Kg	0.05	0.1	11/26/19 16:22	mfm
Silver, total (3050)	M6020B ICP-MS	495	0.06	BH	*	mg/Kg	0.05	0.2	12/03/19 15:22	mfm
Thallium, total (3050)	M6020B ICP-MS	495		UH	*	mg/Kg	0.05	0.2	11/26/19 16:22	mfm
Vanadium, total (3050)	M6010D ICP	198	109	H	*	mg/Kg	1	5	11/27/19 4:18	kja
Zinc, total (3050)	M6010D ICP	99	43	H	*	mg/Kg	1	5	11/26/19 5:30	kja

Soil Analysis

Parameter	EPA Method	Dilution	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Solids, Percent	D2216-80	1	99.9	H	*	%	0.1	0.5	11/19/19 20:34	jms

Soil Preparation

Parameter	EPA Method	Dilution	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Digestion - Hot Plate	M3050B ICP								11/22/19 15:22	mlp
Digestion - Hot Plate	M3050B ICP-MS								11/22/19 15:22	mlp

Rise Grass Valley Inc.

Project ID:

Sample ID: Y973553

ACZ Sample ID: **L55821-05**

Date Sampled: 03/05/19 12:00

Date Received: 11/11/19

Sample Matrix: Soil

Metals Analysis

Parameter	EPA Method	Dilution	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Aluminum, total (3050)	M6010D ICP	198	26500	H	*	mg/Kg	10	50	12/02/19 20:41	kja
Antimony, total (3050)	M6020B ICP-MS	495		UH	*	mg/Kg	0.2	1	12/03/19 15:24	mfm
Arsenic, total (3050)	M6020B ICP-MS	495	0.5	H	*	mg/Kg	0.1	0.5	11/26/19 16:24	mfm
Barium, total (3050)	M6010D ICP	99	5.7	H	*	mg/Kg	0.7	3	11/26/19 5:34	kja
Beryllium, total (3050)	M6020B ICP-MS	495		UH	*	mg/Kg	0.04	0.1	11/26/19 16:24	mfm
Boron, total (3050)	M6010D ICP	99		UH	*	mg/Kg	2	10	11/26/19 5:34	kja
Cadmium, total (3050)	M6020B ICP-MS	495	0.47	H	*	mg/Kg	0.02	0.1	11/26/19 16:24	mfm
Chromium, total (3050)	M6010D ICP	99	160	H	*	mg/Kg	1	5	11/26/19 5:34	kja
Cobalt, total (3050)	M6010D ICP	99	23	H	*	mg/Kg	1	5	11/26/19 5:34	kja
Copper, total (3050)	M6010D ICP	99	64	H	*	mg/Kg	1	5	11/26/19 5:34	kja
Iron, total (3050)	M6010D ICP	198	35200	H	*	mg/Kg	6	10	12/02/19 20:41	kja
Lead, total (3050)	M6020B ICP-MS	495	0.96	H	*	mg/Kg	0.05	0.2	11/26/19 16:24	mfm
Manganese, total (3050)	M6010D ICP	198	603	H	*	mg/Kg	2	10	11/27/19 4:21	kja
Molybdenum, total (3050)	M6010D ICP	99		UH	*	mg/Kg	2	10	11/26/19 5:34	kja
Nickel, total (3050)	M6010D ICP	99	64.6	H	*	mg/Kg	0.8	4	11/26/19 5:34	kja
Selenium, total (3050)	M6020B ICP-MS	495	0.10	H	*	mg/Kg	0.05	0.1	11/26/19 16:24	mfm
Silver, total (3050)	M6020B ICP-MS	495	0.08	BH	*	mg/Kg	0.05	0.2	12/03/19 15:24	mfm
Thallium, total (3050)	M6020B ICP-MS	495		UH	*	mg/Kg	0.05	0.2	11/26/19 16:24	mfm
Vanadium, total (3050)	M6010D ICP	198	123	H	*	mg/Kg	1	5	11/27/19 4:21	kja
Zinc, total (3050)	M6010D ICP	99	46	H	*	mg/Kg	1	5	11/26/19 5:34	kja

Soil Analysis

Parameter	EPA Method	Dilution	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Solids, Percent	D2216-80	1	99.9	H	*	%	0.1	0.5	11/19/19 21:42	jms

Soil Preparation

Parameter	EPA Method	Dilution	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Digestion - Hot Plate	M3050B ICP								11/22/19 15:38	mlp
Digestion - Hot Plate	M3050B ICP-MS								11/22/19 15:38	mlp

Rise Grass Valley Inc.

Project ID:

Sample ID: Y973554

ACZ Sample ID: **L55821-06**

Date Sampled: 03/05/19 12:00

Date Received: 11/11/19

Sample Matrix: Soil

Metals Analysis

Parameter	EPA Method	Dilution	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Aluminum, total (3050)	M6010D ICP	198	21900	H	*	mg/Kg	10	50	12/02/19 20:53	kja
Antimony, total (3050)	M6020B ICP-MS	495		UH	*	mg/Kg	0.2	1	12/03/19 15:29	mfm
Arsenic, total (3050)	M6020B ICP-MS	495	1.3	H	*	mg/Kg	0.1	0.5	11/26/19 16:56	mfm
Barium, total (3050)	M6010D ICP	99	4.1	H	*	mg/Kg	0.7	3	11/26/19 5:45	kja
Beryllium, total (3050)	M6020B ICP-MS	495		UH	*	mg/Kg	0.04	0.1	11/26/19 16:56	mfm
Boron, total (3050)	M6010D ICP	99		UH	*	mg/Kg	2	10	11/26/19 5:45	kja
Cadmium, total (3050)	M6020B ICP-MS	495	0.40	H	*	mg/Kg	0.02	0.1	11/26/19 16:56	mfm
Chromium, total (3050)	M6010D ICP	99	81	H	*	mg/Kg	1	5	11/26/19 5:45	kja
Cobalt, total (3050)	M6010D ICP	99	23	H	*	mg/Kg	1	5	11/26/19 5:45	kja
Copper, total (3050)	M6010D ICP	99	75	H	*	mg/Kg	1	5	11/26/19 5:45	kja
Iron, total (3050)	M6010D ICP	198	35100	H	*	mg/Kg	6	10	12/02/19 20:53	kja
Lead, total (3050)	M6020B ICP-MS	495	0.65	H	*	mg/Kg	0.05	0.2	11/26/19 16:56	mfm
Manganese, total (3050)	M6010D ICP	198	550	H	*	mg/Kg	2	10	11/27/19 4:32	kja
Molybdenum, total (3050)	M6010D ICP	99		UH	*	mg/Kg	2	10	11/26/19 5:45	kja
Nickel, total (3050)	M6010D ICP	99	40.9	H	*	mg/Kg	0.8	4	11/26/19 5:45	kja
Selenium, total (3050)	M6020B ICP-MS	495	0.25	H	*	mg/Kg	0.05	0.1	11/26/19 16:56	mfm
Silver, total (3050)	M6020B ICP-MS	495	0.09	BH	*	mg/Kg	0.05	0.2	12/03/19 15:29	mfm
Thallium, total (3050)	M6020B ICP-MS	495		UH	*	mg/Kg	0.05	0.2	11/26/19 16:56	mfm
Vanadium, total (3050)	M6010D ICP	198	102	H	*	mg/Kg	1	5	11/27/19 4:32	kja
Zinc, total (3050)	M6010D ICP	99	48	H	*	mg/Kg	1	5	11/26/19 5:45	kja

Soil Analysis

Parameter	EPA Method	Dilution	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Solids, Percent	D2216-80	1	99.9	H	*	%	0.1	0.5	11/19/19 22:51	jms

Soil Preparation

Parameter	EPA Method	Dilution	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Digestion - Hot Plate	M3050B ICP								11/22/19 15:54	mlp
Digestion - Hot Plate	M3050B ICP-MS								11/22/19 15:54	mlp

Rise Grass Valley Inc.

Project ID:

Sample ID: Y973555

ACZ Sample ID: **L55821-07**

Date Sampled: 03/05/19 12:00

Date Received: 11/11/19

Sample Matrix: Soil

Metals Analysis

Parameter	EPA Method	Dilution	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Aluminum, total (3050)	M6010D ICP	198	22000	H	*	mg/Kg	10	50	12/02/19 20:57	kja
Antimony, total (3050)	M6020B ICP-MS	495		UH	*	mg/Kg	0.2	1	12/03/19 15:31	mfm
Arsenic, total (3050)	M6020B ICP-MS	495	4.3	H	*	mg/Kg	0.1	0.5	12/04/19 17:45	mfm
Barium, total (3050)	M6010D ICP	99	4.7	H	*	mg/Kg	0.7	3	11/26/19 5:49	kja
Beryllium, total (3050)	M6020B ICP-MS	495	0.05	BH	*	mg/Kg	0.04	0.1	11/26/19 16:58	mfm
Boron, total (3050)	M6010D ICP	99		UH	*	mg/Kg	2	10	11/26/19 5:49	kja
Cadmium, total (3050)	M6020B ICP-MS	495	0.38	H	*	mg/Kg	0.02	0.1	11/26/19 16:58	mfm
Chromium, total (3050)	M6010D ICP	99	150	H	*	mg/Kg	1	5	11/26/19 5:49	kja
Cobalt, total (3050)	M6010D ICP	99	24	H	*	mg/Kg	1	5	11/26/19 5:49	kja
Copper, total (3050)	M6010D ICP	99	58	H	*	mg/Kg	1	5	11/26/19 5:49	kja
Iron, total (3050)	M6010D ICP	198	32100	H	*	mg/Kg	6	10	12/02/19 20:57	kja
Lead, total (3050)	M6020B ICP-MS	495	0.74	H	*	mg/Kg	0.05	0.2	11/26/19 16:58	mfm
Manganese, total (3050)	M6010D ICP	198	557	H	*	mg/Kg	2	10	11/27/19 4:36	kja
Molybdenum, total (3050)	M6010D ICP	99		UH	*	mg/Kg	2	10	11/26/19 5:49	kja
Nickel, total (3050)	M6010D ICP	99	63.3	H	*	mg/Kg	0.8	4	11/26/19 5:49	kja
Selenium, total (3050)	M6020B ICP-MS	495	0.12	H	*	mg/Kg	0.05	0.1	11/26/19 16:58	mfm
Silver, total (3050)	M6020B ICP-MS	495	0.08	BH	*	mg/Kg	0.05	0.2	12/03/19 15:31	mfm
Thallium, total (3050)	M6020B ICP-MS	495		UH	*	mg/Kg	0.05	0.2	11/26/19 16:58	mfm
Vanadium, total (3050)	M6010D ICP	198	109	H	*	mg/Kg	1	5	11/27/19 4:36	kja
Zinc, total (3050)	M6010D ICP	99	43	H	*	mg/Kg	1	5	11/26/19 5:49	kja

Soil Analysis

Parameter	EPA Method	Dilution	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Solids, Percent	D2216-80	1	99.9	H	*	%	0.1	0.5	11/19/19 23:59	jms

Soil Preparation

Parameter	EPA Method	Dilution	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Digestion - Hot Plate	M3050B ICP								11/22/19 16:10	mlp
Digestion - Hot Plate	M3050B ICP-MS								11/22/19 16:10	mlp

Rise Grass Valley Inc.

Project ID:

Sample ID: Y973556

ACZ Sample ID: **L55821-08**

Date Sampled: 03/05/19 12:00

Date Received: 11/11/19

Sample Matrix: Soil

Metals Analysis

Parameter	EPA Method	Dilution	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Aluminum, total (3050)	M6010D ICP	200	25000	H	*	mg/Kg	10	50	12/02/19 21:00	kja
Antimony, total (3050)	M6020B ICP-MS	500		UH	*	mg/Kg	0.2	1	12/03/19 15:34	mfm
Arsenic, total (3050)	M6020B ICP-MS	500	1.3	H	*	mg/Kg	0.1	0.5	12/04/19 17:49	mfm
Barium, total (3050)	M6010D ICP	100	5.1	H	*	mg/Kg	0.7	4	11/26/19 5:53	kja
Beryllium, total (3050)	M6020B ICP-MS	500	0.07	BH	*	mg/Kg	0.04	0.1	11/26/19 16:59	mfm
Boron, total (3050)	M6010D ICP	100		UH	*	mg/Kg	2	10	11/26/19 5:53	kja
Cadmium, total (3050)	M6020B ICP-MS	500	0.40	H	*	mg/Kg	0.03	0.1	11/26/19 16:59	mfm
Chromium, total (3050)	M6010D ICP	100	156	H	*	mg/Kg	1	5	11/26/19 5:53	kja
Cobalt, total (3050)	M6010D ICP	100	25	H	*	mg/Kg	1	5	11/26/19 5:53	kja
Copper, total (3050)	M6010D ICP	100	58	H	*	mg/Kg	1	5	11/26/19 5:53	kja
Iron, total (3050)	M6010D ICP	200	35800	H	*	mg/Kg	6	20	12/02/19 21:00	kja
Lead, total (3050)	M6020B ICP-MS	500	0.69	H	*	mg/Kg	0.05	0.3	11/26/19 16:59	mfm
Manganese, total (3050)	M6010D ICP	200	633	H	*	mg/Kg	2	10	11/27/19 4:40	kja
Molybdenum, total (3050)	M6010D ICP	100		UH	*	mg/Kg	2	10	11/26/19 5:53	kja
Nickel, total (3050)	M6010D ICP	100	54.1	H	*	mg/Kg	0.8	4	11/26/19 5:53	kja
Selenium, total (3050)	M6020B ICP-MS	500	0.12	H	*	mg/Kg	0.05	0.1	11/26/19 16:59	mfm
Silver, total (3050)	M6020B ICP-MS	500	0.08	BH	*	mg/Kg	0.05	0.3	12/03/19 15:34	mfm
Thallium, total (3050)	M6020B ICP-MS	500		UH	*	mg/Kg	0.05	0.3	11/26/19 16:59	mfm
Vanadium, total (3050)	M6010D ICP	200	117	H	*	mg/Kg	1	5	11/27/19 4:40	kja
Zinc, total (3050)	M6010D ICP	100	48	H	*	mg/Kg	1	5	11/26/19 5:53	kja

Soil Analysis

Parameter	EPA Method	Dilution	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Solids, Percent	D2216-80	1	99.9	H	*	%	0.1	0.5	11/20/19 1:08	jms

Soil Preparation

Parameter	EPA Method	Dilution	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Digestion - Hot Plate	M3050B ICP								11/22/19 16:26	mlp
Digestion - Hot Plate	M3050B ICP-MS								11/22/19 16:26	mlp

Rise Grass Valley Inc.

Project ID:

Sample ID: Y973557

ACZ Sample ID: **L55821-09**

Date Sampled: 03/05/19 12:00

Date Received: 11/11/19

Sample Matrix: Soil

Metals Analysis

Parameter	EPA Method	Dilution	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Aluminum, total (3050)	M6010D ICP	200	33100	H	*	mg/Kg	10	50	12/02/19 21:04	kja
Antimony, total (3050)	M6020B ICP-MS	500		UH	*	mg/Kg	0.2	1	12/03/19 15:36	mfm
Arsenic, total (3050)	M6020B ICP-MS	500	7.0	H	*	mg/Kg	0.1	0.5	12/04/19 17:54	mfm
Barium, total (3050)	M6010D ICP	100	11.9	H	*	mg/Kg	0.7	4	11/26/19 5:56	kja
Beryllium, total (3050)	M6020B ICP-MS	500	0.13	H	*	mg/Kg	0.04	0.1	11/26/19 17:01	mfm
Boron, total (3050)	M6010D ICP	100		UH	*	mg/Kg	2	10	11/26/19 5:56	kja
Cadmium, total (3050)	M6020B ICP-MS	500	0.41	H	*	mg/Kg	0.03	0.1	11/26/19 17:01	mfm
Chromium, total (3050)	M6010D ICP	100	126	H	*	mg/Kg	1	5	11/26/19 5:56	kja
Cobalt, total (3050)	M6010D ICP	100	31	H	*	mg/Kg	1	5	11/26/19 5:56	kja
Copper, total (3050)	M6010D ICP	100	79	H	*	mg/Kg	1	5	11/26/19 5:56	kja
Iron, total (3050)	M6010D ICP	200	51200	H	*	mg/Kg	6	20	12/02/19 21:04	kja
Lead, total (3050)	M6020B ICP-MS	500	0.88	H	*	mg/Kg	0.05	0.3	11/26/19 17:01	mfm
Manganese, total (3050)	M6010D ICP	200	933	H	*	mg/Kg	2	10	11/27/19 4:44	kja
Molybdenum, total (3050)	M6010D ICP	100		UH	*	mg/Kg	2	10	11/26/19 5:56	kja
Nickel, total (3050)	M6010D ICP	100	48.6	H	*	mg/Kg	0.8	4	11/26/19 5:56	kja
Selenium, total (3050)	M6020B ICP-MS	500	0.36	H	*	mg/Kg	0.05	0.1	11/26/19 17:01	mfm
Silver, total (3050)	M6020B ICP-MS	500	0.11	BH	*	mg/Kg	0.05	0.3	12/03/19 15:36	mfm
Thallium, total (3050)	M6020B ICP-MS	500		UH	*	mg/Kg	0.05	0.3	11/26/19 17:01	mfm
Vanadium, total (3050)	M6010D ICP	200	191	H	*	mg/Kg	1	5	11/27/19 4:44	kja
Zinc, total (3050)	M6010D ICP	100	72	H	*	mg/Kg	1	5	11/26/19 5:56	kja

Soil Analysis

Parameter	EPA Method	Dilution	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Solids, Percent	D2216-80	1	99.9	H	*	%	0.1	0.5	11/20/19 2:17	jms

Soil Preparation

Parameter	EPA Method	Dilution	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Digestion - Hot Plate	M3050B ICP								11/22/19 16:42	mlp
Digestion - Hot Plate	M3050B ICP-MS								11/22/19 16:42	mlp

Rise Grass Valley Inc.

Project ID:

Sample ID: Y973558

ACZ Sample ID: **L55821-10**

Date Sampled: 03/05/19 12:00

Date Received: 11/11/19

Sample Matrix: Soil

Metals Analysis

Parameter	EPA Method	Dilution	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Aluminum, total (3050)	M6010D ICP	200	25000	H	*	mg/Kg	10	50	12/02/19 21:08	kja
Antimony, total (3050)	M6020B ICP-MS	500		UH	*	mg/Kg	0.2	1	12/03/19 15:38	mfm
Arsenic, total (3050)	M6020B ICP-MS	500	3.1	H	*	mg/Kg	0.1	0.5	11/26/19 17:03	mfm
Barium, total (3050)	M6010D ICP	100	4.5	H	*	mg/Kg	0.7	4	11/26/19 6:00	kja
Beryllium, total (3050)	M6020B ICP-MS	500	0.05	BH	*	mg/Kg	0.04	0.1	11/26/19 17:03	mfm
Boron, total (3050)	M6010D ICP	100		UH	*	mg/Kg	2	10	11/26/19 6:00	kja
Cadmium, total (3050)	M6020B ICP-MS	500	0.34	H	*	mg/Kg	0.03	0.1	11/26/19 17:03	mfm
Chromium, total (3050)	M6010D ICP	100	82	H	*	mg/Kg	1	5	11/26/19 6:00	kja
Cobalt, total (3050)	M6010D ICP	100	25	H	*	mg/Kg	1	5	11/26/19 6:00	kja
Copper, total (3050)	M6010D ICP	100	61	H	*	mg/Kg	1	5	11/26/19 6:00	kja
Iron, total (3050)	M6010D ICP	200	38200	H	*	mg/Kg	6	20	12/02/19 21:08	kja
Lead, total (3050)	M6020B ICP-MS	500	0.73	H	*	mg/Kg	0.05	0.3	11/26/19 17:03	mfm
Manganese, total (3050)	M6010D ICP	200	598	H	*	mg/Kg	2	10	11/27/19 4:47	kja
Molybdenum, total (3050)	M6010D ICP	100		UH	*	mg/Kg	2	10	11/26/19 6:00	kja
Nickel, total (3050)	M6010D ICP	100	36.8	H	*	mg/Kg	0.8	4	11/26/19 6:00	kja
Selenium, total (3050)	M6020B ICP-MS	500	0.27	H	*	mg/Kg	0.05	0.1	11/26/19 17:03	mfm
Silver, total (3050)	M6020B ICP-MS	500	0.08	BH	*	mg/Kg	0.05	0.3	12/03/19 15:38	mfm
Thallium, total (3050)	M6020B ICP-MS	500		UH	*	mg/Kg	0.05	0.3	11/26/19 17:03	mfm
Vanadium, total (3050)	M6010D ICP	200	114	H	*	mg/Kg	1	5	11/27/19 4:47	kja
Zinc, total (3050)	M6010D ICP	100	56	H	*	mg/Kg	1	5	11/26/19 6:00	kja

Soil Analysis

Parameter	EPA Method	Dilution	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Solids, Percent	D2216-80	1	99.9	H	*	%	0.1	0.5	11/20/19 3:25	jms

Soil Preparation

Parameter	EPA Method	Dilution	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Digestion - Hot Plate	M3050B ICP								11/22/19 10:34	mlp
Digestion - Hot Plate	M3050B ICP-MS								11/22/19 10:34	mlp

Rise Grass Valley Inc.

Project ID:

Sample ID: Y973586

ACZ Sample ID: **L55821-11**

Date Sampled: 03/05/19 12:00

Date Received: 11/11/19

Sample Matrix: Soil

Metals Analysis

Parameter	EPA Method	Dilution	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Aluminum, total (3050)	M6010D ICP	1000	23500	H	*	mg/Kg	50	300	12/02/19 21:12	kja
Antimony, total (3050)	M6020B ICP-MS	500		UH	*	mg/Kg	0.2	1	12/03/19 15:40	mfm
Arsenic, total (3050)	M6020B ICP-MS	500	7.4	H	*	mg/Kg	0.1	0.5	11/26/19 17:05	mfm
Barium, total (3050)	M6010D ICP	100	0.9	BH	*	mg/Kg	0.7	4	11/26/19 6:04	kja
Beryllium, total (3050)	M6020B ICP-MS	500		UH	*	mg/Kg	0.04	0.1	11/26/19 17:05	mfm
Boron, total (3050)	M6010D ICP	100	31	H	*	mg/Kg	2	10	11/26/19 6:04	kja
Cadmium, total (3050)	M6020B ICP-MS	500		UH	*	mg/Kg	0.03	0.1	11/26/19 17:05	mfm
Chromium, total (3050)	M6010D ICP	100	319	H	*	mg/Kg	1	5	11/26/19 6:04	kja
Cobalt, total (3050)	M6010D ICP	100	99	H	*	mg/Kg	1	5	11/26/19 6:04	kja
Copper, total (3050)	M6010D ICP	100	75	H	*	mg/Kg	1	5	11/26/19 6:04	kja
Iron, total (3050)	M6010D ICP	1000	59200	H	*	mg/Kg	30	80	12/02/19 21:12	kja
Lead, total (3050)	M6020B ICP-MS	500	0.53	H	*	mg/Kg	0.05	0.3	11/26/19 17:05	mfm
Manganese, total (3050)	M6010D ICP	1000	830	H	*	mg/Kg	10	50	11/27/19 4:51	kja
Molybdenum, total (3050)	M6010D ICP	100		UH	*	mg/Kg	2	10	11/26/19 6:04	kja
Nickel, total (3050)	M6010D ICP	1000	1400	H	*	mg/Kg	8	40	11/27/19 4:51	kja
Selenium, total (3050)	M6020B ICP-MS	500	0.23	H	*	mg/Kg	0.05	0.1	11/26/19 17:05	mfm
Silver, total (3050)	M6020B ICP-MS	500		UH	*	mg/Kg	0.05	0.3	12/03/19 15:40	mfm
Thallium, total (3050)	M6020B ICP-MS	500		UH	*	mg/Kg	0.05	0.3	11/26/19 17:05	mfm
Vanadium, total (3050)	M6010D ICP	100	18.0	H	*	mg/Kg	0.5	3	11/26/19 6:04	kja
Zinc, total (3050)	M6010D ICP	100	20	H	*	mg/Kg	1	5	11/26/19 6:04	kja

Soil Analysis

Parameter	EPA Method	Dilution	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Solids, Percent	D2216-80	1	99.7	H	*	%	0.1	0.5	11/20/19 4:34	jms

Soil Preparation

Parameter	EPA Method	Dilution	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Digestion - Hot Plate	M3050B ICP								11/22/19 10:50	mlp
Digestion - Hot Plate	M3050B ICP-MS								11/22/19 10:50	mlp

Rise Grass Valley Inc.

Project ID:

Sample ID: Y973559

ACZ Sample ID: **L55821-12**

Date Sampled: 03/05/19 12:00

Date Received: 11/11/19

Sample Matrix: Soil

Metals Analysis

Parameter	EPA Method	Dilution	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Aluminum, total (3050)	M6010D ICP	200	16400	H	*	mg/Kg	10	50	12/02/19 21:16	kja
Antimony, total (3050)	M6020B ICP-MS	500		UH	*	mg/Kg	0.2	1	12/03/19 15:41	mfm
Arsenic, total (3050)	M6020B ICP-MS	500	1.1	H	*	mg/Kg	0.1	0.5	12/04/19 17:56	mfm
Barium, total (3050)	M6010D ICP	100	11.2	H	*	mg/Kg	0.7	4	11/26/19 6:08	kja
Beryllium, total (3050)	M6020B ICP-MS	500	0.11	H	*	mg/Kg	0.04	0.1	11/26/19 17:07	mfm
Boron, total (3050)	M6010D ICP	100		UH	*	mg/Kg	2	10	11/26/19 6:08	kja
Cadmium, total (3050)	M6020B ICP-MS	500	0.68	H	*	mg/Kg	0.03	0.1	11/26/19 17:07	mfm
Chromium, total (3050)	M6010D ICP	100	74	H	*	mg/Kg	1	5	11/26/19 6:08	kja
Cobalt, total (3050)	M6010D ICP	100	17	H	*	mg/Kg	1	5	11/26/19 6:08	kja
Copper, total (3050)	M6010D ICP	100	60	H	*	mg/Kg	1	5	11/26/19 6:08	kja
Iron, total (3050)	M6010D ICP	200	32800	H	*	mg/Kg	6	20	12/02/19 21:16	kja
Lead, total (3050)	M6020B ICP-MS	500	2.71	H	*	mg/Kg	0.05	0.3	11/26/19 17:07	mfm
Manganese, total (3050)	M6010D ICP	200	541	H	*	mg/Kg	2	10	11/27/19 4:55	kja
Molybdenum, total (3050)	M6010D ICP	100		UH	*	mg/Kg	2	10	11/26/19 6:08	kja
Nickel, total (3050)	M6010D ICP	100	30.2	H	*	mg/Kg	0.8	4	11/26/19 6:08	kja
Selenium, total (3050)	M6020B ICP-MS	500	1.89	H	*	mg/Kg	0.05	0.1	11/26/19 17:07	mfm
Silver, total (3050)	M6020B ICP-MS	500	0.20	BH	*	mg/Kg	0.05	0.3	12/03/19 15:41	mfm
Thallium, total (3050)	M6020B ICP-MS	500		UH	*	mg/Kg	0.05	0.3	11/26/19 17:07	mfm
Vanadium, total (3050)	M6010D ICP	200	102	H	*	mg/Kg	1	5	11/27/19 4:55	kja
Zinc, total (3050)	M6010D ICP	100	72	H	*	mg/Kg	1	5	11/26/19 6:08	kja

Soil Analysis

Parameter	EPA Method	Dilution	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Solids, Percent	D2216-80	1	99.9	H	*	%	0.1	0.5	11/20/19 5:42	jms

Soil Preparation

Parameter	EPA Method	Dilution	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Digestion - Hot Plate	M3050B ICP								11/22/19 11:06	mlp
Digestion - Hot Plate	M3050B ICP-MS								11/22/19 11:06	mlp

Rise Grass Valley Inc.

Project ID:

Sample ID: Y973560

ACZ Sample ID: **L55821-13**

Date Sampled: 03/05/19 12:00

Date Received: 11/11/19

Sample Matrix: Soil

Metals Analysis

Parameter	EPA Method	Dilution	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Aluminum, total (3050)	M6010D ICP	200	26600	H	*	mg/Kg	10	50	12/02/19 21:20	kja
Antimony, total (3050)	M6020B ICP-MS	500		UH	*	mg/Kg	0.2	1	12/03/19 15:43	mfm
Arsenic, total (3050)	M6020B ICP-MS	500	5.6	H	*	mg/Kg	0.1	0.5	12/04/19 17:58	mfm
Barium, total (3050)	M6010D ICP	100	31.1	H	*	mg/Kg	0.7	4	11/26/19 6:11	kja
Beryllium, total (3050)	M6020B ICP-MS	500	0.12	H	*	mg/Kg	0.04	0.1	11/26/19 17:08	mfm
Boron, total (3050)	M6010D ICP	100		UH	*	mg/Kg	2	10	11/26/19 6:11	kja
Cadmium, total (3050)	M6020B ICP-MS	500	0.60	H	*	mg/Kg	0.03	0.1	11/26/19 17:08	mfm
Chromium, total (3050)	M6010D ICP	100	80	H	*	mg/Kg	1	5	11/26/19 6:11	kja
Cobalt, total (3050)	M6010D ICP	100	26	H	*	mg/Kg	1	5	11/26/19 6:11	kja
Copper, total (3050)	M6010D ICP	100	75	H	*	mg/Kg	1	5	11/26/19 6:11	kja
Iron, total (3050)	M6010D ICP	200	42000	H	*	mg/Kg	6	20	12/02/19 21:20	kja
Lead, total (3050)	M6020B ICP-MS	500	1.69	H	*	mg/Kg	0.05	0.3	11/26/19 17:08	mfm
Manganese, total (3050)	M6010D ICP	200	744	H	*	mg/Kg	2	10	11/27/19 4:58	kja
Molybdenum, total (3050)	M6010D ICP	100		UH	*	mg/Kg	2	10	11/26/19 6:11	kja
Nickel, total (3050)	M6010D ICP	100	35.9	H	*	mg/Kg	0.8	4	11/26/19 6:11	kja
Selenium, total (3050)	M6020B ICP-MS	500	0.69	H	*	mg/Kg	0.05	0.1	11/26/19 17:08	mfm
Silver, total (3050)	M6020B ICP-MS	500	0.13	BH	*	mg/Kg	0.05	0.3	12/03/19 15:43	mfm
Thallium, total (3050)	M6020B ICP-MS	500		UH	*	mg/Kg	0.05	0.3	11/26/19 17:08	mfm
Vanadium, total (3050)	M6010D ICP	200	139	H	*	mg/Kg	1	5	11/27/19 4:58	kja
Zinc, total (3050)	M6010D ICP	100	60	H	*	mg/Kg	1	5	11/26/19 6:11	kja

Soil Analysis

Parameter	EPA Method	Dilution	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Solids, Percent	D2216-80	1	99.9	H	*	%	0.1	0.5	11/20/19 6:51	jms

Soil Preparation

Parameter	EPA Method	Dilution	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Digestion - Hot Plate	M3050B ICP								11/22/19 11:22	mlp
Digestion - Hot Plate	M3050B ICP-MS								11/22/19 11:22	mlp

Rise Grass Valley Inc.

Project ID:

Sample ID: Y973561

ACZ Sample ID: **L55821-14**

Date Sampled: 03/05/19 12:00

Date Received: 11/11/19

Sample Matrix: Soil

Metals Analysis

Parameter	EPA Method	Dilution	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Aluminum, total (3050)	M6010D ICP	200	23000	H	*	mg/Kg	10	50	12/02/19 21:23	kja
Antimony, total (3050)	M6020B ICP-MS	500		UH	*	mg/Kg	0.2	1	12/03/19 15:45	mfm
Arsenic, total (3050)	M6020B ICP-MS	500	1.0	H	*	mg/Kg	0.1	0.5	11/26/19 17:10	mfm
Barium, total (3050)	M6010D ICP	100	25.6	H	*	mg/Kg	0.7	4	11/26/19 6:15	kja
Beryllium, total (3050)	M6020B ICP-MS	500	0.09	BH	*	mg/Kg	0.04	0.1	11/26/19 17:10	mfm
Boron, total (3050)	M6010D ICP	100		UH	*	mg/Kg	2	10	11/26/19 6:15	kja
Cadmium, total (3050)	M6020B ICP-MS	500	0.29	H	*	mg/Kg	0.03	0.1	11/26/19 17:10	mfm
Chromium, total (3050)	M6010D ICP	100	63	H	*	mg/Kg	1	5	11/26/19 6:15	kja
Cobalt, total (3050)	M6010D ICP	100	19	H	*	mg/Kg	1	5	11/26/19 6:15	kja
Copper, total (3050)	M6010D ICP	100	63	H	*	mg/Kg	1	5	11/26/19 6:15	kja
Iron, total (3050)	M6010D ICP	200	31200	H	*	mg/Kg	6	20	12/02/19 21:23	kja
Lead, total (3050)	M6020B ICP-MS	500	1.39	H	*	mg/Kg	0.05	0.3	11/26/19 17:10	mfm
Manganese, total (3050)	M6010D ICP	200	527	H	*	mg/Kg	2	10	11/27/19 5:02	kja
Molybdenum, total (3050)	M6010D ICP	100		UH	*	mg/Kg	2	10	11/26/19 6:15	kja
Nickel, total (3050)	M6010D ICP	100	26.0	H	*	mg/Kg	0.8	4	11/26/19 6:15	kja
Selenium, total (3050)	M6020B ICP-MS	500	0.43	H	*	mg/Kg	0.05	0.1	11/26/19 17:10	mfm
Silver, total (3050)	M6020B ICP-MS	500	0.10	BH	*	mg/Kg	0.05	0.3	12/03/19 15:45	mfm
Thallium, total (3050)	M6020B ICP-MS	500		UH	*	mg/Kg	0.05	0.3	11/26/19 17:10	mfm
Vanadium, total (3050)	M6010D ICP	200	99	H	*	mg/Kg	1	5	11/27/19 5:02	kja
Zinc, total (3050)	M6010D ICP	100	50	H	*	mg/Kg	1	5	11/26/19 6:15	kja

Soil Analysis

Parameter	EPA Method	Dilution	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Solids, Percent	D2216-80	1	99.9	H	*	%	0.1	0.5	11/20/19 7:59	jms

Soil Preparation

Parameter	EPA Method	Dilution	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Digestion - Hot Plate	M3050B ICP								11/22/19 11:38	mlp
Digestion - Hot Plate	M3050B ICP-MS								11/22/19 11:38	mlp

Rise Grass Valley Inc.

Project ID:

Sample ID: Y973562

ACZ Sample ID: **L55821-15**

Date Sampled: 03/05/19 12:00

Date Received: 11/11/19

Sample Matrix: Soil

Metals Analysis

Parameter	EPA Method	Dilution	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Aluminum, total (3050)	M6010D ICP	100	6620	H	*	mg/Kg	5	30	12/02/19 21:27	kja
Antimony, total (3050)	M6020B ICP-MS	500		UH	*	mg/Kg	0.2	1	11/26/19 17:16	mfm
Arsenic, total (3050)	M6020B ICP-MS	500	0.6	H	*	mg/Kg	0.1	0.5	11/26/19 17:16	mfm
Barium, total (3050)	M6010D ICP	100	14.2	H	*	mg/Kg	0.7	4	11/26/19 6:19	kja
Beryllium, total (3050)	M6020B ICP-MS	500	0.07	BH	*	mg/Kg	0.04	0.1	11/26/19 17:16	mfm
Boron, total (3050)	M6010D ICP	100		UH	*	mg/Kg	2	10	11/26/19 6:19	kja
Cadmium, total (3050)	M6020B ICP-MS	500	0.47	H	*	mg/Kg	0.03	0.1	11/26/19 17:16	mfm
Chromium, total (3050)	M6010D ICP	100	21	H	*	mg/Kg	1	5	11/26/19 6:19	kja
Cobalt, total (3050)	M6010D ICP	100	6	H	*	mg/Kg	1	5	11/26/19 6:19	kja
Copper, total (3050)	M6010D ICP	100	26	H	*	mg/Kg	1	5	11/26/19 6:19	kja
Iron, total (3050)	M6010D ICP	100	11000	H	*	mg/Kg	3	8	12/02/19 21:27	kja
Lead, total (3050)	M6020B ICP-MS	500	0.88	H	*	mg/Kg	0.05	0.3	11/26/19 17:16	mfm
Manganese, total (3050)	M6010D ICP	100	276	H	*	mg/Kg	1	5	11/27/19 5:06	kja
Molybdenum, total (3050)	M6010D ICP	100		UH	*	mg/Kg	2	10	11/26/19 6:19	kja
Nickel, total (3050)	M6010D ICP	100	10.2	H	*	mg/Kg	0.8	4	11/26/19 6:19	kja
Selenium, total (3050)	M6020B ICP-MS	500	0.85	H	*	mg/Kg	0.05	0.1	11/26/19 17:16	mfm
Silver, total (3050)	M6020B ICP-MS	500	0.11	BH	*	mg/Kg	0.05	0.3	12/04/19 17:59	mfm
Thallium, total (3050)	M6020B ICP-MS	500		UH	*	mg/Kg	0.05	0.3	11/26/19 17:16	mfm
Vanadium, total (3050)	M6010D ICP	100	31.0	H	*	mg/Kg	0.5	3	11/26/19 6:19	kja
Zinc, total (3050)	M6010D ICP	100	42	H	*	mg/Kg	1	5	11/26/19 6:19	kja

Soil Analysis

Parameter	EPA Method	Dilution	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Solids, Percent	D2216-80	1	100	H	*	%	0.1	0.5	11/20/19 9:08	jms

Soil Preparation

Parameter	EPA Method	Dilution	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Digestion - Hot Plate	M3050B ICP								11/22/19 11:54	mlp
Digestion - Hot Plate	M3050B ICP-MS								11/22/19 11:54	mlp

Rise Grass Valley Inc.

Project ID:

Sample ID: Y973563

ACZ Sample ID: **L55821-16**

Date Sampled: 03/05/19 12:00

Date Received: 11/11/19

Sample Matrix: Soil

Metals Analysis

Parameter	EPA Method	Dilution	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Aluminum, total (3050)	M6010D ICP	100	16700	H	*	mg/Kg	5	30	12/02/19 21:39	kja
Antimony, total (3050)	M6020B ICP-MS	500		UH	*	mg/Kg	0.2	1	11/26/19 17:17	mfm
Arsenic, total (3050)	M6020B ICP-MS	500	0.6	H	*	mg/Kg	0.1	0.5	11/26/19 17:17	mfm
Barium, total (3050)	M6010D ICP	100	48.0	H	*	mg/Kg	0.7	4	11/26/19 6:30	kja
Beryllium, total (3050)	M6020B ICP-MS	500	0.07	BH	*	mg/Kg	0.04	0.1	11/26/19 17:17	mfm
Boron, total (3050)	M6010D ICP	100		UH	*	mg/Kg	2	10	11/26/19 6:30	kja
Cadmium, total (3050)	M6020B ICP-MS	500	0.52	H	*	mg/Kg	0.03	0.1	11/26/19 17:17	mfm
Chromium, total (3050)	M6010D ICP	100	35	H	*	mg/Kg	1	5	11/26/19 6:30	kja
Cobalt, total (3050)	M6010D ICP	100	12	H	*	mg/Kg	1	5	11/26/19 6:30	kja
Copper, total (3050)	M6010D ICP	100	27	H	*	mg/Kg	1	5	11/26/19 6:30	kja
Iron, total (3050)	M6010D ICP	100	25200	H	*	mg/Kg	3	8	12/02/19 21:39	kja
Lead, total (3050)	M6020B ICP-MS	500	1.42	H	*	mg/Kg	0.05	0.3	11/26/19 17:17	mfm
Manganese, total (3050)	M6010D ICP	100	438	H	*	mg/Kg	1	5	11/27/19 5:17	kja
Molybdenum, total (3050)	M6010D ICP	100		UH	*	mg/Kg	2	10	11/26/19 6:30	kja
Nickel, total (3050)	M6010D ICP	100	17.0	H	*	mg/Kg	0.8	4	11/26/19 6:30	kja
Selenium, total (3050)	M6020B ICP-MS	500	0.36	H	*	mg/Kg	0.05	0.1	11/26/19 17:17	mfm
Silver, total (3050)	M6020B ICP-MS	500	0.14	BH	*	mg/Kg	0.05	0.3	12/04/19 18:01	mfm
Thallium, total (3050)	M6020B ICP-MS	500		UH	*	mg/Kg	0.05	0.3	11/26/19 17:17	mfm
Vanadium, total (3050)	M6010D ICP	100	80.8	H	*	mg/Kg	0.5	3	11/26/19 6:30	kja
Zinc, total (3050)	M6010D ICP	100	55	H	*	mg/Kg	1	5	11/26/19 6:30	kja

Soil Analysis

Parameter	EPA Method	Dilution	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Solids, Percent	D2216-80	1	100	H	*	%	0.1	0.5	11/20/19 10:17	jms

Soil Preparation

Parameter	EPA Method	Dilution	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Digestion - Hot Plate	M3050B ICP								11/22/19 12:10	mlp
Digestion - Hot Plate	M3050B ICP-MS								11/22/19 12:10	mlp

Rise Grass Valley Inc.

Project ID:

Sample ID: Y973583

ACZ Sample ID: **L55821-17**

Date Sampled: 03/05/19 12:00

Date Received: 11/11/19

Sample Matrix: Soil

Metals Analysis

Parameter	EPA Method	Dilution	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Aluminum, total (3050)	M6010D ICP	200	23100	H	*	mg/Kg	10	50	12/02/19 21:43	kja
Antimony, total (3050)	M6020B ICP-MS	500		UH	*	mg/Kg	0.2	1	11/26/19 17:19	mfm
Arsenic, total (3050)	M6020B ICP-MS	500	2.2	H	*	mg/Kg	0.1	0.5	11/26/19 17:19	mfm
Barium, total (3050)	M6010D ICP	100	4.7	H	*	mg/Kg	0.7	4	11/26/19 6:34	kja
Beryllium, total (3050)	M6020B ICP-MS	500	0.05	BH	*	mg/Kg	0.04	0.1	11/26/19 17:19	mfm
Boron, total (3050)	M6010D ICP	100		UH	*	mg/Kg	2	10	11/26/19 6:34	kja
Cadmium, total (3050)	M6020B ICP-MS	500	0.47	H	*	mg/Kg	0.03	0.1	11/26/19 17:19	mfm
Chromium, total (3050)	M6010D ICP	100	112	H	*	mg/Kg	1	5	11/26/19 6:34	kja
Cobalt, total (3050)	M6010D ICP	100	25	H	*	mg/Kg	1	5	11/26/19 6:34	kja
Copper, total (3050)	M6010D ICP	200	220	H	*	mg/Kg	2	10	11/27/19 5:21	kja
Iron, total (3050)	M6010D ICP	200	35900	H	*	mg/Kg	6	20	12/02/19 21:43	kja
Lead, total (3050)	M6020B ICP-MS	500	0.59	H	*	mg/Kg	0.05	0.3	11/26/19 17:19	mfm
Manganese, total (3050)	M6010D ICP	200	666	H	*	mg/Kg	2	10	11/27/19 5:21	kja
Molybdenum, total (3050)	M6010D ICP	100		UH	*	mg/Kg	2	10	11/26/19 6:34	kja
Nickel, total (3050)	M6010D ICP	100	35.3	H	*	mg/Kg	0.8	4	11/26/19 6:34	kja
Selenium, total (3050)	M6020B ICP-MS	500	0.26	H	*	mg/Kg	0.05	0.1	11/26/19 17:19	mfm
Silver, total (3050)	M6020B ICP-MS	500	0.13	BH	*	mg/Kg	0.05	0.3	12/04/19 18:03	mfm
Thallium, total (3050)	M6020B ICP-MS	500		UH	*	mg/Kg	0.05	0.3	11/26/19 17:19	mfm
Vanadium, total (3050)	M6010D ICP	200	125	H	*	mg/Kg	1	5	11/27/19 5:21	kja
Zinc, total (3050)	M6010D ICP	100	42	H	*	mg/Kg	1	5	11/26/19 6:34	kja

Soil Analysis

Parameter	EPA Method	Dilution	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Solids, Percent	D2216-80	1	99.9	H	*	%	0.1	0.5	11/20/19 11:25	jms

Soil Preparation

Parameter	EPA Method	Dilution	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Digestion - Hot Plate	M3050B ICP								11/22/19 12:26	mlp
Digestion - Hot Plate	M3050B ICP-MS								11/22/19 12:26	mlp

Rise Grass Valley Inc.

Project ID:

Sample ID: Y973584

ACZ Sample ID: **L55821-18**

Date Sampled: 03/05/19 12:00

Date Received: 11/11/19

Sample Matrix: Soil

Metals Analysis

Parameter	EPA Method	Dilution	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Aluminum, total (3050)	M6010D ICP	198	26100	H	*	mg/Kg	10	50	12/02/19 21:47	kja
Antimony, total (3050)	M6020B ICP-MS	495		UH	*	mg/Kg	0.2	1	11/26/19 17:21	mfm
Arsenic, total (3050)	M6020B ICP-MS	495	5.6	H	*	mg/Kg	0.1	0.5	11/26/19 17:21	mfm
Barium, total (3050)	M6010D ICP	99	4.6	H	*	mg/Kg	0.7	3	11/26/19 6:37	kja
Beryllium, total (3050)	M6020B ICP-MS	495	0.06	BH	*	mg/Kg	0.04	0.1	11/26/19 17:21	mfm
Boron, total (3050)	M6010D ICP	99		UH	*	mg/Kg	2	10	11/26/19 6:37	kja
Cadmium, total (3050)	M6020B ICP-MS	495	0.28	H	*	mg/Kg	0.02	0.1	11/26/19 17:21	mfm
Chromium, total (3050)	M6010D ICP	99	122	H	*	mg/Kg	1	5	11/26/19 6:37	kja
Cobalt, total (3050)	M6010D ICP	99	23	H	*	mg/Kg	1	5	11/26/19 6:37	kja
Copper, total (3050)	M6010D ICP	99	65	H	*	mg/Kg	1	5	11/26/19 6:37	kja
Iron, total (3050)	M6010D ICP	198	33700	H	*	mg/Kg	6	10	12/02/19 21:47	kja
Lead, total (3050)	M6020B ICP-MS	495	0.92	H	*	mg/Kg	0.05	0.2	11/26/19 17:21	mfm
Manganese, total (3050)	M6010D ICP	200	571	H	*	mg/Kg	2	10	11/27/19 5:25	kja
Molybdenum, total (3050)	M6010D ICP	99		UH	*	mg/Kg	2	10	11/26/19 6:37	kja
Nickel, total (3050)	M6010D ICP	99	51.5	H	*	mg/Kg	0.8	4	11/26/19 6:37	kja
Selenium, total (3050)	M6020B ICP-MS	495		UH	*	mg/Kg	0.05	0.1	11/26/19 17:21	mfm
Silver, total (3050)	M6020B ICP-MS	495	0.06	BH	*	mg/Kg	0.05	0.2	12/04/19 18:05	mfm
Thallium, total (3050)	M6020B ICP-MS	495		UH	*	mg/Kg	0.05	0.2	11/26/19 17:21	mfm
Vanadium, total (3050)	M6010D ICP	200	103	H	*	mg/Kg	1	5	11/27/19 5:25	kja
Zinc, total (3050)	M6010D ICP	99	48	H	*	mg/Kg	1	5	11/26/19 6:37	kja

Soil Analysis

Parameter	EPA Method	Dilution	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Solids, Percent	D2216-80	1	99.9	H	*	%	0.1	0.5	11/20/19 12:34	jms

Soil Preparation

Parameter	EPA Method	Dilution	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Digestion - Hot Plate	M3050B ICP								11/22/19 16:58	mlp
Digestion - Hot Plate	M3050B ICP-MS								11/22/19 16:58	mlp

Rise Grass Valley Inc.

Project ID:

Sample ID: Y973585

ACZ Sample ID: **L55821-19**

Date Sampled: 03/05/19 12:00

Date Received: 11/11/19

Sample Matrix: Soil

Metals Analysis

Parameter	EPA Method	Dilution	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Aluminum, total (3050)	M6010D ICP	198	26300	H	*	mg/Kg	10	50	12/02/19 21:51	kja
Antimony, total (3050)	M6020B ICP-MS	495		UH	*	mg/Kg	0.2	1	11/26/19 17:23	mfm
Arsenic, total (3050)	M6020B ICP-MS	495	0.8	H	*	mg/Kg	0.1	0.5	11/26/19 17:23	mfm
Barium, total (3050)	M6010D ICP	99	13.8	H	*	mg/Kg	0.7	3	11/26/19 6:41	kja
Beryllium, total (3050)	M6020B ICP-MS	495	0.08	BH	*	mg/Kg	0.04	0.1	11/26/19 17:23	mfm
Boron, total (3050)	M6010D ICP	99		UH	*	mg/Kg	2	10	11/26/19 6:41	kja
Cadmium, total (3050)	M6020B ICP-MS	495	0.26	H	*	mg/Kg	0.02	0.1	11/26/19 17:23	mfm
Chromium, total (3050)	M6010D ICP	99	135	H	*	mg/Kg	1	5	11/26/19 6:41	kja
Cobalt, total (3050)	M6010D ICP	99	25	H	*	mg/Kg	1	5	11/26/19 6:41	kja
Copper, total (3050)	M6010D ICP	99	67	H	*	mg/Kg	1	5	11/26/19 6:41	kja
Iron, total (3050)	M6010D ICP	198	35700	H	*	mg/Kg	6	10	12/02/19 21:51	kja
Lead, total (3050)	M6020B ICP-MS	495	0.85	H	*	mg/Kg	0.05	0.2	11/26/19 17:23	mfm
Manganese, total (3050)	M6010D ICP	198	741	H	*	mg/Kg	2	10	11/27/19 5:28	kja
Molybdenum, total (3050)	M6010D ICP	99		UH	*	mg/Kg	2	10	11/26/19 6:41	kja
Nickel, total (3050)	M6010D ICP	99	53.1	H	*	mg/Kg	0.8	4	11/26/19 6:41	kja
Selenium, total (3050)	M6020B ICP-MS	495	0.20	H	*	mg/Kg	0.05	0.1	11/26/19 17:23	mfm
Silver, total (3050)	M6020B ICP-MS	495	0.06	BH	*	mg/Kg	0.05	0.2	12/04/19 18:07	mfm
Thallium, total (3050)	M6020B ICP-MS	495		UH	*	mg/Kg	0.05	0.2	11/26/19 17:23	mfm
Vanadium, total (3050)	M6010D ICP	198	124	H	*	mg/Kg	1	5	11/27/19 5:28	kja
Zinc, total (3050)	M6010D ICP	99	63	H	*	mg/Kg	1	5	11/26/19 6:41	kja

Soil Analysis

Parameter	EPA Method	Dilution	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Solids, Percent	D2216-80	1	100	H	*	%	0.1	0.5	11/20/19 13:42	jms

Soil Preparation

Parameter	EPA Method	Dilution	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Digestion - Hot Plate	M3050B ICP								11/22/19 17:14	mlp
Digestion - Hot Plate	M3050B ICP-MS								11/22/19 17:14	mlp

Rise Grass Valley Inc.

Project ID:

Sample ID: Y973587

ACZ Sample ID: **L55821-20**

Date Sampled: 03/05/19 12:00

Date Received: 11/11/19

Sample Matrix: Soil

Metals Analysis

Parameter	EPA Method	Dilution	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Aluminum, total (3050)	M6010D ICP	200	26700	H	*	mg/Kg	10	50	12/02/19 21:54	kja
Antimony, total (3050)	M6020B ICP-MS	500		UH	*	mg/Kg	0.2	1	11/26/19 17:25	mfm
Arsenic, total (3050)	M6020B ICP-MS	500	1.5	H	*	mg/Kg	0.1	0.5	11/26/19 17:25	mfm
Barium, total (3050)	M6010D ICP	100	2.3	BH	*	mg/Kg	0.7	4	11/26/19 6:45	kja
Beryllium, total (3050)	M6020B ICP-MS	500		UH	*	mg/Kg	0.04	0.1	11/26/19 17:25	mfm
Boron, total (3050)	M6010D ICP	100		UH	*	mg/Kg	2	10	11/26/19 6:45	kja
Cadmium, total (3050)	M6020B ICP-MS	500	0.39	H	*	mg/Kg	0.03	0.1	11/26/19 17:25	mfm
Chromium, total (3050)	M6010D ICP	100	156	H	*	mg/Kg	1	5	11/26/19 6:45	kja
Cobalt, total (3050)	M6010D ICP	100	35	H	*	mg/Kg	1	5	11/26/19 6:45	kja
Copper, total (3050)	M6010D ICP	100	66	H	*	mg/Kg	1	5	11/26/19 6:45	kja
Iron, total (3050)	M6010D ICP	200	45000	H	*	mg/Kg	6	20	12/02/19 21:54	kja
Lead, total (3050)	M6020B ICP-MS	500	0.27	BH	*	mg/Kg	0.05	0.3	11/26/19 17:25	mfm
Manganese, total (3050)	M6010D ICP	200	847	H	*	mg/Kg	2	10	11/27/19 5:32	kja
Molybdenum, total (3050)	M6010D ICP	100		UH	*	mg/Kg	2	10	11/26/19 6:45	kja
Nickel, total (3050)	M6010D ICP	100	55.4	H	*	mg/Kg	0.8	4	11/26/19 6:45	kja
Selenium, total (3050)	M6020B ICP-MS	500	0.22	H	*	mg/Kg	0.05	0.1	11/26/19 17:25	mfm
Silver, total (3050)	M6020B ICP-MS	500	0.06	BH	*	mg/Kg	0.05	0.3	12/04/19 18:08	mfm
Thallium, total (3050)	M6020B ICP-MS	500		UH	*	mg/Kg	0.05	0.3	11/26/19 17:25	mfm
Vanadium, total (3050)	M6010D ICP	200	136	H	*	mg/Kg	1	5	11/27/19 5:32	kja
Zinc, total (3050)	M6010D ICP	100	56	H	*	mg/Kg	1	5	11/26/19 6:45	kja

Soil Analysis

Parameter	EPA Method	Dilution	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Solids, Percent	D2216-80	1	99.9	H	*	%	0.1	0.5	11/20/19 14:51	jms

Soil Preparation

Parameter	EPA Method	Dilution	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Digestion - Hot Plate	M3050B ICP								11/22/19 17:30	mlp
Digestion - Hot Plate	M3050B ICP-MS								11/22/19 17:30	mlp



Report Header Explanations

<i>Batch</i>	A distinct set of samples analyzed at a specific time
<i>Found</i>	Value of the QC Type of interest
<i>Limit</i>	Upper limit for RPD, in %.
<i>Lower</i>	Lower Recovery Limit, in % (except for LCSS, mg/Kg)
<i>MDL</i>	Method Detection Limit. Same as Minimum Reporting Limit unless omitted or equal to the PQL (see comment #5). Allows for instrument and annual fluctuations.
<i>PCN/SCN</i>	A number assigned to reagents/standards to trace to the manufacturer's certificate of analysis
<i>PQL</i>	Practical Quantitation Limit. Synonymous with the EPA term "minimum level".
<i>QC</i>	True Value of the Control Sample or the amount added to the Spike
<i>Rec</i>	Recovered amount of the true value or spike added, in % (except for LCSS, mg/Kg)
<i>RPD</i>	Relative Percent Difference, calculation used for Duplicate QC Types
<i>Upper</i>	Upper Recovery Limit, in % (except for LCSS, mg/Kg)
<i>Sample</i>	Value of the Sample of interest

QC Sample Types

<i>AS</i>	Analytical Spike (Post Digestion)	<i>LCSWD</i>	Laboratory Control Sample - Water Duplicate
<i>ASD</i>	Analytical Spike (Post Digestion) Duplicate	<i>LFB</i>	Laboratory Fortified Blank
<i>CCB</i>	Continuing Calibration Blank	<i>LFM</i>	Laboratory Fortified Matrix
<i>CCV</i>	Continuing Calibration Verification standard	<i>LFMD</i>	Laboratory Fortified Matrix Duplicate
<i>DUP</i>	Sample Duplicate	<i>LRB</i>	Laboratory Reagent Blank
<i>ICB</i>	Initial Calibration Blank	<i>MS</i>	Matrix Spike
<i>ICV</i>	Initial Calibration Verification standard	<i>MSD</i>	Matrix Spike Duplicate
<i>ICSAB</i>	Inter-element Correction Standard - A plus B solutions	<i>PBS</i>	Prep Blank - Soil
<i>LCSS</i>	Laboratory Control Sample - Soil	<i>PBW</i>	Prep Blank - Water
<i>LCSSD</i>	Laboratory Control Sample - Soil Duplicate	<i>PQV</i>	Practical Quantitation Verification standard
<i>LCSW</i>	Laboratory Control Sample - Water	<i>SDL</i>	Serial Dilution

QC Sample Type Explanations

Blanks	Verifies that there is no or minimal contamination in the prep method or calibration procedure.
Control Samples	Verifies the accuracy of the method, including the prep procedure.
Duplicates	Verifies the precision of the instrument and/or method.
Spikes/Fortified Matrix	Determines sample matrix interferences, if any.
Standard	Verifies the validity of the calibration.

ACZ Qualifiers (Qual)

B	Analyte concentration detected at a value between MDL and PQL. The associated value is an estimated quantity.
H	Analysis exceeded method hold time. pH is a field test with an immediate hold time.
L	Target analyte response was below the laboratory defined negative threshold.
U	The material was analyzed for, but was not detected above the level of the associated value. The associated value is either the sample quantitation limit or the sample detection limit.

Method References

(1)	EPA 600/4-83-020. Methods for Chemical Analysis of Water and Wastes, March 1983.
(2)	EPA 600/R-93-100. Methods for the Determination of Inorganic Substances in Environmental Samples, August 1993.
(3)	EPA 600/R-94-111. Methods for the Determination of Metals in Environmental Samples - Supplement I, May 1994.
(4)	EPA SW-846. Test Methods for Evaluating Solid Waste.
(5)	Standard Methods for the Examination of Water and Wastewater.

Comments

(1)	QC results calculated from raw data. Results may vary slightly if the rounded values are used in the calculations.
(2)	Soil, Sludge, and Plant matrices for Inorganic analyses are reported on a dry weight basis.
(3)	Animal matrices for Inorganic analyses are reported on an "as received" basis.
(4)	An asterisk in the "XQ" column indicates there is an extended qualifier and/or certification qualifier associated with the result.
(5)	If the MDL equals the PQL or the MDL column is omitted, the PQL is the reporting limit.

For a complete list of ACZ's Extended Qualifiers, please click:

<https://acz.com/wp-content/uploads/2019/04/Ext-Qual-List.pdf>

Rise Grass Valley Inc.

ACZ Project ID: **L55821**

NOTE: If the Rec% column is null, the high/low limits are in the same units as the result. If the Rec% column is not null, then the high/low limits are in % Rec.

Aluminum, total (3050)

M6010D ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec%	Lower	Upper	RPD	Limit	Qual
WG487088													
WG487088ICV	ICV	12/02/19 19:39	II191122-1	2		1.962	mg/L	98	90	110			
WG487088ICB	ICB	12/02/19 19:43				U	mg/L		-0.15	0.15			
WG486773PBS	PBS	12/02/19 20:07				U	mg/Kg		-15	15			
WG486773LCSS	LCSS	12/02/19 20:11	PCN59282	8610		9221	mg/Kg		4410	12800			
WG486773LCSSD	LCSSD	12/02/19 20:14	PCN59282	8610		9825	mg/Kg		4410	12800	6	20	
L55821-01MS	MS	12/02/19 20:22	II2XSOIL	100.11	24500	26660	mg/Kg	2158	75	125			M3
L55821-01MSD	MSD	12/02/19 20:26	II2XSOIL	100.11	24500	26800	mg/Kg	2297	75	125	1	20	M3

Antimony, total (3050)

M6020B ICP-MS

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec%	Lower	Upper	RPD	Limit	Qual
WG486982													
WG486982ICV	ICV	11/26/19 15:55	MS191014-8	.02004		.02105	mg/L	105	90	110			
WG486982ICB	ICB	11/26/19 15:57				U	mg/L		-0.0012	0.0012			
WG486773PBS	PBS	11/26/19 16:07				U	mg/Kg		-0.6	0.6			
WG486773LCSS	LCSS	11/26/19 16:09	PCN59282	68.6		42.8	mg/Kg		2.03	135			
WG486773LCSSD	LCSSD	11/26/19 16:11	PCN59282	68.6		47.7	mg/Kg		2.03	135	11	20	
L55821-02MS	MS	11/26/19 16:16	MS191112-2	4.95	U	.44	mg/Kg	9	75	125			M2
L55821-02MSD	MSD	11/26/19 16:18	MS191112-2	5	U	.46	mg/Kg	9	75	125	4	20	M2
WG487260													
WG487260ICV	ICV	12/03/19 14:55	MS191014-8	.02004		.02034	mg/L	101	90	110			
WG487260ICB	ICB	12/03/19 14:57				U	mg/L		-0.0012	0.0012			
WG486773PBS	PBS	12/03/19 15:08				U	mg/Kg		-0.6	0.6			
WG486773LCSS	LCSS	12/03/19 15:09	PCN59282	68.6		49.9	mg/Kg		2.03	135			
WG486773LCSSD	LCSSD	12/03/19 15:11	PCN59282	68.6		53.6	mg/Kg		2.03	135	7	20	
L55821-02MS	MS	12/03/19 15:17	MS191112-2	4.95	U	.24	mg/Kg	5	75	125			M2
L55821-02MSD	MSD	12/03/19 15:18	MS191112-2	5	U	.27	mg/Kg	5	75	125	12	20	M2

Arsenic, total (3050)

M6020B ICP-MS

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec%	Lower	Upper	RPD	Limit	Qual
WG486982													
WG486982ICV	ICV	11/26/19 15:55	MS191014-8	.05		.0503	mg/L	101	90	110			
WG486982ICB	ICB	11/26/19 15:57				U	mg/L		-0.0006	0.0006			
WG486773PBS	PBS	11/26/19 16:07				U	mg/Kg		-0.3	0.3			
WG486773LCSS	LCSS	11/26/19 16:09	PCN59282	69.4		62.5	mg/Kg		57.2	81.5			
WG486773LCSSD	LCSSD	11/26/19 16:11	PCN59282	69.4		62.6	mg/Kg		57.2	81.5	0	20	
L55821-02MS	MS	11/26/19 16:16	MS191112-2	24.77475	.5	17.99	mg/Kg	71	75	125			M2
L55821-02MSD	MSD	11/26/19 16:18	MS191112-2	25.025	.5	17.45	mg/Kg	68	75	125	3	20	M2
WG487389													
WG487389ICV	ICV	12/04/19 17:20	MS191014-8	.05		.04705	mg/L	94	90	110			
WG487389ICB	ICB	12/04/19 17:22				U	mg/L		-0.0006	0.0006			
WG486773PBS	PBS	12/04/19 17:33				U	mg/Kg		-0.3	0.3			
WG486773LCSS	LCSS	12/04/19 17:34	PCN59282	69.4		60.9	mg/Kg		57.2	81.5			
WG486773LCSSD	LCSSD	12/04/19 17:36	PCN59282	69.4		62.9	mg/Kg		57.2	81.5	3	20	
L55821-02MS	MS	12/04/19 17:42	MS191112-2	24.77475	.8	23.21	mg/Kg	90	75	125			
L55821-02MSD	MSD	12/04/19 17:43	MS191112-2	25.025	.8	24.59	mg/Kg	95	75	125	6	20	

Rise Grass Valley Inc.

ACZ Project ID: **L55821**

NOTE: If the Rec% column is null, the high/low limits are in the same units as the result. If the Rec% column is not null, then the high/low limits are in % Rec.

Barium, total (3050) M6010D ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec%	Lower	Upper	RPD	Limit	Qual
WG486912													
WG486912ICV	ICV	11/26/19 4:35	II191121-2	2		1.943	mg/L	97	90	110			
WG486912ICB	ICB	11/26/19 4:38				U	mg/L		-0.021	0.021			
WG486773PBS	PBS	11/26/19 5:01				U	mg/Kg		-2.1	2.1			
WG486773LCSS	LCSS	11/26/19 5:05	PCN59282	362		338	mg/Kg		297	427			
WG486773LCSSD	LCSSD	11/26/19 5:08	PCN59282	362		360.4	mg/Kg		297	427	6	20	
L55821-01MS	MS	11/26/19 5:15	II191106-4	50.05	14.7	62.13	mg/Kg	95	75	125			
L55821-01MSD	MSD	11/26/19 5:19	II191106-4	50.05	14.7	61.33	mg/Kg	93	75	125	1	20	

Beryllium, total (3050) M6020B ICP-MS

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec%	Lower	Upper	RPD	Limit	Qual
WG486982													
WG486982ICV	ICV	11/26/19 15:55	MS191014-8	.05		.050316	mg/L	101	90	110			
WG486982ICB	ICB	11/26/19 15:57				U	mg/L		-0.00024	0.00024			
WG486773PBS	PBS	11/26/19 16:07				U	mg/Kg		-0.12	0.12			
WG486773LCSS	LCSS	11/26/19 16:09	PCN59282	223		197.12	mg/Kg		185	260			
WG486773LCSSD	LCSSD	11/26/19 16:11	PCN59282	223		207.03	mg/Kg		185	260	5	20	
L55821-02MS	MS	11/26/19 16:16	MS191112-2	24.77475	.05	21.754	mg/Kg	88	75	125			
L55821-02MSD	MSD	11/26/19 16:18	MS191112-2	25.025	.05	21.226	mg/Kg	85	75	125	2	20	

Boron, total (3050) M6010D ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec%	Lower	Upper	RPD	Limit	Qual
WG486912													
WG486912ICV	ICV	11/26/19 4:35	II191121-2	2		2.004	mg/L	100	90	110			
WG486912ICB	ICB	11/26/19 4:38				U	mg/L		-0.06	0.06			
WG486773PBS	PBS	11/26/19 5:01				U	mg/Kg		-6	6			
WG486773LCSS	LCSS	11/26/19 5:05	PCN59282	79.4		81.4	mg/Kg		57.2	102			
WG486773LCSSD	LCSSD	11/26/19 5:08	PCN59282	79.4		88.6	mg/Kg		57.2	102	8	20	
L55821-01MS	MS	11/26/19 5:15	II191106-4	50.05	U	48.6	mg/Kg	97	75	125			
L55821-01MSD	MSD	11/26/19 5:19	II191106-4	50.05	U	48.2	mg/Kg	96	75	125	1	20	

Cadmium, total (3050) M6020B ICP-MS

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec%	Lower	Upper	RPD	Limit	Qual
WG486982													
WG486982ICV	ICV	11/26/19 15:55	MS191014-8	.05		.051693	mg/L	103	90	110			
WG486982ICB	ICB	11/26/19 15:57				U	mg/L		-0.00015	0.00015			
WG486773PBS	PBS	11/26/19 16:07				U	mg/Kg		-0.09	0.09			
WG486773LCSS	LCSS	11/26/19 16:09	PCN59282	166		155.63	mg/Kg		138	195			
WG486773LCSSD	LCSSD	11/26/19 16:11	PCN59282	166		167.75	mg/Kg		138	195	7	20	
L55821-02MS	MS	11/26/19 16:16	MS191112-2	24.77475	.49	23.859	mg/Kg	94	75	125			
L55821-02MSD	MSD	11/26/19 16:18	MS191112-2	25.025	.49	22.785	mg/Kg	89	75	125	5	20	

Rise Grass Valley Inc.

ACZ Project ID: **L55821**

NOTE: If the Rec% column is null, the high/low limits are in the same units as the result. If the Rec% column is not null, then the high/low limits are in % Rec.

Chromium, total (3050)

M6010D ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec%	Lower	Upper	RPD	Limit	Qual
WG486912													
WG486912ICV	ICV	11/26/19 4:35	II191121-2	2		1.95	mg/L	98	90	110			
WG486912ICB	ICB	11/26/19 4:38				U	mg/L		-0.03	0.03			
WG486773PBS	PBS	11/26/19 5:01				U	mg/Kg		-3	3			
WG486773LCSS	LCSS	11/26/19 5:05	PCN59282	249		237.9	mg/Kg		203	295			
WG486773LCSSD	LCSSD	11/26/19 5:08	PCN59282	249		253.8	mg/Kg		203	295	6	20	
L55821-01MS	MS	11/26/19 5:15	II191106-4	50.1	142	195.8	mg/Kg	107	75	125			
L55821-01MSD	MSD	11/26/19 5:19	II191106-4	50.1	142	191.9	mg/Kg	100	75	125	2	20	

Cobalt, total (3050)

M6010D ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec%	Lower	Upper	RPD	Limit	Qual
WG486912													
WG486912ICV	ICV	11/26/19 4:35	II191121-2	2.002		1.933	mg/L	97	90	110			
WG486912ICB	ICB	11/26/19 4:38				U	mg/L		-0.03	0.03			
WG486773PBS	PBS	11/26/19 5:01				U	mg/Kg		-3	3			
WG486773LCSS	LCSS	11/26/19 5:05	PCN59282	90.6		87.5	mg/Kg		75.1	106			
WG486773LCSSD	LCSSD	11/26/19 5:08	PCN59282	90.6		93.4	mg/Kg		75.1	106	7	20	
L55821-01MS	MS	11/26/19 5:15	II191106-4	50	31	77.1	mg/Kg	92	75	125			
L55821-01MSD	MSD	11/26/19 5:19	II191106-4	50	31	75.7	mg/Kg	89	75	125	2	20	

Copper, total (3050)

M6010D ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec%	Lower	Upper	RPD	Limit	Qual
WG486912													
WG486912ICV	ICV	11/26/19 4:35	II191121-2	2		1.917	mg/L	96	90	110			
WG486912ICB	ICB	11/26/19 4:38				U	mg/L		-0.03	0.03			
WG486773PBS	PBS	11/26/19 5:01				U	mg/Kg		-3	3			
WG486773LCSS	LCSS	11/26/19 5:05	PCN59282	280		252.6	mg/Kg		233	326			
WG486773LCSSD	LCSSD	11/26/19 5:08	PCN59282	280		268.7	mg/Kg		233	326	6	20	
L55821-01MS	MS	11/26/19 5:15	II191106-4	50.05	99	148.5	mg/Kg	99	75	125			
L55821-01MSD	MSD	11/26/19 5:19	II191106-4	50.05	99	147	mg/Kg	96	75	125	1	20	

WG486989

WG486989ICV	ICV	11/27/19 3:22	II191122-1	2		1.893	mg/L	95	90	110			
WG486989ICB	ICB	11/27/19 3:25				U	mg/L		-0.03	0.03			
WG486773PBS	PBS	11/27/19 3:48				U	mg/Kg		-3	3			
WG486773LCSS	LCSS	11/27/19 3:52	PCN59282	280		249.7	mg/Kg		233	326			
WG486773LCSSD	LCSSD	11/27/19 3:55	PCN59282	280		276.3	mg/Kg		233	326	10	20	
L55821-01MS	MS	11/27/19 4:03	II2XSOIL	50	105	155.6	mg/Kg	101	75	125			
L55821-01MSD	MSD	11/27/19 4:06	II2XSOIL	50	105	155.6	mg/Kg	101	75	125	0	20	

Rise Grass Valley Inc.

ACZ Project ID: **L55821**

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Iron, total (3050)

M6010D ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec%	Lower	Upper	RPD	Limit	Qual
WG487088													
WG487088ICV	ICV	12/02/19 19:39	II191122-1	2		1.915	mg/L	96	90	110			
WG487088ICB	ICB	12/02/19 19:43				U	mg/L		-0.09	0.09			
WG486773PBS	PBS	12/02/19 20:07				3.1	mg/Kg		-9	9			
WG486773LCSS	LCSS	12/02/19 20:11	PCN59282	14000		12120	mg/Kg		8380	19600			
WG486773LCSSD	LCSSD	12/02/19 20:14	PCN59282	14000		13430	mg/Kg		8380	19600	10	20	
L55821-01MS	MS	12/02/19 20:22	II2XSOIL	100.14	39400	43020	mg/Kg	3615	75	125			M3
L55821-01MSD	MSD	12/02/19 20:26	II2XSOIL	100.14	39400	42860	mg/Kg	3455	75	125	0	20	M3

Lead, total (3050)

M6020B ICP-MS

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec%	Lower	Upper	RPD	Limit	Qual
WG486982													
WG486982ICV	ICV	11/26/19 15:55	MS191014-8	.05		.05144	mg/L	103	90	110			
WG486982ICB	ICB	11/26/19 15:57				U	mg/L		-0.0003	0.0003			
WG486773PBS	PBS	11/26/19 16:07				U	mg/Kg		-0.15	0.15			
WG486773LCSS	LCSS	11/26/19 16:09	PCN59282	225		201.38	mg/Kg		184	266			
WG486773LCSSD	LCSSD	11/26/19 16:11	PCN59282	225		207.48	mg/Kg		184	266	3	20	
L55821-02MS	MS	11/26/19 16:16	MS191112-2	24.77475	.32	23.116	mg/Kg	92	75	125			
L55821-02MSD	MSD	11/26/19 16:18	MS191112-2	25.025	.32	22.395	mg/Kg	88	75	125	3	20	

Manganese, total (3050)

M6010D ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec%	Lower	Upper	RPD	Limit	Qual
WG486989													
WG486989ICV	ICV	11/27/19 3:22	II191122-1	2		1.883	mg/L	94	90	110			
WG486989ICB	ICB	11/27/19 3:25				.013	mg/L		-0.03	0.03			
WG486773PBS	PBS	11/27/19 3:48				1.3	mg/Kg		-3	3			
WG486773LCSS	LCSS	11/27/19 3:52	PCN59282	332		298.6	mg/Kg		272	392			
WG486773LCSSD	LCSSD	11/27/19 3:55	PCN59282	332		329.5	mg/Kg		272	392	10	20	
L55821-01MS	MS	11/27/19 4:03	II2XSOIL	50.1	737	835.8	mg/Kg	197	75	125			M3
L55821-01MSD	MSD	11/27/19 4:06	II2XSOIL	50.1	737	832.2	mg/Kg	190	75	125	0	20	M3

Molybdenum, total (3050)

M6010D ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec%	Lower	Upper	RPD	Limit	Qual
WG486912													
WG486912ICV	ICV	11/26/19 4:35	II191121-2	2		1.918	mg/L	96	90	110			
WG486912ICB	ICB	11/26/19 4:38				U	mg/L		-0.06	0.06			
WG486773PBS	PBS	11/26/19 5:01				U	mg/Kg		-6	6			
WG486773LCSS	LCSS	11/26/19 5:05	PCN59282	158		150.9	mg/Kg		127	190			
WG486773LCSSD	LCSSD	11/26/19 5:08	PCN59282	158		159.9	mg/Kg		127	190	6	20	
L55821-01MS	MS	11/26/19 5:15	II191106-4	49.75	U	44.4	mg/Kg	89	75	125			
L55821-01MSD	MSD	11/26/19 5:19	II191106-4	49.75	U	43.6	mg/Kg	88	75	125	2	20	

Rise Grass Valley Inc.

ACZ Project ID: **L55821**

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Nickel, total (3050)

M6010D ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec%	Lower	Upper	RPD	Limit	Qual
WG486912													
WG486912ICV	ICV	11/26/19 4:35	II191121-2	2		1.93	mg/L	97	90	110			
WG486912ICB	ICB	11/26/19 4:38				U	mg/L		-0.024	0.024			
WG486773PBS	PBS	11/26/19 5:01				U	mg/Kg		-2.4	2.4			
WG486773LCSS	LCSS	11/26/19 5:05	PCN59282	114		108.2	mg/Kg		93.9	134			
WG486773LCSSD	LCSSD	11/26/19 5:08	PCN59282	114		116.4	mg/Kg		93.9	134	7	20	
L55821-01MS	MS	11/26/19 5:15	II191106-4	50.1	43.5	89.43	mg/Kg	92	75	125			
L55821-01MSD	MSD	11/26/19 5:19	II191106-4	50.1	43.5	87.28	mg/Kg	87	75	125	2	20	
WG486989													
WG486989ICV	ICV	11/27/19 3:22	II191122-1	2		1.881	mg/L	94	90	110			
WG486989ICB	ICB	11/27/19 3:25				U	mg/L		-0.024	0.024			
WG486773PBS	PBS	11/27/19 3:48				U	mg/Kg		-2.4	2.4			
WG486773LCSS	LCSS	11/27/19 3:52	PCN59282	114		105.5	mg/Kg		93.9	134			
WG486773LCSSD	LCSSD	11/27/19 3:55	PCN59282	114		117.8	mg/Kg		93.9	134	11	20	
L55821-01MS	MS	11/27/19 4:03	II2XSOIL	50	48	97.5	mg/Kg	99	75	125			
L55821-01MSD	MSD	11/27/19 4:06	II2XSOIL	50	48	96.4	mg/Kg	97	75	125	1	20	

Selenium, total (3050)

M6020B ICP-MS

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec%	Lower	Upper	RPD	Limit	Qual
WG486982													
WG486982ICV	ICV	11/26/19 15:55	MS191014-8	.05		.04987	mg/L	100	90	110			
WG486982ICB	ICB	11/26/19 15:57				U	mg/L		-0.0003	0.0003			
WG486773PBS	PBS	11/26/19 16:07				U	mg/Kg		-0.15	0.15			
WG486773LCSS	LCSS	11/26/19 16:09	PCN59282	195		173.62	mg/Kg		154	237			
WG486773LCSSD	LCSSD	11/26/19 16:11	PCN59282	195		185.94	mg/Kg		154	237	7	20	
L55821-02MS	MS	11/26/19 16:16	MS191112-2	12.387375	.24	11.037	mg/Kg	87	75	125			
L55821-02MSD	MSD	11/26/19 16:18	MS191112-2	12.5125	.24	11.054	mg/Kg	86	75	125	0	20	

Silver, total (3050)

M6020B ICP-MS

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec%	Lower	Upper	RPD	Limit	Qual
WG487260													
WG487260ICV	ICV	12/03/19 14:55	MS191014-8	.02004		.02155	mg/L	108	90	110			
WG487260ICB	ICB	12/03/19 14:57				U	mg/L		-0.0003	0.0003			
WG486773PBS	PBS	12/03/19 15:08				U	mg/Kg		-0.15	0.15			
WG486773LCSS	LCSS	12/03/19 15:09	PCN59282	61.8		65.15	mg/Kg		49.2	74.4			
WG486773LCSSD	LCSSD	12/03/19 15:11	PCN59282	61.8		66.92	mg/Kg		49.2	74.4	3	20	
L55821-02MS	MS	12/03/19 15:17	MS191112-2	4.9599	.13	4.371	mg/Kg	86	75	125			
L55821-02MSD	MSD	12/03/19 15:18	MS191112-2	5.01	.13	4.635	mg/Kg	90	75	125	6	20	
WG487389													
WG487389ICV	ICV	12/04/19 17:20	MS191014-8	.02004		.01991	mg/L	99	90	110			
WG487389ICB	ICB	12/04/19 17:22				U	mg/L		-0.0003	0.0003			
WG486773PBS	PBS	12/04/19 17:33				U	mg/Kg		-0.15	0.15			
WG486773LCSS	LCSS	12/04/19 17:34	PCN59282	61.8		55.35	mg/Kg		49.2	74.4			
WG486773LCSSD	LCSSD	12/04/19 17:36	PCN59282	61.8		57.42	mg/Kg		49.2	74.4	4	20	
L55821-02MS	MS	12/04/19 17:42	MS191112-2	4.9599	.12	4.294	mg/Kg	84	75	125			
L55821-02MSD	MSD	12/04/19 17:43	MS191112-2	5.01	.12	4.389	mg/Kg	85	75	125	2	20	

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NOTE: If the Rec% column is null, the high/low limits are in the same units as the result. If the Rec% column is not null, then the high/low limits are in % Rec.

Solids, Percent

D2216-80

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec%	Lower	Upper	RPD	Limit	Qual
WG486511													
L55821-01DUP	DUP	11/19/19 17:08			99.8	99.82	%				0	20	
WG486511PBS	PBS	11/20/19 15:59				U	%		-0.1	0.1			

Thallium, total (3050)

M6020B ICP-MS

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec%	Lower	Upper	RPD	Limit	Qual
WG486982													
WG486982ICV	ICV	11/26/19 15:55	MS191014-8	.05		.05204	mg/L	104	90	110			
WG486982ICB	ICB	11/26/19 15:57				U	mg/L		-0.0003	0.0003			
WG486773PBS	PBS	11/26/19 16:07				U	mg/Kg		-0.15	0.15			
WG486773LCSS	LCSS	11/26/19 16:09	PCN59282	135		129.92	mg/Kg		109	161			
WG486773LCSSD	LCSSD	11/26/19 16:11	PCN59282	135		130.72	mg/Kg		109	161	1	20	
L55821-02MS	MS	11/26/19 16:16	MS191112-2	24.7995	U	22.118	mg/Kg	89	75	125			
L55821-02MSD	MSD	11/26/19 16:18	MS191112-2	25.05	U	21.038	mg/Kg	84	75	125	5	20	

Vanadium, total (3050)

M6010D ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec%	Lower	Upper	RPD	Limit	Qual
WG486912													
WG486912ICV	ICV	11/26/19 4:35	II191121-2	2		2.046	mg/L	102	90	110			
WG486912ICB	ICB	11/26/19 4:38				U	mg/L		-0.015	0.015			
WG486773PBS	PBS	11/26/19 5:01				U	mg/Kg		-1.5	1.5			
WG486773LCSS	LCSS	11/26/19 5:05	PCN59282	86.4		89.31	mg/Kg		67.4	105			
WG486773LCSSD	LCSSD	11/26/19 5:08	PCN59282	86.4		95.71	mg/Kg		67.4	105	7	20	
L55821-01MS	MS	11/26/19 5:15	II191106-4	49.95	108	178.1	mg/Kg	140	75	125			M1
L55821-01MSD	MSD	11/26/19 5:19	II191106-4	49.95	108	173.1	mg/Kg	130	75	125	3	20	M1
WG486989													
WG486989ICV	ICV	11/27/19 3:22	II191122-1	2		1.937	mg/L	97	90	110			
WG486989ICB	ICB	11/27/19 3:25				U	mg/L		-0.015	0.015			
WG486773PBS	PBS	11/27/19 3:48				U	mg/Kg		-1.5	1.5			
WG486773LCSS	LCSS	11/27/19 3:52	PCN59282	86.4		84.76	mg/Kg		67.4	105			
WG486773LCSSD	LCSSD	11/27/19 3:55	PCN59282	86.4		93.84	mg/Kg		67.4	105	10	20	
L55821-01MS	MS	11/27/19 4:03	II2XSOIL	50	106	172.8	mg/Kg	134	75	125			M1
L55821-01MSD	MSD	11/27/19 4:06	II2XSOIL	50	106	176.5	mg/Kg	141	75	125	2	20	M1

Zinc, total (3050)

M6010D ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec%	Lower	Upper	RPD	Limit	Qual
WG486912													
WG486912ICV	ICV	11/26/19 4:35	II191121-2	2		1.958	mg/L	98	90	110			
WG486912ICB	ICB	11/26/19 4:38				U	mg/L		-0.03	0.03			
WG486773PBS	PBS	11/26/19 5:01				U	mg/Kg		-3	3			
WG486773LCSS	LCSS	11/26/19 5:05	PCN59282	122		116.8	mg/Kg		98.6	145			
WG486773LCSSD	LCSSD	11/26/19 5:08	PCN59282	122		123.4	mg/Kg		98.6	145	5	20	
L55821-01MS	MS	11/26/19 5:15	II191106-4	50.075	49	97.5	mg/Kg	97	75	125			
L55821-01MSD	MSD	11/26/19 5:19	II191106-4	50.075	49	95.5	mg/Kg	93	75	125	2	20	

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ACZ ID	WORKNUM	PARAMETER	METHOD	QUAL	DESCRIPTION
L55821-01	WG487088	Aluminum, total (3050)	M6010D ICP	H3	Sample was received and analyzed past holding time.
			M6010D ICP	M3	The spike recovery value is unusable since the analyte concentration in the sample is disproportionate to the spike level. The recovery of the associated control sample (LCS or LFB) was acceptable.
	WG487260	Antimony, total (3050)	M6020B ICP-MS	H3	Sample was received and analyzed past holding time.
			M6020B ICP-MS	IA	Internal standard recovery exceeded the acceptance limits. Concentration of associated target analyte(s) in the sample is < MDL.
			M6020B ICP-MS	M2	Matrix spike recovery was low, the recovery of the associated control sample (LCS or LFB) was acceptable.
	WG487389	Arsenic, total (3050)	M6020B ICP-MS	H3	Sample was received and analyzed past holding time.
	WG486912	Barium, total (3050)	M6010D ICP	H3	Sample was received and analyzed past holding time.
	WG486982	Beryllium, total (3050)	M6020B ICP-MS	H3	Sample was received and analyzed past holding time.
	WG486912	Boron, total (3050)	M6010D ICP	H3	Sample was received and analyzed past holding time.
	WG486982	Cadmium, total (3050)	M6020B ICP-MS	H3	Sample was received and analyzed past holding time.
	WG486912	Chromium, total (3050)	M6010D ICP	H3	Sample was received and analyzed past holding time.
		Cobalt, total (3050)	M6010D ICP	H3	Sample was received and analyzed past holding time.
		Copper, total (3050)	M6010D ICP	H3	Sample was received and analyzed past holding time.
	WG487088	Iron, total (3050)	M6010D ICP	H3	Sample was received and analyzed past holding time.
			M6010D ICP	M3	The spike recovery value is unusable since the analyte concentration in the sample is disproportionate to the spike level. The recovery of the associated control sample (LCS or LFB) was acceptable.
	WG486982	Lead, total (3050)	M6020B ICP-MS	H3	Sample was received and analyzed past holding time.
	WG486989	Manganese, total (3050)	M6010D ICP	H3	Sample was received and analyzed past holding time.
			M6010D ICP	M3	The spike recovery value is unusable since the analyte concentration in the sample is disproportionate to the spike level. The recovery of the associated control sample (LCS or LFB) was acceptable.
	WG486912	Molybdenum, total (3050)	M6010D ICP	H3	Sample was received and analyzed past holding time.
			M6010D ICP	H3	Sample was received and analyzed past holding time.
			M6010D ICP	ZH	Serial Dilution exceeded the acceptance criteria. Matrix interference [physical or chemical] is suspected.
	WG486982	Selenium, total (3050)	M6020B ICP-MS	H3	Sample was received and analyzed past holding time.
			M6020B ICP-MS	ZG	The ICP or ICP-MS Serial Dilution was not used for data validation because the sample concentration was less than 50 times the MDL.
	WG487260	Silver, total (3050)	M6020B ICP-MS	H3	Sample was received and analyzed past holding time.
	WG486511	Solids, Percent	D2216-80	H3	Sample was received and analyzed past holding time.
	WG486982	Thallium, total (3050)	M6020B ICP-MS	H3	Sample was received and analyzed past holding time.
	WG486989	Vanadium, total (3050)	M6010D ICP	H3	Sample was received and analyzed past holding time.
			M6010D ICP	M1	Matrix spike recovery was high, the recovery of the associated control sample (LCS or LFB) was acceptable.
	WG486912	Zinc, total (3050)	M6010D ICP	H3	Sample was received and analyzed past holding time.

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ACZ ID	WORKNUM	PARAMETER	METHOD	QUAL	DESCRIPTION
L55821-02	WG487088	Aluminum, total (3050)	M6010D ICP	H3	Sample was received and analyzed past holding time.
			M6010D ICP	M3	The spike recovery value is unusable since the analyte concentration in the sample is disproportionate to the spike level. The recovery of the associated control sample (LCS or LFB) was acceptable.
	WG487260	Antimony, total (3050)	M6020B ICP-MS	H3	Sample was received and analyzed past holding time.
			M6020B ICP-MS	IA	Internal standard recovery exceeded the acceptance limits. Concentration of associated target analyte(s) in the sample is < MDL.
			M6020B ICP-MS	M2	Matrix spike recovery was low, the recovery of the associated control sample (LCS or LFB) was acceptable.
	WG486982	Arsenic, total (3050)	M6020B ICP-MS	H3	Sample was received and analyzed past holding time.
			M6020B ICP-MS	M2	Matrix spike recovery was low, the recovery of the associated control sample (LCS or LFB) was acceptable.
			M6020B ICP-MS	ZG	The ICP or ICP-MS Serial Dilution was not used for data validation because the sample concentration was less than 50 times the MDL.
	WG486912	Barium, total (3050)	M6010D ICP	H3	Sample was received and analyzed past holding time.
	WG486982	Beryllium, total (3050)	M6020B ICP-MS	H3	Sample was received and analyzed past holding time.
	WG486912	Boron, total (3050)	M6010D ICP	H3	Sample was received and analyzed past holding time.
	WG486982	Cadmium, total (3050)	M6020B ICP-MS	H3	Sample was received and analyzed past holding time.
	WG486912	Chromium, total (3050)	M6010D ICP	H3	Sample was received and analyzed past holding time.
		Cobalt, total (3050)	M6010D ICP	H3	Sample was received and analyzed past holding time.
		Copper, total (3050)	M6010D ICP	H3	Sample was received and analyzed past holding time.
	WG487088	Iron, total (3050)	M6010D ICP	H3	Sample was received and analyzed past holding time.
			M6010D ICP	M3	The spike recovery value is unusable since the analyte concentration in the sample is disproportionate to the spike level. The recovery of the associated control sample (LCS or LFB) was acceptable.
	WG486982	Lead, total (3050)	M6020B ICP-MS	H3	Sample was received and analyzed past holding time.
	WG486989	Manganese, total (3050)	M6010D ICP	H3	Sample was received and analyzed past holding time.
			M6010D ICP	M3	The spike recovery value is unusable since the analyte concentration in the sample is disproportionate to the spike level. The recovery of the associated control sample (LCS or LFB) was acceptable.
	WG486912	Molybdenum, total (3050)	M6010D ICP	H3	Sample was received and analyzed past holding time.
			M6010D ICP	H3	Sample was received and analyzed past holding time.
			M6010D ICP	ZH	Serial Dilution exceeded the acceptance criteria. Matrix interference [physical or chemical] is suspected.
	WG486982	Selenium, total (3050)	M6020B ICP-MS	H3	Sample was received and analyzed past holding time.
			M6020B ICP-MS	ZG	The ICP or ICP-MS Serial Dilution was not used for data validation because the sample concentration was less than 50 times the MDL.
	WG487260	Silver, total (3050)	M6020B ICP-MS	H3	Sample was received and analyzed past holding time.
	WG486511	Solids, Percent	D2216-80	H3	Sample was received and analyzed past holding time.
	WG486982	Thallium, total (3050)	M6020B ICP-MS	H3	Sample was received and analyzed past holding time.
	WG486989	Vanadium, total (3050)	M6010D ICP	H3	Sample was received and analyzed past holding time.
			M6010D ICP	M1	Matrix spike recovery was high, the recovery of the associated control sample (LCS or LFB) was acceptable.
	WG486912	Zinc, total (3050)	M6010D ICP	H3	Sample was received and analyzed past holding time.

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ACZ ID	WORKNUM	PARAMETER	METHOD	QUAL	DESCRIPTION
L55821-03	WG487088	Aluminum, total (3050)	M6010D ICP	H3	Sample was received and analyzed past holding time.
			M6010D ICP	M3	The spike recovery value is unusable since the analyte concentration in the sample is disproportionate to the spike level. The recovery of the associated control sample (LCS or LFB) was acceptable.
	WG487260	Antimony, total (3050)	M6020B ICP-MS	H3	Sample was received and analyzed past holding time.
			M6020B ICP-MS	IA	Internal standard recovery exceeded the acceptance limits. Concentration of associated target analyte(s) in the sample is < MDL.
			M6020B ICP-MS	M2	Matrix spike recovery was low, the recovery of the associated control sample (LCS or LFB) was acceptable.
	WG486982	Arsenic, total (3050)	M6020B ICP-MS	H3	Sample was received and analyzed past holding time.
			M6020B ICP-MS	M2	Matrix spike recovery was low, the recovery of the associated control sample (LCS or LFB) was acceptable.
			M6020B ICP-MS	ZG	The ICP or ICP-MS Serial Dilution was not used for data validation because the sample concentration was less than 50 times the MDL.
	WG486912	Barium, total (3050)	M6010D ICP	H3	Sample was received and analyzed past holding time.
	WG486982	Beryllium, total (3050)	M6020B ICP-MS	H3	Sample was received and analyzed past holding time.
	WG486912	Boron, total (3050)	M6010D ICP	H3	Sample was received and analyzed past holding time.
	WG486982	Cadmium, total (3050)	M6020B ICP-MS	H3	Sample was received and analyzed past holding time.
	WG486912	Chromium, total (3050)	M6010D ICP	H3	Sample was received and analyzed past holding time.
		Cobalt, total (3050)	M6010D ICP	H3	Sample was received and analyzed past holding time.
		Copper, total (3050)	M6010D ICP	H3	Sample was received and analyzed past holding time.
	WG487088	Iron, total (3050)	M6010D ICP	H3	Sample was received and analyzed past holding time.
			M6010D ICP	M3	The spike recovery value is unusable since the analyte concentration in the sample is disproportionate to the spike level. The recovery of the associated control sample (LCS or LFB) was acceptable.
	WG486982	Lead, total (3050)	M6020B ICP-MS	H3	Sample was received and analyzed past holding time.
	WG486989	Manganese, total (3050)	M6010D ICP	H3	Sample was received and analyzed past holding time.
			M6010D ICP	M3	The spike recovery value is unusable since the analyte concentration in the sample is disproportionate to the spike level. The recovery of the associated control sample (LCS or LFB) was acceptable.
	WG486912	Molybdenum, total (3050)	M6010D ICP	H3	Sample was received and analyzed past holding time.
			M6010D ICP	H3	Sample was received and analyzed past holding time.
			M6010D ICP	ZH	Serial Dilution exceeded the acceptance criteria. Matrix interference [physical or chemical] is suspected.
	WG486982	Nickel, total (3050)	M6020B ICP-MS	H3	Sample was received and analyzed past holding time.
			M6020B ICP-MS	ZG	The ICP or ICP-MS Serial Dilution was not used for data validation because the sample concentration was less than 50 times the MDL.
	WG487260	Silver, total (3050)	M6020B ICP-MS	H3	Sample was received and analyzed past holding time.
	WG486511	Solids, Percent	D2216-80	H3	Sample was received and analyzed past holding time.
	WG486982	Thallium, total (3050)	M6020B ICP-MS	H3	Sample was received and analyzed past holding time.
	WG486912	Vanadium, total (3050)	M6010D ICP	H3	Sample was received and analyzed past holding time.
			M6010D ICP	M1	Matrix spike recovery was high, the recovery of the associated control sample (LCS or LFB) was acceptable.
		Zinc, total (3050)	M6010D ICP	H3	Sample was received and analyzed past holding time.

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ACZ ID	WORKNUM	PARAMETER	METHOD	QUAL	DESCRIPTION
L55821-04	WG487088	Aluminum, total (3050)	M6010D ICP	H3	Sample was received and analyzed past holding time.
			M6010D ICP	M3	The spike recovery value is unusable since the analyte concentration in the sample is disproportionate to the spike level. The recovery of the associated control sample (LCS or LFB) was acceptable.
	WG487260	Antimony, total (3050)	M6020B ICP-MS	H3	Sample was received and analyzed past holding time.
			M6020B ICP-MS	IA	Internal standard recovery exceeded the acceptance limits. Concentration of associated target analyte(s) in the sample is < MDL.
			M6020B ICP-MS	M2	Matrix spike recovery was low, the recovery of the associated control sample (LCS or LFB) was acceptable.
	WG486982	Arsenic, total (3050)	M6020B ICP-MS	H3	Sample was received and analyzed past holding time.
			M6020B ICP-MS	M2	Matrix spike recovery was low, the recovery of the associated control sample (LCS or LFB) was acceptable.
			M6020B ICP-MS	ZG	The ICP or ICP-MS Serial Dilution was not used for data validation because the sample concentration was less than 50 times the MDL.
	WG486912	Barium, total (3050)	M6010D ICP	H3	Sample was received and analyzed past holding time.
	WG486982	Beryllium, total (3050)	M6020B ICP-MS	H3	Sample was received and analyzed past holding time.
	WG486912	Boron, total (3050)	M6010D ICP	H3	Sample was received and analyzed past holding time.
	WG486982	Cadmium, total (3050)	M6020B ICP-MS	H3	Sample was received and analyzed past holding time.
	WG486912	Chromium, total (3050)	M6010D ICP	H3	Sample was received and analyzed past holding time.
		Cobalt, total (3050)	M6010D ICP	H3	Sample was received and analyzed past holding time.
		Copper, total (3050)	M6010D ICP	H3	Sample was received and analyzed past holding time.
	WG487088	Iron, total (3050)	M6010D ICP	H3	Sample was received and analyzed past holding time.
			M6010D ICP	M3	The spike recovery value is unusable since the analyte concentration in the sample is disproportionate to the spike level. The recovery of the associated control sample (LCS or LFB) was acceptable.
	WG486982	Lead, total (3050)	M6020B ICP-MS	H3	Sample was received and analyzed past holding time.
	WG486989	Manganese, total (3050)	M6010D ICP	H3	Sample was received and analyzed past holding time.
			M6010D ICP	M3	The spike recovery value is unusable since the analyte concentration in the sample is disproportionate to the spike level. The recovery of the associated control sample (LCS or LFB) was acceptable.
	WG486912	Molybdenum, total (3050)	M6010D ICP	H3	Sample was received and analyzed past holding time.
			M6010D ICP	H3	Sample was received and analyzed past holding time.
			M6010D ICP	ZH	Serial Dilution exceeded the acceptance criteria. Matrix interference [physical or chemical] is suspected.
	WG486982	Nickel, total (3050)	M6020B ICP-MS	H3	Sample was received and analyzed past holding time.
			M6020B ICP-MS	IA	Internal standard recovery exceeded the acceptance limits. Concentration of associated target analyte(s) in the sample is < MDL.
			M6020B ICP-MS	ZG	The ICP or ICP-MS Serial Dilution was not used for data validation because the sample concentration was less than 50 times the MDL.
	WG487260	Silver, total (3050)	M6020B ICP-MS	H3	Sample was received and analyzed past holding time.
	WG486511	Solids, Percent	D2216-80	H3	Sample was received and analyzed past holding time.
	WG486982	Thallium, total (3050)	M6020B ICP-MS	H3	Sample was received and analyzed past holding time.
	WG486989	Vanadium, total (3050)	M6010D ICP	H3	Sample was received and analyzed past holding time.
			M6010D ICP	M1	Matrix spike recovery was high, the recovery of the associated control sample (LCS or LFB) was acceptable.
	WG486912	Zinc, total (3050)	M6010D ICP	H3	Sample was received and analyzed past holding time.

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ACZ ID	WORKNUM	PARAMETER	METHOD	QUAL	DESCRIPTION
L55821-05	WG487088	Aluminum, total (3050)	M6010D ICP	H3	Sample was received and analyzed past holding time.
			M6010D ICP	M3	The spike recovery value is unusable since the analyte concentration in the sample is disproportionate to the spike level. The recovery of the associated control sample (LCS or LFB) was acceptable.
	WG487260	Antimony, total (3050)	M6020B ICP-MS	H3	Sample was received and analyzed past holding time.
			M6020B ICP-MS	IA	Internal standard recovery exceeded the acceptance limits. Concentration of associated target analyte(s) in the sample is < MDL.
			M6020B ICP-MS	M2	Matrix spike recovery was low, the recovery of the associated control sample (LCS or LFB) was acceptable.
	WG486982	Arsenic, total (3050)	M6020B ICP-MS	H3	Sample was received and analyzed past holding time.
			M6020B ICP-MS	M2	Matrix spike recovery was low, the recovery of the associated control sample (LCS or LFB) was acceptable.
			M6020B ICP-MS	ZG	The ICP or ICP-MS Serial Dilution was not used for data validation because the sample concentration was less than 50 times the MDL.
	WG486912	Barium, total (3050)	M6010D ICP	H3	Sample was received and analyzed past holding time.
	WG486982	Beryllium, total (3050)	M6020B ICP-MS	H3	Sample was received and analyzed past holding time.
	WG486912	Boron, total (3050)	M6010D ICP	H3	Sample was received and analyzed past holding time.
	WG486982	Cadmium, total (3050)	M6020B ICP-MS	H3	Sample was received and analyzed past holding time.
	WG486912	Chromium, total (3050)	M6010D ICP	H3	Sample was received and analyzed past holding time.
		Cobalt, total (3050)	M6010D ICP	H3	Sample was received and analyzed past holding time.
		Copper, total (3050)	M6010D ICP	H3	Sample was received and analyzed past holding time.
	WG487088	Iron, total (3050)	M6010D ICP	H3	Sample was received and analyzed past holding time.
			M6010D ICP	M3	The spike recovery value is unusable since the analyte concentration in the sample is disproportionate to the spike level. The recovery of the associated control sample (LCS or LFB) was acceptable.
	WG486982	Lead, total (3050)	M6020B ICP-MS	H3	Sample was received and analyzed past holding time.
	WG486989	Manganese, total (3050)	M6010D ICP	H3	Sample was received and analyzed past holding time.
			M6010D ICP	M3	The spike recovery value is unusable since the analyte concentration in the sample is disproportionate to the spike level. The recovery of the associated control sample (LCS or LFB) was acceptable.
	WG486912	Molybdenum, total (3050)	M6010D ICP	H3	Sample was received and analyzed past holding time.
			M6010D ICP	H3	Sample was received and analyzed past holding time.
			M6010D ICP	ZH	Serial Dilution exceeded the acceptance criteria. Matrix interference [physical or chemical] is suspected.
	WG486982	Nickel, total (3050)	M6020B ICP-MS	H3	Sample was received and analyzed past holding time.
			M6020B ICP-MS	ZG	The ICP or ICP-MS Serial Dilution was not used for data validation because the sample concentration was less than 50 times the MDL.
	WG487260	Silver, total (3050)	M6020B ICP-MS	H3	Sample was received and analyzed past holding time.
	WG486511	Solids, Percent	D2216-80	H3	Sample was received and analyzed past holding time.
	WG486982	Thallium, total (3050)	M6020B ICP-MS	H3	Sample was received and analyzed past holding time.
	WG486989	Vanadium, total (3050)	M6010D ICP	H3	Sample was received and analyzed past holding time.
			M6010D ICP	M1	Matrix spike recovery was high, the recovery of the associated control sample (LCS or LFB) was acceptable.
	WG486912	Zinc, total (3050)	M6010D ICP	H3	Sample was received and analyzed past holding time.

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ACZ ID	WORKNUM	PARAMETER	METHOD	QUAL	DESCRIPTION
L55821-06	WG487088	Aluminum, total (3050)	M6010D ICP	H3	Sample was received and analyzed past holding time.
			M6010D ICP	M3	The spike recovery value is unusable since the analyte concentration in the sample is disproportionate to the spike level. The recovery of the associated control sample (LCS or LFB) was acceptable.
	WG487260	Antimony, total (3050)	M6020B ICP-MS	H3	Sample was received and analyzed past holding time.
			M6020B ICP-MS	IA	Internal standard recovery exceeded the acceptance limits. Concentration of associated target analyte(s) in the sample is < MDL.
			M6020B ICP-MS	M2	Matrix spike recovery was low, the recovery of the associated control sample (LCS or LFB) was acceptable.
	WG486982	Arsenic, total (3050)	M6020B ICP-MS	H3	Sample was received and analyzed past holding time.
			M6020B ICP-MS	M2	Matrix spike recovery was low, the recovery of the associated control sample (LCS or LFB) was acceptable.
			M6020B ICP-MS	ZG	The ICP or ICP-MS Serial Dilution was not used for data validation because the sample concentration was less than 50 times the MDL.
	WG486912	Barium, total (3050)	M6010D ICP	H3	Sample was received and analyzed past holding time.
	WG486982	Beryllium, total (3050)	M6020B ICP-MS	H3	Sample was received and analyzed past holding time.
	WG486912	Boron, total (3050)	M6010D ICP	H3	Sample was received and analyzed past holding time.
	WG486982	Cadmium, total (3050)	M6020B ICP-MS	H3	Sample was received and analyzed past holding time.
	WG486912	Chromium, total (3050)	M6010D ICP	H3	Sample was received and analyzed past holding time.
		Cobalt, total (3050)	M6010D ICP	H3	Sample was received and analyzed past holding time.
		Copper, total (3050)	M6010D ICP	H3	Sample was received and analyzed past holding time.
	WG487088	Iron, total (3050)	M6010D ICP	H3	Sample was received and analyzed past holding time.
			M6010D ICP	M3	The spike recovery value is unusable since the analyte concentration in the sample is disproportionate to the spike level. The recovery of the associated control sample (LCS or LFB) was acceptable.
	WG486982	Lead, total (3050)	M6020B ICP-MS	H3	Sample was received and analyzed past holding time.
	WG486989	Manganese, total (3050)	M6010D ICP	H3	Sample was received and analyzed past holding time.
			M6010D ICP	M3	The spike recovery value is unusable since the analyte concentration in the sample is disproportionate to the spike level. The recovery of the associated control sample (LCS or LFB) was acceptable.
	WG486912	Molybdenum, total (3050)	M6010D ICP	H3	Sample was received and analyzed past holding time.
			M6010D ICP	H3	Sample was received and analyzed past holding time.
			M6010D ICP	ZH	Serial Dilution exceeded the acceptance criteria. Matrix interference [physical or chemical] is suspected.
	WG486982	Nickel, total (3050)	M6020B ICP-MS	H3	Sample was received and analyzed past holding time.
			M6020B ICP-MS	ZG	The ICP or ICP-MS Serial Dilution was not used for data validation because the sample concentration was less than 50 times the MDL.
	WG487260	Silver, total (3050)	M6020B ICP-MS	H3	Sample was received and analyzed past holding time.
	WG486511	Solids, Percent	D2216-80	H3	Sample was received and analyzed past holding time.
	WG486982	Thallium, total (3050)	M6020B ICP-MS	H3	Sample was received and analyzed past holding time.
	WG486989	Vanadium, total (3050)	M6010D ICP	H3	Sample was received and analyzed past holding time.
			M6010D ICP	M1	Matrix spike recovery was high, the recovery of the associated control sample (LCS or LFB) was acceptable.
	WG486912	Zinc, total (3050)	M6010D ICP	H3	Sample was received and analyzed past holding time.

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ACZ ID	WORKNUM	PARAMETER	METHOD	QUAL	DESCRIPTION
L55821-07	WG487088	Aluminum, total (3050)	M6010D ICP	H3	Sample was received and analyzed past holding time.
			M6010D ICP	M3	The spike recovery value is unusable since the analyte concentration in the sample is disproportionate to the spike level. The recovery of the associated control sample (LCS or LFB) was acceptable.
	WG487260	Antimony, total (3050)	M6020B ICP-MS	H3	Sample was received and analyzed past holding time.
			M6020B ICP-MS	IA	Internal standard recovery exceeded the acceptance limits. Concentration of associated target analyte(s) in the sample is < MDL.
			M6020B ICP-MS	M2	Matrix spike recovery was low, the recovery of the associated control sample (LCS or LFB) was acceptable.
	WG487389	Arsenic, total (3050)	M6020B ICP-MS	H3	Sample was received and analyzed past holding time.
	WG486912	Barium, total (3050)	M6010D ICP	H3	Sample was received and analyzed past holding time.
	WG486982	Beryllium, total (3050)	M6020B ICP-MS	H3	Sample was received and analyzed past holding time.
	WG486912	Boron, total (3050)	M6010D ICP	H3	Sample was received and analyzed past holding time.
	WG486982	Cadmium, total (3050)	M6020B ICP-MS	H3	Sample was received and analyzed past holding time.
	WG486912	Chromium, total (3050)	M6010D ICP	H3	Sample was received and analyzed past holding time.
		Cobalt, total (3050)	M6010D ICP	H3	Sample was received and analyzed past holding time.
		Copper, total (3050)	M6010D ICP	H3	Sample was received and analyzed past holding time.
	WG487088	Iron, total (3050)	M6010D ICP	H3	Sample was received and analyzed past holding time.
			M6010D ICP	M3	The spike recovery value is unusable since the analyte concentration in the sample is disproportionate to the spike level. The recovery of the associated control sample (LCS or LFB) was acceptable.
	WG486982	Lead, total (3050)	M6020B ICP-MS	H3	Sample was received and analyzed past holding time.
	WG486989	Manganese, total (3050)	M6010D ICP	H3	Sample was received and analyzed past holding time.
			M6010D ICP	M3	The spike recovery value is unusable since the analyte concentration in the sample is disproportionate to the spike level. The recovery of the associated control sample (LCS or LFB) was acceptable.
	WG486912	Molybdenum, total (3050)	M6010D ICP	H3	Sample was received and analyzed past holding time.
			M6010D ICP	H3	Sample was received and analyzed past holding time.
			M6010D ICP	ZH	Serial Dilution exceeded the acceptance criteria. Matrix interference [physical or chemical] is suspected.
	WG486982	Selenium, total (3050)	M6020B ICP-MS	H3	Sample was received and analyzed past holding time.
			M6020B ICP-MS	ZG	The ICP or ICP-MS Serial Dilution was not used for data validation because the sample concentration was less than 50 times the MDL.
	WG487260	Silver, total (3050)	M6020B ICP-MS	H3	Sample was received and analyzed past holding time.
	WG486511	Solids, Percent	D2216-80	H3	Sample was received and analyzed past holding time.
	WG486982	Thallium, total (3050)	M6020B ICP-MS	H3	Sample was received and analyzed past holding time.
	WG486989	Vanadium, total (3050)	M6010D ICP	H3	Sample was received and analyzed past holding time.
			M6010D ICP	M1	Matrix spike recovery was high, the recovery of the associated control sample (LCS or LFB) was acceptable.
	WG486912	Zinc, total (3050)	M6010D ICP	H3	Sample was received and analyzed past holding time.

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ACZ ID	WORKNUM	PARAMETER	METHOD	QUAL	DESCRIPTION
L55821-08	WG487088	Aluminum, total (3050)	M6010D ICP	H3	Sample was received and analyzed past holding time.
			M6010D ICP	M3	The spike recovery value is unusable since the analyte concentration in the sample is disproportionate to the spike level. The recovery of the associated control sample (LCS or LFB) was acceptable.
	WG487260	Antimony, total (3050)	M6020B ICP-MS	H3	Sample was received and analyzed past holding time.
			M6020B ICP-MS	IA	Internal standard recovery exceeded the acceptance limits. Concentration of associated target analyte(s) in the sample is < MDL.
			M6020B ICP-MS	M2	Matrix spike recovery was low, the recovery of the associated control sample (LCS or LFB) was acceptable.
	WG487389	Arsenic, total (3050)	M6020B ICP-MS	H3	Sample was received and analyzed past holding time.
	WG486912	Barium, total (3050)	M6010D ICP	H3	Sample was received and analyzed past holding time.
	WG486982	Beryllium, total (3050)	M6020B ICP-MS	H3	Sample was received and analyzed past holding time.
	WG486912	Boron, total (3050)	M6010D ICP	H3	Sample was received and analyzed past holding time.
	WG486982	Cadmium, total (3050)	M6020B ICP-MS	H3	Sample was received and analyzed past holding time.
	WG486912	Chromium, total (3050)	M6010D ICP	H3	Sample was received and analyzed past holding time.
		Cobalt, total (3050)	M6010D ICP	H3	Sample was received and analyzed past holding time.
		Copper, total (3050)	M6010D ICP	H3	Sample was received and analyzed past holding time.
	WG487088	Iron, total (3050)	M6010D ICP	H3	Sample was received and analyzed past holding time.
			M6010D ICP	M3	The spike recovery value is unusable since the analyte concentration in the sample is disproportionate to the spike level. The recovery of the associated control sample (LCS or LFB) was acceptable.
	WG486982	Lead, total (3050)	M6020B ICP-MS	H3	Sample was received and analyzed past holding time.
	WG486989	Manganese, total (3050)	M6010D ICP	H3	Sample was received and analyzed past holding time.
			M6010D ICP	M3	The spike recovery value is unusable since the analyte concentration in the sample is disproportionate to the spike level. The recovery of the associated control sample (LCS or LFB) was acceptable.
	WG486912	Molybdenum, total (3050)	M6010D ICP	H3	Sample was received and analyzed past holding time.
			M6010D ICP	H3	Sample was received and analyzed past holding time.
			M6010D ICP	ZH	Serial Dilution exceeded the acceptance criteria. Matrix interference [physical or chemical] is suspected.
	WG486982	Selenium, total (3050)	M6020B ICP-MS	H3	Sample was received and analyzed past holding time.
			M6020B ICP-MS	ZG	The ICP or ICP-MS Serial Dilution was not used for data validation because the sample concentration was less than 50 times the MDL.
	WG487260	Silver, total (3050)	M6020B ICP-MS	H3	Sample was received and analyzed past holding time.
	WG486511	Solids, Percent	D2216-80	H3	Sample was received and analyzed past holding time.
	WG486982	Thallium, total (3050)	M6020B ICP-MS	H3	Sample was received and analyzed past holding time.
	WG486989	Vanadium, total (3050)	M6010D ICP	H3	Sample was received and analyzed past holding time.
			M6010D ICP	M1	Matrix spike recovery was high, the recovery of the associated control sample (LCS or LFB) was acceptable.
	WG486912	Zinc, total (3050)	M6010D ICP	H3	Sample was received and analyzed past holding time.

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ACZ ID	WORKNUM	PARAMETER	METHOD	QUAL	DESCRIPTION
L55821-09	WG487088	Aluminum, total (3050)	M6010D ICP	H3	Sample was received and analyzed past holding time.
			M6010D ICP	M3	The spike recovery value is unusable since the analyte concentration in the sample is disproportionate to the spike level. The recovery of the associated control sample (LCS or LFB) was acceptable.
	WG487260	Antimony, total (3050)	M6020B ICP-MS	H3	Sample was received and analyzed past holding time.
			M6020B ICP-MS	IA	Internal standard recovery exceeded the acceptance limits. Concentration of associated target analyte(s) in the sample is < MDL.
			M6020B ICP-MS	M2	Matrix spike recovery was low, the recovery of the associated control sample (LCS or LFB) was acceptable.
	WG487389	Arsenic, total (3050)	M6020B ICP-MS	H3	Sample was received and analyzed past holding time.
	WG486912	Barium, total (3050)	M6010D ICP	H3	Sample was received and analyzed past holding time.
	WG486982	Beryllium, total (3050)	M6020B ICP-MS	H3	Sample was received and analyzed past holding time.
	WG486912	Boron, total (3050)	M6010D ICP	H3	Sample was received and analyzed past holding time.
	WG486982	Cadmium, total (3050)	M6020B ICP-MS	H3	Sample was received and analyzed past holding time.
	WG486912	Chromium, total (3050)	M6010D ICP	H3	Sample was received and analyzed past holding time.
		Cobalt, total (3050)	M6010D ICP	H3	Sample was received and analyzed past holding time.
		Copper, total (3050)	M6010D ICP	H3	Sample was received and analyzed past holding time.
	WG487088	Iron, total (3050)	M6010D ICP	H3	Sample was received and analyzed past holding time.
			M6010D ICP	M3	The spike recovery value is unusable since the analyte concentration in the sample is disproportionate to the spike level. The recovery of the associated control sample (LCS or LFB) was acceptable.
	WG486982	Lead, total (3050)	M6020B ICP-MS	H3	Sample was received and analyzed past holding time.
	WG486989	Manganese, total (3050)	M6010D ICP	H3	Sample was received and analyzed past holding time.
			M6010D ICP	M3	The spike recovery value is unusable since the analyte concentration in the sample is disproportionate to the spike level. The recovery of the associated control sample (LCS or LFB) was acceptable.
	WG486912	Molybdenum, total (3050)	M6010D ICP	H3	Sample was received and analyzed past holding time.
			M6010D ICP	H3	Sample was received and analyzed past holding time.
			M6010D ICP	ZH	Serial Dilution exceeded the acceptance criteria. Matrix interference [physical or chemical] is suspected.
	WG486982	Nickel, total (3050)	M6020B ICP-MS	H3	Sample was received and analyzed past holding time.
			M6020B ICP-MS	ZG	The ICP or ICP-MS Serial Dilution was not used for data validation because the sample concentration was less than 50 times the MDL.
	WG487260	Silver, total (3050)	M6020B ICP-MS	H3	Sample was received and analyzed past holding time.
	WG486511	Solids, Percent	D2216-80	H3	Sample was received and analyzed past holding time.
	WG486982	Thallium, total (3050)	M6020B ICP-MS	H3	Sample was received and analyzed past holding time.
	WG486989	Vanadium, total (3050)	M6010D ICP	H3	Sample was received and analyzed past holding time.
			M6010D ICP	M1	Matrix spike recovery was high, the recovery of the associated control sample (LCS or LFB) was acceptable.
	WG486912	Zinc, total (3050)	M6010D ICP	H3	Sample was received and analyzed past holding time.

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ACZ ID	WORKNUM	PARAMETER	METHOD	QUAL	DESCRIPTION
L55821-10	WG487088	Aluminum, total (3050)	M6010D ICP	H3	Sample was received and analyzed past holding time.
			M6010D ICP	M3	The spike recovery value is unusable since the analyte concentration in the sample is disproportionate to the spike level. The recovery of the associated control sample (LCS or LFB) was acceptable.
	WG487260	Antimony, total (3050)	M6020B ICP-MS	H3	Sample was received and analyzed past holding time.
			M6020B ICP-MS	IA	Internal standard recovery exceeded the acceptance limits. Concentration of associated target analyte(s) in the sample is < MDL.
			M6020B ICP-MS	M2	Matrix spike recovery was low, the recovery of the associated control sample (LCS or LFB) was acceptable.
	WG486982	Arsenic, total (3050)	M6020B ICP-MS	H3	Sample was received and analyzed past holding time.
			M6020B ICP-MS	M2	Matrix spike recovery was low, the recovery of the associated control sample (LCS or LFB) was acceptable.
			M6020B ICP-MS	ZG	The ICP or ICP-MS Serial Dilution was not used for data validation because the sample concentration was less than 50 times the MDL.
	WG486912	Barium, total (3050)	M6010D ICP	H3	Sample was received and analyzed past holding time.
	WG486982	Beryllium, total (3050)	M6020B ICP-MS	H3	Sample was received and analyzed past holding time.
	WG486912	Boron, total (3050)	M6010D ICP	H3	Sample was received and analyzed past holding time.
	WG486982	Cadmium, total (3050)	M6020B ICP-MS	H3	Sample was received and analyzed past holding time.
	WG486912	Chromium, total (3050)	M6010D ICP	H3	Sample was received and analyzed past holding time.
		Cobalt, total (3050)	M6010D ICP	H3	Sample was received and analyzed past holding time.
		Copper, total (3050)	M6010D ICP	H3	Sample was received and analyzed past holding time.
	WG487088	Iron, total (3050)	M6010D ICP	H3	Sample was received and analyzed past holding time.
			M6010D ICP	M3	The spike recovery value is unusable since the analyte concentration in the sample is disproportionate to the spike level. The recovery of the associated control sample (LCS or LFB) was acceptable.
	WG486982	Lead, total (3050)	M6020B ICP-MS	H3	Sample was received and analyzed past holding time.
	WG486989	Manganese, total (3050)	M6010D ICP	H3	Sample was received and analyzed past holding time.
			M6010D ICP	M3	The spike recovery value is unusable since the analyte concentration in the sample is disproportionate to the spike level. The recovery of the associated control sample (LCS or LFB) was acceptable.
	WG486912	Molybdenum, total (3050)	M6010D ICP	H3	Sample was received and analyzed past holding time.
			M6010D ICP	H3	Sample was received and analyzed past holding time.
			M6010D ICP	ZH	Serial Dilution exceeded the acceptance criteria. Matrix interference [physical or chemical] is suspected.
	WG486982	Nickel, total (3050)	M6020B ICP-MS	H3	Sample was received and analyzed past holding time.
			M6020B ICP-MS	ZG	The ICP or ICP-MS Serial Dilution was not used for data validation because the sample concentration was less than 50 times the MDL.
	WG487260	Silver, total (3050)	M6020B ICP-MS	H3	Sample was received and analyzed past holding time.
	WG486511	Solids, Percent	D2216-80	H3	Sample was received and analyzed past holding time.
	WG486982	Thallium, total (3050)	M6020B ICP-MS	H3	Sample was received and analyzed past holding time.
	WG486989	Vanadium, total (3050)	M6010D ICP	H3	Sample was received and analyzed past holding time.
			M6010D ICP	M1	Matrix spike recovery was high, the recovery of the associated control sample (LCS or LFB) was acceptable.
	WG486912	Zinc, total (3050)	M6010D ICP	H3	Sample was received and analyzed past holding time.

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ACZ ID	WORKNUM	PARAMETER	METHOD	QUAL	DESCRIPTION
L55821-11	WG487088	Aluminum, total (3050)	M6010D ICP	H3	Sample was received and analyzed past holding time.
			M6010D ICP	M3	The spike recovery value is unusable since the analyte concentration in the sample is disproportionate to the spike level. The recovery of the associated control sample (LCS or LFB) was acceptable.
	WG487260	Antimony, total (3050)	M6020B ICP-MS	H3	Sample was received and analyzed past holding time.
			M6020B ICP-MS	IA	Internal standard recovery exceeded the acceptance limits. Concentration of associated target analyte(s) in the sample is < MDL.
			M6020B ICP-MS	M2	Matrix spike recovery was low, the recovery of the associated control sample (LCS or LFB) was acceptable.
	WG486982	Arsenic, total (3050)	M6020B ICP-MS	H3	Sample was received and analyzed past holding time.
			M6020B ICP-MS	M2	Matrix spike recovery was low, the recovery of the associated control sample (LCS or LFB) was acceptable.
			M6020B ICP-MS	ZG	The ICP or ICP-MS Serial Dilution was not used for data validation because the sample concentration was less than 50 times the MDL.
	WG486912	Barium, total (3050)	M6010D ICP	H3	Sample was received and analyzed past holding time.
	WG486982	Beryllium, total (3050)	M6020B ICP-MS	H3	Sample was received and analyzed past holding time.
	WG486912	Boron, total (3050)	M6010D ICP	H3	Sample was received and analyzed past holding time.
	WG486982	Cadmium, total (3050)	M6020B ICP-MS	H3	Sample was received and analyzed past holding time.
	WG486912	Chromium, total (3050)	M6010D ICP	H3	Sample was received and analyzed past holding time.
			Cobalt, total (3050)	H3	Sample was received and analyzed past holding time.
			Copper, total (3050)	H3	Sample was received and analyzed past holding time.
	WG487088	Iron, total (3050)	M6010D ICP	H3	Sample was received and analyzed past holding time.
			M6010D ICP	M3	The spike recovery value is unusable since the analyte concentration in the sample is disproportionate to the spike level. The recovery of the associated control sample (LCS or LFB) was acceptable.
	WG486982	Lead, total (3050)	M6020B ICP-MS	H3	Sample was received and analyzed past holding time.
	WG486989	Manganese, total (3050)	M6010D ICP	H3	Sample was received and analyzed past holding time.
			M6010D ICP	M3	The spike recovery value is unusable since the analyte concentration in the sample is disproportionate to the spike level. The recovery of the associated control sample (LCS or LFB) was acceptable.
	WG486912	Molybdenum, total (3050)	M6010D ICP	H3	Sample was received and analyzed past holding time.
	WG486989	Nickel, total (3050)	M6010D ICP	H3	Sample was received and analyzed past holding time.
			M6010D ICP	ZG	The ICP or ICP-MS Serial Dilution was not used for data validation because the sample concentration was less than 50 times the MDL.
	WG486982	Selenium, total (3050)	M6020B ICP-MS	H3	Sample was received and analyzed past holding time.
			M6020B ICP-MS	ZG	The ICP or ICP-MS Serial Dilution was not used for data validation because the sample concentration was less than 50 times the MDL.
	WG487260	Silver, total (3050)	M6020B ICP-MS	H3	Sample was received and analyzed past holding time.
	WG486511	Solids, Percent	D2216-80	H3	Sample was received and analyzed past holding time.
	WG486982	Thallium, total (3050)	M6020B ICP-MS	H3	Sample was received and analyzed past holding time.
	WG486912	Vanadium, total (3050)	M6010D ICP	H3	Sample was received and analyzed past holding time.
			M6010D ICP	M1	Matrix spike recovery was high, the recovery of the associated control sample (LCS or LFB) was acceptable.
		Zinc, total (3050)	M6010D ICP	H3	Sample was received and analyzed past holding time.

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ACZ ID	WORKNUM	PARAMETER	METHOD	QUAL	DESCRIPTION
L55821-12	WG487088	Aluminum, total (3050)	M6010D ICP	H3	Sample was received and analyzed past holding time.
			M6010D ICP	M3	The spike recovery value is unusable since the analyte concentration in the sample is disproportionate to the spike level. The recovery of the associated control sample (LCS or LFB) was acceptable.
	WG487260	Antimony, total (3050)	M6020B ICP-MS	H3	Sample was received and analyzed past holding time.
			M6020B ICP-MS	IA	Internal standard recovery exceeded the acceptance limits. Concentration of associated target analyte(s) in the sample is < MDL.
			M6020B ICP-MS	M2	Matrix spike recovery was low, the recovery of the associated control sample (LCS or LFB) was acceptable.
	WG487389	Arsenic, total (3050)	M6020B ICP-MS	H3	Sample was received and analyzed past holding time.
	WG486912	Barium, total (3050)	M6010D ICP	H3	Sample was received and analyzed past holding time.
	WG486982	Beryllium, total (3050)	M6020B ICP-MS	H3	Sample was received and analyzed past holding time.
	WG486912	Boron, total (3050)	M6010D ICP	H3	Sample was received and analyzed past holding time.
	WG486982	Cadmium, total (3050)	M6020B ICP-MS	H3	Sample was received and analyzed past holding time.
	WG486912	Chromium, total (3050)	M6010D ICP	H3	Sample was received and analyzed past holding time.
		Cobalt, total (3050)	M6010D ICP	H3	Sample was received and analyzed past holding time.
		Copper, total (3050)	M6010D ICP	H3	Sample was received and analyzed past holding time.
	WG487088	Iron, total (3050)	M6010D ICP	H3	Sample was received and analyzed past holding time.
			M6010D ICP	M3	The spike recovery value is unusable since the analyte concentration in the sample is disproportionate to the spike level. The recovery of the associated control sample (LCS or LFB) was acceptable.
	WG486982	Lead, total (3050)	M6020B ICP-MS	H3	Sample was received and analyzed past holding time.
	WG486989	Manganese, total (3050)	M6010D ICP	H3	Sample was received and analyzed past holding time.
			M6010D ICP	M3	The spike recovery value is unusable since the analyte concentration in the sample is disproportionate to the spike level. The recovery of the associated control sample (LCS or LFB) was acceptable.
	WG486912	Molybdenum, total (3050)	M6010D ICP	H3	Sample was received and analyzed past holding time.
			M6010D ICP	H3	Sample was received and analyzed past holding time.
			M6010D ICP	ZH	Serial Dilution exceeded the acceptance criteria. Matrix interference [physical or chemical] is suspected.
	WG486982	Selenium, total (3050)	M6020B ICP-MS	H3	Sample was received and analyzed past holding time.
			M6020B ICP-MS	ZG	The ICP or ICP-MS Serial Dilution was not used for data validation because the sample concentration was less than 50 times the MDL.
	WG487260	Silver, total (3050)	M6020B ICP-MS	H3	Sample was received and analyzed past holding time.
	WG486511	Solids, Percent	D2216-80	H3	Sample was received and analyzed past holding time.
	WG486982	Thallium, total (3050)	M6020B ICP-MS	H3	Sample was received and analyzed past holding time.
	WG486989	Vanadium, total (3050)	M6010D ICP	H3	Sample was received and analyzed past holding time.
			M6010D ICP	M1	Matrix spike recovery was high, the recovery of the associated control sample (LCS or LFB) was acceptable.
	WG486912	Zinc, total (3050)	M6010D ICP	H3	Sample was received and analyzed past holding time.

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ACZ ID	WORKNUM	PARAMETER	METHOD	QUAL	DESCRIPTION
L55821-13	WG487088	Aluminum, total (3050)	M6010D ICP	H3	Sample was received and analyzed past holding time.
			M6010D ICP	M3	The spike recovery value is unusable since the analyte concentration in the sample is disproportionate to the spike level. The recovery of the associated control sample (LCS or LFB) was acceptable.
	WG487260	Antimony, total (3050)	M6020B ICP-MS	H3	Sample was received and analyzed past holding time.
			M6020B ICP-MS	IA	Internal standard recovery exceeded the acceptance limits. Concentration of associated target analyte(s) in the sample is < MDL.
			M6020B ICP-MS	M2	Matrix spike recovery was low, the recovery of the associated control sample (LCS or LFB) was acceptable.
	WG487389	Arsenic, total (3050)	M6020B ICP-MS	H3	Sample was received and analyzed past holding time.
	WG486912	Barium, total (3050)	M6010D ICP	H3	Sample was received and analyzed past holding time.
	WG486982	Beryllium, total (3050)	M6020B ICP-MS	H3	Sample was received and analyzed past holding time.
	WG486912	Boron, total (3050)	M6010D ICP	H3	Sample was received and analyzed past holding time.
	WG486982	Cadmium, total (3050)	M6020B ICP-MS	H3	Sample was received and analyzed past holding time.
	WG486912	Chromium, total (3050)	M6010D ICP	H3	Sample was received and analyzed past holding time.
		Cobalt, total (3050)	M6010D ICP	H3	Sample was received and analyzed past holding time.
		Copper, total (3050)	M6010D ICP	H3	Sample was received and analyzed past holding time.
	WG487088	Iron, total (3050)	M6010D ICP	H3	Sample was received and analyzed past holding time.
			M6010D ICP	M3	The spike recovery value is unusable since the analyte concentration in the sample is disproportionate to the spike level. The recovery of the associated control sample (LCS or LFB) was acceptable.
	WG486982	Lead, total (3050)	M6020B ICP-MS	H3	Sample was received and analyzed past holding time.
	WG486989	Manganese, total (3050)	M6010D ICP	H3	Sample was received and analyzed past holding time.
			M6010D ICP	M3	The spike recovery value is unusable since the analyte concentration in the sample is disproportionate to the spike level. The recovery of the associated control sample (LCS or LFB) was acceptable.
	WG486912	Molybdenum, total (3050)	M6010D ICP	H3	Sample was received and analyzed past holding time.
			M6010D ICP	H3	Sample was received and analyzed past holding time.
			M6010D ICP	ZH	Serial Dilution exceeded the acceptance criteria. Matrix interference [physical or chemical] is suspected.
	WG486982	Selenium, total (3050)	M6020B ICP-MS	H3	Sample was received and analyzed past holding time.
			M6020B ICP-MS	ZG	The ICP or ICP-MS Serial Dilution was not used for data validation because the sample concentration was less than 50 times the MDL.
	WG487260	Silver, total (3050)	M6020B ICP-MS	H3	Sample was received and analyzed past holding time.
	WG486511	Solids, Percent	D2216-80	H3	Sample was received and analyzed past holding time.
	WG486982	Thallium, total (3050)	M6020B ICP-MS	H3	Sample was received and analyzed past holding time.
	WG486989	Vanadium, total (3050)	M6010D ICP	H3	Sample was received and analyzed past holding time.
			M6010D ICP	M1	Matrix spike recovery was high, the recovery of the associated control sample (LCS or LFB) was acceptable.
	WG486912	Zinc, total (3050)	M6010D ICP	H3	Sample was received and analyzed past holding time.

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ACZ ID	WORKNUM	PARAMETER	METHOD	QUAL	DESCRIPTION
L55821-14	WG487088	Aluminum, total (3050)	M6010D ICP	H3	Sample was received and analyzed past holding time.
			M6010D ICP	M3	The spike recovery value is unusable since the analyte concentration in the sample is disproportionate to the spike level. The recovery of the associated control sample (LCS or LFB) was acceptable.
	WG487260	Antimony, total (3050)	M6020B ICP-MS	H3	Sample was received and analyzed past holding time.
			M6020B ICP-MS	IA	Internal standard recovery exceeded the acceptance limits. Concentration of associated target analyte(s) in the sample is < MDL.
			M6020B ICP-MS	M2	Matrix spike recovery was low, the recovery of the associated control sample (LCS or LFB) was acceptable.
	WG486982	Arsenic, total (3050)	M6020B ICP-MS	H3	Sample was received and analyzed past holding time.
			M6020B ICP-MS	M2	Matrix spike recovery was low, the recovery of the associated control sample (LCS or LFB) was acceptable.
			M6020B ICP-MS	ZG	The ICP or ICP-MS Serial Dilution was not used for data validation because the sample concentration was less than 50 times the MDL.
	WG486912	Barium, total (3050)	M6010D ICP	H3	Sample was received and analyzed past holding time.
	WG486982	Beryllium, total (3050)	M6020B ICP-MS	H3	Sample was received and analyzed past holding time.
	WG486912	Boron, total (3050)	M6010D ICP	H3	Sample was received and analyzed past holding time.
	WG486982	Cadmium, total (3050)	M6020B ICP-MS	H3	Sample was received and analyzed past holding time.
	WG486912	Chromium, total (3050)	M6010D ICP	H3	Sample was received and analyzed past holding time.
		Cobalt, total (3050)	M6010D ICP	H3	Sample was received and analyzed past holding time.
		Copper, total (3050)	M6010D ICP	H3	Sample was received and analyzed past holding time.
	WG487088	Iron, total (3050)	M6010D ICP	H3	Sample was received and analyzed past holding time.
			M6010D ICP	M3	The spike recovery value is unusable since the analyte concentration in the sample is disproportionate to the spike level. The recovery of the associated control sample (LCS or LFB) was acceptable.
	WG486982	Lead, total (3050)	M6020B ICP-MS	H3	Sample was received and analyzed past holding time.
	WG486989	Manganese, total (3050)	M6010D ICP	H3	Sample was received and analyzed past holding time.
			M6010D ICP	M3	The spike recovery value is unusable since the analyte concentration in the sample is disproportionate to the spike level. The recovery of the associated control sample (LCS or LFB) was acceptable.
	WG486912	Molybdenum, total (3050)	M6010D ICP	H3	Sample was received and analyzed past holding time.
			M6010D ICP	H3	Sample was received and analyzed past holding time.
			M6010D ICP	ZH	Serial Dilution exceeded the acceptance criteria. Matrix interference [physical or chemical] is suspected.
	WG486982	Selenium, total (3050)	M6020B ICP-MS	H3	Sample was received and analyzed past holding time.
			M6020B ICP-MS	ZG	The ICP or ICP-MS Serial Dilution was not used for data validation because the sample concentration was less than 50 times the MDL.
	WG487260	Silver, total (3050)	M6020B ICP-MS	H3	Sample was received and analyzed past holding time.
	WG486511	Solids, Percent	D2216-80	H3	Sample was received and analyzed past holding time.
	WG486982	Thallium, total (3050)	M6020B ICP-MS	H3	Sample was received and analyzed past holding time.
	WG486989	Vanadium, total (3050)	M6010D ICP	H3	Sample was received and analyzed past holding time.
			M6010D ICP	M1	Matrix spike recovery was high, the recovery of the associated control sample (LCS or LFB) was acceptable.
	WG486912	Zinc, total (3050)	M6010D ICP	H3	Sample was received and analyzed past holding time.

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ACZ ID	WORKNUM	PARAMETER	METHOD	QUAL	DESCRIPTION
L55821-15	WG487088	Aluminum, total (3050)	M6010D ICP	H3	Sample was received and analyzed past holding time.
			M6010D ICP	M3	The spike recovery value is unusable since the analyte concentration in the sample is disproportionate to the spike level. The recovery of the associated control sample (LCS or LFB) was acceptable.
	WG486982	Antimony, total (3050)	M6020B ICP-MS	H3	Sample was received and analyzed past holding time.
			M6020B ICP-MS	M2	Matrix spike recovery was low, the recovery of the associated control sample (LCS or LFB) was acceptable.
		Arsenic, total (3050)	M6020B ICP-MS	H3	Sample was received and analyzed past holding time.
			M6020B ICP-MS	M2	Matrix spike recovery was low, the recovery of the associated control sample (LCS or LFB) was acceptable.
			M6020B ICP-MS	ZG	The ICP or ICP-MS Serial Dilution was not used for data validation because the sample concentration was less than 50 times the MDL.
	WG486912	Barium, total (3050)	M6010D ICP	H3	Sample was received and analyzed past holding time.
	WG486982	Beryllium, total (3050)	M6020B ICP-MS	H3	Sample was received and analyzed past holding time.
	WG486912	Boron, total (3050)	M6010D ICP	H3	Sample was received and analyzed past holding time.
	WG486982	Cadmium, total (3050)	M6020B ICP-MS	H3	Sample was received and analyzed past holding time.
	WG486912	Chromium, total (3050)	M6010D ICP	H3	Sample was received and analyzed past holding time.
			M6010D ICP	H3	Sample was received and analyzed past holding time.
			M6010D ICP	H3	Sample was received and analyzed past holding time.
	WG487088	Iron, total (3050)	M6010D ICP	H3	Sample was received and analyzed past holding time.
			M6010D ICP	M3	The spike recovery value is unusable since the analyte concentration in the sample is disproportionate to the spike level. The recovery of the associated control sample (LCS or LFB) was acceptable.
			M6010D ICP	H3	Sample was received and analyzed past holding time.
	WG486982	Lead, total (3050)	M6020B ICP-MS	H3	Sample was received and analyzed past holding time.
	WG486989	Manganese, total (3050)	M6010D ICP	H3	Sample was received and analyzed past holding time.
			M6010D ICP	M3	The spike recovery value is unusable since the analyte concentration in the sample is disproportionate to the spike level. The recovery of the associated control sample (LCS or LFB) was acceptable.
	WG486912	Molybdenum, total (3050)	M6010D ICP	H3	Sample was received and analyzed past holding time.
			M6010D ICP	H3	Sample was received and analyzed past holding time.
			M6010D ICP	ZH	Serial Dilution exceeded the acceptance criteria. Matrix interference [physical or chemical] is suspected.
	WG486982	Selenium, total (3050)	M6020B ICP-MS	H3	Sample was received and analyzed past holding time.
			M6020B ICP-MS	ZG	The ICP or ICP-MS Serial Dilution was not used for data validation because the sample concentration was less than 50 times the MDL.
	WG487389	Silver, total (3050)	M6020B ICP-MS	H3	Sample was received and analyzed past holding time.
	WG486511	Solids, Percent	D2216-80	H3	Sample was received and analyzed past holding time.
	WG486982	Thallium, total (3050)	M6020B ICP-MS	H3	Sample was received and analyzed past holding time.
	WG486912	Vanadium, total (3050)	M6010D ICP	H3	Sample was received and analyzed past holding time.
			M6010D ICP	H3	Sample was received and analyzed past holding time.
		Zinc, total (3050)	M6010D ICP	H3	Sample was received and analyzed past holding time.

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ACZ ID	WORKNUM	PARAMETER	METHOD	QUAL	DESCRIPTION
L55821-16	WG487088	Aluminum, total (3050)	M6010D ICP	H3	Sample was received and analyzed past holding time.
			M6010D ICP	M3	The spike recovery value is unusable since the analyte concentration in the sample is disproportionate to the spike level. The recovery of the associated control sample (LCS or LFB) was acceptable.
	WG486982	Antimony, total (3050)	M6020B ICP-MS	H3	Sample was received and analyzed past holding time.
			M6020B ICP-MS	M2	Matrix spike recovery was low, the recovery of the associated control sample (LCS or LFB) was acceptable.
		Arsenic, total (3050)	M6020B ICP-MS	H3	Sample was received and analyzed past holding time.
			M6020B ICP-MS	M2	Matrix spike recovery was low, the recovery of the associated control sample (LCS or LFB) was acceptable.
			M6020B ICP-MS	ZG	The ICP or ICP-MS Serial Dilution was not used for data validation because the sample concentration was less than 50 times the MDL.
	WG486912	Barium, total (3050)	M6010D ICP	H3	Sample was received and analyzed past holding time.
	WG486982	Beryllium, total (3050)	M6020B ICP-MS	H3	Sample was received and analyzed past holding time.
	WG486912	Boron, total (3050)	M6010D ICP	H3	Sample was received and analyzed past holding time.
	WG486982	Cadmium, total (3050)	M6020B ICP-MS	H3	Sample was received and analyzed past holding time.
	WG486912	Chromium, total (3050)	M6010D ICP	H3	Sample was received and analyzed past holding time.
		Cobalt, total (3050)	M6010D ICP	H3	Sample was received and analyzed past holding time.
		Copper, total (3050)	M6010D ICP	H3	Sample was received and analyzed past holding time.
	WG487088	Iron, total (3050)	M6010D ICP	H3	Sample was received and analyzed past holding time.
			M6010D ICP	M3	The spike recovery value is unusable since the analyte concentration in the sample is disproportionate to the spike level. The recovery of the associated control sample (LCS or LFB) was acceptable.
	WG486982	Lead, total (3050)	M6020B ICP-MS	H3	Sample was received and analyzed past holding time.
	WG486989	Manganese, total (3050)	M6010D ICP	H3	Sample was received and analyzed past holding time.
			M6010D ICP	M3	The spike recovery value is unusable since the analyte concentration in the sample is disproportionate to the spike level. The recovery of the associated control sample (LCS or LFB) was acceptable.
	WG486912	Molybdenum, total (3050)	M6010D ICP	H3	Sample was received and analyzed past holding time.
			M6010D ICP	H3	Sample was received and analyzed past holding time.
			M6010D ICP	ZH	Serial Dilution exceeded the acceptance criteria. Matrix interference [physical or chemical] is suspected.
	WG486982	Selenium, total (3050)	M6020B ICP-MS	H3	Sample was received and analyzed past holding time.
			M6020B ICP-MS	ZG	The ICP or ICP-MS Serial Dilution was not used for data validation because the sample concentration was less than 50 times the MDL.
	WG487389	Silver, total (3050)	M6020B ICP-MS	H3	Sample was received and analyzed past holding time.
	WG486511	Solids, Percent	D2216-80	H3	Sample was received and analyzed past holding time.
	WG486982	Thallium, total (3050)	M6020B ICP-MS	H3	Sample was received and analyzed past holding time.
	WG486912	Vanadium, total (3050)	M6010D ICP	H3	Sample was received and analyzed past holding time.
			M6010D ICP	M1	Matrix spike recovery was high, the recovery of the associated control sample (LCS or LFB) was acceptable.
			M6010D ICP	H3	Sample was received and analyzed past holding time.
		Zinc, total (3050)	M6010D ICP	H3	Sample was received and analyzed past holding time.

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ACZ ID	WORKNUM	PARAMETER	METHOD	QUAL	DESCRIPTION
L55821-17	WG487088	Aluminum, total (3050)	M6010D ICP	H3	Sample was received and analyzed past holding time.
			M6010D ICP	M3	The spike recovery value is unusable since the analyte concentration in the sample is disproportionate to the spike level. The recovery of the associated control sample (LCS or LFB) was acceptable.
	WG486982	Antimony, total (3050)	M6020B ICP-MS	H3	Sample was received and analyzed past holding time.
			M6020B ICP-MS	M2	Matrix spike recovery was low, the recovery of the associated control sample (LCS or LFB) was acceptable.
		Arsenic, total (3050)	M6020B ICP-MS	H3	Sample was received and analyzed past holding time.
			M6020B ICP-MS	M2	Matrix spike recovery was low, the recovery of the associated control sample (LCS or LFB) was acceptable.
			M6020B ICP-MS	ZG	The ICP or ICP-MS Serial Dilution was not used for data validation because the sample concentration was less than 50 times the MDL.
	WG486912	Barium, total (3050)	M6010D ICP	H3	Sample was received and analyzed past holding time.
	WG486982	Beryllium, total (3050)	M6020B ICP-MS	H3	Sample was received and analyzed past holding time.
	WG486912	Boron, total (3050)	M6010D ICP	H3	Sample was received and analyzed past holding time.
	WG486982	Cadmium, total (3050)	M6020B ICP-MS	H3	Sample was received and analyzed past holding time.
	WG486912	Chromium, total (3050)	M6010D ICP	H3	Sample was received and analyzed past holding time.
		Cobalt, total (3050)	M6010D ICP	H3	Sample was received and analyzed past holding time.
	WG486989	Copper, total (3050)	M6010D ICP	H3	Sample was received and analyzed past holding time.
	WG487088	Iron, total (3050)	M6010D ICP	H3	Sample was received and analyzed past holding time.
			M6010D ICP	M3	The spike recovery value is unusable since the analyte concentration in the sample is disproportionate to the spike level. The recovery of the associated control sample (LCS or LFB) was acceptable.
	WG486982	Lead, total (3050)	M6020B ICP-MS	H3	Sample was received and analyzed past holding time.
	WG486989	Manganese, total (3050)	M6010D ICP	H3	Sample was received and analyzed past holding time.
			M6010D ICP	M3	The spike recovery value is unusable since the analyte concentration in the sample is disproportionate to the spike level. The recovery of the associated control sample (LCS or LFB) was acceptable.
	WG486912	Molybdenum, total (3050)	M6010D ICP	H3	Sample was received and analyzed past holding time.
			M6010D ICP	H3	Sample was received and analyzed past holding time.
			M6010D ICP	ZH	Serial Dilution exceeded the acceptance criteria. Matrix interference [physical or chemical] is suspected.
	WG486982	Selenium, total (3050)	M6020B ICP-MS	H3	Sample was received and analyzed past holding time.
			M6020B ICP-MS	ZG	The ICP or ICP-MS Serial Dilution was not used for data validation because the sample concentration was less than 50 times the MDL.
	WG487389	Silver, total (3050)	M6020B ICP-MS	H3	Sample was received and analyzed past holding time.
	WG486511	Solids, Percent	D2216-80	H3	Sample was received and analyzed past holding time.
	WG486982	Thallium, total (3050)	M6020B ICP-MS	H3	Sample was received and analyzed past holding time.
	WG486989	Vanadium, total (3050)	M6010D ICP	H3	Sample was received and analyzed past holding time.
			M6010D ICP	M1	Matrix spike recovery was high, the recovery of the associated control sample (LCS or LFB) was acceptable.
	WG486912	Zinc, total (3050)	M6010D ICP	H3	Sample was received and analyzed past holding time.

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ACZ ID	WORKNUM	PARAMETER	METHOD	QUAL	DESCRIPTION
L55821-18	WG487088	Aluminum, total (3050)	M6010D ICP	H3	Sample was received and analyzed past holding time.
			M6010D ICP	M3	The spike recovery value is unusable since the analyte concentration in the sample is disproportionate to the spike level. The recovery of the associated control sample (LCS or LFB) was acceptable.
	WG486982	Antimony, total (3050)	M6020B ICP-MS	H3	Sample was received and analyzed past holding time.
			M6020B ICP-MS	M2	Matrix spike recovery was low, the recovery of the associated control sample (LCS or LFB) was acceptable.
		Arsenic, total (3050)	M6020B ICP-MS	H3	Sample was received and analyzed past holding time.
			M6020B ICP-MS	M2	Matrix spike recovery was low, the recovery of the associated control sample (LCS or LFB) was acceptable.
			M6020B ICP-MS	ZG	The ICP or ICP-MS Serial Dilution was not used for data validation because the sample concentration was less than 50 times the MDL.
	WG486912	Barium, total (3050)	M6010D ICP	H3	Sample was received and analyzed past holding time.
	WG486982	Beryllium, total (3050)	M6020B ICP-MS	H3	Sample was received and analyzed past holding time.
	WG486912	Boron, total (3050)	M6010D ICP	H3	Sample was received and analyzed past holding time.
	WG486982	Cadmium, total (3050)	M6020B ICP-MS	H3	Sample was received and analyzed past holding time.
	WG486912	Chromium, total (3050)	M6010D ICP	H3	Sample was received and analyzed past holding time.
		Cobalt, total (3050)	M6010D ICP	H3	Sample was received and analyzed past holding time.
		Copper, total (3050)	M6010D ICP	H3	Sample was received and analyzed past holding time.
	WG487088	Iron, total (3050)	M6010D ICP	H3	Sample was received and analyzed past holding time.
			M6010D ICP	M3	The spike recovery value is unusable since the analyte concentration in the sample is disproportionate to the spike level. The recovery of the associated control sample (LCS or LFB) was acceptable.
	WG486982	Lead, total (3050)	M6020B ICP-MS	H3	Sample was received and analyzed past holding time.
	WG486989	Manganese, total (3050)	M6010D ICP	H3	Sample was received and analyzed past holding time.
			M6010D ICP	M3	The spike recovery value is unusable since the analyte concentration in the sample is disproportionate to the spike level. The recovery of the associated control sample (LCS or LFB) was acceptable.
	WG486912	Molybdenum, total (3050)	M6010D ICP	H3	Sample was received and analyzed past holding time.
			M6010D ICP	H3	Sample was received and analyzed past holding time.
			M6010D ICP	ZH	Serial Dilution exceeded the acceptance criteria. Matrix interference [physical or chemical] is suspected.
	WG486982	Selenium, total (3050)	M6020B ICP-MS	H3	Sample was received and analyzed past holding time.
			M6020B ICP-MS	ZG	The ICP or ICP-MS Serial Dilution was not used for data validation because the sample concentration was less than 50 times the MDL.
	WG487389	Silver, total (3050)	M6020B ICP-MS	H3	Sample was received and analyzed past holding time.
	WG486511	Solids, Percent	D2216-80	H3	Sample was received and analyzed past holding time.
	WG486982	Thallium, total (3050)	M6020B ICP-MS	H3	Sample was received and analyzed past holding time.
	WG486989	Vanadium, total (3050)	M6010D ICP	H3	Sample was received and analyzed past holding time.
			M6010D ICP	M1	Matrix spike recovery was high, the recovery of the associated control sample (LCS or LFB) was acceptable.
	WG486912	Zinc, total (3050)	M6010D ICP	H3	Sample was received and analyzed past holding time.

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ACZ ID	WORKNUM	PARAMETER	METHOD	QUAL	DESCRIPTION
L55821-19	WG487088	Aluminum, total (3050)	M6010D ICP	H3	Sample was received and analyzed past holding time.
			M6010D ICP	M3	The spike recovery value is unusable since the analyte concentration in the sample is disproportionate to the spike level. The recovery of the associated control sample (LCS or LFB) was acceptable.
	WG486982	Antimony, total (3050)	M6020B ICP-MS	H3	Sample was received and analyzed past holding time.
			M6020B ICP-MS	M2	Matrix spike recovery was low, the recovery of the associated control sample (LCS or LFB) was acceptable.
		Arsenic, total (3050)	M6020B ICP-MS	H3	Sample was received and analyzed past holding time.
			M6020B ICP-MS	M2	Matrix spike recovery was low, the recovery of the associated control sample (LCS or LFB) was acceptable.
			M6020B ICP-MS	ZG	The ICP or ICP-MS Serial Dilution was not used for data validation because the sample concentration was less than 50 times the MDL.
	WG486912	Barium, total (3050)	M6010D ICP	H3	Sample was received and analyzed past holding time.
	WG486982	Beryllium, total (3050)	M6020B ICP-MS	H3	Sample was received and analyzed past holding time.
	WG486912	Boron, total (3050)	M6010D ICP	H3	Sample was received and analyzed past holding time.
	WG486982	Cadmium, total (3050)	M6020B ICP-MS	H3	Sample was received and analyzed past holding time.
	WG486912	Chromium, total (3050)	M6010D ICP	H3	Sample was received and analyzed past holding time.
		Cobalt, total (3050)	M6010D ICP	H3	Sample was received and analyzed past holding time.
		Copper, total (3050)	M6010D ICP	H3	Sample was received and analyzed past holding time.
	WG487088	Iron, total (3050)	M6010D ICP	H3	Sample was received and analyzed past holding time.
			M6010D ICP	M3	The spike recovery value is unusable since the analyte concentration in the sample is disproportionate to the spike level. The recovery of the associated control sample (LCS or LFB) was acceptable.
	WG486982	Lead, total (3050)	M6020B ICP-MS	H3	Sample was received and analyzed past holding time.
	WG486989	Manganese, total (3050)	M6010D ICP	H3	Sample was received and analyzed past holding time.
			M6010D ICP	M3	The spike recovery value is unusable since the analyte concentration in the sample is disproportionate to the spike level. The recovery of the associated control sample (LCS or LFB) was acceptable.
	WG486912	Molybdenum, total (3050)	M6010D ICP	H3	Sample was received and analyzed past holding time.
			M6010D ICP	H3	Sample was received and analyzed past holding time.
			M6010D ICP	ZH	Serial Dilution exceeded the acceptance criteria. Matrix interference [physical or chemical] is suspected.
	WG486982	Selenium, total (3050)	M6020B ICP-MS	H3	Sample was received and analyzed past holding time.
			M6020B ICP-MS	ZG	The ICP or ICP-MS Serial Dilution was not used for data validation because the sample concentration was less than 50 times the MDL.
	WG487389	Silver, total (3050)	M6020B ICP-MS	H3	Sample was received and analyzed past holding time.
	WG486511	Solids, Percent	D2216-80	H3	Sample was received and analyzed past holding time.
	WG486982	Thallium, total (3050)	M6020B ICP-MS	H3	Sample was received and analyzed past holding time.
	WG486989	Vanadium, total (3050)	M6010D ICP	H3	Sample was received and analyzed past holding time.
			M6010D ICP	M1	Matrix spike recovery was high, the recovery of the associated control sample (LCS or LFB) was acceptable.
	WG486912	Zinc, total (3050)	M6010D ICP	H3	Sample was received and analyzed past holding time.

Rise Grass Valley Inc.

ACZ Project ID: **L55821**

ACZ ID	WORKNUM	PARAMETER	METHOD	QUAL	DESCRIPTION
L55821-20	WG487088	Aluminum, total (3050)	M6010D ICP	H3	Sample was received and analyzed past holding time.
			M6010D ICP	M3	The spike recovery value is unusable since the analyte concentration in the sample is disproportionate to the spike level. The recovery of the associated control sample (LCS or LFB) was acceptable.
	WG486982	Antimony, total (3050)	M6020B ICP-MS	H3	Sample was received and analyzed past holding time.
			M6020B ICP-MS	M2	Matrix spike recovery was low, the recovery of the associated control sample (LCS or LFB) was acceptable.
		Arsenic, total (3050)	M6020B ICP-MS	H3	Sample was received and analyzed past holding time.
			M6020B ICP-MS	M2	Matrix spike recovery was low, the recovery of the associated control sample (LCS or LFB) was acceptable.
			M6020B ICP-MS	ZG	The ICP or ICP-MS Serial Dilution was not used for data validation because the sample concentration was less than 50 times the MDL.
	WG486912	Barium, total (3050)	M6010D ICP	H3	Sample was received and analyzed past holding time.
	WG486982	Beryllium, total (3050)	M6020B ICP-MS	H3	Sample was received and analyzed past holding time.
	WG486912	Boron, total (3050)	M6010D ICP	H3	Sample was received and analyzed past holding time.
	WG486982	Cadmium, total (3050)	M6020B ICP-MS	H3	Sample was received and analyzed past holding time.
	WG486912	Chromium, total (3050)	M6010D ICP	H3	Sample was received and analyzed past holding time.
		Cobalt, total (3050)	M6010D ICP	H3	Sample was received and analyzed past holding time.
		Copper, total (3050)	M6010D ICP	H3	Sample was received and analyzed past holding time.
	WG487088	Iron, total (3050)	M6010D ICP	H3	Sample was received and analyzed past holding time.
			M6010D ICP	M3	The spike recovery value is unusable since the analyte concentration in the sample is disproportionate to the spike level. The recovery of the associated control sample (LCS or LFB) was acceptable.
	WG486982	Lead, total (3050)	M6020B ICP-MS	H3	Sample was received and analyzed past holding time.
	WG486989	Manganese, total (3050)	M6010D ICP	H3	Sample was received and analyzed past holding time.
			M6010D ICP	M3	The spike recovery value is unusable since the analyte concentration in the sample is disproportionate to the spike level. The recovery of the associated control sample (LCS or LFB) was acceptable.
	WG486912	Molybdenum, total (3050)	M6010D ICP	H3	Sample was received and analyzed past holding time.
			M6010D ICP	H3	Sample was received and analyzed past holding time.
			M6010D ICP	ZH	Serial Dilution exceeded the acceptance criteria. Matrix interference [physical or chemical] is suspected.
	WG486982	Selenium, total (3050)	M6020B ICP-MS	H3	Sample was received and analyzed past holding time.
			M6020B ICP-MS	ZG	The ICP or ICP-MS Serial Dilution was not used for data validation because the sample concentration was less than 50 times the MDL.
	WG487389	Silver, total (3050)	M6020B ICP-MS	H3	Sample was received and analyzed past holding time.
	WG486511	Solids, Percent	D2216-80	H3	Sample was received and analyzed past holding time.
	WG486982	Thallium, total (3050)	M6020B ICP-MS	H3	Sample was received and analyzed past holding time.
	WG486989	Vanadium, total (3050)	M6010D ICP	H3	Sample was received and analyzed past holding time.
			M6010D ICP	M1	Matrix spike recovery was high, the recovery of the associated control sample (LCS or LFB) was acceptable.
	WG486912	Zinc, total (3050)	M6010D ICP	H3	Sample was received and analyzed past holding time.

Rise Grass Valley Inc.

ACZ Project ID: **L55821**

Soil Analysis

The following parameters are not offered for certification or are not covered by NELAC certificate #ACZ.

Solids, Percent

D2216-80

Rise Grass Valley Inc.

ACZ Project ID: L55821

Date Received: 11/11/2019 14:20

Received By:

Date Printed: 11/13/2019

Receipt Verification

	YES	NO	NA
1) Is a foreign soil permit included for applicable samples?	☐	☐	☒
2) Is the Chain of Custody form or other directive shipping papers present?	☒	☐	☐
3) Does this project require special handling procedures such as CLP protocol?	☐	☒	☐
4) Are any samples NRC licensable material?	☐	☐	☒
5) If samples are received past hold time, proceed with requested short hold time analyses?	☒	☐	☐
6) Is the Chain of Custody form complete and accurate?	☒	☐	☐
7) Were any changes made to the Chain of Custody form prior to ACZ receiving the samples?	☐	☒	☐

Samples/Containers

	YES	NO	NA
8) Are all containers intact and with no leaks?	☒	☐	☐
9) Are all labels on containers and are they intact and legible?	☒	☐	☐
10) Do the sample labels and Chain of Custody form match for Sample ID, Date, and Time?	☒	☐	☐
11) For preserved bottle types, was the pH checked and within limits? ¹	☐	☐	☒
12) Is there sufficient sample volume to perform all requested work?	☒	☐	☐
13) Is the custody seal intact on all containers?	☐	☐	☒
14) Are samples that require zero headspace acceptable?	☐	☐	☒
15) Are all sample containers appropriate for analytical requirements?	☒	☐	☐
16) Is there an Hg-1631 trip blank present?	☐	☐	☒
17) Is there a VOA trip blank present?	☐	☐	☒
18) Were all samples received within hold time?	☐	☒	☐

Some parameters were received past hold time.

NA indicates Not Applicable

Chain of Custody Related Remarks

Client Contact Remarks

Shipping Containers

Cooler Id	Temp (°C)	Temp Criteria (°C)	Rad (µR/Hr)	Custody Seal Intact?
NA31790	12.2	NA	14	N/A

Was ice present in the shipment container(s)?

No - Wet or gel ice was not present in the shipment container(s).

Client must contact an ACZ Project Manager if analysis should not proceed for samples received outside of their thermal preservation acceptance criteria.

Rise Grass Valley Inc.

ACZ Project ID: L55821

Date Received: 11/11/2019 14:20

Received By:

Date Printed: 11/13/2019

¹ The preservation of the following bottle types is not checked at sample receipt: Orange (oil and grease), Purple (total cyanide), Pink (dissolved cyanide), Brown (arsenic speciation), Sterile (fecal coliform), EDTA (sulfite), HCl preserved vial (organics), Na₂S₂O₃ preserved vial (organics), and HG-1631 (total/dissolved mercury by method 1631).



Laboratories, Inc. L55821

CHAIN of CUSTODY

2773 Downhill Drive Steamboat Springs, CO 80487 (800) 334-5493

Report to:

Name: Ben Mossman

Company: Rise Gold Corp.

E-mail: ceo@risegoldcorp.com

Address: 333 Crown Point Circle Suite 215

Grass Valley Ca. 95945

Telephone: 604-219-9072

Copy of Report to:

Name: Andy Kopania

Company: EMKO Environmental

E-mail: akopania@sbcglobal.net

Telephone: 916-718-5519

Invoice to:

Name: Ben Mossman

Company: Rise Gold Corp.

E-mail: ceo@risegoldcorp.com

Address: 333 Crown Point Circle Suite 215

Grass Valley Ca. 95945

Telephone: 604-219-9072

If sample(s) received past holding time (HT), or if insufficient HT remains to complete analysis before expiration, shall ACZ proceed with requested short HT analyses?

YES

NO

☒ ☐

If "NO" then ACZ will contact client for further instruction. If neither "YES" nor "NO" is indicated, ACZ will proceed with the requested analyses, even if HT is expired, and data will be qualified

Are samples for SDWA Compliance Monitoring?

Yes

☐

No

☒

If yes, please include state forms. Results will be reported to PQL for Colorado.

Sampler's Name: BM

Sampler's Site Information

State CA

Zip code 95945

Time Zone PST

*Sampler's Signature:

*I attest to the authenticity and validity of this sample. I understand that intentionally mislabeling the time/date/location or tampering with the sample in anyway, is considered fraud and punishable by State Law.

PROJECT INFORMATION

ANALYSES REQUESTED (attach list or use quote number)

Quote #: PULP-2

PO#:

Reporting state for compliance testing: CA

Check box if samples include NRC licensed material?

☐

SAMPLE IDENTIFICATION

DATE:TIME

Matrix

of Containers

Metals by ICP & ICP/MS

SAMPLE IDENTIFICATION	DATE:TIME	Matrix	# of Containers	Metals by ICP & ICP/MS															
• Y973589	3/5/19:12:00 pm	T	1	☒	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
• Y973588	3/5/19:12:00 pm	T	1	☒	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
• Y973551	3/5/19:12:00 pm	T	1	☒	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
• Y973552	3/5/19:12:00 pm	T	1	☒	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
• Y973553	3/5/19:12:00 pm	T	1	☒	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
• Y973554	3/5/19:12:00 pm	T	1	☒	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
• Y973555	3/5/19:12:00 pm	T	1	☒	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
• Y973556	3/5/19:12:00 pm	T	1	☒	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
• Y973557	3/5/19:12:00 pm	T	1	☒	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
• Y973558	3/5/19:12:00 pm	T	1	☒	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐

Matrix SW (Surface Water) · GW (Ground Water) · WW (Waste Water) · DW (Drinking Water) · SL (Sludge) · SO (Soil) · OL (Oil) · Other (Specify)

REMARKS

T = tailings (assay pulp)

Please refer to ACZ's terms & conditions located on the reverse side of this COC.

RELINQUISHED BY:	DATE:TIME	RECEIVED BY:	DATE:TIME
	11/6/19 2:15pm		11-11-19 1420

FRMAD050.06.14.14

White - Return with sample. Yellow - Retain for your records.

L55821 Chain of Custody



Laboratories, Inc. L55821

2773 Downhill Drive Steamboat Springs, CO 80487 (800) 334-5493

CHAIN of CUSTODY

Report to:

Name: Ben Mossman	Address: 333 Crown Point Circle Suite 215
Company: Rise Gold Corp.	Grass Valley Ca. 95945
E-mail: ceo@risegoldcorp.com	Telephone: 604-219-9072

Copy of Report to:

Name: Andy Kopania	E-mail: akopania@sbcglobal.net
Company: EMKO Environmental	Telephone: 916-718-5519

Invoice to:

Name: Ben Mossman	Address: 333 Crown Point Circle Suite 215
Company: Rise Gold Corp.	Grass Valley Ca. 95945
E-mail: ceo@risegoldcorp.com	Telephone: 604-219-9072

If sample(s) received past holding time (HT), or if insufficient HT remains to complete analysis before expiration, shall ACZ proceed with requested short HT analyses? YES ☒ NO ☐

If "NO" then ACZ will contact client for further instruction. If neither "YES" nor "NO" is indicated, ACZ will proceed with the requested analyses, even if HT is expired, and data will be qualified

Are samples for SDWA Compliance Monitoring? Yes ☐ No ☒

If yes, please include state forms. Results will be reported to PQL for Colorado.

Sampler's Name: BM Sampler's Site Information State CA Zip code 95945 Time Zone PST

*Sampler's Signature: _____ *I attest to the authenticity and validity of this sample. I understand that intentionally mislabeling the time/date/location or tampering with the sample in anyway, is considered fraud and punishable by State Law.

PROJECT INFORMATION

Quote #: PULP-2	# of Containers	Metals by ICP & ICPMS										
PO#:												
Reporting state for compliance testing: CA												
Check box if samples include NRC licensed material? ☐												
SAMPLE IDENTIFICATION	DATE:TIME	Matrix										
• Y973586	3/5/19:12:00 pm	T	1	☒	☐	☐	☐	☐	☐	☐	☐	☐
• Y973559	3/5/19:12:00 pm	T	1	☒	☐	☐	☐	☐	☐	☐	☐	☐
• Y973560	3/5/19:12:00 pm	T	1	☒	☐	☐	☐	☐	☐	☐	☐	☐
• Y973561	3/5/19:12:00 pm	T	1	☒	☐	☐	☐	☐	☐	☐	☐	☐
• Y973562	3/5/19:12:00 pm	T	1	☒	☐	☐	☐	☐	☐	☐	☐	☐
• Y973563	3/5/19:12:00 pm	T	1	☒	☐	☐	☐	☐	☐	☐	☐	☐
• Y973583	3/5/19:12:00 pm	T	1	☒	☐	☐	☐	☐	☐	☐	☐	☐
• Y973584	3/5/19:12:00 pm	T	1	☒	☐	☐	☐	☐	☐	☐	☐	☐
• Y973585	3/5/19:12:00 pm	T	1	☒	☐	☐	☐	☐	☐	☐	☐	☐
• Y973587	3/5/19:12:00 pm	T	1	☒	☐	☐	☐	☐	☐	☐	☐	☐
Matrix	SW (Surface Water) · GW (Ground Water) · WW (Waste Water) · DW (Drinking Water) · SL (Sludge) · SO (Soil) · OL (Oil) · Other (Specify)											

REMARKS

T = tailings (assay pulp)

Please refer to ACZ's terms & conditions located on the reverse side of this COC.

RELINQUISHED BY:	DATE:TIME	RECEIVED BY:	DATE:TIME
<i>GL/L</i>	11/6/19 2:15pm	<i>gme</i>	11/11/19 1420

FRMAD050.06.14.14

White - Return with sample. Yellow - Retain for your records.

Laboratories, Inc. L55821

2773 Downhill Drive Steamboat Springs, CO 80487 (800) 334-5493

CHAIN of CUSTODY

Report to:

Name: Ben Mossman		Address: 333 Crown Point Circle Suite 215
Company: Rise Gold Corp.		Grass Valley Ca. 95945
E-mail: ceo@risegoldcorp.com		Telephone: 604-219-9072

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Company: EMKO Environmental	Telephone: 916-718-5519

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Name: Ben Mossman		Address: 333 Crown Point Circle Suite 215
Company: Rise Gold Corp.		Grass Valley Ca. 95945
E-mail: ceo@risegoldcorp.com		Telephone: 604-219-9072

If sample(s) received past holding time (HT), or if insufficient HT remains to complete analysis before expiration, shall ACZ proceed with requested short HT analyses?

YES	☒
NO	☐

If "NO" then ACZ will contact client for further instruction. If neither "YES" nor "NO" is indicated, ACZ will proceed with the requested analyses, even if HT is expired, and data will be qualified.

Are samples for SDWA Compliance Monitoring?

Yes	☐	No	☒

If yes, please include state forms. Results will be reported to PQL for Colorado.

Sampler's Name: BM **Sampler's Site Information** **State** CA **Zip code** 95945 **Time Zone** PST

***Sampler's Signature:**

*I attest to the authenticity and validity of this sample. I understand that intentionally mislabeling the time/date/location or tampering with the sample in anyway, is considered fraud and punishable by State Law.

PROJECT INFORMATION

ANALYSES REQUESTED (attach list or use quote number)

Quote #: PULP-2						# of Containers Metals by ICP & IC/PMS																								
PO#:																														
Reporting state for compliance testing: CA																														
Check box if samples include NRC licensed material?					☐																									
SAMPLE IDENTIFICATION		DATE/TIME	Matrix																											
• Y973589	3/5/19:12:00 pm	T	1	☒	☐														☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
• Y973588	3/5/19:12:00 pm	T	1	☒	☐														☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
• Y973551	3/5/19:12:00 pm	T	1	☒	☐														☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
- Y973552	3/5/19:12:00 pm	T	1	☒	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐													
- Y973553	3/5/19:12:00 pm	T	1	☒	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐													
' Y973554	3/5/19:12:00 pm	T	1	☒	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐													
• Y973555	3/5/19:12:00 pm	T	1	☒	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐													
• Y973556	3/5/19:12:00 pm	T	1	☒	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐													
• Y973557	3/5/19:12:00 pm	T	1	☒	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐													
• Y973558	3/5/19:12:00 pm	T	1	☒	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐													
Matrix	SW (Surface Water) · GW (Ground Water) · WW (Waste Water) · DW (Drinking Water) · SL (Sludge) · SO (Soil) · OL (Oil) · Other (Specify)																													

REMARKS

T = tailings (assay pulp)

Please refer to ACZ's terms & conditions located on the reverse side of this COC.

RELINQUISHED BY:	DATE:TIME	RECEIVED BY:	DATE:TIME
<i>[Signature]</i>	11/6/19 2:15 pm	<i>[Signature]</i>	11-11-19 142

FRMAD050.06.14.14

White - Return with sample. Yellow - Retain for your records.



2773 Downhill Drive Steamboat Springs, CO 80487 (800) 334-5493

Report to:

Name: Ben Mossman	Address: 333 Crown Point Circle Suite 215
Company: Rise Gold Corp.	Grass Valley Ca. 95945
E-mail: ceo@risegoldcorp.com	Telephone: 604-219-9072

Copy of Report to:

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Name: Ben Mossman		Address: 333 Crown Point Circle Suite 215
Company: Rise Gold Corp.		Grass Valley Ca. 95945
E-mail: ceo@risegoldcorp.com		Telephone: 604-219-9072

If sample(s) received past holding time (HT), or if insufficient HT remains to complete analysis before expiration, shall ACZ proceed with requested short HT analyses? YES ☒ NO ☐

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Are samples for SDWA Compliance Monitoring? Yes ☐ No ☒

If yes, please include state forms. Results will be reported to PQL for Colorado.

Sampler's Name: BM Sampler's Site Information State CA Zip code 95945 Time Zone PST

***Sampler's Signature:** _____ ***I attest to the authenticity and validity of this sample. I understand that intentionally mislabeling the time/date/location or tampering with the sample in anyway, is considered fraud and punishable by State Law.**

PROJECT INFORMATION

ANALYSES REQUESTED (attach list or use quote number)

[illegible]

Matrix	SW (Surface Water) · GW (Ground Water) · WW (Waste Water) · DW (Drinking Water) · SL (Sludge) · SO (Soil) · OL (Oil) · Other (Specify)

REMARKS

T = tailings (assay pulp)

Please refer to ACZ's terms & conditions located on the reverse side of this COC.

RELINQUISHED BY:	DATE:TIME	RECEIVED BY:	DATE:TIME
<i>CVL/CL</i>	<i>11/6/19</i>	<i>gme</i>	<i>11/11/19 1420</i>
	<i>2:15pm</i>		

December 12, 2019

Report to:

Ben Mossman
Rise Grass Valley Inc.
Suite 215 - 333 Crown Point Circle
Grass Valley, CA 95945

Bill to:

Ben Mossman
Rise Grass Valley Inc.
Suite 215 - 333 Crown Point Circle
Grass Valley, CA 95945

cc: Andy Kopania

Project ID:

ACZ Project ID: L55822

Ben Mossman:

Enclosed are the analytical results for sample(s) submitted to ACZ Laboratories, Inc. (ACZ) on November 11, 2019. This project has been assigned to ACZ's project number, L55822. Please reference this number in all future inquiries.

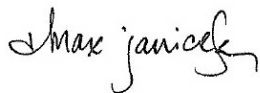
All analyses were performed according to ACZ's Quality Assurance Plan. The enclosed results relate only to the samples received under L55822. Each section of this report has been reviewed and approved by the appropriate Laboratory Supervisor, or a qualified substitute.

Except as noted, the test results for the methods and parameters listed on ACZ's current NELAC certificate letter (#ACZ) meet all requirements of NELAC.

This report shall be used or copied only in its entirety. ACZ is not responsible for the consequences arising from the use of a partial report.

All samples and sub-samples associated with this project will be disposed of after January 11, 2020. If the samples are determined to be hazardous, additional charges apply for disposal (typically \$11/sample). If you would like the samples to be held longer than ACZ's stated policy or to be returned, please contact your Project Manager or Customer Service Representative for further details and associated costs. ACZ retains analytical raw data reports for ten years.

If you have any questions or other needs, please contact your Project Manager.



Max Janicek has reviewed and approved this report.



Rise Grass Valley Inc.

Project ID:

Sample ID: Y973564

ACZ Sample ID: **L55822-01**

Date Sampled: 03/05/19 12:00

Date Received: 11/11/19

Sample Matrix: Soil

Metals Analysis

Parameter	EPA Method	Dilution	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Aluminum, total (3050)	M6010D ICP	198	27600	H	*	mg/Kg	10	50	12/05/19 0:30	kja
Antimony, total (3050)	M6020B ICP-MS	495		UH	*	mg/Kg	0.2	1	12/04/19 14:29	mfm
Arsenic, total (3050)	M6020B ICP-MS	495	1.6	H	*	mg/Kg	0.1	0.5	12/04/19 14:29	mfm
Barium, total (3050)	M6010D ICP	99	6.6	H	*	mg/Kg	0.7	3	12/04/19 2:39	kja
Beryllium, total (3050)	M6020B ICP-MS	495	0.09	BH	*	mg/Kg	0.04	0.1	12/04/19 14:29	mfm
Boron, total (3050)	M6010D ICP	99		UH	*	mg/Kg	2	10	12/04/19 2:39	kja
Cadmium, total (3050)	M6020B ICP-MS	495	0.51	H	*	mg/Kg	0.02	0.1	12/04/19 14:29	mfm
Chromium, total (3050)	M6010D ICP	99	122	H	*	mg/Kg	1	5	12/04/19 2:39	kja
Cobalt, total (3050)	M6010D ICP	99	24	H	*	mg/Kg	1	5	12/04/19 2:39	kja
Copper, total (3050)	M6010D ICP	99	58	H	*	mg/Kg	1	5	12/04/19 2:39	kja
Iron, total (3050)	M6010D ICP	99	40200	H	*	mg/Kg	3	7	12/04/19 2:39	kja
Lead, total (3050)	M6020B ICP-MS	495	0.63	H	*	mg/Kg	0.05	0.2	12/04/19 14:29	mfm
Manganese, total (3050)	M6010D ICP	99	611	H	*	mg/Kg	1	5	12/04/19 2:39	kja
Molybdenum, total (3050)	M6010D ICP	99		UH	*	mg/Kg	2	10	12/04/19 2:39	kja
Nickel, total (3050)	M6010D ICP	99	43.6	H	*	mg/Kg	0.8	4	12/04/19 2:39	kja
Selenium, total (3050)	M6020B ICP-MS	495	0.34	H	*	mg/Kg	0.05	0.1	12/04/19 14:29	mfm
Silver, total (3050)	M6020B ICP-MS	495	0.09	BH	*	mg/Kg	0.05	0.2	12/10/19 15:05	mfm
Thallium, total (3050)	M6020B ICP-MS	495	0.07	BH	*	mg/Kg	0.05	0.2	12/04/19 14:29	mfm
Vanadium, total (3050)	M6010D ICP	198	162	H	*	mg/Kg	1	5	12/05/19 0:30	kja
Zinc, total (3050)	M6010D ICP	99	60	H	*	mg/Kg	1	5	12/04/19 2:39	kja

Soil Analysis

Parameter	EPA Method	Dilution	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Solids, Percent	D2216-80	1	99.8	H	*	%	0.1	0.5	11/19/19 17:00	jms

Soil Preparation

Parameter	EPA Method	Dilution	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Digestion - Hot Plate	M3050B ICP								11/26/19 10:08	mlp
Digestion - Hot Plate	M3050B ICP-MS								11/26/19 10:08	mlp

Rise Grass Valley Inc.

Project ID:

Sample ID: Y973565

ACZ Sample ID: **L55822-02**

Date Sampled: 03/05/19 12:00

Date Received: 11/11/19

Sample Matrix: Soil

Metals Analysis

Parameter	EPA Method	Dilution	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Aluminum, total (3050)	M6010D ICP	100	17400	H	*	mg/Kg	5	30	12/04/19 2:50	kja
Antimony, total (3050)	M6020B ICP-MS	500		UH	*	mg/Kg	0.2	1	12/04/19 14:31	mfm
Arsenic, total (3050)	M6020B ICP-MS	500	1.8	H	*	mg/Kg	0.1	0.5	12/04/19 14:31	mfm
Barium, total (3050)	M6010D ICP	100	6.7	H	*	mg/Kg	0.7	4	12/04/19 2:50	kja
Beryllium, total (3050)	M6020B ICP-MS	500	0.16	H	*	mg/Kg	0.04	0.1	12/04/19 14:31	mfm
Boron, total (3050)	M6010D ICP	100		UH	*	mg/Kg	2	10	12/04/19 2:50	kja
Cadmium, total (3050)	M6020B ICP-MS	500	0.92	H	*	mg/Kg	0.03	0.1	12/04/19 14:31	mfm
Chromium, total (3050)	M6010D ICP	100	139	H	*	mg/Kg	1	5	12/04/19 2:50	kja
Cobalt, total (3050)	M6010D ICP	100	35	H	*	mg/Kg	1	5	12/04/19 2:50	kja
Copper, total (3050)	M6010D ICP	100	19	H	*	mg/Kg	1	5	12/04/19 2:50	kja
Iron, total (3050)	M6010D ICP	200	57700	H	*	mg/Kg	6	20	12/05/19 0:41	kja
Lead, total (3050)	M6020B ICP-MS	500	0.74	H	*	mg/Kg	0.05	0.3	12/04/19 14:31	mfm
Manganese, total (3050)	M6010D ICP	100	778	H	*	mg/Kg	1	5	12/04/19 2:50	kja
Molybdenum, total (3050)	M6010D ICP	100		UH	*	mg/Kg	2	10	12/04/19 2:50	kja
Nickel, total (3050)	M6010D ICP	100	37.1	H	*	mg/Kg	0.8	4	12/04/19 2:50	kja
Selenium, total (3050)	M6020B ICP-MS	500	0.11	H	*	mg/Kg	0.05	0.1	12/04/19 14:31	mfm
Silver, total (3050)	M6020B ICP-MS	500	0.10	BH	*	mg/Kg	0.05	0.3	12/10/19 15:06	mfm
Thallium, total (3050)	M6020B ICP-MS	500		UH	*	mg/Kg	0.05	0.3	12/04/19 14:31	mfm
Vanadium, total (3050)	M6010D ICP	200	200	H	*	mg/Kg	1	5	12/05/19 0:41	kja
Zinc, total (3050)	M6010D ICP	100	69	H	*	mg/Kg	1	5	12/04/19 2:50	kja

Soil Analysis

Parameter	EPA Method	Dilution	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Solids, Percent	D2216-80	1	99.8	H	*	%	0.1	0.5	11/19/19 19:11	jms

Soil Preparation

Parameter	EPA Method	Dilution	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Digestion - Hot Plate	M3050B ICP								11/26/19 11:06	mlp
Digestion - Hot Plate	M3050B ICP-MS								11/26/19 11:06	mlp

Rise Grass Valley Inc.

Project ID:

Sample ID: Y973566

ACZ Sample ID: **L55822-03**

Date Sampled: 03/05/19 12:00

Date Received: 11/11/19

Sample Matrix: Soil

Metals Analysis

Parameter	EPA Method	Dilution	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Aluminum, total (3050)	M6010D ICP	200	25200	H	*	mg/Kg	10	50	12/05/19 0:44	kja
Antimony, total (3050)	M6020B ICP-MS	500	0.3	BH	*	mg/Kg	0.2	1	12/04/19 14:37	mfm
Arsenic, total (3050)	M6020B ICP-MS	500	2.0	H	*	mg/Kg	0.1	0.5	12/04/19 14:37	mfm
Barium, total (3050)	M6010D ICP	100	12.4	H	*	mg/Kg	0.7	4	12/04/19 2:54	kja
Beryllium, total (3050)	M6020B ICP-MS	500	0.20	H	*	mg/Kg	0.04	0.1	12/04/19 14:37	mfm
Boron, total (3050)	M6010D ICP	100		UH	*	mg/Kg	2	10	12/04/19 2:54	kja
Cadmium, total (3050)	M6020B ICP-MS	500	0.68	H	*	mg/Kg	0.03	0.1	12/04/19 14:37	mfm
Chromium, total (3050)	M6010D ICP	100	143	H	*	mg/Kg	1	5	12/04/19 2:54	kja
Cobalt, total (3050)	M6010D ICP	100	41	H	*	mg/Kg	1	5	12/04/19 2:54	kja
Copper, total (3050)	M6010D ICP	100	15	H	*	mg/Kg	1	5	12/04/19 2:54	kja
Iron, total (3050)	M6010D ICP	200	63600	H	*	mg/Kg	6	20	12/05/19 0:44	kja
Lead, total (3050)	M6020B ICP-MS	500	1.23	H	*	mg/Kg	0.05	0.3	12/04/19 14:37	mfm
Manganese, total (3050)	M6010D ICP	100	1130	H	*	mg/Kg	1	5	12/04/19 2:54	kja
Molybdenum, total (3050)	M6010D ICP	100		UH	*	mg/Kg	2	10	12/04/19 2:54	kja
Nickel, total (3050)	M6010D ICP	100	53.4	H	*	mg/Kg	0.8	4	12/04/19 2:54	kja
Selenium, total (3050)	M6020B ICP-MS	500	0.12	H	*	mg/Kg	0.05	0.1	12/04/19 14:37	mfm
Silver, total (3050)	M6020B ICP-MS	500	0.07	BH	*	mg/Kg	0.05	0.3	12/10/19 15:12	mfm
Thallium, total (3050)	M6020B ICP-MS	500	0.08	BH	*	mg/Kg	0.05	0.3	12/04/19 14:37	mfm
Vanadium, total (3050)	M6010D ICP	200	172	H	*	mg/Kg	1	5	12/05/19 0:44	kja
Zinc, total (3050)	M6010D ICP	100	103	H	*	mg/Kg	1	5	12/04/19 2:54	kja

Soil Analysis

Parameter	EPA Method	Dilution	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Solids, Percent	D2216-80	1	99.8	H	*	%	0.1	0.5	11/19/19 20:17	jms

Soil Preparation

Parameter	EPA Method	Dilution	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Digestion - Hot Plate	M3050B ICP								11/26/19 12:03	mlp
Digestion - Hot Plate	M3050B ICP-MS								11/26/19 12:03	mlp

Rise Grass Valley Inc.

Project ID:

Sample ID: Y973567

ACZ Sample ID: **L55822-04**

Date Sampled: 03/05/19 12:00

Date Received: 11/11/19

Sample Matrix: Soil

Metals Analysis

Parameter	EPA Method	Dilution	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Aluminum, total (3050)	M6010D ICP	100	22900	H	*	mg/Kg	5	30	12/04/19 2:58	kja
Antimony, total (3050)	M6020B ICP-MS	500		UH	*	mg/Kg	0.2	1	12/04/19 14:38	mfm
Arsenic, total (3050)	M6020B ICP-MS	500	2.8	H	*	mg/Kg	0.1	0.5	12/04/19 14:38	mfm
Barium, total (3050)	M6010D ICP	100	14.8	H	*	mg/Kg	0.7	4	12/04/19 2:58	kja
Beryllium, total (3050)	M6020B ICP-MS	500	0.16	H	*	mg/Kg	0.04	0.1	12/04/19 14:38	mfm
Boron, total (3050)	M6010D ICP	100		UH	*	mg/Kg	2	10	12/04/19 2:58	kja
Cadmium, total (3050)	M6020B ICP-MS	500	0.96	H	*	mg/Kg	0.03	0.1	12/04/19 14:38	mfm
Chromium, total (3050)	M6010D ICP	100	137	H	*	mg/Kg	1	5	12/04/19 2:58	kja
Cobalt, total (3050)	M6010D ICP	100	42	H	*	mg/Kg	1	5	12/04/19 2:58	kja
Copper, total (3050)	M6010D ICP	100	23	H	*	mg/Kg	1	5	12/04/19 2:58	kja
Iron, total (3050)	M6010D ICP	100	47400	H	*	mg/Kg	3	8	12/04/19 2:58	kja
Lead, total (3050)	M6020B ICP-MS	500	0.94	H	*	mg/Kg	0.05	0.3	12/04/19 14:38	mfm
Manganese, total (3050)	M6010D ICP	100	1050	H	*	mg/Kg	1	5	12/04/19 2:58	kja
Molybdenum, total (3050)	M6010D ICP	100		UH	*	mg/Kg	2	10	12/04/19 2:58	kja
Nickel, total (3050)	M6010D ICP	100	56.0	H	*	mg/Kg	0.8	4	12/04/19 2:58	kja
Selenium, total (3050)	M6020B ICP-MS	500	0.11	H	*	mg/Kg	0.05	0.1	12/04/19 14:38	mfm
Silver, total (3050)	M6020B ICP-MS	500	0.10	BH	*	mg/Kg	0.05	0.3	12/10/19 15:14	mfm
Thallium, total (3050)	M6020B ICP-MS	500	0.08	BH	*	mg/Kg	0.05	0.3	12/04/19 14:38	mfm
Vanadium, total (3050)	M6010D ICP	200	188	H	*	mg/Kg	1	5	12/05/19 0:48	kja
Zinc, total (3050)	M6010D ICP	100	101	H	*	mg/Kg	1	5	12/04/19 2:58	kja

Soil Analysis

Parameter	EPA Method	Dilution	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Solids, Percent	D2216-80	1	99.9	H	*	%	0.1	0.5	11/19/19 21:22	jms

Soil Preparation

Parameter	EPA Method	Dilution	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Digestion - Hot Plate	M3050B ICP								11/26/19 12:23	mlp
Digestion - Hot Plate	M3050B ICP-MS								11/26/19 12:23	mlp

Rise Grass Valley Inc.

Project ID:

Sample ID: Y973568

ACZ Sample ID: **L55822-05**

Date Sampled: 03/05/19 12:00

Date Received: 11/11/19

Sample Matrix: Soil

Metals Analysis

Parameter	EPA Method	Dilution	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Aluminum, total (3050)	M6010D ICP	100	22100	H	*	mg/Kg	5	30	12/04/19 3:01	kja
Antimony, total (3050)	M6020B ICP-MS	500		UH	*	mg/Kg	0.2	1	12/04/19 14:40	mfm
Arsenic, total (3050)	M6020B ICP-MS	500	1.9	H	*	mg/Kg	0.1	0.5	12/04/19 14:40	mfm
Barium, total (3050)	M6010D ICP	100	7.9	H	*	mg/Kg	0.7	4	12/04/19 3:01	kja
Beryllium, total (3050)	M6020B ICP-MS	500	0.12	H	*	mg/Kg	0.04	0.1	12/04/19 14:40	mfm
Boron, total (3050)	M6010D ICP	100		UH	*	mg/Kg	2	10	12/04/19 3:01	kja
Cadmium, total (3050)	M6020B ICP-MS	500	0.70	H	*	mg/Kg	0.03	0.1	12/04/19 14:40	mfm
Chromium, total (3050)	M6010D ICP	100	169	H	*	mg/Kg	1	5	12/04/19 3:01	kja
Cobalt, total (3050)	M6010D ICP	100	39	H	*	mg/Kg	1	5	12/04/19 3:01	kja
Copper, total (3050)	M6010D ICP	100	34	H	*	mg/Kg	1	5	12/04/19 3:01	kja
Iron, total (3050)	M6010D ICP	100	47800	H	*	mg/Kg	3	8	12/04/19 3:01	kja
Lead, total (3050)	M6020B ICP-MS	500	0.38	H	*	mg/Kg	0.05	0.3	12/04/19 14:40	mfm
Manganese, total (3050)	M6010D ICP	100	815	H	*	mg/Kg	1	5	12/04/19 3:01	kja
Molybdenum, total (3050)	M6010D ICP	100		UH	*	mg/Kg	2	10	12/04/19 3:01	kja
Nickel, total (3050)	M6010D ICP	100	54.0	H	*	mg/Kg	0.8	4	12/04/19 3:01	kja
Selenium, total (3050)	M6020B ICP-MS	500	0.09	BH	*	mg/Kg	0.05	0.1	12/04/19 14:40	mfm
Silver, total (3050)	M6020B ICP-MS	500	0.08	BH	*	mg/Kg	0.05	0.3	12/10/19 15:21	mfm
Thallium, total (3050)	M6020B ICP-MS	500	0.06	BH	*	mg/Kg	0.05	0.3	12/04/19 14:40	mfm
Vanadium, total (3050)	M6010D ICP	200	173	H	*	mg/Kg	1	5	12/05/19 0:52	kja
Zinc, total (3050)	M6010D ICP	100	69	H	*	mg/Kg	1	5	12/04/19 3:01	kja

Soil Analysis

Parameter	EPA Method	Dilution	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Solids, Percent	D2216-80	1	99.9	H	*	%	0.1	0.5	11/19/19 22:28	jms

Soil Preparation

Parameter	EPA Method	Dilution	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Digestion - Hot Plate	M3050B ICP								11/26/19 12:42	mlp
Digestion - Hot Plate	M3050B ICP-MS								11/26/19 12:42	mlp

Rise Grass Valley Inc.

Project ID:

Sample ID: Y973569

ACZ Sample ID: **L55822-06**

Date Sampled: 03/05/19 12:00

Date Received: 11/11/19

Sample Matrix: Soil

Metals Analysis

Parameter	EPA Method	Dilution	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Aluminum, total (3050)	M6010D ICP	198	27700	H	*	mg/Kg	10	50	12/05/19 1:03	kja
Antimony, total (3050)	M6020B ICP-MS	495		UH	*	mg/Kg	0.2	1	12/04/19 14:45	mfm
Arsenic, total (3050)	M6020B ICP-MS	495	4.9	H	*	mg/Kg	0.1	0.5	12/04/19 14:45	mfm
Barium, total (3050)	M6010D ICP	99	11.7	H	*	mg/Kg	0.7	3	12/04/19 3:13	kja
Beryllium, total (3050)	M6020B ICP-MS	495	0.12	H	*	mg/Kg	0.04	0.1	12/04/19 14:45	mfm
Boron, total (3050)	M6010D ICP	99		UH	*	mg/Kg	2	10	12/04/19 3:13	kja
Cadmium, total (3050)	M6020B ICP-MS	495	0.77	H	*	mg/Kg	0.02	0.1	12/04/19 14:45	mfm
Chromium, total (3050)	M6010D ICP	99	196	H	*	mg/Kg	1	5	12/04/19 3:13	kja
Cobalt, total (3050)	M6010D ICP	99	42	H	*	mg/Kg	1	5	12/04/19 3:13	kja
Copper, total (3050)	M6010D ICP	99	29	H	*	mg/Kg	1	5	12/04/19 3:13	kja
Iron, total (3050)	M6010D ICP	99	38400	H	*	mg/Kg	3	7	12/04/19 3:13	kja
Lead, total (3050)	M6020B ICP-MS	495	0.37	H	*	mg/Kg	0.05	0.2	12/04/19 14:45	mfm
Manganese, total (3050)	M6010D ICP	99	1090	H	*	mg/Kg	1	5	12/04/19 3:13	kja
Molybdenum, total (3050)	M6010D ICP	99		UH	*	mg/Kg	2	10	12/04/19 3:13	kja
Nickel, total (3050)	M6010D ICP	99	69.6	H	*	mg/Kg	0.8	4	12/04/19 3:13	kja
Selenium, total (3050)	M6020B ICP-MS	495	0.08	BH	*	mg/Kg	0.05	0.1	12/04/19 14:45	mfm
Silver, total (3050)	M6020B ICP-MS	495	0.08	BH	*	mg/Kg	0.05	0.2	12/10/19 15:22	mfm
Thallium, total (3050)	M6020B ICP-MS	495	0.06	BH	*	mg/Kg	0.05	0.2	12/04/19 14:45	mfm
Vanadium, total (3050)	M6010D ICP	198	179	H	*	mg/Kg	1	5	12/05/19 1:03	kja
Zinc, total (3050)	M6010D ICP	99	81	H	*	mg/Kg	1	5	12/04/19 3:13	kja

Soil Analysis

Parameter	EPA Method	Dilution	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Solids, Percent	D2216-80	1	99.9	H	*	%	0.1	0.5	11/19/19 23:34	jms

Soil Preparation

Parameter	EPA Method	Dilution	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Digestion - Hot Plate	M3050B ICP								11/26/19 13:01	mlp
Digestion - Hot Plate	M3050B ICP-MS								11/26/19 13:01	mlp

Rise Grass Valley Inc.

Project ID:

Sample ID: Y973570

ACZ Sample ID: **L55822-07**

Date Sampled: 03/05/19 12:00

Date Received: 11/11/19

Sample Matrix: Soil

Metals Analysis

Parameter	EPA Method	Dilution	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Aluminum, total (3050)	M6010D ICP	200	33900	H	*	mg/Kg	10	50	12/05/19 1:07	kja
Antimony, total (3050)	M6020B ICP-MS	500		UH	*	mg/Kg	0.2	1	12/04/19 14:49	mfm
Arsenic, total (3050)	M6020B ICP-MS	500	2.7	H	*	mg/Kg	0.1	0.5	12/04/19 14:49	mfm
Barium, total (3050)	M6010D ICP	100	20.2	H	*	mg/Kg	0.7	4	12/04/19 3:16	kja
Beryllium, total (3050)	M6020B ICP-MS	500	0.16	H	*	mg/Kg	0.04	0.1	12/04/19 14:49	mfm
Boron, total (3050)	M6010D ICP	100		UH	*	mg/Kg	2	10	12/04/19 3:16	kja
Cadmium, total (3050)	M6020B ICP-MS	500	0.61	H	*	mg/Kg	0.03	0.1	12/04/19 14:49	mfm
Chromium, total (3050)	M6010D ICP	100	210	H	*	mg/Kg	1	5	12/04/19 3:16	kja
Cobalt, total (3050)	M6010D ICP	100	44	H	*	mg/Kg	1	5	12/04/19 3:16	kja
Copper, total (3050)	M6010D ICP	100	23	H	*	mg/Kg	1	5	12/04/19 3:16	kja
Iron, total (3050)	M6010D ICP	100	45200	H	*	mg/Kg	3	8	12/04/19 3:16	kja
Lead, total (3050)	M6020B ICP-MS	500	0.29	BH	*	mg/Kg	0.05	0.3	12/04/19 14:49	mfm
Manganese, total (3050)	M6010D ICP	100	1080	H	*	mg/Kg	1	5	12/04/19 3:16	kja
Molybdenum, total (3050)	M6010D ICP	100		UH	*	mg/Kg	2	10	12/04/19 3:16	kja
Nickel, total (3050)	M6010D ICP	100	75.8	H	*	mg/Kg	0.8	4	12/04/19 3:16	kja
Selenium, total (3050)	M6020B ICP-MS	500	0.20	H	*	mg/Kg	0.05	0.1	12/04/19 14:49	mfm
Silver, total (3050)	M6020B ICP-MS	500	0.08	BH	*	mg/Kg	0.05	0.3	12/10/19 15:24	mfm
Thallium, total (3050)	M6020B ICP-MS	500	0.15	BH	*	mg/Kg	0.05	0.3	12/04/19 14:49	mfm
Vanadium, total (3050)	M6010D ICP	500	208	H	*	mg/Kg	3	10	12/05/19 13:13	kja
Zinc, total (3050)	M6010D ICP	100	88	H	*	mg/Kg	1	5	12/04/19 3:16	kja

Soil Analysis

Parameter	EPA Method	Dilution	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Solids, Percent	D2216-80	1	100	H	*	%	0.1	0.5	11/20/19 0:40	jms

Soil Preparation

Parameter	EPA Method	Dilution	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Digestion - Hot Plate	M3050B ICP								11/26/19 13:20	mlp
Digestion - Hot Plate	M3050B ICP-MS								11/26/19 13:20	mlp

Rise Grass Valley Inc.

Project ID:

Sample ID: Y973571

ACZ Sample ID: **L55822-08**

Date Sampled: 03/05/19 12:00

Date Received: 11/11/19

Sample Matrix: Soil

Metals Analysis

Parameter	EPA Method	Dilution	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Aluminum, total (3050)	M6010D ICP	200	28500	H	*	mg/Kg	10	50	12/05/19 1:10	kja
Antimony, total (3050)	M6020B ICP-MS	500		UH	*	mg/Kg	0.2	1	12/04/19 14:51	mfm
Arsenic, total (3050)	M6020B ICP-MS	500	2.2	H	*	mg/Kg	0.1	0.5	12/04/19 14:51	mfm
Barium, total (3050)	M6010D ICP	100	6.8	H	*	mg/Kg	0.7	4	12/04/19 3:20	kja
Beryllium, total (3050)	M6020B ICP-MS	500	0.15	H	*	mg/Kg	0.04	0.1	12/04/19 14:51	mfm
Boron, total (3050)	M6010D ICP	100		UH	*	mg/Kg	2	10	12/04/19 3:20	kja
Cadmium, total (3050)	M6020B ICP-MS	500	0.69	H	*	mg/Kg	0.03	0.1	12/04/19 14:51	mfm
Chromium, total (3050)	M6010D ICP	100	163	H	*	mg/Kg	1	5	12/04/19 3:20	kja
Cobalt, total (3050)	M6010D ICP	100	41	H	*	mg/Kg	1	5	12/04/19 3:20	kja
Copper, total (3050)	M6010D ICP	100	72	H	*	mg/Kg	1	5	12/04/19 3:20	kja
Iron, total (3050)	M6010D ICP	200	63500	H	*	mg/Kg	6	20	12/05/19 1:10	kja
Lead, total (3050)	M6020B ICP-MS	500	0.17	BH	*	mg/Kg	0.05	0.3	12/04/19 14:51	mfm
Manganese, total (3050)	M6010D ICP	100	1140	H	*	mg/Kg	1	5	12/04/19 3:20	kja
Molybdenum, total (3050)	M6010D ICP	100		UH	*	mg/Kg	2	10	12/04/19 3:20	kja
Nickel, total (3050)	M6010D ICP	100	56.8	H	*	mg/Kg	0.8	4	12/04/19 3:20	kja
Selenium, total (3050)	M6020B ICP-MS	500	0.10	H	*	mg/Kg	0.05	0.1	12/04/19 14:51	mfm
Silver, total (3050)	M6020B ICP-MS	500	0.09	BH	*	mg/Kg	0.05	0.3	12/10/19 15:26	mfm
Thallium, total (3050)	M6020B ICP-MS	500	0.14	BH	*	mg/Kg	0.05	0.3	12/04/19 14:51	mfm
Vanadium, total (3050)	M6010D ICP	500	235	H	*	mg/Kg	3	10	12/05/19 13:17	kja
Zinc, total (3050)	M6010D ICP	100	75	H	*	mg/Kg	1	5	12/04/19 3:20	kja

Soil Analysis

Parameter	EPA Method	Dilution	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Solids, Percent	D2216-80	1	100	H	*	%	0.1	0.5	11/20/19 1:45	jms

Soil Preparation

Parameter	EPA Method	Dilution	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Digestion - Hot Plate	M3050B ICP								11/26/19 13:39	mlp
Digestion - Hot Plate	M3050B ICP-MS								11/26/19 13:39	mlp

Rise Grass Valley Inc.

Project ID:

Sample ID: Y973572

ACZ Sample ID: **L55822-09**

Date Sampled: 03/05/19 12:00

Date Received: 11/11/19

Sample Matrix: Soil

Metals Analysis

Parameter	EPA Method	Dilution	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Aluminum, total (3050)	M6010D ICP	100	21700	H	*	mg/Kg	5	30	12/04/19 3:24	kja
Antimony, total (3050)	M6020B ICP-MS	500		UH	*	mg/Kg	0.2	1	12/04/19 14:53	mfm
Arsenic, total (3050)	M6020B ICP-MS	500	2.2	H	*	mg/Kg	0.1	0.5	12/04/19 14:53	mfm
Barium, total (3050)	M6010D ICP	100	2.7	BH	*	mg/Kg	0.7	4	12/04/19 3:24	kja
Beryllium, total (3050)	M6020B ICP-MS	500	0.06	BH	*	mg/Kg	0.04	0.1	12/04/19 14:53	mfm
Boron, total (3050)	M6010D ICP	100	3	BH	*	mg/Kg	2	10	12/04/19 3:24	kja
Cadmium, total (3050)	M6020B ICP-MS	500	0.76	H	*	mg/Kg	0.03	0.1	12/04/19 14:53	mfm
Chromium, total (3050)	M6010D ICP	100	45	H	*	mg/Kg	1	5	12/04/19 3:24	kja
Cobalt, total (3050)	M6010D ICP	100	28	H	*	mg/Kg	1	5	12/04/19 3:24	kja
Copper, total (3050)	M6010D ICP	100	57	H	*	mg/Kg	1	5	12/04/19 3:24	kja
Iron, total (3050)	M6010D ICP	100	27700	H	*	mg/Kg	3	8	12/04/19 3:24	kja
Lead, total (3050)	M6020B ICP-MS	500	0.16	BH	*	mg/Kg	0.05	0.3	12/04/19 14:53	mfm
Manganese, total (3050)	M6010D ICP	100	519	H	*	mg/Kg	1	5	12/04/19 3:24	kja
Molybdenum, total (3050)	M6010D ICP	100		UH	*	mg/Kg	2	10	12/04/19 3:24	kja
Nickel, total (3050)	M6010D ICP	100	33.5	H	*	mg/Kg	0.8	4	12/04/19 3:24	kja
Selenium, total (3050)	M6020B ICP-MS	500	0.42	H	*	mg/Kg	0.05	0.1	12/04/19 14:53	mfm
Silver, total (3050)	M6020B ICP-MS	500	0.09	BH	*	mg/Kg	0.05	0.3	12/10/19 15:28	mfm
Thallium, total (3050)	M6020B ICP-MS	500		UH	*	mg/Kg	0.05	0.3	12/04/19 14:53	mfm
Vanadium, total (3050)	M6010D ICP	100	94.8	H	*	mg/Kg	0.5	3	12/04/19 3:24	kja
Zinc, total (3050)	M6010D ICP	100	35	H	*	mg/Kg	1	5	12/04/19 3:24	kja

Soil Analysis

Parameter	EPA Method	Dilution	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Solids, Percent	D2216-80	1	99.9	H	*	%	0.1	0.5	11/20/19 2:51	jms

Soil Preparation

Parameter	EPA Method	Dilution	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Digestion - Hot Plate	M3050B ICP								11/26/19 13:59	mlp
Digestion - Hot Plate	M3050B ICP-MS								11/26/19 13:59	mlp

Rise Grass Valley Inc.

Project ID:

Sample ID: Y973573

ACZ Sample ID: **L55822-10**

Date Sampled: 03/05/19 12:00

Date Received: 11/11/19

Sample Matrix: Soil

Metals Analysis

Parameter	EPA Method	Dilution	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Aluminum, total (3050)	M6010D ICP	198	30000	H	*	mg/Kg	10	50	12/05/19 1:14	kja
Antimony, total (3050)	M6020B ICP-MS	495		UH	*	mg/Kg	0.2	1	12/04/19 14:54	mfm
Arsenic, total (3050)	M6020B ICP-MS	495	0.9	H	*	mg/Kg	0.1	0.5	12/04/19 14:54	mfm
Barium, total (3050)	M6010D ICP	99	2.1	BH	*	mg/Kg	0.7	3	12/04/19 3:28	kja
Beryllium, total (3050)	M6020B ICP-MS	495	0.11	H	*	mg/Kg	0.04	0.1	12/04/19 14:54	mfm
Boron, total (3050)	M6010D ICP	99		UH	*	mg/Kg	2	10	12/04/19 3:28	kja
Cadmium, total (3050)	M6020B ICP-MS	495	0.52	H	*	mg/Kg	0.02	0.1	12/04/19 14:54	mfm
Chromium, total (3050)	M6010D ICP	99	152	H	*	mg/Kg	1	5	12/04/19 3:28	kja
Cobalt, total (3050)	M6010D ICP	99	32	H	*	mg/Kg	1	5	12/04/19 3:28	kja
Copper, total (3050)	M6010D ICP	99	52	H	*	mg/Kg	1	5	12/04/19 3:28	kja
Iron, total (3050)	M6010D ICP	99	41200	H	*	mg/Kg	3	7	12/04/19 3:28	kja
Lead, total (3050)	M6020B ICP-MS	495	0.52	H	*	mg/Kg	0.05	0.2	12/04/19 14:54	mfm
Manganese, total (3050)	M6010D ICP	99	878	H	*	mg/Kg	1	5	12/04/19 3:28	kja
Molybdenum, total (3050)	M6010D ICP	99		UH	*	mg/Kg	2	10	12/04/19 3:28	kja
Nickel, total (3050)	M6010D ICP	99	49.4	H	*	mg/Kg	0.8	4	12/04/19 3:28	kja
Selenium, total (3050)	M6020B ICP-MS	495	0.10	H	*	mg/Kg	0.05	0.1	12/04/19 14:54	mfm
Silver, total (3050)	M6020B ICP-MS	495	0.11	BH	*	mg/Kg	0.05	0.2	12/10/19 15:30	mfm
Thallium, total (3050)	M6020B ICP-MS	495		UH	*	mg/Kg	0.05	0.2	12/04/19 14:54	mfm
Vanadium, total (3050)	M6010D ICP	198	160	H	*	mg/Kg	1	5	12/05/19 1:14	kja
Zinc, total (3050)	M6010D ICP	99	53	H	*	mg/Kg	1	5	12/04/19 3:28	kja

Soil Analysis

Parameter	EPA Method	Dilution	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Solids, Percent	D2216-80	1	99.9	H	*	%	0.1	0.5	11/20/19 3:57	jms

Soil Preparation

Parameter	EPA Method	Dilution	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Digestion - Hot Plate	M3050B ICP								11/26/19 14:18	mlp
Digestion - Hot Plate	M3050B ICP-MS								11/26/19 14:18	mlp

Rise Grass Valley Inc.

Project ID:

Sample ID: Y973574

ACZ Sample ID: **L55822-11**

Date Sampled: 03/05/19 12:00

Date Received: 11/11/19

Sample Matrix: Soil

Metals Analysis

Parameter	EPA Method	Dilution	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Aluminum, total (3050)	M6010D ICP	200	32000	H	*	mg/Kg	10	50	12/05/19 1:18	kja
Antimony, total (3050)	M6020B ICP-MS	500		UH	*	mg/Kg	0.2	1	12/04/19 14:56	mfm
Arsenic, total (3050)	M6020B ICP-MS	500	2.4	H	*	mg/Kg	0.1	0.5	12/04/19 14:56	mfm
Barium, total (3050)	M6010D ICP	100	3.5	BH	*	mg/Kg	0.7	4	12/04/19 3:31	kja
Beryllium, total (3050)	M6020B ICP-MS	500	0.11	H	*	mg/Kg	0.04	0.1	12/04/19 14:56	mfm
Boron, total (3050)	M6010D ICP	100		UH	*	mg/Kg	2	10	12/04/19 3:31	kja
Cadmium, total (3050)	M6020B ICP-MS	500	0.47	H	*	mg/Kg	0.03	0.1	12/04/19 14:56	mfm
Chromium, total (3050)	M6010D ICP	100	146	H	*	mg/Kg	1	5	12/04/19 3:31	kja
Cobalt, total (3050)	M6010D ICP	100	35	H	*	mg/Kg	1	5	12/04/19 3:31	kja
Copper, total (3050)	M6010D ICP	100	51	H	*	mg/Kg	1	5	12/04/19 3:31	kja
Iron, total (3050)	M6010D ICP	100	44500	H	*	mg/Kg	3	8	12/04/19 3:31	kja
Lead, total (3050)	M6020B ICP-MS	500	0.57	H	*	mg/Kg	0.05	0.3	12/04/19 14:56	mfm
Manganese, total (3050)	M6010D ICP	100	853	H	*	mg/Kg	1	5	12/04/19 3:31	kja
Molybdenum, total (3050)	M6010D ICP	100		UH	*	mg/Kg	2	10	12/04/19 3:31	kja
Nickel, total (3050)	M6010D ICP	100	52.9	H	*	mg/Kg	0.8	4	12/04/19 3:31	kja
Selenium, total (3050)	M6020B ICP-MS	500	0.14	H	*	mg/Kg	0.05	0.1	12/04/19 14:56	mfm
Silver, total (3050)	M6020B ICP-MS	500	0.08	BH	*	mg/Kg	0.05	0.3	12/10/19 15:31	mfm
Thallium, total (3050)	M6020B ICP-MS	500		UH	*	mg/Kg	0.05	0.3	12/04/19 14:56	mfm
Vanadium, total (3050)	M6010D ICP	200	144	H	*	mg/Kg	1	5	12/05/19 1:18	kja
Zinc, total (3050)	M6010D ICP	100	66	H	*	mg/Kg	1	5	12/04/19 3:31	kja

Soil Analysis

Parameter	EPA Method	Dilution	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Solids, Percent	D2216-80	1	99.9	H	*	%	0.1	0.5	11/20/19 5:02	jms

Soil Preparation

Parameter	EPA Method	Dilution	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Digestion - Hot Plate	M3050B ICP								11/26/19 14:37	mlp
Digestion - Hot Plate	M3050B ICP-MS								11/26/19 14:37	mlp

Rise Grass Valley Inc.

Project ID:

Sample ID: Y973575

ACZ Sample ID: **L55822-12**

Date Sampled: 03/05/19 12:00

Date Received: 11/11/19

Sample Matrix: Soil

Metals Analysis

Parameter	EPA Method	Dilution	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Aluminum, total (3050)	M6010D ICP	200	27500	H	*	mg/Kg	10	50	12/05/19 1:21	kja
Antimony, total (3050)	M6020B ICP-MS	500		UH	*	mg/Kg	0.2	1	12/04/19 14:58	mfm
Arsenic, total (3050)	M6020B ICP-MS	500	1.4	H	*	mg/Kg	0.1	0.5	12/04/19 14:58	mfm
Barium, total (3050)	M6010D ICP	100	2.0	BH	*	mg/Kg	0.7	4	12/04/19 3:35	kja
Beryllium, total (3050)	M6020B ICP-MS	500	0.07	BH	*	mg/Kg	0.04	0.1	12/04/19 14:58	mfm
Boron, total (3050)	M6010D ICP	100		UH	*	mg/Kg	2	10	12/04/19 3:35	kja
Cadmium, total (3050)	M6020B ICP-MS	500	0.48	H	*	mg/Kg	0.03	0.1	12/04/19 14:58	mfm
Chromium, total (3050)	M6010D ICP	100	177	H	*	mg/Kg	1	5	12/04/19 3:35	kja
Cobalt, total (3050)	M6010D ICP	100	32	H	*	mg/Kg	1	5	12/04/19 3:35	kja
Copper, total (3050)	M6010D ICP	100	62	H	*	mg/Kg	1	5	12/04/19 3:35	kja
Iron, total (3050)	M6010D ICP	100	44500	H	*	mg/Kg	3	8	12/04/19 3:35	kja
Lead, total (3050)	M6020B ICP-MS	500	0.22	BH	*	mg/Kg	0.05	0.3	12/04/19 14:58	mfm
Manganese, total (3050)	M6010D ICP	100	773	H	*	mg/Kg	1	5	12/04/19 3:35	kja
Molybdenum, total (3050)	M6010D ICP	100		UH	*	mg/Kg	2	10	12/04/19 3:35	kja
Nickel, total (3050)	M6010D ICP	100	49.1	H	*	mg/Kg	0.8	4	12/04/19 3:35	kja
Selenium, total (3050)	M6020B ICP-MS	500	0.24	H	*	mg/Kg	0.05	0.1	12/04/19 14:58	mfm
Silver, total (3050)	M6020B ICP-MS	500	0.07	BH	*	mg/Kg	0.05	0.3	12/10/19 15:33	mfm
Thallium, total (3050)	M6020B ICP-MS	500		UH	*	mg/Kg	0.05	0.3	12/04/19 14:58	mfm
Vanadium, total (3050)	M6010D ICP	200	153	H	*	mg/Kg	1	5	12/05/19 1:21	kja
Zinc, total (3050)	M6010D ICP	100	85	H	*	mg/Kg	1	5	12/04/19 3:35	kja

Soil Analysis

Parameter	EPA Method	Dilution	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Solids, Percent	D2216-80	1	99.9	H	*	%	0.1	0.5	11/20/19 6:08	jms

Soil Preparation

Parameter	EPA Method	Dilution	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Digestion - Hot Plate	M3050B ICP								11/26/19 14:56	mlp
Digestion - Hot Plate	M3050B ICP-MS								11/26/19 14:56	mlp

Rise Grass Valley Inc.

Project ID:

Sample ID: Y973576

ACZ Sample ID: **L55822-13**

Date Sampled: 03/05/19 12:00

Date Received: 11/11/19

Sample Matrix: Soil

Metals Analysis

Parameter	EPA Method	Dilution	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Aluminum, total (3050)	M6010D ICP	5000	31500	H	*	mg/Kg	300	1000	12/05/19 1:25	kja
Antimony, total (3050)	M6020B ICP-MS	500		UH	*	mg/Kg	0.2	1	12/04/19 15:00	mfm
Arsenic, total (3050)	M6020B ICP-MS	500	1.3	H	*	mg/Kg	0.1	0.5	12/04/19 15:00	mfm
Barium, total (3050)	M6010D ICP	100	33.0	H	*	mg/Kg	0.7	4	12/04/19 3:39	kja
Beryllium, total (3050)	M6020B ICP-MS	500	0.06	BH	*	mg/Kg	0.04	0.1	12/04/19 15:00	mfm
Boron, total (3050)	M6010D ICP	100		UH	*	mg/Kg	2	10	12/04/19 3:39	kja
Cadmium, total (3050)	M6020B ICP-MS	500	0.41	H	*	mg/Kg	0.03	0.1	12/04/19 15:00	mfm
Chromium, total (3050)	M6010D ICP	100	313	H	*	mg/Kg	1	5	12/04/19 3:39	kja
Cobalt, total (3050)	M6010D ICP	100	47	H	*	mg/Kg	1	5	12/04/19 3:39	kja
Copper, total (3050)	M6010D ICP	100	52	H	*	mg/Kg	1	5	12/04/19 3:39	kja
Iron, total (3050)	M6010D ICP	100	46100	H	*	mg/Kg	3	8	12/04/19 3:39	kja
Lead, total (3050)	M6020B ICP-MS	500	0.18	BH	*	mg/Kg	0.05	0.3	12/04/19 15:00	mfm
Manganese, total (3050)	M6010D ICP	100	801	H	*	mg/Kg	1	5	12/04/19 3:39	kja
Molybdenum, total (3050)	M6010D ICP	100		UH	*	mg/Kg	2	10	12/04/19 3:39	kja
Nickel, total (3050)	M6010D ICP	5000	260	H	*	mg/Kg	40	200	12/05/19 1:25	kja
Selenium, total (3050)	M6020B ICP-MS	500	0.07	BH	*	mg/Kg	0.05	0.1	12/04/19 15:00	mfm
Silver, total (3050)	M6020B ICP-MS	500		UH	*	mg/Kg	0.05	0.3	12/10/19 15:35	mfm
Thallium, total (3050)	M6020B ICP-MS	500	0.19	BH	*	mg/Kg	0.05	0.3	12/04/19 15:00	mfm
Vanadium, total (3050)	M6010D ICP	5000	120	H	*	mg/Kg	30	100	12/05/19 1:25	kja
Zinc, total (3050)	M6010D ICP	100	53	H	*	mg/Kg	1	5	12/04/19 3:39	kja

Soil Analysis

Parameter	EPA Method	Dilution	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Solids, Percent	D2216-80	1	99.9	H	*	%	0.1	0.5	11/20/19 7:14	jms

Soil Preparation

Parameter	EPA Method	Dilution	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Digestion - Hot Plate	M3050B ICP								11/26/19 15:15	mlp
Digestion - Hot Plate	M3050B ICP-MS								11/26/19 15:15	mlp

Rise Grass Valley Inc.

Project ID:

Sample ID: Y973577

ACZ Sample ID: **L55822-14**

Date Sampled: 03/05/19 12:00

Date Received: 11/11/19

Sample Matrix: Soil

Metals Analysis

Parameter	EPA Method	Dilution	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Aluminum, total (3050)	M6010D ICP	200	31400	H	*	mg/Kg	10	50	12/05/19 1:29	kja
Antimony, total (3050)	M6020B ICP-MS	500		UH	*	mg/Kg	0.2	1	12/04/19 15:01	mfm
Arsenic, total (3050)	M6020B ICP-MS	500	1.5	H	*	mg/Kg	0.1	0.5	12/04/19 15:01	mfm
Barium, total (3050)	M6010D ICP	100	8.5	H	*	mg/Kg	0.7	4	12/04/19 3:43	kja
Beryllium, total (3050)	M6020B ICP-MS	500	0.13	H	*	mg/Kg	0.04	0.1	12/04/19 15:01	mfm
Boron, total (3050)	M6010D ICP	100		UH	*	mg/Kg	2	10	12/04/19 3:43	kja
Cadmium, total (3050)	M6020B ICP-MS	500	0.48	H	*	mg/Kg	0.03	0.1	12/04/19 15:01	mfm
Chromium, total (3050)	M6010D ICP	100	118	H	*	mg/Kg	1	5	12/04/19 3:43	kja
Cobalt, total (3050)	M6010D ICP	100	38	H	*	mg/Kg	1	5	12/04/19 3:43	kja
Copper, total (3050)	M6010D ICP	100	57	H	*	mg/Kg	1	5	12/04/19 3:43	kja
Iron, total (3050)	M6010D ICP	200	56400	H	*	mg/Kg	6	20	12/05/19 1:29	kja
Lead, total (3050)	M6020B ICP-MS	500	0.42	H	*	mg/Kg	0.05	0.3	12/04/19 15:01	mfm
Manganese, total (3050)	M6010D ICP	100	952	H	*	mg/Kg	1	5	12/04/19 3:43	kja
Molybdenum, total (3050)	M6010D ICP	100		UH	*	mg/Kg	2	10	12/04/19 3:43	kja
Nickel, total (3050)	M6010D ICP	100	38.7	H	*	mg/Kg	0.8	4	12/04/19 3:43	kja
Selenium, total (3050)	M6020B ICP-MS	500	0.29	H	*	mg/Kg	0.05	0.1	12/04/19 15:01	mfm
Silver, total (3050)	M6020B ICP-MS	500	0.06	BH	*	mg/Kg	0.05	0.3	12/10/19 15:37	mfm
Thallium, total (3050)	M6020B ICP-MS	500		UH	*	mg/Kg	0.05	0.3	12/04/19 15:01	mfm
Vanadium, total (3050)	M6010D ICP	200	176	H	*	mg/Kg	1	5	12/05/19 1:29	kja
Zinc, total (3050)	M6010D ICP	100	55	H	*	mg/Kg	1	5	12/04/19 3:43	kja

Soil Analysis

Parameter	EPA Method	Dilution	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Solids, Percent	D2216-80	1	99.9	H	*	%	0.1	0.5	11/20/19 8:20	jms

Soil Preparation

Parameter	EPA Method	Dilution	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Digestion - Hot Plate	M3050B ICP								11/26/19 15:35	mlp
Digestion - Hot Plate	M3050B ICP-MS								11/26/19 15:35	mlp

Rise Grass Valley Inc.

Project ID:

Sample ID: Y973578

ACZ Sample ID: **L55822-15**

Date Sampled: 03/05/19 12:00

Date Received: 11/11/19

Sample Matrix: Soil

Metals Analysis

Parameter	EPA Method	Dilution	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Aluminum, total (3050)	M6010D ICP	200	28800	H	*	mg/Kg	10	50	12/05/19 1:33	kja
Antimony, total (3050)	M6020B ICP-MS	500		UH	*	mg/Kg	0.2	1	12/06/19 18:30	mfm
Arsenic, total (3050)	M6020B ICP-MS	500	0.7	H	*	mg/Kg	0.1	0.5	12/06/19 18:30	mfm
Barium, total (3050)	M6010D ICP	100	2.5	BH	*	mg/Kg	0.7	4	12/04/19 3:46	kja
Beryllium, total (3050)	M6020B ICP-MS	500	0.05	BH	*	mg/Kg	0.04	0.1	12/06/19 18:30	mfm
Boron, total (3050)	M6010D ICP	100		UH	*	mg/Kg	2	10	12/04/19 3:46	kja
Cadmium, total (3050)	M6020B ICP-MS	500	0.39	H	*	mg/Kg	0.03	0.1	12/06/19 18:30	mfm
Chromium, total (3050)	M6010D ICP	100	138	H	*	mg/Kg	1	5	12/04/19 3:46	kja
Cobalt, total (3050)	M6010D ICP	100	35	H	*	mg/Kg	1	5	12/04/19 3:46	kja
Copper, total (3050)	M6010D ICP	100	81	H	*	mg/Kg	1	5	12/04/19 3:46	kja
Iron, total (3050)	M6010D ICP	100	46000	H	*	mg/Kg	3	8	12/04/19 3:46	kja
Lead, total (3050)	M6020B ICP-MS	500	0.28	BH	*	mg/Kg	0.05	0.3	12/06/19 18:30	mfm
Manganese, total (3050)	M6010D ICP	100	762	H	*	mg/Kg	1	5	12/04/19 3:46	kja
Molybdenum, total (3050)	M6010D ICP	100		UH	*	mg/Kg	2	10	12/04/19 3:46	kja
Nickel, total (3050)	M6010D ICP	100	46.7	H	*	mg/Kg	0.8	4	12/04/19 3:46	kja
Selenium, total (3050)	M6020B ICP-MS	500	0.35	H	*	mg/Kg	0.05	0.1	12/06/19 18:30	mfm
Silver, total (3050)	M6020B ICP-MS	500	0.06	BH	*	mg/Kg	0.05	0.3	12/10/19 15:42	mfm
Thallium, total (3050)	M6020B ICP-MS	500		UH	*	mg/Kg	0.05	0.3	12/06/19 18:30	mfm
Vanadium, total (3050)	M6010D ICP	200	142	H	*	mg/Kg	1	5	12/05/19 1:33	kja
Zinc, total (3050)	M6010D ICP	100	40	H	*	mg/Kg	1	5	12/04/19 3:46	kja

Soil Analysis

Parameter	EPA Method	Dilution	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Solids, Percent	D2216-80	1	100	H	*	%	0.1	0.5	11/20/19 9:25	jms

Soil Preparation

Parameter	EPA Method	Dilution	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Digestion - Hot Plate	M3050B ICP								11/26/19 15:54	mlp
Digestion - Hot Plate	M3050B ICP-MS								11/26/19 15:54	mlp

Rise Grass Valley Inc.

Project ID:

Sample ID: Y973579

ACZ Sample ID: **L55822-16**

Date Sampled: 03/05/19 12:00

Date Received: 11/11/19

Sample Matrix: Soil

Metals Analysis

Parameter	EPA Method	Dilution	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Aluminum, total (3050)	M6010D ICP	200	29300	H	*	mg/Kg	10	50	12/05/19 1:36	kja
Antimony, total (3050)	M6020B ICP-MS	500		UH	*	mg/Kg	0.2	1	12/06/19 18:31	mfm
Arsenic, total (3050)	M6020B ICP-MS	500	0.8	H	*	mg/Kg	0.1	0.5	12/06/19 18:31	mfm
Barium, total (3050)	M6010D ICP	100	2.7	BH	*	mg/Kg	0.7	4	12/04/19 3:58	kja
Beryllium, total (3050)	M6020B ICP-MS	500	0.05	BH	*	mg/Kg	0.04	0.1	12/06/19 18:31	mfm
Boron, total (3050)	M6010D ICP	100		UH	*	mg/Kg	2	10	12/04/19 3:58	kja
Cadmium, total (3050)	M6020B ICP-MS	500	0.39	H	*	mg/Kg	0.03	0.1	12/06/19 18:31	mfm
Chromium, total (3050)	M6010D ICP	100	137	H	*	mg/Kg	1	5	12/04/19 3:58	kja
Cobalt, total (3050)	M6010D ICP	100	35	H	*	mg/Kg	1	5	12/04/19 3:58	kja
Copper, total (3050)	M6010D ICP	100	83	H	*	mg/Kg	1	5	12/04/19 3:58	kja
Iron, total (3050)	M6010D ICP	100	44500	H	*	mg/Kg	3	8	12/04/19 3:58	kja
Lead, total (3050)	M6020B ICP-MS	500	0.27	BH	*	mg/Kg	0.05	0.3	12/06/19 18:31	mfm
Manganese, total (3050)	M6010D ICP	100	770	H	*	mg/Kg	1	5	12/04/19 3:58	kja
Molybdenum, total (3050)	M6010D ICP	100		UH	*	mg/Kg	2	10	12/04/19 3:58	kja
Nickel, total (3050)	M6010D ICP	100	49.0	H	*	mg/Kg	0.8	4	12/04/19 3:58	kja
Selenium, total (3050)	M6020B ICP-MS	500	0.39	H	*	mg/Kg	0.05	0.1	12/06/19 18:31	mfm
Silver, total (3050)	M6020B ICP-MS	500	0.06	BH	*	mg/Kg	0.05	0.3	12/10/19 15:44	mfm
Thallium, total (3050)	M6020B ICP-MS	500		UH	*	mg/Kg	0.05	0.3	12/06/19 18:31	mfm
Vanadium, total (3050)	M6010D ICP	200	143	H	*	mg/Kg	1	5	12/05/19 1:36	kja
Zinc, total (3050)	M6010D ICP	100	38	H	*	mg/Kg	1	5	12/04/19 3:58	kja

Soil Analysis

Parameter	EPA Method	Dilution	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Solids, Percent	D2216-80	1	99.9	H	*	%	0.1	0.5	11/20/19 10:31	jms

Soil Preparation

Parameter	EPA Method	Dilution	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Digestion - Hot Plate	M3050B ICP								11/26/19 16:13	mlp
Digestion - Hot Plate	M3050B ICP-MS								11/26/19 16:13	mlp

Rise Grass Valley Inc.

Project ID:

Sample ID: Y973580

ACZ Sample ID: **L55822-17**

Date Sampled: 03/05/19 12:00

Date Received: 11/11/19

Sample Matrix: Soil

Metals Analysis

Parameter	EPA Method	Dilution	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Aluminum, total (3050)	M6010D ICP	198	29400	H	*	mg/Kg	10	50	12/05/19 1:47	kja
Antimony, total (3050)	M6020B ICP-MS	495		UH	*	mg/Kg	0.2	1	12/06/19 18:33	mfm
Arsenic, total (3050)	M6020B ICP-MS	495	1.5	H	*	mg/Kg	0.1	0.5	12/06/19 18:33	mfm
Barium, total (3050)	M6010D ICP	99	1.2	BH	*	mg/Kg	0.7	3	12/04/19 4:02	kja
Beryllium, total (3050)	M6020B ICP-MS	495	0.06	BH	*	mg/Kg	0.04	0.1	12/06/19 18:33	mfm
Boron, total (3050)	M6010D ICP	99		UH	*	mg/Kg	2	10	12/04/19 4:02	kja
Cadmium, total (3050)	M6020B ICP-MS	495	0.38	H	*	mg/Kg	0.02	0.1	12/06/19 18:33	mfm
Chromium, total (3050)	M6010D ICP	99	137	H	*	mg/Kg	1	5	12/04/19 4:02	kja
Cobalt, total (3050)	M6010D ICP	99	33	H	*	mg/Kg	1	5	12/04/19 4:02	kja
Copper, total (3050)	M6010D ICP	99	88	H	*	mg/Kg	1	5	12/04/19 4:02	kja
Iron, total (3050)	M6010D ICP	99	41000	H	*	mg/Kg	3	7	12/04/19 4:02	kja
Lead, total (3050)	M6020B ICP-MS	495	0.76	H	*	mg/Kg	0.05	0.2	12/06/19 18:33	mfm
Manganese, total (3050)	M6010D ICP	99	761	H	*	mg/Kg	1	5	12/04/19 4:02	kja
Molybdenum, total (3050)	M6010D ICP	99		UH	*	mg/Kg	2	10	12/04/19 4:02	kja
Nickel, total (3050)	M6010D ICP	99	61.5	H	*	mg/Kg	0.8	4	12/04/19 4:02	kja
Selenium, total (3050)	M6020B ICP-MS	495	0.19	H	*	mg/Kg	0.05	0.1	12/06/19 18:33	mfm
Silver, total (3050)	M6020B ICP-MS	495	0.08	BH	*	mg/Kg	0.05	0.2	12/10/19 15:46	mfm
Thallium, total (3050)	M6020B ICP-MS	495		UH	*	mg/Kg	0.05	0.2	12/06/19 18:33	mfm
Vanadium, total (3050)	M6010D ICP	99	98.4	H	*	mg/Kg	0.5	2	12/04/19 4:02	kja
Zinc, total (3050)	M6010D ICP	99	48	H	*	mg/Kg	1	5	12/04/19 4:02	kja

Soil Analysis

Parameter	EPA Method	Dilution	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Solids, Percent	D2216-80	1	100	H	*	%	0.1	0.5	11/20/19 11:37	jms

Soil Preparation

Parameter	EPA Method	Dilution	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Digestion - Hot Plate	M3050B ICP								11/26/19 16:32	mlp
Digestion - Hot Plate	M3050B ICP-MS								11/26/19 16:32	mlp

Rise Grass Valley Inc.

Project ID:

Sample ID: Y973581

ACZ Sample ID: **L55822-18**

Date Sampled: 03/05/19 12:00

Date Received: 11/11/19

Sample Matrix: Soil

Metals Analysis

Parameter	EPA Method	Dilution	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Aluminum, total (3050)	M6010D ICP	100	17600	H	*	mg/Kg	5	30	12/04/19 4:05	kja
Antimony, total (3050)	M6020B ICP-MS	500		UH	*	mg/Kg	0.2	1	12/06/19 18:35	mfm
Arsenic, total (3050)	M6020B ICP-MS	500	0.9	H	*	mg/Kg	0.1	0.5	12/06/19 18:35	mfm
Barium, total (3050)	M6010D ICP	100	11.1	H	*	mg/Kg	0.7	4	12/04/19 4:05	kja
Beryllium, total (3050)	M6020B ICP-MS	500	0.09	BH	*	mg/Kg	0.04	0.1	12/06/19 18:35	mfm
Boron, total (3050)	M6010D ICP	100		UH	*	mg/Kg	2	10	12/04/19 4:05	kja
Cadmium, total (3050)	M6020B ICP-MS	500	0.52	H	*	mg/Kg	0.03	0.1	12/06/19 18:35	mfm
Chromium, total (3050)	M6010D ICP	100	29	H	*	mg/Kg	1	5	12/04/19 4:05	kja
Cobalt, total (3050)	M6010D ICP	100	18	H	*	mg/Kg	1	5	12/04/19 4:05	kja
Copper, total (3050)	M6010D ICP	100	110	H	*	mg/Kg	1	5	12/04/19 4:05	kja
Iron, total (3050)	M6010D ICP	100	32200	H	*	mg/Kg	3	8	12/04/19 4:05	kja
Lead, total (3050)	M6020B ICP-MS	500	0.59	H	*	mg/Kg	0.05	0.3	12/06/19 18:35	mfm
Manganese, total (3050)	M6010D ICP	100	496	H	*	mg/Kg	1	5	12/04/19 4:05	kja
Molybdenum, total (3050)	M6010D ICP	100		UH	*	mg/Kg	2	10	12/04/19 4:05	kja
Nickel, total (3050)	M6010D ICP	100	14.9	H	*	mg/Kg	0.8	4	12/04/19 4:05	kja
Selenium, total (3050)	M6020B ICP-MS	500	0.23	H	*	mg/Kg	0.05	0.1	12/06/19 18:35	mfm
Silver, total (3050)	M6020B ICP-MS	500	0.09	BH	*	mg/Kg	0.05	0.3	12/10/19 15:48	mfm
Thallium, total (3050)	M6020B ICP-MS	500		UH	*	mg/Kg	0.05	0.3	12/06/19 18:35	mfm
Vanadium, total (3050)	M6010D ICP	200	130	H	*	mg/Kg	1	5	12/05/19 1:51	kja
Zinc, total (3050)	M6010D ICP	100	42	H	*	mg/Kg	1	5	12/04/19 4:05	kja

Soil Analysis

Parameter	EPA Method	Dilution	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Solids, Percent	D2216-80	1	99.9	H	*	%	0.1	0.5	11/20/19 12:42	jms

Soil Preparation

Parameter	EPA Method	Dilution	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Digestion - Hot Plate	M3050B ICP								11/26/19 16:51	mlp
Digestion - Hot Plate	M3050B ICP-MS								11/26/19 16:51	mlp

Rise Grass Valley Inc.

Project ID:

Sample ID: Y973582

ACZ Sample ID: **L55822-19**

Date Sampled: 03/05/19 12:00

Date Received: 11/11/19

Sample Matrix: Soil

Metals Analysis

Parameter	EPA Method	Dilution	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Aluminum, total (3050)	M6010D ICP	200	32600	H	*	mg/Kg	10	50	12/05/19 1:55	kja
Antimony, total (3050)	M6020B ICP-MS	500		UH	*	mg/Kg	0.2	1	12/06/19 18:37	mfm
Arsenic, total (3050)	M6020B ICP-MS	500	3.7	H	*	mg/Kg	0.1	0.5	12/06/19 18:37	mfm
Barium, total (3050)	M6010D ICP	100	3.2	BH	*	mg/Kg	0.7	4	12/04/19 4:09	kja
Beryllium, total (3050)	M6020B ICP-MS	500	0.05	BH	*	mg/Kg	0.04	0.1	12/06/19 18:37	mfm
Boron, total (3050)	M6010D ICP	100		UH	*	mg/Kg	2	10	12/04/19 4:09	kja
Cadmium, total (3050)	M6020B ICP-MS	500	0.24	H	*	mg/Kg	0.03	0.1	12/06/19 18:37	mfm
Chromium, total (3050)	M6010D ICP	100	158	H	*	mg/Kg	1	5	12/04/19 4:09	kja
Cobalt, total (3050)	M6010D ICP	100	35	H	*	mg/Kg	1	5	12/04/19 4:09	kja
Copper, total (3050)	M6010D ICP	100	57	H	*	mg/Kg	1	5	12/04/19 4:09	kja
Iron, total (3050)	M6010D ICP	100	45500	H	*	mg/Kg	3	8	12/04/19 4:09	kja
Lead, total (3050)	M6020B ICP-MS	500	0.80	H	*	mg/Kg	0.05	0.3	12/06/19 18:37	mfm
Manganese, total (3050)	M6010D ICP	100	795	H	*	mg/Kg	1	5	12/04/19 4:09	kja
Molybdenum, total (3050)	M6010D ICP	100		UH	*	mg/Kg	2	10	12/04/19 4:09	kja
Nickel, total (3050)	M6010D ICP	100	60.4	H	*	mg/Kg	0.8	4	12/04/19 4:09	kja
Selenium, total (3050)	M6020B ICP-MS	500	0.22	H	*	mg/Kg	0.05	0.1	12/06/19 18:37	mfm
Silver, total (3050)	M6020B ICP-MS	500	0.07	BH	*	mg/Kg	0.05	0.3	12/10/19 15:49	mfm
Thallium, total (3050)	M6020B ICP-MS	500		UH	*	mg/Kg	0.05	0.3	12/06/19 18:37	mfm
Vanadium, total (3050)	M6010D ICP	200	136	H	*	mg/Kg	1	5	12/05/19 1:55	kja
Zinc, total (3050)	M6010D ICP	100	46	H	*	mg/Kg	1	5	12/04/19 4:09	kja

Soil Analysis

Parameter	EPA Method	Dilution	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Solids, Percent	D2216-80	1	99.9	H	*	%	0.1	0.5	11/20/19 13:48	jms

Soil Preparation

Parameter	EPA Method	Dilution	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Digestion - Hot Plate	M3050B ICP								11/26/19 17:11	mlp
Digestion - Hot Plate	M3050B ICP-MS								11/26/19 17:11	mlp

Rise Grass Valley Inc.

Project ID:

Sample ID: Y973590

ACZ Sample ID: **L55822-20**

Date Sampled: 03/05/19 12:00

Date Received: 11/11/19

Sample Matrix: Soil

Metals Analysis

Parameter	EPA Method	Dilution	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Aluminum, total (3050)	M6010D ICP	200	40100	H	*	mg/Kg	10	50	12/05/19 1:59	kja
Antimony, total (3050)	M6020B ICP-MS	500		UH	*	mg/Kg	0.2	1	12/06/19 18:39	mfm
Arsenic, total (3050)	M6020B ICP-MS	500	2.0	H	*	mg/Kg	0.1	0.5	12/06/19 18:39	mfm
Barium, total (3050)	M6010D ICP	100	6.3	H	*	mg/Kg	0.7	4	12/04/19 4:13	kja
Beryllium, total (3050)	M6020B ICP-MS	500	0.08	BH	*	mg/Kg	0.04	0.1	12/06/19 18:39	mfm
Boron, total (3050)	M6010D ICP	100		UH	*	mg/Kg	2	10	12/04/19 4:13	kja
Cadmium, total (3050)	M6020B ICP-MS	500	0.24	H	*	mg/Kg	0.03	0.1	12/06/19 18:39	mfm
Chromium, total (3050)	M6010D ICP	100	204	H	*	mg/Kg	1	5	12/04/19 4:13	kja
Cobalt, total (3050)	M6010D ICP	100	40	H	*	mg/Kg	1	5	12/04/19 4:13	kja
Copper, total (3050)	M6010D ICP	100	71	H	*	mg/Kg	1	5	12/04/19 4:13	kja
Iron, total (3050)	M6010D ICP	200	60800	H	*	mg/Kg	6	20	12/05/19 1:59	kja
Lead, total (3050)	M6020B ICP-MS	500	0.93	H	*	mg/Kg	0.05	0.3	12/06/19 18:39	mfm
Manganese, total (3050)	M6010D ICP	100	1100	H	*	mg/Kg	1	5	12/04/19 4:13	kja
Molybdenum, total (3050)	M6010D ICP	100		UH	*	mg/Kg	2	10	12/04/19 4:13	kja
Nickel, total (3050)	M6010D ICP	100	79.6	H	*	mg/Kg	0.8	4	12/04/19 4:13	kja
Selenium, total (3050)	M6020B ICP-MS	500	0.41	H	*	mg/Kg	0.05	0.1	12/06/19 18:39	mfm
Silver, total (3050)	M6020B ICP-MS	500	0.13	BH	*	mg/Kg	0.05	0.3	12/10/19 15:51	mfm
Thallium, total (3050)	M6020B ICP-MS	500		UH	*	mg/Kg	0.05	0.3	12/06/19 18:39	mfm
Vanadium, total (3050)	M6010D ICP	500	201	H	*	mg/Kg	3	10	12/05/19 13:21	kja
Zinc, total (3050)	M6010D ICP	100	56	H	*	mg/Kg	1	5	12/04/19 4:13	kja

Soil Analysis

Parameter	EPA Method	Dilution	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Solids, Percent	D2216-80	1	100	H	*	%	0.1	0.5	11/20/19 14:54	jms

Soil Preparation

Parameter	EPA Method	Dilution	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Digestion - Hot Plate	M3050B ICP								11/26/19 17:30	mlp
Digestion - Hot Plate	M3050B ICP-MS								11/26/19 17:30	mlp

Rise Grass Valley Inc.

Project ID:

Sample ID: Y973591

ACZ Sample ID: **L55822-21**

Date Sampled: 03/05/19 12:00

Date Received: 11/11/19

Sample Matrix: Soil

Metals Analysis

Parameter	EPA Method	Dilution	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Aluminum, total (3050)	M6010D ICP	200	27200	H	*	mg/Kg	10	50	12/04/19 22:44	kja
Antimony, total (3050)	M6020B ICP-MS	500		UH	*	mg/Kg	0.2	1	12/04/19 14:13	bsu
Arsenic, total (3050)	M6020B ICP-MS	500	0.5	H	*	mg/Kg	0.1	0.5	12/04/19 14:13	bsu
Barium, total (3050)	M6010D ICP	100	3.3	BH	*	mg/Kg	0.7	4	12/04/19 5:22	kja
Beryllium, total (3050)	M6020B ICP-MS	500	0.08	BH	*	mg/Kg	0.04	0.1	12/04/19 14:13	bsu
Boron, total (3050)	M6010D ICP	200		UH	*	mg/Kg	4	20	12/04/19 22:44	kja
Cadmium, total (3050)	M6020B ICP-MS	500	0.25	H	*	mg/Kg	0.03	0.1	12/04/19 14:13	bsu
Chromium, total (3050)	M6010D ICP	200	170	H	*	mg/Kg	2	10	12/04/19 22:44	kja
Cobalt, total (3050)	M6010D ICP	100	27	H	*	mg/Kg	1	5	12/04/19 5:22	kja
Copper, total (3050)	M6010D ICP	100	52	H	*	mg/Kg	1	5	12/04/19 5:22	kja
Iron, total (3050)	M6010D ICP	100	35500	H	*	mg/Kg	3	8	12/04/19 5:22	kja
Lead, total (3050)	M6020B ICP-MS	500	0.56	H	*	mg/Kg	0.05	0.3	12/04/19 14:13	bsu
Manganese, total (3050)	M6010D ICP	100	628	H	*	mg/Kg	1	5	12/04/19 5:22	kja
Molybdenum, total (3050)	M6010D ICP	100		UH	*	mg/Kg	2	10	12/04/19 5:22	kja
Nickel, total (3050)	M6010D ICP	100	51.0	H	*	mg/Kg	0.8	4	12/04/19 5:22	kja
Selenium, total (3050)	M6020B ICP-MS	500	0.11	H	*	mg/Kg	0.05	0.1	12/04/19 14:13	bsu
Silver, total (3050)	M6020B ICP-MS	500	0.05	BH	*	mg/Kg	0.05	0.3	12/04/19 14:13	bsu
Thallium, total (3050)	M6020B ICP-MS	500		UH	*	mg/Kg	0.05	0.3	12/04/19 14:13	bsu
Vanadium, total (3050)	M6010D ICP	200	125	H	*	mg/Kg	1	5	12/04/19 22:44	kja
Zinc, total (3050)	M6010D ICP	200	38	H	*	mg/Kg	2	10	12/04/19 22:44	kja

Soil Analysis

Parameter	EPA Method	Dilution	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Solids, Percent	D2216-80	1	99.9	H	*	%	0.1	0.5	11/19/19 17:00	jms

Soil Preparation

Parameter	EPA Method	Dilution	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Digestion - Hot Plate	M3050B ICP								11/26/19 11:36	mlp
Digestion - Hot Plate	M3050B ICP-MS								11/26/19 11:36	mlp

Rise Grass Valley Inc.

Project ID:

Sample ID: Y973592

ACZ Sample ID: **L55822-22**

Date Sampled: 03/05/19 12:00

Date Received: 11/11/19

Sample Matrix: Soil

Metals Analysis

Parameter	EPA Method	Dilution	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Aluminum, total (3050)	M6010D ICP	198	29800	H	*	mg/Kg	10	50	12/04/19 22:55	kja
Antimony, total (3050)	M6020B ICP-MS	495		UH	*	mg/Kg	0.2	1	12/04/19 14:15	bsu
Arsenic, total (3050)	M6020B ICP-MS	495	1.8	H	*	mg/Kg	0.1	0.5	12/04/19 14:15	bsu
Barium, total (3050)	M6010D ICP	99	1.6	BH	*	mg/Kg	0.7	3	12/04/19 5:33	kja
Beryllium, total (3050)	M6020B ICP-MS	495	0.09	BH	*	mg/Kg	0.04	0.1	12/04/19 14:15	bsu
Boron, total (3050)	M6010D ICP	198		UH	*	mg/Kg	4	20	12/04/19 22:55	kja
Cadmium, total (3050)	M6020B ICP-MS	495	0.25	H	*	mg/Kg	0.02	0.1	12/04/19 14:15	bsu
Chromium, total (3050)	M6010D ICP	198	124	H	*	mg/Kg	2	10	12/04/19 22:55	kja
Cobalt, total (3050)	M6010D ICP	99	33	H	*	mg/Kg	1	5	12/04/19 5:33	kja
Copper, total (3050)	M6010D ICP	99	51	H	*	mg/Kg	1	5	12/04/19 5:33	kja
Iron, total (3050)	M6010D ICP	99	41000	H	*	mg/Kg	3	7	12/04/19 5:33	kja
Lead, total (3050)	M6020B ICP-MS	495	0.29	H	*	mg/Kg	0.05	0.2	12/04/19 14:15	bsu
Manganese, total (3050)	M6010D ICP	99	704	H	*	mg/Kg	1	5	12/04/19 5:33	kja
Molybdenum, total (3050)	M6010D ICP	99		UH	*	mg/Kg	2	10	12/04/19 5:33	kja
Nickel, total (3050)	M6010D ICP	99	43.1	H	*	mg/Kg	0.8	4	12/04/19 5:33	kja
Selenium, total (3050)	M6020B ICP-MS	495	0.18	H	*	mg/Kg	0.05	0.1	12/04/19 14:15	bsu
Silver, total (3050)	M6020B ICP-MS	495		UH	*	mg/Kg	0.05	0.2	12/04/19 14:15	bsu
Thallium, total (3050)	M6020B ICP-MS	495		UH	*	mg/Kg	0.05	0.2	12/04/19 14:15	bsu
Vanadium, total (3050)	M6010D ICP	198	134	H	*	mg/Kg	1	5	12/04/19 22:55	kja
Zinc, total (3050)	M6010D ICP	198	35	H	*	mg/Kg	2	10	12/04/19 22:55	kja

Soil Analysis

Parameter	EPA Method	Dilution	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Solids, Percent	D2216-80	1	99.9	H	*	%	0.1	0.5	11/19/19 22:48	jms

Soil Preparation

Parameter	EPA Method	Dilution	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Digestion - Hot Plate	M3050B ICP								11/26/19 15:12	mlp
Digestion - Hot Plate	M3050B ICP-MS								11/26/19 15:12	mlp

Rise Grass Valley Inc.

Project ID:

Sample ID: Y973593

ACZ Sample ID: **L55822-23**

Date Sampled: 03/05/19 12:00

Date Received: 11/11/19

Sample Matrix: Soil

Metals Analysis

Parameter	EPA Method	Dilution	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Aluminum, total (3050)	M6010D ICP	198	34300	H	*	mg/Kg	10	50	12/04/19 22:59	kja
Antimony, total (3050)	M6020B ICP-MS	495		UH	*	mg/Kg	0.2	1	12/04/19 14:24	bsu
Arsenic, total (3050)	M6020B ICP-MS	495	2.0	H	*	mg/Kg	0.1	0.5	12/04/19 14:24	bsu
Barium, total (3050)	M6010D ICP	99	2.6	BH	*	mg/Kg	0.7	3	12/04/19 5:36	kja
Beryllium, total (3050)	M6020B ICP-MS	495	0.17	H	*	mg/Kg	0.04	0.1	12/04/19 14:24	bsu
Boron, total (3050)	M6010D ICP	198		UH	*	mg/Kg	4	20	12/04/19 22:59	kja
Cadmium, total (3050)	M6020B ICP-MS	495	0.39	H	*	mg/Kg	0.02	0.1	12/04/19 14:24	bsu
Chromium, total (3050)	M6010D ICP	198	174	H	*	mg/Kg	2	10	12/04/19 22:59	kja
Cobalt, total (3050)	M6010D ICP	99	37	H	*	mg/Kg	1	5	12/04/19 5:36	kja
Copper, total (3050)	M6010D ICP	99	88	H	*	mg/Kg	1	5	12/04/19 5:36	kja
Iron, total (3050)	M6010D ICP	99	47000	H	*	mg/Kg	3	7	12/04/19 5:36	kja
Lead, total (3050)	M6020B ICP-MS	495	0.53	H	*	mg/Kg	0.05	0.2	12/04/19 14:24	bsu
Manganese, total (3050)	M6010D ICP	99	846	H	*	mg/Kg	1	5	12/04/19 5:36	kja
Molybdenum, total (3050)	M6010D ICP	99		UH	*	mg/Kg	2	10	12/04/19 5:36	kja
Nickel, total (3050)	M6010D ICP	99	48.0	H	*	mg/Kg	0.8	4	12/04/19 5:36	kja
Selenium, total (3050)	M6020B ICP-MS	495	0.23	H	*	mg/Kg	0.05	0.1	12/04/19 14:24	bsu
Silver, total (3050)	M6020B ICP-MS	495	0.07	BH	*	mg/Kg	0.05	0.2	12/04/19 14:24	bsu
Thallium, total (3050)	M6020B ICP-MS	495		UH	*	mg/Kg	0.05	0.2	12/04/19 14:24	bsu
Vanadium, total (3050)	M6010D ICP	198	175	H	*	mg/Kg	1	5	12/04/19 22:59	kja
Zinc, total (3050)	M6010D ICP	198	93	H	*	mg/Kg	2	10	12/04/19 22:59	kja

Soil Analysis

Parameter	EPA Method	Dilution	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Solids, Percent	D2216-80	1	99.9	H	*	%	0.1	0.5	11/20/19 1:43	jms

Soil Preparation

Parameter	EPA Method	Dilution	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Digestion - Hot Plate	M3050B ICP								11/26/19 16:11	mlp
Digestion - Hot Plate	M3050B ICP-MS								11/26/19 16:11	mlp

Rise Grass Valley Inc.

Project ID:

Sample ID: Y973594

ACZ Sample ID: **L55822-24**

Date Sampled: 03/05/19 12:00

Date Received: 11/11/19

Sample Matrix: Soil

Metals Analysis

Parameter	EPA Method	Dilution	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Aluminum, total (3050)	M6010D ICP	100	23900	H	*	mg/Kg	5	30	12/04/19 5:40	kja
Antimony, total (3050)	M6020B ICP-MS	500		UH	*	mg/Kg	0.2	1	12/04/19 14:26	bsu
Arsenic, total (3050)	M6020B ICP-MS	500	6.1	H	*	mg/Kg	0.1	0.5	12/04/19 14:26	bsu
Barium, total (3050)	M6010D ICP	100	7.6	H	*	mg/Kg	0.7	4	12/04/19 5:40	kja
Beryllium, total (3050)	M6020B ICP-MS	500	0.20	H	*	mg/Kg	0.04	0.1	12/04/19 14:26	bsu
Boron, total (3050)	M6010D ICP	200		UH	*	mg/Kg	4	20	12/04/19 23:03	kja
Cadmium, total (3050)	M6020B ICP-MS	500	0.24	H	*	mg/Kg	0.03	0.1	12/04/19 14:26	bsu
Chromium, total (3050)	M6010D ICP	200	73	H	*	mg/Kg	2	10	12/04/19 23:03	kja
Cobalt, total (3050)	M6010D ICP	100	22	H	*	mg/Kg	1	5	12/04/19 5:40	kja
Copper, total (3050)	M6010D ICP	100	115	H	*	mg/Kg	1	5	12/04/19 5:40	kja
Iron, total (3050)	M6010D ICP	100	39700	H	*	mg/Kg	3	8	12/04/19 5:40	kja
Lead, total (3050)	M6020B ICP-MS	500	4.01	H	*	mg/Kg	0.05	0.3	12/04/19 14:26	bsu
Manganese, total (3050)	M6010D ICP	100	587	H	*	mg/Kg	1	5	12/04/19 5:40	kja
Molybdenum, total (3050)	M6010D ICP	100		UH	*	mg/Kg	2	10	12/04/19 5:40	kja
Nickel, total (3050)	M6010D ICP	100	28.8	H	*	mg/Kg	0.8	4	12/04/19 5:40	kja
Selenium, total (3050)	M6020B ICP-MS	500	0.13	H	*	mg/Kg	0.05	0.1	12/04/19 14:26	bsu
Silver, total (3050)	M6020B ICP-MS	500	0.13	BH	*	mg/Kg	0.05	0.3	12/04/19 14:26	bsu
Thallium, total (3050)	M6020B ICP-MS	500		UH	*	mg/Kg	0.05	0.3	12/04/19 14:26	bsu
Vanadium, total (3050)	M6010D ICP	200	168	H	*	mg/Kg	1	5	12/04/19 23:03	kja
Zinc, total (3050)	M6010D ICP	200	57	H	*	mg/Kg	2	10	12/04/19 23:03	kja

Soil Analysis

Parameter	EPA Method	Dilution	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Solids, Percent	D2216-80	1	99.9	H	*	%	0.1	0.5	11/20/19 4:37	jms

Soil Preparation

Parameter	EPA Method	Dilution	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Digestion - Hot Plate	M3050B ICP								11/26/19 16:31	mlp
Digestion - Hot Plate	M3050B ICP-MS								11/26/19 16:31	mlp

Rise Grass Valley Inc.

Project ID:

Sample ID: Y973595

ACZ Sample ID: **L55822-25**

Date Sampled: 03/05/19 12:00

Date Received: 11/11/19

Sample Matrix: Soil

Metals Analysis

Parameter	EPA Method	Dilution	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Aluminum, total (3050)	M6010D ICP	200	33900	H	*	mg/Kg	10	50	12/04/19 23:06	kja
Antimony, total (3050)	M6020B ICP-MS	500		UH	*	mg/Kg	0.2	1	12/04/19 14:28	bsu
Arsenic, total (3050)	M6020B ICP-MS	500	3.2	H	*	mg/Kg	0.1	0.5	12/04/19 14:28	bsu
Barium, total (3050)	M6010D ICP	100	11.8	H	*	mg/Kg	0.7	4	12/04/19 5:44	kja
Beryllium, total (3050)	M6020B ICP-MS	500	0.19	H	*	mg/Kg	0.04	0.1	12/04/19 14:28	bsu
Boron, total (3050)	M6010D ICP	200		UH	*	mg/Kg	4	20	12/04/19 23:06	kja
Cadmium, total (3050)	M6020B ICP-MS	500	0.25	H	*	mg/Kg	0.03	0.1	12/04/19 14:28	bsu
Chromium, total (3050)	M6010D ICP	200	228	H	*	mg/Kg	2	10	12/04/19 23:06	kja
Cobalt, total (3050)	M6010D ICP	100	27	H	*	mg/Kg	1	5	12/04/19 5:44	kja
Copper, total (3050)	M6010D ICP	100	38	H	*	mg/Kg	1	5	12/04/19 5:44	kja
Iron, total (3050)	M6010D ICP	100	39900	H	*	mg/Kg	3	8	12/04/19 5:44	kja
Lead, total (3050)	M6020B ICP-MS	500	1.42	H	*	mg/Kg	0.05	0.3	12/04/19 14:28	bsu
Manganese, total (3050)	M6010D ICP	100	610	H	*	mg/Kg	1	5	12/04/19 5:44	kja
Molybdenum, total (3050)	M6010D ICP	100		UH	*	mg/Kg	2	10	12/04/19 5:44	kja
Nickel, total (3050)	M6010D ICP	100	89.4	H	*	mg/Kg	0.8	4	12/04/19 5:44	kja
Selenium, total (3050)	M6020B ICP-MS	500	0.07	BH	*	mg/Kg	0.05	0.1	12/04/19 14:28	bsu
Silver, total (3050)	M6020B ICP-MS	500		UH	*	mg/Kg	0.05	0.3	12/04/19 14:28	bsu
Thallium, total (3050)	M6020B ICP-MS	500		UH	*	mg/Kg	0.05	0.3	12/04/19 14:28	bsu
Vanadium, total (3050)	M6010D ICP	200	174	H	*	mg/Kg	1	5	12/04/19 23:06	kja
Zinc, total (3050)	M6010D ICP	200	53	H	*	mg/Kg	2	10	12/04/19 23:06	kja

Soil Analysis

Parameter	EPA Method	Dilution	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Solids, Percent	D2216-80	1	99.9	H	*	%	0.1	0.5	11/20/19 7:31	jms

Soil Preparation

Parameter	EPA Method	Dilution	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Digestion - Hot Plate	M3050B ICP								11/26/19 16:50	mlp
Digestion - Hot Plate	M3050B ICP-MS								11/26/19 16:50	mlp

Rise Grass Valley Inc.

Project ID:

Sample ID: Y973596

ACZ Sample ID: **L55822-26**

Date Sampled: 03/05/19 12:00

Date Received: 11/11/19

Sample Matrix: Soil

Metals Analysis

Parameter	EPA Method	Dilution	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Aluminum, total (3050)	M6010D ICP	200	37800	H	*	mg/Kg	10	50	12/04/19 23:18	kja
Antimony, total (3050)	M6020B ICP-MS	500		UH	*	mg/Kg	0.2	1	12/04/19 14:30	bsu
Arsenic, total (3050)	M6020B ICP-MS	500	1.2	H	*	mg/Kg	0.1	0.5	12/04/19 14:30	bsu
Barium, total (3050)	M6010D ICP	100	6.8	H	*	mg/Kg	0.7	4	12/04/19 5:55	kja
Beryllium, total (3050)	M6020B ICP-MS	500	0.29	H	*	mg/Kg	0.04	0.1	12/04/19 14:30	bsu
Boron, total (3050)	M6010D ICP	200		UH	*	mg/Kg	4	20	12/04/19 23:18	kja
Cadmium, total (3050)	M6020B ICP-MS	500	0.46	H	*	mg/Kg	0.03	0.1	12/04/19 14:30	bsu
Chromium, total (3050)	M6010D ICP	200	162	H	*	mg/Kg	2	10	12/04/19 23:18	kja
Cobalt, total (3050)	M6010D ICP	100	38	H	*	mg/Kg	1	5	12/04/19 5:55	kja
Copper, total (3050)	M6010D ICP	100	46	H	*	mg/Kg	1	5	12/04/19 5:55	kja
Iron, total (3050)	M6010D ICP	200	65300	H	*	mg/Kg	6	20	12/04/19 23:18	kja
Lead, total (3050)	M6020B ICP-MS	500	0.47	H	*	mg/Kg	0.05	0.3	12/04/19 14:30	bsu
Manganese, total (3050)	M6010D ICP	100	945	H	*	mg/Kg	1	5	12/04/19 5:55	kja
Molybdenum, total (3050)	M6010D ICP	100		UH	*	mg/Kg	2	10	12/04/19 5:55	kja
Nickel, total (3050)	M6010D ICP	100	52.4	H	*	mg/Kg	0.8	4	12/04/19 5:55	kja
Selenium, total (3050)	M6020B ICP-MS	500	0.20	H	*	mg/Kg	0.05	0.1	12/04/19 14:30	bsu
Silver, total (3050)	M6020B ICP-MS	500	0.07	BH	*	mg/Kg	0.05	0.3	12/04/19 14:30	bsu
Thallium, total (3050)	M6020B ICP-MS	500		UH	*	mg/Kg	0.05	0.3	12/04/19 14:30	bsu
Vanadium, total (3050)	M6010D ICP	500	247	H	*	mg/Kg	3	10	12/05/19 11:54	kja
Zinc, total (3050)	M6010D ICP	200	75	H	*	mg/Kg	2	10	12/04/19 23:18	kja

Soil Analysis

Parameter	EPA Method	Dilution	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Solids, Percent	D2216-80	1	99.9	H	*	%	0.1	0.5	11/20/19 10:26	jms

Soil Preparation

Parameter	EPA Method	Dilution	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Digestion - Hot Plate	M3050B ICP								11/26/19 17:10	mlp
Digestion - Hot Plate	M3050B ICP-MS								11/26/19 17:10	mlp

Rise Grass Valley Inc.

Project ID:

Sample ID: Y973597

ACZ Sample ID: **L55822-27**

Date Sampled: 03/05/19 12:00

Date Received: 11/11/19

Sample Matrix: Soil

Metals Analysis

Parameter	EPA Method	Dilution	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Aluminum, total (3050)	M6010D ICP	500	76200	H	*	mg/Kg	30	100	12/04/19 23:21	kja
Antimony, total (3050)	M6020B ICP-MS	500		UH	*	mg/Kg	0.2	1	12/04/19 14:31	bsu
Arsenic, total (3050)	M6020B ICP-MS	500	1.0	H	*	mg/Kg	0.1	0.5	12/04/19 14:31	bsu
Barium, total (3050)	M6010D ICP	100	2.1	BH	*	mg/Kg	0.7	4	12/04/19 5:59	kja
Beryllium, total (3050)	M6020B ICP-MS	500	0.21	H	*	mg/Kg	0.04	0.1	12/04/19 14:31	bsu
Boron, total (3050)	M6010D ICP	500		UH	*	mg/Kg	10	50	12/04/19 23:21	kja
Cadmium, total (3050)	M6020B ICP-MS	500	0.04	BH	*	mg/Kg	0.03	0.1	12/04/19 14:31	bsu
Chromium, total (3050)	M6010D ICP	500	746	H	*	mg/Kg	5	30	12/04/19 23:21	kja
Cobalt, total (3050)	M6010D ICP	100	42	H	*	mg/Kg	1	5	12/04/19 5:59	kja
Copper, total (3050)	M6010D ICP	500		UH	*	mg/Kg	5	30	12/04/19 23:21	kja
Iron, total (3050)	M6010D ICP	500	76800	H	*	mg/Kg	20	40	12/04/19 23:21	kja
Lead, total (3050)	M6020B ICP-MS	500	0.31	H	*	mg/Kg	0.05	0.3	12/04/19 14:31	bsu
Manganese, total (3050)	M6010D ICP	100	1060	H	*	mg/Kg	1	5	12/04/19 5:59	kja
Molybdenum, total (3050)	M6010D ICP	100		UH	*	mg/Kg	2	10	12/04/19 5:59	kja
Nickel, total (3050)	M6010D ICP	500	550	H	*	mg/Kg	4	20	12/04/19 23:21	kja
Selenium, total (3050)	M6020B ICP-MS	500		UH	*	mg/Kg	0.05	0.1	12/04/19 14:31	bsu
Silver, total (3050)	M6020B ICP-MS	500		UH	*	mg/Kg	0.05	0.3	12/04/19 14:31	bsu
Thallium, total (3050)	M6020B ICP-MS	500		UH	*	mg/Kg	0.05	0.3	12/04/19 14:31	bsu
Vanadium, total (3050)	M6010D ICP	500	130	H	*	mg/Kg	3	10	12/04/19 23:21	kja
Zinc, total (3050)	M6010D ICP	500	100	H	*	mg/Kg	5	30	12/04/19 23:21	kja

Soil Analysis

Parameter	EPA Method	Dilution	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Solids, Percent	D2216-80	1	99.9	H	*	%	0.1	0.5	11/20/19 13:20	jms

Soil Preparation

Parameter	EPA Method	Dilution	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Digestion - Hot Plate	M3050B ICP								11/26/19 17:29	mlp
Digestion - Hot Plate	M3050B ICP-MS								11/26/19 17:29	mlp

Report Header Explanations

<i>Batch</i>	A distinct set of samples analyzed at a specific time
<i>Found</i>	Value of the QC Type of interest
<i>Limit</i>	Upper limit for RPD, in %.
<i>Lower</i>	Lower Recovery Limit, in % (except for LCSS, mg/Kg)
<i>MDL</i>	Method Detection Limit. Same as Minimum Reporting Limit unless omitted or equal to the PQL (see comment #5). Allows for instrument and annual fluctuations.
<i>PCN/SCN</i>	A number assigned to reagents/standards to trace to the manufacturer's certificate of analysis
<i>PQL</i>	Practical Quantitation Limit. Synonymous with the EPA term "minimum level".
<i>QC</i>	True Value of the Control Sample or the amount added to the Spike
<i>Rec</i>	Recovered amount of the true value or spike added, in % (except for LCSS, mg/Kg)
<i>RPD</i>	Relative Percent Difference, calculation used for Duplicate QC Types
<i>Upper</i>	Upper Recovery Limit, in % (except for LCSS, mg/Kg)
<i>Sample</i>	Value of the Sample of interest

QC Sample Types

<i>AS</i>	Analytical Spike (Post Digestion)	<i>LCSWD</i>	Laboratory Control Sample - Water Duplicate
<i>ASD</i>	Analytical Spike (Post Digestion) Duplicate	<i>LFB</i>	Laboratory Fortified Blank
<i>CCB</i>	Continuing Calibration Blank	<i>LFM</i>	Laboratory Fortified Matrix
<i>CCV</i>	Continuing Calibration Verification standard	<i>LFMD</i>	Laboratory Fortified Matrix Duplicate
<i>DUP</i>	Sample Duplicate	<i>LRB</i>	Laboratory Reagent Blank
<i>ICB</i>	Initial Calibration Blank	<i>MS</i>	Matrix Spike
<i>ICV</i>	Initial Calibration Verification standard	<i>MSD</i>	Matrix Spike Duplicate
<i>ICSAB</i>	Inter-element Correction Standard - A plus B solutions	<i>PBS</i>	Prep Blank - Soil
<i>LCSS</i>	Laboratory Control Sample - Soil	<i>PBW</i>	Prep Blank - Water
<i>LCSSD</i>	Laboratory Control Sample - Soil Duplicate	<i>PQV</i>	Practical Quantitation Verification standard
<i>LCSW</i>	Laboratory Control Sample - Water	<i>SDL</i>	Serial Dilution

QC Sample Type Explanations

Blanks	Verifies that there is no or minimal contamination in the prep method or calibration procedure.
Control Samples	Verifies the accuracy of the method, including the prep procedure.
Duplicates	Verifies the precision of the instrument and/or method.
Spikes/Fortified Matrix	Determines sample matrix interferences, if any.
Standard	Verifies the validity of the calibration.

ACZ Qualifiers (Qual)

B	Analyte concentration detected at a value between MDL and PQL. The associated value is an estimated quantity.
H	Analysis exceeded method hold time. pH is a field test with an immediate hold time.
L	Target analyte response was below the laboratory defined negative threshold.
U	The material was analyzed for, but was not detected above the level of the associated value. The associated value is either the sample quantitation limit or the sample detection limit.

Method References

(1)	EPA 600/4-83-020. Methods for Chemical Analysis of Water and Wastes, March 1983.
(2)	EPA 600/R-93-100. Methods for the Determination of Inorganic Substances in Environmental Samples, August 1993.
(3)	EPA 600/R-94-111. Methods for the Determination of Metals in Environmental Samples - Supplement I, May 1994.
(4)	EPA SW-846. Test Methods for Evaluating Solid Waste.
(5)	Standard Methods for the Examination of Water and Wastewater.

Comments

(1)	QC results calculated from raw data. Results may vary slightly if the rounded values are used in the calculations.
(2)	Soil, Sludge, and Plant matrices for Inorganic analyses are reported on a dry weight basis.
(3)	Animal matrices for Inorganic analyses are reported on an "as received" basis.
(4)	An asterisk in the "XQ" column indicates there is an extended qualifier and/or certification qualifier associated with the result.
(5)	If the MDL equals the PQL or the MDL column is omitted, the PQL is the reporting limit.

For a complete list of ACZ's Extended Qualifiers, please click:

<https://acz.com/wp-content/uploads/2019/04/Ext-Qual-List.pdf>

Rise Grass Valley Inc.

ACZ Project ID: **L55822**

NOTE: If the Rec% column is null, the high/low limits are in the same units as the result. If the Rec% column is not null, then the high/low limits are in % Rec.

Aluminum, total (3050)

M6010D ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec%	Lower	Upper	RPD	Limit	Qual
WG487195													
WG487195ICV	ICV	12/04/19 2:01	II191122-1	2		2.01	mg/L	101	90	110			
WG487195ICB	ICB	12/04/19 2:04				U	mg/L		-0.15	0.15			
WG486956PBS	PBS	12/04/19 2:28				U	mg/Kg		-15	15			
WG486956LCSS	LCSS	12/04/19 2:31	PCN59282	8610		9770	mg/Kg		4410	12800			
WG486956LCSSD	LCSSD	12/04/19 2:35	PCN59282	8610		9773	mg/Kg		4410	12800	0	20	
L55822-01MS	MS	12/04/19 2:42	II191106-4	100.12	26700	27790	mg/Kg	1089	75	125			M3
L55822-01MSD	MSD	12/04/19 2:46	II191106-4	99.1188	26700	27779.4	mg/Kg	1089	75	125	0	20	M3
WG487254													
WG487254ICV	ICV	12/04/19 4:43	II191122-1	2		2.038	mg/L	102	90	110			
WG487254ICB	ICB	12/04/19 4:47				U	mg/L		-0.15	0.15			
WG486958PBS	PBS	12/04/19 5:11				U	mg/Kg		-15	15			
WG486958LCSS	LCSS	12/04/19 5:14	PCN59282	8610		9491	mg/Kg		4410	12800			
WG486958LCSSD	LCSSD	12/04/19 5:18	PCN59282	8610		9306	mg/Kg		4410	12800	2	20	
L55822-21MS	MS	12/04/19 5:25	II191106-4	100.12	26600	27430	mg/Kg	829	75	125			M3
L55822-21MSD	MSD	12/04/19 5:29	II191106-4	100.12	26600	27870	mg/Kg	1268	75	125	2	20	M3
WG487348													
WG487348ICV	ICV	12/04/19 22:07	II191122-1	2		1.973	mg/L	99	90	110			
WG487348ICB	ICB	12/04/19 22:10				U	mg/L		-0.15	0.15			
WG486958PBS	PBS	12/04/19 22:33				U	mg/Kg		-15	15			
WG486958LCSS	LCSS	12/04/19 22:37	PCN59282	8610		9695	mg/Kg		4410	12800			
WG486958LCSSD	LCSSD	12/04/19 22:41	PCN59282	8610		9289	mg/Kg		4410	12800	4	20	
L55822-21MS	MS	12/04/19 22:48	II2XSOIL	100.11	27200	28560	mg/Kg	1359	75	125			M3
L55822-21MSD	MSD	12/04/19 22:52	II2XSOIL	100.11	27200	29100	mg/Kg	1898	75	125	2	20	M3
WG487350													
WG487350ICV	ICV	12/04/19 23:52	II191122-1	2		1.968	mg/L	98	90	110			
WG487350ICB	ICB	12/04/19 23:56				U	mg/L		-0.15	0.15			
WG486956PBS	PBS	12/05/19 0:19				U	mg/Kg		-15	15			
WG486956LCSS	LCSS	12/05/19 0:23	PCN59282	8610		9624	mg/Kg		4410	12800			
WG486956LCSSD	LCSSD	12/05/19 0:26	PCN59282	8610		9692	mg/Kg		4410	12800	1	20	
L55822-01MS	MS	12/05/19 0:33	II2XSOIL	100.11	27600	28840	mg/Kg	1239	75	125			M3
L55822-01MSD	MSD	12/05/19 0:37	II2XSOIL	99.1089	27600	28334	mg/Kg	741	75	125	2	20	M3

Rise Grass Valley Inc.

ACZ Project ID: **L55822**

NOTE: If the Rec% column is null, the high/low limits are in the same units as the result. If the Rec% column is not null, then the high/low limits are in % Rec.

Antimony, total (3050)

M6020B ICP-MS

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec%	Lower	Upper	RPD	Limit	Qual
WG487337													
WG487337ICV	ICV	12/04/19 13:33	MS191014-8	.02004		.02018	mg/L	101	90	110			
WG487337ICB	ICB	12/04/19 13:35				U	mg/L		-0.0012	0.0012			
WG486958PBS	PBS	12/04/19 13:44				U	mg/Kg		-0.6	0.6			
WG486958LCSS	LCSS	12/04/19 13:46	PCN59282	68.6		55	mg/Kg		2.03	135			
WG486958LCSSD	LCSSD	12/04/19 13:47	PCN59282	68.6		51.1	mg/Kg		2.03	135	7	20	
L55822-22MS	MS	12/04/19 14:17	MS191112-2	5	U	.54	mg/Kg	11	75	125			M2
L55822-22MSD	MSD	12/04/19 14:22	MS191112-2	5	U	.52	mg/Kg	10	75	125	4	20	M2
WG487344													
WG487344ICV	ICV	12/04/19 14:12	MS191014-8	.02004		.01996	mg/L	100	90	110			
WG487344ICB	ICB	12/04/19 14:13				U	mg/L		-0.0012	0.0012			
WG486956PBS	PBS	12/04/19 14:24				U	mg/Kg		-0.6	0.6			
WG486956LCSS	LCSS	12/04/19 14:26	PCN59282	68.6		55.1	mg/Kg		2.03	135			
WG486956LCSSD	LCSSD	12/04/19 14:28	PCN59282	68.6		57.6	mg/Kg		2.03	135	4	20	
L55822-02MS	MS	12/04/19 14:33	MS191112-2	4.95	U	.58	mg/Kg	12	75	125			M2
L55822-02MSD	MSD	12/04/19 14:35	MS191112-2	4.95	U	.6	mg/Kg	12	75	125	3	20	M2
WG487630													
WG487630ICV	ICV	12/06/19 17:35	MS191014-8	.02004		.02084	mg/L	104	90	110			
WG487630ICB	ICB	12/06/19 17:36				U	mg/L		-0.0012	0.0012			
WG486956PBS	PBS	12/06/19 17:47				U	mg/Kg		-0.6	0.6			
WG486956LCSS	LCSS	12/06/19 17:49	PCN59282	68.6		59	mg/Kg		2.03	135			
WG486956LCSSD	LCSSD	12/06/19 17:51	PCN59282	68.6		58.9	mg/Kg		2.03	135	0	20	
L55822-02MS	MS	12/06/19 17:56	MS191112-2	4.95	U	.54	mg/Kg	11	75	125			M2
L55822-02MSD	MSD	12/06/19 17:58	MS191112-2	4.95	U	.55	mg/Kg	11	75	125	2	20	M2

Rise Grass Valley Inc.

ACZ Project ID: **L55822**

NOTE: If the Rec% column is null, the high/low limits are in the same units as the result. If the Rec% column is not null, then the high/low limits are in % Rec.

Arsenic, total (3050)

M6020B ICP-MS

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec%	Lower	Upper	RPD	Limit	Qual
WG487337													
WG487337ICV	ICV	12/04/19 13:33	MS191014-8	.05		.04988	mg/L	100	90	110			
WG487337ICB	ICB	12/04/19 13:35				U	mg/L		-0.0006	0.0006			
WG486958PBS	PBS	12/04/19 13:44				U	mg/Kg		-0.3	0.3			
WG486958LCSS	LCSS	12/04/19 13:46	PCN59282	69.4		75.2	mg/Kg		57.2	81.5			
WG486958LCSSD	LCSSD	12/04/19 13:47	PCN59282	69.4		73.1	mg/Kg		57.2	81.5	3	20	
L55822-22MS	MS	12/04/19 14:17	MS191112-2	25.025	1.8	25.78	mg/Kg	96	75	125			
L55822-22MSD	MSD	12/04/19 14:22	MS191112-2	25.025	1.8	26.17	mg/Kg	97	75	125	2	20	
WG487344													
WG487344ICV	ICV	12/04/19 14:12	MS191014-8	.05		.04778	mg/L	96	90	110			
WG487344ICB	ICB	12/04/19 14:13				U	mg/L		-0.0006	0.0006			
WG486956PBS	PBS	12/04/19 14:24				U	mg/Kg		-0.3	0.3			
WG486956LCSS	LCSS	12/04/19 14:26	PCN59282	69.4		68	mg/Kg		57.2	81.5			
WG486956LCSSD	LCSSD	12/04/19 14:28	PCN59282	69.4		72.7	mg/Kg		57.2	81.5	7	20	
L55822-02MS	MS	12/04/19 14:33	MS191112-2	24.77475	1.8	24.11	mg/Kg	90	75	125			
L55822-02MSD	MSD	12/04/19 14:35	MS191112-2	24.77475	1.8	24.35	mg/Kg	91	75	125	1	20	
WG487630													
WG487630ICV	ICV	12/06/19 17:35	MS191014-8	.05		.05229	mg/L	105	90	110			
WG487630ICB	ICB	12/06/19 17:36				U	mg/L		-0.0006	0.0006			
WG486956PBS	PBS	12/06/19 17:47				U	mg/Kg		-0.3	0.3			
WG486956LCSS	LCSS	12/06/19 17:49	PCN59282	69.4		75.8	mg/Kg		57.2	81.5			
WG486956LCSSD	LCSSD	12/06/19 17:51	PCN59282	69.4		78.6	mg/Kg		57.2	81.5	4	20	
L55822-02MS	MS	12/06/19 17:56	MS191112-2	24.77475	2	25.6	mg/Kg	95	75	125			
L55822-02MSD	MSD	12/06/19 17:58	MS191112-2	24.77475	2	24.46	mg/Kg	91	75	125	5	20	

Barium, total (3050)

M6010D ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec%	Lower	Upper	RPD	Limit	Qual
WG487195													
WG487195ICV	ICV	12/04/19 2:01	II191122-1	2		1.997	mg/L	100	90	110			
WG487195ICB	ICB	12/04/19 2:04				U	mg/L		-0.021	0.021			
WG486956PBS	PBS	12/04/19 2:28				U	mg/Kg		-2.1	2.1			
WG486956LCSS	LCSS	12/04/19 2:31	PCN59282	362		370.1	mg/Kg		297	427			
WG486956LCSSD	LCSSD	12/04/19 2:35	PCN59282	362		360.3	mg/Kg		297	427	3	20	
L55822-01MS	MS	12/04/19 2:42	II191106-4	50.05	6.6	53.6	mg/Kg	94	75	125			
L55822-01MSD	MSD	12/04/19 2:46	II191106-4	49.5495	6.6	52.64	mg/Kg	93	75	125	2	20	
WG487254													
WG487254ICV	ICV	12/04/19 4:43	II191122-1	2		2.013	mg/L	101	90	110			
WG487254ICB	ICB	12/04/19 4:47				U	mg/L		-0.021	0.021			
WG486958PBS	PBS	12/04/19 5:11				U	mg/Kg		-2.1	2.1			
WG486958LCSS	LCSS	12/04/19 5:14	PCN59282	362		351.2	mg/Kg		297	427			
WG486958LCSSD	LCSSD	12/04/19 5:18	PCN59282	362		345.8	mg/Kg		297	427	2	20	
L55822-21MS	MS	12/04/19 5:25	II191106-4	50.05	3.3	48.1	mg/Kg	90	75	125			
L55822-21MSD	MSD	12/04/19 5:29	II191106-4	50.05	3.3	48.81	mg/Kg	91	75	125	1	20	

Rise Grass Valley Inc.

ACZ Project ID: **L55822**

NOTE: If the Rec% column is null, the high/low limits are in the same units as the result. If the Rec% column is not null, then the high/low limits are in % Rec.

Beryllium, total (3050)

M6020B ICP-MS

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec%	Lower	Upper	RPD	Limit	Qual
WG487337													
WG487337ICV	ICV	12/04/19 13:33	MS191014-8	.05		.048696	mg/L	97	90	110			
WG487337ICB	ICB	12/04/19 13:35				U	mg/L		-0.00024	0.00024			
WG486958PBS	PBS	12/04/19 13:44				U	mg/Kg		-0.12	0.12			
WG486958LCSS	LCSS	12/04/19 13:46	PCN59282	223		233.15	mg/Kg		185	260			
WG486958LCSSD	LCSSD	12/04/19 13:47	PCN59282	223		228.47	mg/Kg		185	260	2	20	
L55822-22MS	MS	12/04/19 14:17	MS191112-2	25.025	.09	26.614	mg/Kg	106	75	125			
L55822-22MSD	MSD	12/04/19 14:22	MS191112-2	25.025	.09	26.054	mg/Kg	104	75	125	2	20	
WG487344													
WG487344ICV	ICV	12/04/19 14:12	MS191014-8	.05		.047505	mg/L	95	90	110			
WG487344ICB	ICB	12/04/19 14:13				U	mg/L		-0.00024	0.00024			
WG486956PBS	PBS	12/04/19 14:24				U	mg/Kg		-0.12	0.12			
WG486956LCSS	LCSS	12/04/19 14:26	PCN59282	223		210.41	mg/Kg		185	260			
WG486956LCSSD	LCSSD	12/04/19 14:28	PCN59282	223		212.8	mg/Kg		185	260	1	20	
L55822-02MS	MS	12/04/19 14:33	MS191112-2	24.77475	.16	20.827	mg/Kg	83	75	125			
L55822-02MSD	MSD	12/04/19 14:35	MS191112-2	24.77475	.16	21.067	mg/Kg	84	75	125	1	20	
WG487630													
WG487630ICV	ICV	12/06/19 17:35	MS191014-8	.05		.050501	mg/L	101	90	110			
WG487630ICB	ICB	12/06/19 17:36				U	mg/L		-0.00024	0.00024			
WG486956PBS	PBS	12/06/19 17:47				U	mg/Kg		-0.12	0.12			
WG486956LCSS	LCSS	12/06/19 17:49	PCN59282	223		234.17	mg/Kg		185	260			
WG486956LCSSD	LCSSD	12/06/19 17:51	PCN59282	223		227.59	mg/Kg		185	260	3	20	
L55822-02MS	MS	12/06/19 17:56	MS191112-2	24.77475	.14	21.237	mg/Kg	85	75	125			
L55822-02MSD	MSD	12/06/19 17:58	MS191112-2	24.77475	.14	20.802	mg/Kg	83	75	125	2	20	

Boron, total (3050)

M6010D ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec%	Lower	Upper	RPD	Limit	Qual
WG487195													
WG487195ICV	ICV	12/04/19 2:01	II191122-1	2		2.017	mg/L	101	90	110			
WG487195ICB	ICB	12/04/19 2:04				U	mg/L		-0.06	0.06			
WG486956PBS	PBS	12/04/19 2:28				2	mg/Kg		-6	6			
WG486956LCSS	LCSS	12/04/19 2:31	PCN59282	79.4		81.4	mg/Kg		57.2	102			
WG486956LCSSD	LCSSD	12/04/19 2:35	PCN59282	79.4		79.5	mg/Kg		57.2	102	2	20	
L55822-01MS	MS	12/04/19 2:42	II191106-4	50.05	U	48.2	mg/Kg	96	75	125			
L55822-01MSD	MSD	12/04/19 2:46	II191106-4	49.5495	U	49.8	mg/Kg	101	75	125	3	20	
WG487348													
WG487348ICV	ICV	12/04/19 22:07	II191122-1	2		2.064	mg/L	103	90	110			
WG487348ICB	ICB	12/04/19 22:10				U	mg/L		-0.06	0.06			
WG486958PBS	PBS	12/04/19 22:33				U	mg/Kg		-6	6			
WG486958LCSS	LCSS	12/04/19 22:37	PCN59282	79.4		82.7	mg/Kg		57.2	102			
WG486958LCSSD	LCSSD	12/04/19 22:41	PCN59282	79.4		81.5	mg/Kg		57.2	102	1	20	
L55822-21MS	MS	12/04/19 22:48	II2XSOIL	50.05	U	49.2	mg/Kg	98	75	125			
L55822-21MSD	MSD	12/04/19 22:52	II2XSOIL	50.05	U	49.5	mg/Kg	99	75	125	1	20	

Rise Grass Valley Inc.

ACZ Project ID: **L55822**

NOTE: If the Rec% column is null, the high/low limits are in the same units as the result. If the Rec% column is not null, then the high/low limits are in % Rec.

Cadmium, total (3050)

M6020B ICP-MS

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec%	Lower	Upper	RPD	Limit	Qual
WG487337													
WG487337ICV	ICV	12/04/19 13:33	MS191014-8	.05		.049073	mg/L	98	90	110			
WG487337ICB	ICB	12/04/19 13:35				U	mg/L		-0.00015	0.00015			
WG486958PBS	PBS	12/04/19 13:44				U	mg/Kg		-0.09	0.09			
WG486958LCSS	LCSS	12/04/19 13:46	PCN59282	166		169.14	mg/Kg		138	195			
WG486958LCSSD	LCSSD	12/04/19 13:47	PCN59282	166		176.08	mg/Kg		138	195	4	20	
L55822-22MS	MS	12/04/19 14:17	MS191112-2	25.025	.25	23.716	mg/Kg	94	75	125			
L55822-22MSD	MSD	12/04/19 14:22	MS191112-2	25.025	.25	23.642	mg/Kg	93	75	125	0	20	
WG487344													
WG487344ICV	ICV	12/04/19 14:12	MS191014-8	.05		.048704	mg/L	97	90	110			
WG487344ICB	ICB	12/04/19 14:13				U	mg/L		-0.00015	0.00015			
WG486956PBS	PBS	12/04/19 14:24				U	mg/Kg		-0.09	0.09			
WG486956LCSS	LCSS	12/04/19 14:26	PCN59282	166		161.6	mg/Kg		138	195			
WG486956LCSSD	LCSSD	12/04/19 14:28	PCN59282	166		159.71	mg/Kg		138	195	1	20	
L55822-02MS	MS	12/04/19 14:33	MS191112-2	24.77475	.92	23.095	mg/Kg	90	75	125			
L55822-02MSD	MSD	12/04/19 14:35	MS191112-2	24.77475	.92	23.683	mg/Kg	92	75	125	3	20	
WG487630													
WG487630ICV	ICV	12/06/19 17:35	MS191014-8	.05		.051737	mg/L	103	90	110			
WG487630ICB	ICB	12/06/19 17:36				U	mg/L		-0.00015	0.00015			
WG486956PBS	PBS	12/06/19 17:47				U	mg/Kg		-0.09	0.09			
WG486956LCSS	LCSS	12/06/19 17:49	PCN59282	166		176.76	mg/Kg		138	195			
WG486956LCSSD	LCSSD	12/06/19 17:51	PCN59282	166		165.86	mg/Kg		138	195	6	20	
L55822-02MS	MS	12/06/19 17:56	MS191112-2	24.77475	.84	23.221	mg/Kg	90	75	125			
L55822-02MSD	MSD	12/06/19 17:58	MS191112-2	24.77475	.84	23.231	mg/Kg	90	75	125	0	20	

Chromium, total (3050)

M6010D ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec%	Lower	Upper	RPD	Limit	Qual
WG487195													
WG487195ICV	ICV	12/04/19 2:01	II191122-1	2		1.999	mg/L	100	90	110			
WG487195ICB	ICB	12/04/19 2:04				U	mg/L		-0.03	0.03			
WG486956PBS	PBS	12/04/19 2:28				U	mg/Kg		-3	3			
WG486956LCSS	LCSS	12/04/19 2:31	PCN59282	249		253.9	mg/Kg		203	295			
WG486956LCSSD	LCSSD	12/04/19 2:35	PCN59282	249		250.8	mg/Kg		203	295	1	20	
L55822-01MS	MS	12/04/19 2:42	II191106-4	50.1	122	169.4	mg/Kg	95	75	125			
L55822-01MSD	MSD	12/04/19 2:46	II191106-4	49.599	122	169.5	mg/Kg	96	75	125	0	20	
WG487348													
WG487348ICV	ICV	12/04/19 22:07	II191122-1	2		1.971	mg/L	99	90	110			
WG487348ICB	ICB	12/04/19 22:10				U	mg/L		-0.03	0.03			
WG486958PBS	PBS	12/04/19 22:33				U	mg/Kg		-3	3			
WG486958LCSS	LCSS	12/04/19 22:37	PCN59282	249		250.9	mg/Kg		203	295			
WG486958LCSSD	LCSSD	12/04/19 22:41	PCN59282	249		242.7	mg/Kg		203	295	3	20	
L55822-21MS	MS	12/04/19 22:48	II2XSOIL	50.1	170	221.2	mg/Kg	102	75	125			
L55822-21MSD	MSD	12/04/19 22:52	II2XSOIL	50.1	170	224.2	mg/Kg	108	75	125	1	20	

Rise Grass Valley Inc.

ACZ Project ID: **L55822**

NOTE: If the Rec% column is null, the high/low limits are in the same units as the result. If the Rec% column is not null, then the high/low limits are in % Rec.

Cobalt, total (3050)

M6010D ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec%	Lower	Upper	RPD	Limit	Qual
WG487195													
WG487195ICV	ICV	12/04/19 2:01	II191122-1	2.002		1.922	mg/L	96	90	110			
WG487195ICB	ICB	12/04/19 2:04				U	mg/L		-0.03	0.03			
WG486956PBS	PBS	12/04/19 2:28				U	mg/Kg		-3	3			
WG486956LCSS	LCSS	12/04/19 2:31	PCN59282	90.6		90.7	mg/Kg		75.1	106			
WG486956LCSSD	LCSSD	12/04/19 2:35	PCN59282	90.6		89.6	mg/Kg		75.1	106	1	20	
L55822-01MS	MS	12/04/19 2:42	II191106-4	50	24	67.8	mg/Kg	88	75	125			
L55822-01MSD	MSD	12/04/19 2:46	II191106-4	49.5	24	70.6	mg/Kg	94	75	125	4	20	

WG487254

WG487254ICV	ICV	12/04/19 4:43	II191122-1	2.002		1.949	mg/L	97	90	110			
WG487254ICB	ICB	12/04/19 4:47				.016	mg/L		-0.03	0.03			
WG486958PBS	PBS	12/04/19 5:11				1.4	mg/Kg		-3	3			
WG486958LCSS	LCSS	12/04/19 5:14	PCN59282	90.6		86.3	mg/Kg		75.1	106			
WG486958LCSSD	LCSSD	12/04/19 5:18	PCN59282	90.6		84.7	mg/Kg		75.1	106	2	20	
L55822-21MS	MS	12/04/19 5:25	II191106-4	50	27	67.5	mg/Kg	81	75	125			
L55822-21MSD	MSD	12/04/19 5:29	II191106-4	50	27	70	mg/Kg	86	75	125	4	20	

Copper, total (3050)

M6010D ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec%	Lower	Upper	RPD	Limit	Qual
WG487195													
WG487195ICV	ICV	12/04/19 2:01	II191122-1	2		1.991	mg/L	100	90	110			
WG487195ICB	ICB	12/04/19 2:04				U	mg/L		-0.03	0.03			
WG486956PBS	PBS	12/04/19 2:28				U	mg/Kg		-3	3			
WG486956LCSS	LCSS	12/04/19 2:31	PCN59282	280		276.1	mg/Kg		233	326			
WG486956LCSSD	LCSSD	12/04/19 2:35	PCN59282	280		275.9	mg/Kg		233	326	0	20	
L55822-01MS	MS	12/04/19 2:42	II191106-4	50.05	58	105.9	mg/Kg	96	75	125			
L55822-01MSD	MSD	12/04/19 2:46	II191106-4	49.5495	58	106.1	mg/Kg	97	75	125	0	20	

WG487254

WG487254ICV	ICV	12/04/19 4:43	II191122-1	2		1.977	mg/L	99	90	110			
WG487254ICB	ICB	12/04/19 4:47				U	mg/L		-0.03	0.03			
WG486958PBS	PBS	12/04/19 5:11				U	mg/Kg		-3	3			
WG486958LCSS	LCSS	12/04/19 5:14	PCN59282	280		258.5	mg/Kg		233	326			
WG486958LCSSD	LCSSD	12/04/19 5:18	PCN59282	280		256.7	mg/Kg		233	326	1	20	
L55822-21MS	MS	12/04/19 5:25	II191106-4	50.05	52	95.4	mg/Kg	87	75	125			
L55822-21MSD	MSD	12/04/19 5:29	II191106-4	50.05	52	99	mg/Kg	94	75	125	4	20	

WG487348

WG487348ICV	ICV	12/04/19 22:07	II191122-1	2		1.952	mg/L	98	90	110			
WG487348ICB	ICB	12/04/19 22:10				U	mg/L		-0.03	0.03			
WG486958PBS	PBS	12/04/19 22:33				U	mg/Kg		-3	3			
WG486958LCSS	LCSS	12/04/19 22:37	PCN59282	280		269.6	mg/Kg		233	326			
WG486958LCSSD	LCSSD	12/04/19 22:41	PCN59282	280		262.6	mg/Kg		233	326	3	20	
L55822-21MS	MS	12/04/19 22:48	II2XSOIL	50	55	101.1	mg/Kg	92	75	125			
L55822-21MSD	MSD	12/04/19 22:52	II2XSOIL	50	55	104.8	mg/Kg	100	75	125	4	20	

Rise Grass Valley Inc.

ACZ Project ID: **L55822**

NOTE: If the Rec% column is null, the high/low limits are in the same units as the result. If the Rec% column is not null, then the high/low limits are in % Rec.

Iron, total (3050)

M6010D ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec%	Lower	Upper	RPD	Limit	Qual
WG487195													
WG487195ICV	ICV	12/04/19 2:01	II191122-1	2		1.936	mg/L	97	90	110			
WG487195ICB	ICB	12/04/19 2:04				U	mg/L		-0.09	0.09			
WG486956PBS	PBS	12/04/19 2:28				U	mg/Kg		-9	9			
WG486956LCSS	LCSS	12/04/19 2:31	PCN59282	14000		13130	mg/Kg		8380	19600			
WG486956LCSSD	LCSSD	12/04/19 2:35	PCN59282	14000		12960	mg/Kg		8380	19600	1	20	
L55822-01MS	MS	12/04/19 2:42	II191106-4	100.18	40200	42330	mg/Kg	2126	75	125			M3
L55822-01MSD	MSD	12/04/19 2:46	II191106-4	99.1782	40200	44193.6	mg/Kg	4027	75	125	4	20	M3
WG487254													
WG487254ICV	ICV	12/04/19 4:43	II191122-1	2		1.972	mg/L	99	90	110			
WG487254ICB	ICB	12/04/19 4:47				U	mg/L		-0.09	0.09			
WG486958PBS	PBS	12/04/19 5:11				U	mg/Kg		-9	9			
WG486958LCSS	LCSS	12/04/19 5:14	PCN59282	14000		13020	mg/Kg		8380	19600			
WG486958LCSSD	LCSSD	12/04/19 5:18	PCN59282	14000		12910	mg/Kg		8380	19600	1	20	
L55822-21MS	MS	12/04/19 5:25	II191106-4	100.18	35500	36210	mg/Kg	709	75	125			M3
L55822-21MSD	MSD	12/04/19 5:29	II191106-4	100.18	35500	36770	mg/Kg	1268	75	125	2	20	M3
WG487348													
WG487348ICV	ICV	12/04/19 22:07	II191122-1	2		2.044	mg/L	102	90	110			
WG487348ICB	ICB	12/04/19 22:10				U	mg/L		-0.09	0.09			
WG486958PBS	PBS	12/04/19 22:33				U	mg/Kg		-9	9			
WG486958LCSS	LCSS	12/04/19 22:37	PCN59282	14000		14150	mg/Kg		8380	19600			
WG486958LCSSD	LCSSD	12/04/19 22:41	PCN59282	14000		13760	mg/Kg		8380	19600	3	20	
L55822-21MS	MS	12/04/19 22:48	II2XSOIL	100.14	39800	40580	mg/Kg	779	75	125			M3
L55822-21MSD	MSD	12/04/19 22:52	II2XSOIL	100.14	39800	41260	mg/Kg	1458	75	125	2	20	M3
WG487350													
WG487350ICV	ICV	12/04/19 23:52	II191122-1	2		1.882	mg/L	94	90	110			
WG487350ICB	ICB	12/04/19 23:56				U	mg/L		-0.09	0.09			
WG486956PBS	PBS	12/05/19 0:19				3.7	mg/Kg		-9	9			
WG486956LCSS	LCSS	12/05/19 0:23	PCN59282	14000		12600	mg/Kg		8380	19600			
WG486956LCSSD	LCSSD	12/05/19 0:26	PCN59282	14000		12850	mg/Kg		8380	19600	2	20	
L55822-01MS	MS	12/05/19 0:33	II2XSOIL	100.14	45400	46960	mg/Kg	1558	75	125			M3
L55822-01MSD	MSD	12/05/19 0:37	II2XSOIL	99.1386	45400	45005.4	mg/Kg	-398	75	125	4	20	M3

Rise Grass Valley Inc.

ACZ Project ID: **L55822**

NOTE: If the Rec% column is null, the high/low limits are in the same units as the result. If the Rec% column is not null, then the high/low limits are in % Rec.

Lead, total (3050)

M6020B ICP-MS

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec%	Lower	Upper	RPD	Limit	Qual
WG487337													
WG487337ICV	ICV	12/04/19 13:33	MS191014-8	.05		.05102	mg/L	102	90	110			
WG487337ICB	ICB	12/04/19 13:35				U	mg/L		-0.0003	0.0003			
WG486958PBS	PBS	12/04/19 13:44				U	mg/Kg		-0.15	0.15			
WG486958LCSS	LCSS	12/04/19 13:46	PCN59282	225		242.29	mg/Kg		184	266			
WG486958LCSSD	LCSSD	12/04/19 13:47	PCN59282	225		236.5	mg/Kg		184	266	2	20	
L55822-22MS	MS	12/04/19 14:17	MS191112-2	25.025	.29	24.786	mg/Kg	98	75	125			
L55822-22MSD	MSD	12/04/19 14:22	MS191112-2	25.025	.29	24.658	mg/Kg	97	75	125	1	20	
WG487344													
WG487344ICV	ICV	12/04/19 14:12	MS191014-8	.05		.05077	mg/L	102	90	110			
WG487344ICB	ICB	12/04/19 14:13				U	mg/L		-0.0003	0.0003			
WG486956PBS	PBS	12/04/19 14:24				U	mg/Kg		-0.15	0.15			
WG486956LCSS	LCSS	12/04/19 14:26	PCN59282	225		221.75	mg/Kg		184	266			
WG486956LCSSD	LCSSD	12/04/19 14:28	PCN59282	225		226.73	mg/Kg		184	266	2	20	
L55822-02MS	MS	12/04/19 14:33	MS191112-2	24.77475	.74	22.17	mg/Kg	86	75	125			
L55822-02MSD	MSD	12/04/19 14:35	MS191112-2	24.77475	.74	22.553	mg/Kg	88	75	125	2	20	
WG487630													
WG487630ICV	ICV	12/06/19 17:35	MS191014-8	.05		.05137	mg/L	103	90	110			
WG487630ICB	ICB	12/06/19 17:36				U	mg/L		-0.0003	0.0003			
WG486956PBS	PBS	12/06/19 17:47				U	mg/Kg		-0.15	0.15			
WG486956LCSS	LCSS	12/06/19 17:49	PCN59282	225		236.44	mg/Kg		184	266			
WG486956LCSSD	LCSSD	12/06/19 17:51	PCN59282	225		236.74	mg/Kg		184	266	0	20	
L55822-02MS	MS	12/06/19 17:56	MS191112-2	24.77475	.8	23.233	mg/Kg	91	75	125			
L55822-02MSD	MSD	12/06/19 17:58	MS191112-2	24.77475	.8	22.613	mg/Kg	88	75	125	3	20	

Manganese, total (3050)

M6010D ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec%	Lower	Upper	RPD	Limit	Qual
WG487195													
WG487195ICV	ICV	12/04/19 2:01	II191122-1	2		1.959	mg/L	98	90	110			
WG487195ICB	ICB	12/04/19 2:04				U	mg/L		-0.03	0.03			
WG486956PBS	PBS	12/04/19 2:28				U	mg/Kg		-3	3			
WG486956LCSS	LCSS	12/04/19 2:31	PCN59282	332		351.5	mg/Kg		272	392			
WG486956LCSSD	LCSSD	12/04/19 2:35	PCN59282	332		316.8	mg/Kg		272	392	10	20	
L55822-01MS	MS	12/04/19 2:42	II191106-4	50.15	611	674	mg/Kg	126	75	125			M3
L55822-01MSD	MSD	12/04/19 2:46	II191106-4	49.6485	611	672.4	mg/Kg	124	75	125	0	20	
WG487254													
WG487254ICV	ICV	12/04/19 4:43	II191122-1	2		1.974	mg/L	99	90	110			
WG487254ICB	ICB	12/04/19 4:47				U	mg/L		-0.03	0.03			
WG486958PBS	PBS	12/04/19 5:11				U	mg/Kg		-3	3			
WG486958LCSS	LCSS	12/04/19 5:14	PCN59282	332		315.7	mg/Kg		272	392			
WG486958LCSSD	LCSSD	12/04/19 5:18	PCN59282	332		313.8	mg/Kg		272	392	1	20	
L55822-21MS	MS	12/04/19 5:25	II191106-4	50.15	628	690.2	mg/Kg	124	75	125			
L55822-21MSD	MSD	12/04/19 5:29	II191106-4	50.15	628	702.4	mg/Kg	148	75	125	2	20	M3

Rise Grass Valley Inc.

ACZ Project ID: **L55822**

NOTE: If the Rec% column is null, the high/low limits are in the same units as the result. If the Rec% column is not null, then the high/low limits are in % Rec.

Molybdenum, total (3050)

M6010D ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec%	Lower	Upper	RPD	Limit	Qual
WG487195													
WG487195ICV	ICV	12/04/19 2:01	II191122-1	2		1.981	mg/L	99	90	110			
WG487195ICB	ICB	12/04/19 2:04				U	mg/L		-0.06	0.06			
WG486956PBS	PBS	12/04/19 2:28				U	mg/Kg		-6	6			
WG486956LCSS	LCSS	12/04/19 2:31	PCN59282	158		163.8	mg/Kg		127	190			
WG486956LCSSD	LCSSD	12/04/19 2:35	PCN59282	158		163.3	mg/Kg		127	190	0	20	
L55822-01MS	MS	12/04/19 2:42	II191106-4	49.75	U	43.6	mg/Kg	88	75	125			
L55822-01MSD	MSD	12/04/19 2:46	II191106-4	49.2525	U	43.6	mg/Kg	89	75	125	0	20	
WG487254													
WG487254ICV	ICV	12/04/19 4:43	II191122-1	2		1.987	mg/L	99	90	110			
WG487254ICB	ICB	12/04/19 4:47				U	mg/L		-0.06	0.06			
WG486958PBS	PBS	12/04/19 5:11				U	mg/Kg		-6	6			
WG486958LCSS	LCSS	12/04/19 5:14	PCN59282	158		155.9	mg/Kg		127	190			
WG486958LCSSD	LCSSD	12/04/19 5:18	PCN59282	158		152.5	mg/Kg		127	190	2	20	
L55822-21MS	MS	12/04/19 5:25	II191106-4	49.75	U	42.8	mg/Kg	86	75	125			
L55822-21MSD	MSD	12/04/19 5:29	II191106-4	49.75	U	43.3	mg/Kg	87	75	125	1	20	

Rise Grass Valley Inc.

ACZ Project ID: **L55822**

NOTE: If the Rec% column is null, the high/low limits are in the same units as the result. If the Rec% column is not null, then the high/low limits are in % Rec.

Nickel, total (3050)

M6010D ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec%	Lower	Upper	RPD	Limit	Qual
WG487195													
WG487195ICV	ICV	12/04/19 2:01	II191122-1	2		1.996	mg/L	100	90	110			
WG487195ICB	ICB	12/04/19 2:04				.0097	mg/L		-0.024	0.024			
WG486956PBS	PBS	12/04/19 2:28				1.08	mg/Kg		-2.4	2.4			
WG486956LCSS	LCSS	12/04/19 2:31	PCN59282	114		116.5	mg/Kg		93.9	134			
WG486956LCSSD	LCSSD	12/04/19 2:35	PCN59282	114		115.8	mg/Kg		93.9	134	1	20	
L55822-01MS	MS	12/04/19 2:42	II191106-4	50.1	43.6	87.21	mg/Kg	87	75	125			
L55822-01MSD	MSD	12/04/19 2:46	II191106-4	49.599	43.6	88.05	mg/Kg	90	75	125	1	20	
WG487254													
WG487254ICV	ICV	12/04/19 4:43	II191122-1	2		2.003	mg/L	100	90	110			
WG487254ICB	ICB	12/04/19 4:47				U	mg/L		-0.024	0.024			
WG486958PBS	PBS	12/04/19 5:11				U	mg/Kg		-2.4	2.4			
WG486958LCSS	LCSS	12/04/19 5:14	PCN59282	114		111.4	mg/Kg		93.9	134			
WG486958LCSSD	LCSSD	12/04/19 5:18	PCN59282	114		108.3	mg/Kg		93.9	134	3	20	
L55822-21MS	MS	12/04/19 5:25	II191106-4	50.1	51	94.29	mg/Kg	86	75	125			
L55822-21MSD	MSD	12/04/19 5:29	II191106-4	50.1	51	95.47	mg/Kg	89	75	125	1	20	
WG487348													
WG487348ICV	ICV	12/04/19 22:07	II191122-1	2		1.986	mg/L	99	90	110			
WG487348ICB	ICB	12/04/19 22:10				U	mg/L		-0.024	0.024			
WG486958PBS	PBS	12/04/19 22:33				U	mg/Kg		-2.4	2.4			
WG486958LCSS	LCSS	12/04/19 22:37	PCN59282	114		115.8	mg/Kg		93.9	134			
WG486958LCSSD	LCSSD	12/04/19 22:41	PCN59282	114		111.8	mg/Kg		93.9	134	4	20	
L55822-21MS	MS	12/04/19 22:48	II2XSOIL	50	58	105.6	mg/Kg	95	75	125			
L55822-21MSD	MSD	12/04/19 22:52	II2XSOIL	50	58	107.5	mg/Kg	99	75	125	2	20	
WG487350													
WG487350ICV	ICV	12/04/19 23:52	II191122-1	2		1.988	mg/L	99	90	110			
WG487350ICB	ICB	12/04/19 23:56				U	mg/L		-0.024	0.024			
WG486956PBS	PBS	12/05/19 0:19				U	mg/Kg		-2.4	2.4			
WG486956LCSS	LCSS	12/05/19 0:23	PCN59282	114		116.4	mg/Kg		93.9	134			
WG486956LCSSD	LCSSD	12/05/19 0:26	PCN59282	114		116.5	mg/Kg		93.9	134	0	20	
L55822-01MS	MS	12/05/19 0:33	II2XSOIL	50	48	99.5	mg/Kg	103	75	125			
L55822-01MSD	MSD	12/05/19 0:37	II2XSOIL	49.5	48	95.5	mg/Kg	96	75	125	4	20	

Rise Grass Valley Inc.

ACZ Project ID: **L55822**

NOTE: If the Rec% column is null, the high/low limits are in the same units as the result. If the Rec% column is not null, then the high/low limits are in % Rec.

Selenium, total (3050)

M6020B ICP-MS

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec%	Lower	Upper	RPD	Limit	Qual
WG487337													
WG487337ICV	ICV	12/04/19 13:33	MS191014-8	.05		.04942	mg/L	99	90	110			
WG487337ICB	ICB	12/04/19 13:35				U	mg/L		-0.0003	0.0003			
WG486958PBS	PBS	12/04/19 13:44				.053	mg/Kg		-0.15	0.15			
WG486958LCSS	LCSS	12/04/19 13:46	PCN59282	195		210.19	mg/Kg		154	237			
WG486958LCSSD	LCSSD	12/04/19 13:47	PCN59282	195		200.58	mg/Kg		154	237	5	20	
L55822-22MS	MS	12/04/19 14:17	MS191112-2	12.5125	.18	12.345	mg/Kg	97	75	125			
L55822-22MSD	MSD	12/04/19 14:22	MS191112-2	12.5125	.18	12.476	mg/Kg	98	75	125	1	20	
WG487344													
WG487344ICV	ICV	12/04/19 14:12	MS191014-8	.05		.04813	mg/L	96	90	110			
WG487344ICB	ICB	12/04/19 14:13				U	mg/L		-0.0003	0.0003			
WG486956PBS	PBS	12/04/19 14:24				U	mg/Kg		-0.15	0.15			
WG486956LCSS	LCSS	12/04/19 14:26	PCN59282	195		187.23	mg/Kg		154	237			
WG486956LCSSD	LCSSD	12/04/19 14:28	PCN59282	195		196.11	mg/Kg		154	237	5	20	
L55822-02MS	MS	12/04/19 14:33	MS191112-2	12.387375	.11	9.661	mg/Kg	77	75	125			
L55822-02MSD	MSD	12/04/19 14:35	MS191112-2	12.387375	.11	9.658	mg/Kg	77	75	125	0	20	
WG487630													
WG487630ICV	ICV	12/06/19 17:35	MS191014-8	.05		.05225	mg/L	105	90	110			
WG487630ICB	ICB	12/06/19 17:36				U	mg/L		-0.0003	0.0003			
WG486956PBS	PBS	12/06/19 17:47				U	mg/Kg		-0.15	0.15			
WG486956LCSS	LCSS	12/06/19 17:49	PCN59282	195		207.04	mg/Kg		154	237			
WG486956LCSSD	LCSSD	12/06/19 17:51	PCN59282	195		209.68	mg/Kg		154	237	1	20	
L55822-02MS	MS	12/06/19 17:56	MS191112-2	12.387375	.1	10.265	mg/Kg	82	75	125			
L55822-02MSD	MSD	12/06/19 17:58	MS191112-2	12.387375	.1	9.973	mg/Kg	80	75	125	3	20	

Silver, total (3050)

M6020B ICP-MS

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec%	Lower	Upper	RPD	Limit	Qual
WG487337													
WG487337ICV	ICV	12/04/19 13:33	MS191014-8	.02004		.02011	mg/L	100	90	110			
WG487337ICB	ICB	12/04/19 13:35				U	mg/L		-0.0003	0.0003			
WG486958PBS	PBS	12/04/19 13:44				U	mg/Kg		-0.15	0.15			
WG486958LCSS	LCSS	12/04/19 13:46	PCN59282	61.8		65.02	mg/Kg		49.2	74.4			
WG486958LCSSD	LCSSD	12/04/19 13:47	PCN59282	61.8		62.73	mg/Kg		49.2	74.4	4	20	
L55822-22MS	MS	12/04/19 14:17	MS191112-2	5.01	U	4.472	mg/Kg	89	75	125			
L55822-22MSD	MSD	12/04/19 14:22	MS191112-2	5.01	U	4.416	mg/Kg	88	75	125	1	20	
WG487810													
WG487810ICV	ICV	12/10/19 14:40	MS191014-8	.02004		.02146	mg/L	107	90	110			
WG487810ICB	ICB	12/10/19 14:42				U	mg/L		-0.0003	0.0003			
WG486956PBS	PBS	12/10/19 14:59				U	mg/Kg		-0.15	0.15			
WG486956LCSS	LCSS	12/10/19 15:01	PCN59282	61.8		63.93	mg/Kg		49.2	74.4			
WG486956LCSSD	LCSSD	12/10/19 15:03	PCN59282	61.8		61.24	mg/Kg		49.2	74.4	4	20	
L55822-02MS	MS	12/10/19 15:08	MS191112-2	4.9599	.1	4.143	mg/Kg	82	75	125			
L55822-02MSD	MSD	12/10/19 15:10	MS191112-2	4.9599	.1	4.246	mg/Kg	84	75	125	2	20	

Rise Grass Valley Inc.

ACZ Project ID: **L55822**

NOTE: If the Rec% column is null, the high/low limits are in the same units as the result. If the Rec% column is not null, then the high/low limits are in % Rec.

Solids, Percent

D2216-80

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec%	Lower	Upper	RPD	Limit	Qual
WG486512													
L55822-01DUP	DUP	11/19/19 18:05			99.8	99.84	%				0	20	
WG486512PBS	PBS	11/20/19 16:00				U	%		-0.1	0.1			
WG486513													
L55822-21DUP	DUP	11/19/19 19:54			99.9	99.92	%				0	20	
WG486513PBS	PBS	11/20/19 16:14				U	%		-0.1	0.1			

Thallium, total (3050)

M6020B ICP-MS

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec%	Lower	Upper	RPD	Limit	Qual
WG487337													
WG487337ICV	ICV	12/04/19 13:33	MS191014-8	.05		.05153	mg/L	103	90	110			
WG487337ICB	ICB	12/04/19 13:35				U	mg/L		-0.0003	0.0003			
WG486958PBS	PBS	12/04/19 13:44				U	mg/Kg		-0.15	0.15			
WG486958LCSS	LCSS	12/04/19 13:46	PCN59282	135		147.23	mg/Kg			109	161		
WG486958LCSSD	LCSSD	12/04/19 13:47	PCN59282	135		146.45	mg/Kg			109	161	1	20
L55822-22MS	MS	12/04/19 14:17	MS191112-2	25.05	U	24.466	mg/Kg	98	75	125			
L55822-22MSD	MSD	12/04/19 14:22	MS191112-2	25.05	U	24.369	mg/Kg	97	75	125	0	20	
WG487344													
WG487344ICV	ICV	12/04/19 14:12	MS191014-8	.05		.04927	mg/L	99	90	110			
WG487344ICB	ICB	12/04/19 14:13				U	mg/L		-0.0003	0.0003			
WG486956PBS	PBS	12/04/19 14:24				U	mg/Kg		-0.15	0.15			
WG486956LCSS	LCSS	12/04/19 14:26	PCN59282	135		136.64	mg/Kg			109	161		
WG486956LCSSD	LCSSD	12/04/19 14:28	PCN59282	135		138.51	mg/Kg			109	161	1	20
L55822-02MS	MS	12/04/19 14:33	MS191112-2	24.7995	U	19.005	mg/Kg	77	75	125			
L55822-02MSD	MSD	12/04/19 14:35	MS191112-2	24.7995	U	19.262	mg/Kg	78	75	125	1	20	
WG487630													
WG487630ICV	ICV	12/06/19 17:35	MS191014-8	.05		.05224	mg/L	104	90	110			
WG487630ICB	ICB	12/06/19 17:36				U	mg/L		-0.0003	0.0003			
WG486956PBS	PBS	12/06/19 17:47				U	mg/Kg		-0.15	0.15			
WG486956LCSS	LCSS	12/06/19 17:49	PCN59282	135		140.84	mg/Kg			109	161		
WG486956LCSSD	LCSSD	12/06/19 17:51	PCN59282	135		136.5	mg/Kg			109	161	3	20
L55822-02MS	MS	12/06/19 17:56	MS191112-2	24.7995	U	22.999	mg/Kg	93	75	125			
L55822-02MSD	MSD	12/06/19 17:58	MS191112-2	24.7995	U	22.334	mg/Kg	90	75	125	3	20	

Rise Grass Valley Inc.

ACZ Project ID: **L55822**

NOTE: If the Rec% column is null, the high/low limits are in the same units as the result. If the Rec% column is not null, then the high/low limits are in % Rec.

Vanadium, total (3050)

M6010D ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec%	Lower	Upper	RPD	Limit	Qual
WG487195													
WG487195ICV	ICV	12/04/19 2:01	II191122-1	2		2.046	mg/L	102	90	110			
WG487195ICB	ICB	12/04/19 2:04				U	mg/L		-0.015	0.015			
WG486956PBS	PBS	12/04/19 2:28				U	mg/Kg		-1.5	1.5			
WG486956LCSS	LCSS	12/04/19 2:31	PCN59282	86.4		92.65	mg/Kg		67.4	105			
WG486956LCSSD	LCSSD	12/04/19 2:35	PCN59282	86.4		91.1	mg/Kg		67.4	105	2	20	
L55822-01MS	MS	12/04/19 2:42	II191106-4	49.95	149	208.9	mg/Kg	120	75	125			
L55822-01MSD	MSD	12/04/19 2:46	II191106-4	49.4505	149	211.56	mg/Kg	127	75	125	1	20	M3
WG487348													
WG487348ICV	ICV	12/04/19 22:07	II191122-1	2		2.043	mg/L	102	90	110			
WG487348ICB	ICB	12/04/19 22:10				U	mg/L		-0.015	0.015			
WG486958PBS	PBS	12/04/19 22:33				U	mg/Kg		-1.5	1.5			
WG486958LCSS	LCSS	12/04/19 22:37	PCN59282	86.4		93.33	mg/Kg		67.4	105			
WG486958LCSSD	LCSSD	12/04/19 22:41	PCN59282	86.4		89.72	mg/Kg		67.4	105	4	20	
L55822-21MS	MS	12/04/19 22:48	II2XSOIL	50	125	192.9	mg/Kg	136	75	125			M1
L55822-21MSD	MSD	12/04/19 22:52	II2XSOIL	50	125	193.4	mg/Kg	137	75	125	0	20	M1
WG487350													
WG487350ICV	ICV	12/04/19 23:52	II191122-1	2		1.965	mg/L	98	90	110			
WG487350ICB	ICB	12/04/19 23:56				.0051	mg/L		-0.015	0.015			
WG486956PBS	PBS	12/05/19 0:19				U	mg/Kg		-1.5	1.5			
WG486956LCSS	LCSS	12/05/19 0:23	PCN59282	86.4		90.32	mg/Kg		67.4	105			
WG486956LCSSD	LCSSD	12/05/19 0:26	PCN59282	86.4		90.19	mg/Kg		67.4	105	0	20	
L55822-01MS	MS	12/05/19 0:33	II2XSOIL	50	162	227.4	mg/Kg	131	75	125			M3
L55822-01MSD	MSD	12/05/19 0:37	II2XSOIL	49.5	162	221.6	mg/Kg	120	75	125	3	20	
WG487445													
WG487445ICV	ICV	12/05/19 11:06	II191122-1	2		2.031	mg/L	102	90	110			
WG487445ICB	ICB	12/05/19 11:09				U	mg/L		-0.015	0.015			
WG486958PBS	PBS	12/05/19 11:32				U	mg/Kg		-1.5	1.5			
WG486958LCSS	LCSS	12/05/19 11:36	PCN59282	86.4		89.81	mg/Kg		67.4	105			
WG486958LCSSD	LCSSD	12/05/19 11:40	PCN59282	86.4		87.14	mg/Kg		67.4	105	3	20	
L55822-21MS	MS	12/05/19 11:47	II2XSOIL	50	132	200.4	mg/Kg	137	75	125			M1
L55822-21MSD	MSD	12/05/19 11:50	II2XSOIL	50	132	197.5	mg/Kg	131	75	125	1	20	M1
WG487446													
WG487446ICV	ICV	12/05/19 12:25	II191122-1	2		2.043	mg/L	102	90	110			
WG487446ICB	ICB	12/05/19 12:28				U	mg/L		-0.015	0.015			
WG486956PBS	PBS	12/05/19 12:51				U	mg/Kg		-1.5	1.5			
WG486956LCSS	LCSS	12/05/19 12:55	PCN59282	86.4		90.85	mg/Kg		67.4	105			
WG486956LCSSD	LCSSD	12/05/19 12:59	PCN59282	86.4		89.29	mg/Kg		67.4	105	2	20	
L55822-01MS	MS	12/05/19 13:06	II2XSOIL	50	202	331.2	mg/Kg	258	75	125			M3
L55822-01MSD	MSD	12/05/19 13:10	II2XSOIL	49.5	202	307.3	mg/Kg	213	75	125	7	20	M3

Rise Grass Valley Inc.ACZ Project ID: **L55822**

NOTE: If the Rec% column is null, the high/low limits are in the same units as the result. If the Rec% column is not null, then the high/low limits are in % Rec.

Zinc, total (3050)

M6010D ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec%	Lower	Upper	RPD	Limit	Qual
WG487195													
WG487195ICV	ICV	12/04/19 2:01	II191122-1	2		1.91	mg/L	96	90	110			
WG487195ICB	ICB	12/04/19 2:04				U	mg/L		-0.03	0.03			
WG486956PBS	PBS	12/04/19 2:28				U	mg/Kg		-3	3			
WG486956LCSS	LCSS	12/04/19 2:31	PCN59282	122		122.1	mg/Kg		98.6	145			
WG486956LCSSD	LCSSD	12/04/19 2:35	PCN59282	122		118.1	mg/Kg		98.6	145	3	20	
L55822-01MS	MS	12/04/19 2:42	II191106-4	50.075	60	104.4	mg/Kg	89	75	125			
L55822-01MSD	MSD	12/04/19 2:46	II191106-4	49.57425	60	110	mg/Kg	101	75	125	5	20	
WG487348													
WG487348ICV	ICV	12/04/19 22:07	II191122-1	2		2.03	mg/L	102	90	110			
WG487348ICB	ICB	12/04/19 22:10				U	mg/L		-0.03	0.03			
WG486958PBS	PBS	12/04/19 22:33				U	mg/Kg		-3	3			
WG486958LCSS	LCSS	12/04/19 22:37	PCN59282	122		123.8	mg/Kg		98.6	145			
WG486958LCSSD	LCSSD	12/04/19 22:41	PCN59282	122		121.3	mg/Kg		98.6	145	2	20	
L55822-21MS	MS	12/04/19 22:48	II2XSOIL	50.05	38	89.2	mg/Kg	102	75	125			
L55822-21MSD	MSD	12/04/19 22:52	II2XSOIL	50.05	38	90.4	mg/Kg	105	75	125	1	20	

Rise Grass Valley Inc.

ACZ Project ID: **L55822**

ACZ ID	WORKNUM	PARAMETER	METHOD	QUAL	DESCRIPTION
L55822-01	WG487350	Aluminum, total (3050)	M6010D ICP	H3	Sample was received and analyzed past holding time.
			M6010D ICP	M3	The spike recovery value is unusable since the analyte concentration in the sample is disproportionate to the spike level. The recovery of the associated control sample (LCS or LFB) was acceptable.
	WG487344	Antimony, total (3050)	M6020B ICP-MS	H3	Sample was received and analyzed past holding time.
			M6020B ICP-MS	M2	Matrix spike recovery was low, the recovery of the associated control sample (LCS or LFB) was acceptable.
		Arsenic, total (3050)	M6020B ICP-MS	H3	Sample was received and analyzed past holding time.
	WG487195	Barium, total (3050)	M6010D ICP	H3	Sample was received and analyzed past holding time.
			M6010D ICP	ZG	The ICP or ICP-MS Serial Dilution was not used for data validation because the sample concentration was less than 50 times the MDL.
	WG487344	Beryllium, total (3050)	M6020B ICP-MS	H3	Sample was received and analyzed past holding time.
	WG487195	Boron, total (3050)	M6010D ICP	H3	Sample was received and analyzed past holding time.
	WG487344	Cadmium, total (3050)	M6020B ICP-MS	H3	Sample was received and analyzed past holding time.
	WG487195	Chromium, total (3050)	M6010D ICP	H3	Sample was received and analyzed past holding time.
			M6010D ICP	ZH	Serial Dilution exceeded the acceptance criteria. Matrix interference [physical or chemical] is suspected.
		Cobalt, total (3050)	M6010D ICP	H3	Sample was received and analyzed past holding time.
			M6010D ICP	ZG	The ICP or ICP-MS Serial Dilution was not used for data validation because the sample concentration was less than 50 times the MDL.
		Copper, total (3050)	M6010D ICP	H3	Sample was received and analyzed past holding time.
		Iron, total (3050)	M6010D ICP	H3	Sample was received and analyzed past holding time.
			M6010D ICP	M3	The spike recovery value is unusable since the analyte concentration in the sample is disproportionate to the spike level. The recovery of the associated control sample (LCS or LFB) was acceptable.
			M6010D ICP	ZH	Serial Dilution exceeded the acceptance criteria. Matrix interference [physical or chemical] is suspected.
	WG487344	Lead, total (3050)	M6020B ICP-MS	H3	Sample was received and analyzed past holding time.
	WG487195	Manganese, total (3050)	M6010D ICP	H3	Sample was received and analyzed past holding time.
			M6010D ICP	M3	The spike recovery value is unusable since the analyte concentration in the sample is disproportionate to the spike level. The recovery of the associated control sample (LCS or LFB) was acceptable.
			M6010D ICP	ZH	Serial Dilution exceeded the acceptance criteria. Matrix interference [physical or chemical] is suspected.
		Molybdenum, total (3050)	M6010D ICP	H3	Sample was received and analyzed past holding time.
		Nickel, total (3050)	M6010D ICP	H3	Sample was received and analyzed past holding time.
			M6010D ICP	ZH	Serial Dilution exceeded the acceptance criteria. Matrix interference [physical or chemical] is suspected.
	WG487344	Selenium, total (3050)	M6020B ICP-MS	H3	Sample was received and analyzed past holding time.
	WG487810	Silver, total (3050)	M6020B ICP-MS	H3	Sample was received and analyzed past holding time.
	WG486512	Solids, Percent	D2216-80	H3	Sample was received and analyzed past holding time.
	WG487344	Thallium, total (3050)	M6020B ICP-MS	H3	Sample was received and analyzed past holding time.
	WG487350	Vanadium, total (3050)	M6010D ICP	H3	Sample was received and analyzed past holding time.
			M6010D ICP	M3	The spike recovery value is unusable since the analyte concentration in the sample is disproportionate to the spike level. The recovery of the associated control sample (LCS or LFB) was acceptable.
	WG487195	Zinc, total (3050)	M6010D ICP	H3	Sample was received and analyzed past holding time.
			M6010D ICP	ZH	Serial Dilution exceeded the acceptance criteria. Matrix interference [physical or chemical] is suspected.

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ACZ ID	WORKNUM	PARAMETER	METHOD	QUAL	DESCRIPTION
L55822-02	WG487195	Aluminum, total (3050)	M6010D ICP	H3	Sample was received and analyzed past holding time.
			M6010D ICP	M3	The spike recovery value is unusable since the analyte concentration in the sample is disproportionate to the spike level. The recovery of the associated control sample (LCS or LFB) was acceptable.
	WG487344	Antimony, total (3050)	M6020B ICP-MS	H3	Sample was received and analyzed past holding time.
			M6020B ICP-MS	M2	Matrix spike recovery was low, the recovery of the associated control sample (LCS or LFB) was acceptable.
		Arsenic, total (3050)	M6020B ICP-MS	H3	Sample was received and analyzed past holding time.
	WG487195	Barium, total (3050)	M6010D ICP	H3	Sample was received and analyzed past holding time.
			M6010D ICP	ZG	The ICP or ICP-MS Serial Dilution was not used for data validation because the sample concentration was less than 50 times the MDL.
	WG487344	Beryllium, total (3050)	M6020B ICP-MS	H3	Sample was received and analyzed past holding time.
	WG487195	Boron, total (3050)	M6010D ICP	H3	Sample was received and analyzed past holding time.
	WG487344	Cadmium, total (3050)	M6020B ICP-MS	H3	Sample was received and analyzed past holding time.
	WG487195	Chromium, total (3050)	M6010D ICP	H3	Sample was received and analyzed past holding time.
			M6010D ICP	ZH	Serial Dilution exceeded the acceptance criteria. Matrix interference [physical or chemical] is suspected.
		Cobalt, total (3050)	M6010D ICP	H3	Sample was received and analyzed past holding time.
			M6010D ICP	ZG	The ICP or ICP-MS Serial Dilution was not used for data validation because the sample concentration was less than 50 times the MDL.
		Copper, total (3050)	M6010D ICP	H3	Sample was received and analyzed past holding time.
	WG487350	Iron, total (3050)	M6010D ICP	H3	Sample was received and analyzed past holding time.
			M6010D ICP	M3	The spike recovery value is unusable since the analyte concentration in the sample is disproportionate to the spike level. The recovery of the associated control sample (LCS or LFB) was acceptable.
	WG487344	Lead, total (3050)	M6020B ICP-MS	H3	Sample was received and analyzed past holding time.
	WG487195	Manganese, total (3050)	M6010D ICP	H3	Sample was received and analyzed past holding time.
			M6010D ICP	M3	The spike recovery value is unusable since the analyte concentration in the sample is disproportionate to the spike level. The recovery of the associated control sample (LCS or LFB) was acceptable.
			M6010D ICP	ZH	Serial Dilution exceeded the acceptance criteria. Matrix interference [physical or chemical] is suspected.
		Molybdenum, total (3050)	M6010D ICP	H3	Sample was received and analyzed past holding time.
		Nickel, total (3050)	M6010D ICP	H3	Sample was received and analyzed past holding time.
			M6010D ICP	ZH	Serial Dilution exceeded the acceptance criteria. Matrix interference [physical or chemical] is suspected.
	WG487344	Selenium, total (3050)	M6020B ICP-MS	H3	Sample was received and analyzed past holding time.
	WG487810	Silver, total (3050)	M6020B ICP-MS	H3	Sample was received and analyzed past holding time.
	WG486512	Solids, Percent	D2216-80	H3	Sample was received and analyzed past holding time.
	WG487344	Thallium, total (3050)	M6020B ICP-MS	H3	Sample was received and analyzed past holding time.
	WG487350	Vanadium, total (3050)	M6010D ICP	H3	Sample was received and analyzed past holding time.
			M6010D ICP	M3	The spike recovery value is unusable since the analyte concentration in the sample is disproportionate to the spike level. The recovery of the associated control sample (LCS or LFB) was acceptable.
	WG487195	Zinc, total (3050)	M6010D ICP	H3	Sample was received and analyzed past holding time.
			M6010D ICP	ZH	Serial Dilution exceeded the acceptance criteria. Matrix interference [physical or chemical] is suspected.

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ACZ ID	WORKNUM	PARAMETER	METHOD	QUAL	DESCRIPTION
L55822-03	WG487350	Aluminum, total (3050)	M6010D ICP	H3	Sample was received and analyzed past holding time.
			M6010D ICP	M3	The spike recovery value is unusable since the analyte concentration in the sample is disproportionate to the spike level. The recovery of the associated control sample (LCS or LFB) was acceptable.
	WG487344	Antimony, total (3050)	M6020B ICP-MS	H3	Sample was received and analyzed past holding time.
			M6020B ICP-MS	M2	Matrix spike recovery was low, the recovery of the associated control sample (LCS or LFB) was acceptable.
		Arsenic, total (3050)	M6020B ICP-MS	H3	Sample was received and analyzed past holding time.
	WG487195	Barium, total (3050)	M6010D ICP	H3	Sample was received and analyzed past holding time.
			M6010D ICP	ZG	The ICP or ICP-MS Serial Dilution was not used for data validation because the sample concentration was less than 50 times the MDL.
	WG487344	Beryllium, total (3050)	M6020B ICP-MS	H3	Sample was received and analyzed past holding time.
	WG487195	Boron, total (3050)	M6010D ICP	H3	Sample was received and analyzed past holding time.
	WG487344	Cadmium, total (3050)	M6020B ICP-MS	H3	Sample was received and analyzed past holding time.
	WG487195	Chromium, total (3050)	M6010D ICP	H3	Sample was received and analyzed past holding time.
			M6010D ICP	ZH	Serial Dilution exceeded the acceptance criteria. Matrix interference [physical or chemical] is suspected.
		Cobalt, total (3050)	M6010D ICP	H3	Sample was received and analyzed past holding time.
			M6010D ICP	ZG	The ICP or ICP-MS Serial Dilution was not used for data validation because the sample concentration was less than 50 times the MDL.
		Copper, total (3050)	M6010D ICP	H3	Sample was received and analyzed past holding time.
	WG487350	Iron, total (3050)	M6010D ICP	H3	Sample was received and analyzed past holding time.
			M6010D ICP	M3	The spike recovery value is unusable since the analyte concentration in the sample is disproportionate to the spike level. The recovery of the associated control sample (LCS or LFB) was acceptable.
	WG487344	Lead, total (3050)	M6020B ICP-MS	H3	Sample was received and analyzed past holding time.
	WG487195	Manganese, total (3050)	M6010D ICP	H3	Sample was received and analyzed past holding time.
			M6010D ICP	M3	The spike recovery value is unusable since the analyte concentration in the sample is disproportionate to the spike level. The recovery of the associated control sample (LCS or LFB) was acceptable.
			M6010D ICP	ZH	Serial Dilution exceeded the acceptance criteria. Matrix interference [physical or chemical] is suspected.
		Molybdenum, total (3050)	M6010D ICP	H3	Sample was received and analyzed past holding time.
		Nickel, total (3050)	M6010D ICP	H3	Sample was received and analyzed past holding time.
			M6010D ICP	ZH	Serial Dilution exceeded the acceptance criteria. Matrix interference [physical or chemical] is suspected.
	WG487344	Selenium, total (3050)	M6020B ICP-MS	H3	Sample was received and analyzed past holding time.
	WG487810	Silver, total (3050)	M6020B ICP-MS	H3	Sample was received and analyzed past holding time.
	WG486512	Solids, Percent	D2216-80	H3	Sample was received and analyzed past holding time.
	WG487344	Thallium, total (3050)	M6020B ICP-MS	H3	Sample was received and analyzed past holding time.
	WG487350	Vanadium, total (3050)	M6010D ICP	H3	Sample was received and analyzed past holding time.
			M6010D ICP	M3	The spike recovery value is unusable since the analyte concentration in the sample is disproportionate to the spike level. The recovery of the associated control sample (LCS or LFB) was acceptable.
	WG487195	Zinc, total (3050)	M6010D ICP	H3	Sample was received and analyzed past holding time.
			M6010D ICP	ZH	Serial Dilution exceeded the acceptance criteria. Matrix interference [physical or chemical] is suspected.

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ACZ ID	WORKNUM	PARAMETER	METHOD	QUAL	DESCRIPTION
L55822-04	WG487195	Aluminum, total (3050)	M6010D ICP	H3	Sample was received and analyzed past holding time.
			M6010D ICP	M3	The spike recovery value is unusable since the analyte concentration in the sample is disproportionate to the spike level. The recovery of the associated control sample (LCS or LFB) was acceptable.
	WG487344	Antimony, total (3050)	M6020B ICP-MS	H3	Sample was received and analyzed past holding time.
			M6020B ICP-MS	M2	Matrix spike recovery was low, the recovery of the associated control sample (LCS or LFB) was acceptable.
	WG487195	Arsenic, total (3050)	M6020B ICP-MS	H3	Sample was received and analyzed past holding time.
			M6010D ICP	H3	Sample was received and analyzed past holding time.
	WG487195	Barium, total (3050)	M6010D ICP	H3	Sample was received and analyzed past holding time.
			M6010D ICP	ZG	The ICP or ICP-MS Serial Dilution was not used for data validation because the sample concentration was less than 50 times the MDL.
	WG487344	Beryllium, total (3050)	M6020B ICP-MS	H3	Sample was received and analyzed past holding time.
	WG487195	Boron, total (3050)	M6010D ICP	H3	Sample was received and analyzed past holding time.
	WG487344	Cadmium, total (3050)	M6020B ICP-MS	H3	Sample was received and analyzed past holding time.
	WG487195	Chromium, total (3050)	M6010D ICP	H3	Sample was received and analyzed past holding time.
			M6010D ICP	ZH	Serial Dilution exceeded the acceptance criteria. Matrix interference [physical or chemical] is suspected.
		Cobalt, total (3050)	M6010D ICP	H3	Sample was received and analyzed past holding time.
			M6010D ICP	ZG	The ICP or ICP-MS Serial Dilution was not used for data validation because the sample concentration was less than 50 times the MDL.
		Copper, total (3050)	M6010D ICP	H3	Sample was received and analyzed past holding time.
		Iron, total (3050)	M6010D ICP	H3	Sample was received and analyzed past holding time.
			M6010D ICP	M3	The spike recovery value is unusable since the analyte concentration in the sample is disproportionate to the spike level. The recovery of the associated control sample (LCS or LFB) was acceptable.
			M6010D ICP	ZH	Serial Dilution exceeded the acceptance criteria. Matrix interference [physical or chemical] is suspected.
	WG487344	Lead, total (3050)	M6020B ICP-MS	H3	Sample was received and analyzed past holding time.
	WG487195	Manganese, total (3050)	M6010D ICP	H3	Sample was received and analyzed past holding time.
			M6010D ICP	M3	The spike recovery value is unusable since the analyte concentration in the sample is disproportionate to the spike level. The recovery of the associated control sample (LCS or LFB) was acceptable.
			M6010D ICP	ZH	Serial Dilution exceeded the acceptance criteria. Matrix interference [physical or chemical] is suspected.
		Molybdenum, total (3050)	M6010D ICP	H3	Sample was received and analyzed past holding time.
		Nickel, total (3050)	M6010D ICP	H3	Sample was received and analyzed past holding time.
			M6010D ICP	ZH	Serial Dilution exceeded the acceptance criteria. Matrix interference [physical or chemical] is suspected.
	WG487344	Selenium, total (3050)	M6020B ICP-MS	H3	Sample was received and analyzed past holding time.
	WG487810	Silver, total (3050)	M6020B ICP-MS	H3	Sample was received and analyzed past holding time.
	WG486512	Solids, Percent	D2216-80	H3	Sample was received and analyzed past holding time.
	WG487344	Thallium, total (3050)	M6020B ICP-MS	H3	Sample was received and analyzed past holding time.
	WG487350	Vanadium, total (3050)	M6010D ICP	H3	Sample was received and analyzed past holding time.
			M6010D ICP	M3	The spike recovery value is unusable since the analyte concentration in the sample is disproportionate to the spike level. The recovery of the associated control sample (LCS or LFB) was acceptable.
	WG487195	Zinc, total (3050)	M6010D ICP	H3	Sample was received and analyzed past holding time.
			M6010D ICP	ZH	Serial Dilution exceeded the acceptance criteria. Matrix interference [physical or chemical] is suspected.

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ACZ ID	WORKNUM	PARAMETER	METHOD	QUAL	DESCRIPTION
L55822-05	WG487195	Aluminum, total (3050)	M6010D ICP	H3	Sample was received and analyzed past holding time.
			M6010D ICP	M3	The spike recovery value is unusable since the analyte concentration in the sample is disproportionate to the spike level. The recovery of the associated control sample (LCS or LFB) was acceptable.
	WG487344	Antimony, total (3050)	M6020B ICP-MS	H3	Sample was received and analyzed past holding time.
			M6020B ICP-MS	M2	Matrix spike recovery was low, the recovery of the associated control sample (LCS or LFB) was acceptable.
	WG487195	Arsenic, total (3050)	M6020B ICP-MS	H3	Sample was received and analyzed past holding time.
			M6010D ICP	H3	Sample was received and analyzed past holding time.
	WG487195	Barium, total (3050)	M6010D ICP	H3	Sample was received and analyzed past holding time.
			M6010D ICP	ZG	The ICP or ICP-MS Serial Dilution was not used for data validation because the sample concentration was less than 50 times the MDL.
	WG487344	Beryllium, total (3050)	M6020B ICP-MS	H3	Sample was received and analyzed past holding time.
			M6010D ICP	H3	Sample was received and analyzed past holding time.
	WG487344	Boron, total (3050)	M6020B ICP-MS	H3	Sample was received and analyzed past holding time.
			M6010D ICP	H3	Sample was received and analyzed past holding time.
	WG487344	Cadmium, total (3050)	M6010D ICP	H3	Sample was received and analyzed past holding time.
			M6010D ICP	H3	Sample was received and analyzed past holding time.
	WG487195	Chromium, total (3050)	M6010D ICP	H3	Sample was received and analyzed past holding time.
			M6010D ICP	ZH	Serial Dilution exceeded the acceptance criteria. Matrix interference [physical or chemical] is suspected.
		Cobalt, total (3050)	M6010D ICP	H3	Sample was received and analyzed past holding time.
			M6010D ICP	ZG	The ICP or ICP-MS Serial Dilution was not used for data validation because the sample concentration was less than 50 times the MDL.
		Copper, total (3050)	M6010D ICP	H3	Sample was received and analyzed past holding time.
			M6010D ICP	H3	Sample was received and analyzed past holding time.
		Iron, total (3050)	M6010D ICP	M3	The spike recovery value is unusable since the analyte concentration in the sample is disproportionate to the spike level. The recovery of the associated control sample (LCS or LFB) was acceptable.
			M6010D ICP	ZH	Serial Dilution exceeded the acceptance criteria. Matrix interference [physical or chemical] is suspected.
	WG487344	Lead, total (3050)	M6020B ICP-MS	H3	Sample was received and analyzed past holding time.
			M6010D ICP	H3	Sample was received and analyzed past holding time.
	WG487195	Manganese, total (3050)	M6010D ICP	M3	The spike recovery value is unusable since the analyte concentration in the sample is disproportionate to the spike level. The recovery of the associated control sample (LCS or LFB) was acceptable.
			M6010D ICP	ZH	Serial Dilution exceeded the acceptance criteria. Matrix interference [physical or chemical] is suspected.
		Molybdenum, total (3050)	M6010D ICP	H3	Sample was received and analyzed past holding time.
			M6010D ICP	H3	Sample was received and analyzed past holding time.
		Nickel, total (3050)	M6010D ICP	H3	Sample was received and analyzed past holding time.
			M6010D ICP	ZH	Serial Dilution exceeded the acceptance criteria. Matrix interference [physical or chemical] is suspected.
	WG487344	Selenium, total (3050)	M6020B ICP-MS	H3	Sample was received and analyzed past holding time.
			M6020B ICP-MS	H3	Sample was received and analyzed past holding time.
	WG486512	Solids, Percent	D2216-80	H3	Sample was received and analyzed past holding time.
			M6020B ICP-MS	H3	Sample was received and analyzed past holding time.
	WG487350	Vanadium, total (3050)	M6010D ICP	H3	Sample was received and analyzed past holding time.
			M6010D ICP	M3	The spike recovery value is unusable since the analyte concentration in the sample is disproportionate to the spike level. The recovery of the associated control sample (LCS or LFB) was acceptable.
	WG487195	Zinc, total (3050)	M6010D ICP	H3	Sample was received and analyzed past holding time.
			M6010D ICP	ZH	Serial Dilution exceeded the acceptance criteria. Matrix interference [physical or chemical] is suspected.

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ACZ ID	WORKNUM	PARAMETER	METHOD	QUAL	DESCRIPTION
L55822-06	WG487350	Aluminum, total (3050)	M6010D ICP	H3	Sample was received and analyzed past holding time.
			M6010D ICP	M3	The spike recovery value is unusable since the analyte concentration in the sample is disproportionate to the spike level. The recovery of the associated control sample (LCS or LFB) was acceptable.
	WG487344	Antimony, total (3050)	M6020B ICP-MS	H3	Sample was received and analyzed past holding time.
			M6020B ICP-MS	M2	Matrix spike recovery was low, the recovery of the associated control sample (LCS or LFB) was acceptable.
	WG487195	Arsenic, total (3050)	M6020B ICP-MS	H3	Sample was received and analyzed past holding time.
			M6010D ICP	H3	Sample was received and analyzed past holding time.
		Barium, total (3050)	M6010D ICP	H3	Sample was received and analyzed past holding time.
			M6010D ICP	ZG	The ICP or ICP-MS Serial Dilution was not used for data validation because the sample concentration was less than 50 times the MDL.
	WG487344	Beryllium, total (3050)	M6020B ICP-MS	H3	Sample was received and analyzed past holding time.
	WG487195	Boron, total (3050)	M6010D ICP	H3	Sample was received and analyzed past holding time.
	WG487344	Cadmium, total (3050)	M6020B ICP-MS	H3	Sample was received and analyzed past holding time.
	WG487195	Chromium, total (3050)	M6010D ICP	H3	Sample was received and analyzed past holding time.
			M6010D ICP	ZH	Serial Dilution exceeded the acceptance criteria. Matrix interference [physical or chemical] is suspected.
		Cobalt, total (3050)	M6010D ICP	H3	Sample was received and analyzed past holding time.
			M6010D ICP	ZG	The ICP or ICP-MS Serial Dilution was not used for data validation because the sample concentration was less than 50 times the MDL.
		Copper, total (3050)	M6010D ICP	H3	Sample was received and analyzed past holding time.
			M6010D ICP	H3	Sample was received and analyzed past holding time.
		Iron, total (3050)	M6010D ICP	M3	The spike recovery value is unusable since the analyte concentration in the sample is disproportionate to the spike level. The recovery of the associated control sample (LCS or LFB) was acceptable.
			M6010D ICP	ZH	Serial Dilution exceeded the acceptance criteria. Matrix interference [physical or chemical] is suspected.
	WG487344	Lead, total (3050)	M6020B ICP-MS	H3	Sample was received and analyzed past holding time.
	WG487195	Manganese, total (3050)	M6010D ICP	H3	Sample was received and analyzed past holding time.
			M6010D ICP	M3	The spike recovery value is unusable since the analyte concentration in the sample is disproportionate to the spike level. The recovery of the associated control sample (LCS or LFB) was acceptable.
			M6010D ICP	ZH	Serial Dilution exceeded the acceptance criteria. Matrix interference [physical or chemical] is suspected.
			M6010D ICP	H3	Sample was received and analyzed past holding time.
		Molybdenum, total (3050)	M6010D ICP	H3	Sample was received and analyzed past holding time.
			M6010D ICP	H3	Sample was received and analyzed past holding time.
		Nickel, total (3050)	M6010D ICP	H3	Sample was received and analyzed past holding time.
			M6010D ICP	ZH	Serial Dilution exceeded the acceptance criteria. Matrix interference [physical or chemical] is suspected.
	WG487344	Selenium, total (3050)	M6020B ICP-MS	H3	Sample was received and analyzed past holding time.
	WG487810	Silver, total (3050)	M6020B ICP-MS	H3	Sample was received and analyzed past holding time.
	WG486512	Solids, Percent	D2216-80	H3	Sample was received and analyzed past holding time.
	WG487344	Thallium, total (3050)	M6020B ICP-MS	H3	Sample was received and analyzed past holding time.
	WG487350	Vanadium, total (3050)	M6010D ICP	H3	Sample was received and analyzed past holding time.
			M6010D ICP	M3	The spike recovery value is unusable since the analyte concentration in the sample is disproportionate to the spike level. The recovery of the associated control sample (LCS or LFB) was acceptable.
	WG487195	Zinc, total (3050)	M6010D ICP	H3	Sample was received and analyzed past holding time.
			M6010D ICP	ZH	Serial Dilution exceeded the acceptance criteria. Matrix interference [physical or chemical] is suspected.

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ACZ ID	WORKNUM	PARAMETER	METHOD	QUAL	DESCRIPTION
L55822-07	WG487350	Aluminum, total (3050)	M6010D ICP	H3	Sample was received and analyzed past holding time.
			M6010D ICP	M3	The spike recovery value is unusable since the analyte concentration in the sample is disproportionate to the spike level. The recovery of the associated control sample (LCS or LFB) was acceptable.
	WG487344	Antimony, total (3050)	M6020B ICP-MS	H3	Sample was received and analyzed past holding time.
			M6020B ICP-MS	M2	Matrix spike recovery was low, the recovery of the associated control sample (LCS or LFB) was acceptable.
	WG487195	Arsenic, total (3050)	M6020B ICP-MS	H3	Sample was received and analyzed past holding time.
			M6010D ICP	H3	Sample was received and analyzed past holding time.
		Barium, total (3050)	M6010D ICP	H3	Sample was received and analyzed past holding time.
			M6010D ICP	ZG	The ICP or ICP-MS Serial Dilution was not used for data validation because the sample concentration was less than 50 times the MDL.
	WG487344	Beryllium, total (3050)	M6020B ICP-MS	H3	Sample was received and analyzed past holding time.
	WG487195	Boron, total (3050)	M6010D ICP	H3	Sample was received and analyzed past holding time.
	WG487344	Cadmium, total (3050)	M6020B ICP-MS	H3	Sample was received and analyzed past holding time.
	WG487195	Chromium, total (3050)	M6010D ICP	H3	Sample was received and analyzed past holding time.
			M6010D ICP	ZH	Serial Dilution exceeded the acceptance criteria. Matrix interference [physical or chemical] is suspected.
		Cobalt, total (3050)	M6010D ICP	H3	Sample was received and analyzed past holding time.
			M6010D ICP	ZG	The ICP or ICP-MS Serial Dilution was not used for data validation because the sample concentration was less than 50 times the MDL.
		Copper, total (3050)	M6010D ICP	H3	Sample was received and analyzed past holding time.
			M6010D ICP	H3	Sample was received and analyzed past holding time.
		Iron, total (3050)	M6010D ICP	M3	The spike recovery value is unusable since the analyte concentration in the sample is disproportionate to the spike level. The recovery of the associated control sample (LCS or LFB) was acceptable.
			M6010D ICP	ZH	Serial Dilution exceeded the acceptance criteria. Matrix interference [physical or chemical] is suspected.
	WG487344	Lead, total (3050)	M6020B ICP-MS	H3	Sample was received and analyzed past holding time.
	WG487195	Manganese, total (3050)	M6010D ICP	H3	Sample was received and analyzed past holding time.
			M6010D ICP	M3	The spike recovery value is unusable since the analyte concentration in the sample is disproportionate to the spike level. The recovery of the associated control sample (LCS or LFB) was acceptable.
			M6010D ICP	ZH	Serial Dilution exceeded the acceptance criteria. Matrix interference [physical or chemical] is suspected.
			M6010D ICP	H3	Sample was received and analyzed past holding time.
		Molybdenum, total (3050)	M6010D ICP	H3	Sample was received and analyzed past holding time.
			M6010D ICP	H3	Sample was received and analyzed past holding time.
		Nickel, total (3050)	M6010D ICP	H3	Sample was received and analyzed past holding time.
			M6010D ICP	ZH	Serial Dilution exceeded the acceptance criteria. Matrix interference [physical or chemical] is suspected.
	WG487344	Selenium, total (3050)	M6020B ICP-MS	H3	Sample was received and analyzed past holding time.
	WG487810	Silver, total (3050)	M6020B ICP-MS	H3	Sample was received and analyzed past holding time.
	WG486512	Solids, Percent	D2216-80	H3	Sample was received and analyzed past holding time.
	WG487344	Thallium, total (3050)	M6020B ICP-MS	H3	Sample was received and analyzed past holding time.
	WG487446	Vanadium, total (3050)	M6010D ICP	H3	Sample was received and analyzed past holding time.
			M6010D ICP	M3	The spike recovery value is unusable since the analyte concentration in the sample is disproportionate to the spike level. The recovery of the associated control sample (LCS or LFB) was acceptable.
	WG487195	Zinc, total (3050)	M6010D ICP	H3	Sample was received and analyzed past holding time.
			M6010D ICP	ZH	Serial Dilution exceeded the acceptance criteria. Matrix interference [physical or chemical] is suspected.

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ACZ ID	WORKNUM	PARAMETER	METHOD	QUAL	DESCRIPTION
L55822-08	WG487350	Aluminum, total (3050)	M6010D ICP	H3	Sample was received and analyzed past holding time.
			M6010D ICP	M3	The spike recovery value is unusable since the analyte concentration in the sample is disproportionate to the spike level. The recovery of the associated control sample (LCS or LFB) was acceptable.
	WG487344	Antimony, total (3050)	M6020B ICP-MS	H3	Sample was received and analyzed past holding time.
			M6020B ICP-MS	M2	Matrix spike recovery was low, the recovery of the associated control sample (LCS or LFB) was acceptable.
	WG487195	Arsenic, total (3050)	M6020B ICP-MS	H3	Sample was received and analyzed past holding time.
			M6010D ICP	H3	Sample was received and analyzed past holding time.
	WG487195	Barium, total (3050)	M6010D ICP	H3	Sample was received and analyzed past holding time.
			M6010D ICP	ZG	The ICP or ICP-MS Serial Dilution was not used for data validation because the sample concentration was less than 50 times the MDL.
	WG487344	Beryllium, total (3050)	M6020B ICP-MS	H3	Sample was received and analyzed past holding time.
	WG487195	Boron, total (3050)	M6010D ICP	H3	Sample was received and analyzed past holding time.
	WG487344	Cadmium, total (3050)	M6020B ICP-MS	H3	Sample was received and analyzed past holding time.
	WG487195	Chromium, total (3050)	M6010D ICP	H3	Sample was received and analyzed past holding time.
			M6010D ICP	ZH	Serial Dilution exceeded the acceptance criteria. Matrix interference [physical or chemical] is suspected.
		Cobalt, total (3050)	M6010D ICP	H3	Sample was received and analyzed past holding time.
			M6010D ICP	ZG	The ICP or ICP-MS Serial Dilution was not used for data validation because the sample concentration was less than 50 times the MDL.
		Copper, total (3050)	M6010D ICP	H3	Sample was received and analyzed past holding time.
	WG487350	Iron, total (3050)	M6010D ICP	H3	Sample was received and analyzed past holding time.
			M6010D ICP	M3	The spike recovery value is unusable since the analyte concentration in the sample is disproportionate to the spike level. The recovery of the associated control sample (LCS or LFB) was acceptable.
	WG487344	Lead, total (3050)	M6020B ICP-MS	H3	Sample was received and analyzed past holding time.
	WG487195	Manganese, total (3050)	M6010D ICP	H3	Sample was received and analyzed past holding time.
			M6010D ICP	M3	The spike recovery value is unusable since the analyte concentration in the sample is disproportionate to the spike level. The recovery of the associated control sample (LCS or LFB) was acceptable.
			M6010D ICP	ZH	Serial Dilution exceeded the acceptance criteria. Matrix interference [physical or chemical] is suspected.
		Molybdenum, total (3050)	M6010D ICP	H3	Sample was received and analyzed past holding time.
		Nickel, total (3050)	M6010D ICP	H3	Sample was received and analyzed past holding time.
			M6010D ICP	ZH	Serial Dilution exceeded the acceptance criteria. Matrix interference [physical or chemical] is suspected.
	WG487344	Selenium, total (3050)	M6020B ICP-MS	H3	Sample was received and analyzed past holding time.
	WG487810	Silver, total (3050)	M6020B ICP-MS	H3	Sample was received and analyzed past holding time.
	WG486512	Solids, Percent	D2216-80	H3	Sample was received and analyzed past holding time.
	WG487344	Thallium, total (3050)	M6020B ICP-MS	H3	Sample was received and analyzed past holding time.
	WG487446	Vanadium, total (3050)	M6010D ICP	H3	Sample was received and analyzed past holding time.
			M6010D ICP	M3	The spike recovery value is unusable since the analyte concentration in the sample is disproportionate to the spike level. The recovery of the associated control sample (LCS or LFB) was acceptable.
	WG487195	Zinc, total (3050)	M6010D ICP	H3	Sample was received and analyzed past holding time.
			M6010D ICP	ZH	Serial Dilution exceeded the acceptance criteria. Matrix interference [physical or chemical] is suspected.

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ACZ ID	WORKNUM	PARAMETER	METHOD	QUAL	DESCRIPTION
L55822-09	WG487195	Aluminum, total (3050)	M6010D ICP	H3	Sample was received and analyzed past holding time.
			M6010D ICP	M3	The spike recovery value is unusable since the analyte concentration in the sample is disproportionate to the spike level. The recovery of the associated control sample (LCS or LFB) was acceptable.
	WG487344	Antimony, total (3050)	M6020B ICP-MS	H3	Sample was received and analyzed past holding time.
			M6020B ICP-MS	M2	Matrix spike recovery was low, the recovery of the associated control sample (LCS or LFB) was acceptable.
		Arsenic, total (3050)	M6020B ICP-MS	H3	Sample was received and analyzed past holding time.
	WG487195	Barium, total (3050)	M6010D ICP	H3	Sample was received and analyzed past holding time.
			M6010D ICP	ZG	The ICP or ICP-MS Serial Dilution was not used for data validation because the sample concentration was less than 50 times the MDL.
	WG487344	Beryllium, total (3050)	M6020B ICP-MS	H3	Sample was received and analyzed past holding time.
	WG487195	Boron, total (3050)	M6010D ICP	H3	Sample was received and analyzed past holding time.
	WG487344	Cadmium, total (3050)	M6020B ICP-MS	H3	Sample was received and analyzed past holding time.
	WG487195	Chromium, total (3050)	M6010D ICP	H3	Sample was received and analyzed past holding time.
			M6010D ICP	ZH	Serial Dilution exceeded the acceptance criteria. Matrix interference [physical or chemical] is suspected.
		Cobalt, total (3050)	M6010D ICP	H3	Sample was received and analyzed past holding time.
			M6010D ICP	ZG	The ICP or ICP-MS Serial Dilution was not used for data validation because the sample concentration was less than 50 times the MDL.
		Copper, total (3050)	M6010D ICP	H3	Sample was received and analyzed past holding time.
		Iron, total (3050)	M6010D ICP	H3	Sample was received and analyzed past holding time.
			M6010D ICP	M3	The spike recovery value is unusable since the analyte concentration in the sample is disproportionate to the spike level. The recovery of the associated control sample (LCS or LFB) was acceptable.
			M6010D ICP	ZH	Serial Dilution exceeded the acceptance criteria. Matrix interference [physical or chemical] is suspected.
	WG487344	Lead, total (3050)	M6020B ICP-MS	H3	Sample was received and analyzed past holding time.
	WG487195	Manganese, total (3050)	M6010D ICP	H3	Sample was received and analyzed past holding time.
			M6010D ICP	M3	The spike recovery value is unusable since the analyte concentration in the sample is disproportionate to the spike level. The recovery of the associated control sample (LCS or LFB) was acceptable.
			M6010D ICP	ZH	Serial Dilution exceeded the acceptance criteria. Matrix interference [physical or chemical] is suspected.
		Molybdenum, total (3050)	M6010D ICP	H3	Sample was received and analyzed past holding time.
		Nickel, total (3050)	M6010D ICP	H3	Sample was received and analyzed past holding time.
			M6010D ICP	ZH	Serial Dilution exceeded the acceptance criteria. Matrix interference [physical or chemical] is suspected.
	WG487344	Selenium, total (3050)	M6020B ICP-MS	H3	Sample was received and analyzed past holding time.
	WG487810	Silver, total (3050)	M6020B ICP-MS	H3	Sample was received and analyzed past holding time.
	WG486512	Solids, Percent	D2216-80	H3	Sample was received and analyzed past holding time.
	WG487344	Thallium, total (3050)	M6020B ICP-MS	H3	Sample was received and analyzed past holding time.
	WG487195	Vanadium, total (3050)	M6010D ICP	H3	Sample was received and analyzed past holding time.
			M6010D ICP	M3	The spike recovery value is unusable since the analyte concentration in the sample is disproportionate to the spike level. The recovery of the associated control sample (LCS or LFB) was acceptable.
		Zinc, total (3050)	M6010D ICP	H3	Sample was received and analyzed past holding time.
			M6010D ICP	ZH	Serial Dilution exceeded the acceptance criteria. Matrix interference [physical or chemical] is suspected.

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ACZ ID	WORKNUM	PARAMETER	METHOD	QUAL	DESCRIPTION
L55822-10	WG487350	Aluminum, total (3050)	M6010D ICP	H3	Sample was received and analyzed past holding time.
			M6010D ICP	M3	The spike recovery value is unusable since the analyte concentration in the sample is disproportionate to the spike level. The recovery of the associated control sample (LCS or LFB) was acceptable.
	WG487344	Antimony, total (3050)	M6020B ICP-MS	H3	Sample was received and analyzed past holding time.
			M6020B ICP-MS	M2	Matrix spike recovery was low, the recovery of the associated control sample (LCS or LFB) was acceptable.
	WG487195	Arsenic, total (3050)	M6020B ICP-MS	H3	Sample was received and analyzed past holding time.
			M6010D ICP	H3	Sample was received and analyzed past holding time.
		Barium, total (3050)	M6010D ICP	H3	Sample was received and analyzed past holding time.
			M6010D ICP	ZG	The ICP or ICP-MS Serial Dilution was not used for data validation because the sample concentration was less than 50 times the MDL.
	WG487344	Beryllium, total (3050)	M6020B ICP-MS	H3	Sample was received and analyzed past holding time.
	WG487195	Boron, total (3050)	M6010D ICP	H3	Sample was received and analyzed past holding time.
	WG487344	Cadmium, total (3050)	M6020B ICP-MS	H3	Sample was received and analyzed past holding time.
	WG487195	Chromium, total (3050)	M6010D ICP	H3	Sample was received and analyzed past holding time.
			M6010D ICP	ZH	Serial Dilution exceeded the acceptance criteria. Matrix interference [physical or chemical] is suspected.
		Cobalt, total (3050)	M6010D ICP	H3	Sample was received and analyzed past holding time.
			M6010D ICP	ZG	The ICP or ICP-MS Serial Dilution was not used for data validation because the sample concentration was less than 50 times the MDL.
		Copper, total (3050)	M6010D ICP	H3	Sample was received and analyzed past holding time.
			M6010D ICP	H3	Sample was received and analyzed past holding time.
		Iron, total (3050)	M6010D ICP	M3	The spike recovery value is unusable since the analyte concentration in the sample is disproportionate to the spike level. The recovery of the associated control sample (LCS or LFB) was acceptable.
			M6010D ICP	ZH	Serial Dilution exceeded the acceptance criteria. Matrix interference [physical or chemical] is suspected.
	WG487344	Lead, total (3050)	M6020B ICP-MS	H3	Sample was received and analyzed past holding time.
	WG487195	Manganese, total (3050)	M6010D ICP	H3	Sample was received and analyzed past holding time.
			M6010D ICP	M3	The spike recovery value is unusable since the analyte concentration in the sample is disproportionate to the spike level. The recovery of the associated control sample (LCS or LFB) was acceptable.
			M6010D ICP	ZH	Serial Dilution exceeded the acceptance criteria. Matrix interference [physical or chemical] is suspected.
			M6010D ICP	H3	Sample was received and analyzed past holding time.
		Molybdenum, total (3050)	M6010D ICP	H3	Sample was received and analyzed past holding time.
			M6010D ICP	H3	Sample was received and analyzed past holding time.
		Nickel, total (3050)	M6010D ICP	H3	Sample was received and analyzed past holding time.
			M6010D ICP	ZH	Serial Dilution exceeded the acceptance criteria. Matrix interference [physical or chemical] is suspected.
	WG487344	Selenium, total (3050)	M6020B ICP-MS	H3	Sample was received and analyzed past holding time.
	WG487810	Silver, total (3050)	M6020B ICP-MS	H3	Sample was received and analyzed past holding time.
	WG486512	Solids, Percent	D2216-80	H3	Sample was received and analyzed past holding time.
	WG487344	Thallium, total (3050)	M6020B ICP-MS	H3	Sample was received and analyzed past holding time.
	WG487350	Vanadium, total (3050)	M6010D ICP	H3	Sample was received and analyzed past holding time.
			M6010D ICP	M3	The spike recovery value is unusable since the analyte concentration in the sample is disproportionate to the spike level. The recovery of the associated control sample (LCS or LFB) was acceptable.
	WG487195	Zinc, total (3050)	M6010D ICP	H3	Sample was received and analyzed past holding time.
			M6010D ICP	ZH	Serial Dilution exceeded the acceptance criteria. Matrix interference [physical or chemical] is suspected.

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ACZ ID	WORKNUM	PARAMETER	METHOD	QUAL	DESCRIPTION
L55822-11	WG487350	Aluminum, total (3050)	M6010D ICP	H3	Sample was received and analyzed past holding time.
			M6010D ICP	M3	The spike recovery value is unusable since the analyte concentration in the sample is disproportionate to the spike level. The recovery of the associated control sample (LCS or LFB) was acceptable.
	WG487344	Antimony, total (3050)	M6020B ICP-MS	H3	Sample was received and analyzed past holding time.
			M6020B ICP-MS	M2	Matrix spike recovery was low, the recovery of the associated control sample (LCS or LFB) was acceptable.
		Arsenic, total (3050)	M6020B ICP-MS	H3	Sample was received and analyzed past holding time.
	WG487195	Barium, total (3050)	M6010D ICP	H3	Sample was received and analyzed past holding time.
			M6010D ICP	ZG	The ICP or ICP-MS Serial Dilution was not used for data validation because the sample concentration was less than 50 times the MDL.
	WG487344	Beryllium, total (3050)	M6020B ICP-MS	H3	Sample was received and analyzed past holding time.
	WG487195	Boron, total (3050)	M6010D ICP	H3	Sample was received and analyzed past holding time.
	WG487344	Cadmium, total (3050)	M6020B ICP-MS	H3	Sample was received and analyzed past holding time.
	WG487195	Chromium, total (3050)	M6010D ICP	H3	Sample was received and analyzed past holding time.
			M6010D ICP	ZH	Serial Dilution exceeded the acceptance criteria. Matrix interference [physical or chemical] is suspected.
		Cobalt, total (3050)	M6010D ICP	H3	Sample was received and analyzed past holding time.
			M6010D ICP	ZG	The ICP or ICP-MS Serial Dilution was not used for data validation because the sample concentration was less than 50 times the MDL.
		Copper, total (3050)	M6010D ICP	H3	Sample was received and analyzed past holding time.
		Iron, total (3050)	M6010D ICP	H3	Sample was received and analyzed past holding time.
			M6010D ICP	M3	The spike recovery value is unusable since the analyte concentration in the sample is disproportionate to the spike level. The recovery of the associated control sample (LCS or LFB) was acceptable.
			M6010D ICP	ZH	Serial Dilution exceeded the acceptance criteria. Matrix interference [physical or chemical] is suspected.
	WG487344	Lead, total (3050)	M6020B ICP-MS	H3	Sample was received and analyzed past holding time.
	WG487195	Manganese, total (3050)	M6010D ICP	H3	Sample was received and analyzed past holding time.
			M6010D ICP	M3	The spike recovery value is unusable since the analyte concentration in the sample is disproportionate to the spike level. The recovery of the associated control sample (LCS or LFB) was acceptable.
			M6010D ICP	ZH	Serial Dilution exceeded the acceptance criteria. Matrix interference [physical or chemical] is suspected.
		Molybdenum, total (3050)	M6010D ICP	H3	Sample was received and analyzed past holding time.
		Nickel, total (3050)	M6010D ICP	H3	Sample was received and analyzed past holding time.
			M6010D ICP	ZH	Serial Dilution exceeded the acceptance criteria. Matrix interference [physical or chemical] is suspected.
	WG487344	Selenium, total (3050)	M6020B ICP-MS	H3	Sample was received and analyzed past holding time.
	WG487810	Silver, total (3050)	M6020B ICP-MS	H3	Sample was received and analyzed past holding time.
	WG486512	Solids, Percent	D2216-80	H3	Sample was received and analyzed past holding time.
	WG487344	Thallium, total (3050)	M6020B ICP-MS	H3	Sample was received and analyzed past holding time.
	WG487350	Vanadium, total (3050)	M6010D ICP	H3	Sample was received and analyzed past holding time.
			M6010D ICP	M3	The spike recovery value is unusable since the analyte concentration in the sample is disproportionate to the spike level. The recovery of the associated control sample (LCS or LFB) was acceptable.
	WG487195	Zinc, total (3050)	M6010D ICP	H3	Sample was received and analyzed past holding time.
			M6010D ICP	ZH	Serial Dilution exceeded the acceptance criteria. Matrix interference [physical or chemical] is suspected.

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ACZ ID	WORKNUM	PARAMETER	METHOD	QUAL	DESCRIPTION
L55822-12	WG487350	Aluminum, total (3050)	M6010D ICP	H3	Sample was received and analyzed past holding time.
			M6010D ICP	M3	The spike recovery value is unusable since the analyte concentration in the sample is disproportionate to the spike level. The recovery of the associated control sample (LCS or LFB) was acceptable.
	WG487344	Antimony, total (3050)	M6020B ICP-MS	H3	Sample was received and analyzed past holding time.
			M6020B ICP-MS	M2	Matrix spike recovery was low, the recovery of the associated control sample (LCS or LFB) was acceptable.
		Arsenic, total (3050)	M6020B ICP-MS	H3	Sample was received and analyzed past holding time.
	WG487195	Barium, total (3050)	M6010D ICP	H3	Sample was received and analyzed past holding time.
			M6010D ICP	ZG	The ICP or ICP-MS Serial Dilution was not used for data validation because the sample concentration was less than 50 times the MDL.
	WG487344	Beryllium, total (3050)	M6020B ICP-MS	H3	Sample was received and analyzed past holding time.
	WG487195	Boron, total (3050)	M6010D ICP	H3	Sample was received and analyzed past holding time.
	WG487344	Cadmium, total (3050)	M6020B ICP-MS	H3	Sample was received and analyzed past holding time.
	WG487195	Chromium, total (3050)	M6010D ICP	H3	Sample was received and analyzed past holding time.
			M6010D ICP	ZH	Serial Dilution exceeded the acceptance criteria. Matrix interference [physical or chemical] is suspected.
		Cobalt, total (3050)	M6010D ICP	H3	Sample was received and analyzed past holding time.
			M6010D ICP	ZG	The ICP or ICP-MS Serial Dilution was not used for data validation because the sample concentration was less than 50 times the MDL.
		Copper, total (3050)	M6010D ICP	H3	Sample was received and analyzed past holding time.
		Iron, total (3050)	M6010D ICP	H3	Sample was received and analyzed past holding time.
			M6010D ICP	M3	The spike recovery value is unusable since the analyte concentration in the sample is disproportionate to the spike level. The recovery of the associated control sample (LCS or LFB) was acceptable.
			M6010D ICP	ZH	Serial Dilution exceeded the acceptance criteria. Matrix interference [physical or chemical] is suspected.
	WG487344	Lead, total (3050)	M6020B ICP-MS	H3	Sample was received and analyzed past holding time.
	WG487195	Manganese, total (3050)	M6010D ICP	H3	Sample was received and analyzed past holding time.
			M6010D ICP	M3	The spike recovery value is unusable since the analyte concentration in the sample is disproportionate to the spike level. The recovery of the associated control sample (LCS or LFB) was acceptable.
			M6010D ICP	ZH	Serial Dilution exceeded the acceptance criteria. Matrix interference [physical or chemical] is suspected.
		Molybdenum, total (3050)	M6010D ICP	H3	Sample was received and analyzed past holding time.
		Nickel, total (3050)	M6010D ICP	H3	Sample was received and analyzed past holding time.
			M6010D ICP	ZH	Serial Dilution exceeded the acceptance criteria. Matrix interference [physical or chemical] is suspected.
	WG487344	Selenium, total (3050)	M6020B ICP-MS	H3	Sample was received and analyzed past holding time.
	WG487810	Silver, total (3050)	M6020B ICP-MS	H3	Sample was received and analyzed past holding time.
	WG486512	Solids, Percent	D2216-80	H3	Sample was received and analyzed past holding time.
	WG487344	Thallium, total (3050)	M6020B ICP-MS	H3	Sample was received and analyzed past holding time.
	WG487350	Vanadium, total (3050)	M6010D ICP	H3	Sample was received and analyzed past holding time.
			M6010D ICP	M3	The spike recovery value is unusable since the analyte concentration in the sample is disproportionate to the spike level. The recovery of the associated control sample (LCS or LFB) was acceptable.
	WG487195	Zinc, total (3050)	M6010D ICP	H3	Sample was received and analyzed past holding time.
			M6010D ICP	ZH	Serial Dilution exceeded the acceptance criteria. Matrix interference [physical or chemical] is suspected.

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ACZ ID	WORKNUM	PARAMETER	METHOD	QUAL	DESCRIPTION
L55822-13	WG487350	Aluminum, total (3050)	M6010D ICP	H3	Sample was received and analyzed past holding time.
			M6010D ICP	M3	The spike recovery value is unusable since the analyte concentration in the sample is disproportionate to the spike level. The recovery of the associated control sample (LCS or LFB) was acceptable.
	WG487344	Antimony, total (3050)	M6020B ICP-MS	H3	Sample was received and analyzed past holding time.
			M6020B ICP-MS	M2	Matrix spike recovery was low, the recovery of the associated control sample (LCS or LFB) was acceptable.
		Arsenic, total (3050)	M6020B ICP-MS	H3	Sample was received and analyzed past holding time.
	WG487195	Barium, total (3050)	M6010D ICP	H3	Sample was received and analyzed past holding time.
			M6010D ICP	ZG	The ICP or ICP-MS Serial Dilution was not used for data validation because the sample concentration was less than 50 times the MDL.
	WG487344	Beryllium, total (3050)	M6020B ICP-MS	H3	Sample was received and analyzed past holding time.
	WG487195	Boron, total (3050)	M6010D ICP	H3	Sample was received and analyzed past holding time.
	WG487344	Cadmium, total (3050)	M6020B ICP-MS	H3	Sample was received and analyzed past holding time.
	WG487195	Chromium, total (3050)	M6010D ICP	H3	Sample was received and analyzed past holding time.
			M6010D ICP	ZH	Serial Dilution exceeded the acceptance criteria. Matrix interference [physical or chemical] is suspected.
		Cobalt, total (3050)	M6010D ICP	H3	Sample was received and analyzed past holding time.
			M6010D ICP	ZG	The ICP or ICP-MS Serial Dilution was not used for data validation because the sample concentration was less than 50 times the MDL.
		Copper, total (3050)	M6010D ICP	H3	Sample was received and analyzed past holding time.
		Iron, total (3050)	M6010D ICP	H3	Sample was received and analyzed past holding time.
			M6010D ICP	M3	The spike recovery value is unusable since the analyte concentration in the sample is disproportionate to the spike level. The recovery of the associated control sample (LCS or LFB) was acceptable.
			M6010D ICP	ZH	Serial Dilution exceeded the acceptance criteria. Matrix interference [physical or chemical] is suspected.
	WG487344	Lead, total (3050)	M6020B ICP-MS	H3	Sample was received and analyzed past holding time.
	WG487195	Manganese, total (3050)	M6010D ICP	H3	Sample was received and analyzed past holding time.
			M6010D ICP	M3	The spike recovery value is unusable since the analyte concentration in the sample is disproportionate to the spike level. The recovery of the associated control sample (LCS or LFB) was acceptable.
			M6010D ICP	ZH	Serial Dilution exceeded the acceptance criteria. Matrix interference [physical or chemical] is suspected.
		Molybdenum, total (3050)	M6010D ICP	H3	Sample was received and analyzed past holding time.
	WG487350	Nickel, total (3050)	M6010D ICP	H3	Sample was received and analyzed past holding time.
	WG487344	Selenium, total (3050)	M6020B ICP-MS	H3	Sample was received and analyzed past holding time.
	WG487810	Silver, total (3050)	M6020B ICP-MS	H3	Sample was received and analyzed past holding time.
	WG486512	Solids, Percent	D2216-80	H3	Sample was received and analyzed past holding time.
	WG487344	Thallium, total (3050)	M6020B ICP-MS	H3	Sample was received and analyzed past holding time.
	WG487350	Vanadium, total (3050)	M6010D ICP	H3	Sample was received and analyzed past holding time.
			M6010D ICP	M3	The spike recovery value is unusable since the analyte concentration in the sample is disproportionate to the spike level. The recovery of the associated control sample (LCS or LFB) was acceptable.
	WG487195	Zinc, total (3050)	M6010D ICP	H3	Sample was received and analyzed past holding time.
			M6010D ICP	ZH	Serial Dilution exceeded the acceptance criteria. Matrix interference [physical or chemical] is suspected.

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ACZ ID	WORKNUM	PARAMETER	METHOD	QUAL	DESCRIPTION
L55822-14	WG487350	Aluminum, total (3050)	M6010D ICP	H3	Sample was received and analyzed past holding time.
			M6010D ICP	M3	The spike recovery value is unusable since the analyte concentration in the sample is disproportionate to the spike level. The recovery of the associated control sample (LCS or LFB) was acceptable.
	WG487344	Antimony, total (3050)	M6020B ICP-MS	H3	Sample was received and analyzed past holding time.
			M6020B ICP-MS	M2	Matrix spike recovery was low, the recovery of the associated control sample (LCS or LFB) was acceptable.
	WG487195	Arsenic, total (3050)	M6020B ICP-MS	H3	Sample was received and analyzed past holding time.
			M6010D ICP	H3	Sample was received and analyzed past holding time.
	WG487195	Barium, total (3050)	M6010D ICP	H3	Sample was received and analyzed past holding time.
			M6010D ICP	ZG	The ICP or ICP-MS Serial Dilution was not used for data validation because the sample concentration was less than 50 times the MDL.
	WG487344	Beryllium, total (3050)	M6020B ICP-MS	H3	Sample was received and analyzed past holding time.
	WG487195	Boron, total (3050)	M6010D ICP	H3	Sample was received and analyzed past holding time.
	WG487344	Cadmium, total (3050)	M6020B ICP-MS	H3	Sample was received and analyzed past holding time.
	WG487195	Chromium, total (3050)	M6010D ICP	H3	Sample was received and analyzed past holding time.
			M6010D ICP	ZH	Serial Dilution exceeded the acceptance criteria. Matrix interference [physical or chemical] is suspected.
		Cobalt, total (3050)	M6010D ICP	H3	Sample was received and analyzed past holding time.
			M6010D ICP	ZG	The ICP or ICP-MS Serial Dilution was not used for data validation because the sample concentration was less than 50 times the MDL.
		Copper, total (3050)	M6010D ICP	H3	Sample was received and analyzed past holding time.
	WG487350	Iron, total (3050)	M6010D ICP	H3	Sample was received and analyzed past holding time.
			M6010D ICP	M3	The spike recovery value is unusable since the analyte concentration in the sample is disproportionate to the spike level. The recovery of the associated control sample (LCS or LFB) was acceptable.
	WG487344	Lead, total (3050)	M6020B ICP-MS	H3	Sample was received and analyzed past holding time.
	WG487195	Manganese, total (3050)	M6010D ICP	H3	Sample was received and analyzed past holding time.
			M6010D ICP	M3	The spike recovery value is unusable since the analyte concentration in the sample is disproportionate to the spike level. The recovery of the associated control sample (LCS or LFB) was acceptable.
			M6010D ICP	ZH	Serial Dilution exceeded the acceptance criteria. Matrix interference [physical or chemical] is suspected.
		Molybdenum, total (3050)	M6010D ICP	H3	Sample was received and analyzed past holding time.
		Nickel, total (3050)	M6010D ICP	H3	Sample was received and analyzed past holding time.
			M6010D ICP	ZH	Serial Dilution exceeded the acceptance criteria. Matrix interference [physical or chemical] is suspected.
	WG487344	Selenium, total (3050)	M6020B ICP-MS	H3	Sample was received and analyzed past holding time.
	WG487810	Silver, total (3050)	M6020B ICP-MS	H3	Sample was received and analyzed past holding time.
	WG486512	Solids, Percent	D2216-80	H3	Sample was received and analyzed past holding time.
	WG487344	Thallium, total (3050)	M6020B ICP-MS	H3	Sample was received and analyzed past holding time.
	WG487350	Vanadium, total (3050)	M6010D ICP	H3	Sample was received and analyzed past holding time.
			M6010D ICP	M3	The spike recovery value is unusable since the analyte concentration in the sample is disproportionate to the spike level. The recovery of the associated control sample (LCS or LFB) was acceptable.
	WG487195	Zinc, total (3050)	M6010D ICP	H3	Sample was received and analyzed past holding time.
			M6010D ICP	ZH	Serial Dilution exceeded the acceptance criteria. Matrix interference [physical or chemical] is suspected.

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ACZ ID	WORKNUM	PARAMETER	METHOD	QUAL	DESCRIPTION
L55822-15	WG487350	Aluminum, total (3050)	M6010D ICP	H3	Sample was received and analyzed past holding time.
			M6010D ICP	M3	The spike recovery value is unusable since the analyte concentration in the sample is disproportionate to the spike level. The recovery of the associated control sample (LCS or LFB) was acceptable.
	WG487630	Antimony, total (3050)	M6020B ICP-MS	H3	Sample was received and analyzed past holding time.
			M6020B ICP-MS	M2	Matrix spike recovery was low, the recovery of the associated control sample (LCS or LFB) was acceptable.
	WG487195	Arsenic, total (3050)	M6020B ICP-MS	H3	Sample was received and analyzed past holding time.
			M6010D ICP	H3	Sample was received and analyzed past holding time.
		Barium, total (3050)	M6010D ICP	H3	Sample was received and analyzed past holding time.
			M6010D ICP	ZG	The ICP or ICP-MS Serial Dilution was not used for data validation because the sample concentration was less than 50 times the MDL.
	WG487630	Beryllium, total (3050)	M6020B ICP-MS	H3	Sample was received and analyzed past holding time.
	WG487195	Boron, total (3050)	M6010D ICP	H3	Sample was received and analyzed past holding time.
	WG487630	Cadmium, total (3050)	M6020B ICP-MS	H3	Sample was received and analyzed past holding time.
	WG487195	Chromium, total (3050)	M6010D ICP	H3	Sample was received and analyzed past holding time.
			M6010D ICP	ZH	Serial Dilution exceeded the acceptance criteria. Matrix interference [physical or chemical] is suspected.
		Cobalt, total (3050)	M6010D ICP	H3	Sample was received and analyzed past holding time.
			M6010D ICP	ZG	The ICP or ICP-MS Serial Dilution was not used for data validation because the sample concentration was less than 50 times the MDL.
		Copper, total (3050)	M6010D ICP	H3	Sample was received and analyzed past holding time.
			M6010D ICP	H3	Sample was received and analyzed past holding time.
		Iron, total (3050)	M6010D ICP	M3	The spike recovery value is unusable since the analyte concentration in the sample is disproportionate to the spike level. The recovery of the associated control sample (LCS or LFB) was acceptable.
			M6010D ICP	ZH	Serial Dilution exceeded the acceptance criteria. Matrix interference [physical or chemical] is suspected.
	WG487630	Lead, total (3050)	M6020B ICP-MS	H3	Sample was received and analyzed past holding time.
	WG487195	Manganese, total (3050)	M6010D ICP	H3	Sample was received and analyzed past holding time.
			M6010D ICP	M3	The spike recovery value is unusable since the analyte concentration in the sample is disproportionate to the spike level. The recovery of the associated control sample (LCS or LFB) was acceptable.
			M6010D ICP	ZH	Serial Dilution exceeded the acceptance criteria. Matrix interference [physical or chemical] is suspected.
			M6010D ICP	H3	Sample was received and analyzed past holding time.
		Molybdenum, total (3050)	M6010D ICP	H3	Sample was received and analyzed past holding time.
			M6010D ICP	H3	Sample was received and analyzed past holding time.
		Nickel, total (3050)	M6010D ICP	ZH	Serial Dilution exceeded the acceptance criteria. Matrix interference [physical or chemical] is suspected.
			M6010D ICP	H3	Sample was received and analyzed past holding time.
	WG487630	Selenium, total (3050)	M6020B ICP-MS	H3	Sample was received and analyzed past holding time.
	WG487810	Silver, total (3050)	M6020B ICP-MS	H3	Sample was received and analyzed past holding time.
	WG486512	Solids, Percent	D2216-80	H3	Sample was received and analyzed past holding time.
	WG487630	Thallium, total (3050)	M6020B ICP-MS	H3	Sample was received and analyzed past holding time.
	WG487350	Vanadium, total (3050)	M6010D ICP	H3	Sample was received and analyzed past holding time.
			M6010D ICP	M3	The spike recovery value is unusable since the analyte concentration in the sample is disproportionate to the spike level. The recovery of the associated control sample (LCS or LFB) was acceptable.
	WG487195	Zinc, total (3050)	M6010D ICP	H3	Sample was received and analyzed past holding time.
			M6010D ICP	ZH	Serial Dilution exceeded the acceptance criteria. Matrix interference [physical or chemical] is suspected.

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ACZ ID	WORKNUM	PARAMETER	METHOD	QUAL	DESCRIPTION
L55822-16	WG487350	Aluminum, total (3050)	M6010D ICP	H3	Sample was received and analyzed past holding time.
			M6010D ICP	M3	The spike recovery value is unusable since the analyte concentration in the sample is disproportionate to the spike level. The recovery of the associated control sample (LCS or LFB) was acceptable.
	WG487630	Antimony, total (3050)	M6020B ICP-MS	H3	Sample was received and analyzed past holding time.
			M6020B ICP-MS	M2	Matrix spike recovery was low, the recovery of the associated control sample (LCS or LFB) was acceptable.
	WG487195	Arsenic, total (3050)	M6020B ICP-MS	H3	Sample was received and analyzed past holding time.
			M6010D ICP	H3	Sample was received and analyzed past holding time.
		Barium, total (3050)	M6010D ICP	H3	Sample was received and analyzed past holding time.
			M6010D ICP	ZG	The ICP or ICP-MS Serial Dilution was not used for data validation because the sample concentration was less than 50 times the MDL.
	WG487630	Beryllium, total (3050)	M6020B ICP-MS	H3	Sample was received and analyzed past holding time.
	WG487195	Boron, total (3050)	M6010D ICP	H3	Sample was received and analyzed past holding time.
	WG487630	Cadmium, total (3050)	M6020B ICP-MS	H3	Sample was received and analyzed past holding time.
	WG487195	Chromium, total (3050)	M6010D ICP	H3	Sample was received and analyzed past holding time.
			M6010D ICP	ZH	Serial Dilution exceeded the acceptance criteria. Matrix interference [physical or chemical] is suspected.
		Cobalt, total (3050)	M6010D ICP	H3	Sample was received and analyzed past holding time.
			M6010D ICP	ZG	The ICP or ICP-MS Serial Dilution was not used for data validation because the sample concentration was less than 50 times the MDL.
		Copper, total (3050)	M6010D ICP	H3	Sample was received and analyzed past holding time.
			M6010D ICP	H3	Sample was received and analyzed past holding time.
		Iron, total (3050)	M6010D ICP	M3	The spike recovery value is unusable since the analyte concentration in the sample is disproportionate to the spike level. The recovery of the associated control sample (LCS or LFB) was acceptable.
			M6010D ICP	ZH	Serial Dilution exceeded the acceptance criteria. Matrix interference [physical or chemical] is suspected.
	WG487630	Lead, total (3050)	M6020B ICP-MS	H3	Sample was received and analyzed past holding time.
	WG487195	Manganese, total (3050)	M6010D ICP	H3	Sample was received and analyzed past holding time.
			M6010D ICP	M3	The spike recovery value is unusable since the analyte concentration in the sample is disproportionate to the spike level. The recovery of the associated control sample (LCS or LFB) was acceptable.
			M6010D ICP	ZH	Serial Dilution exceeded the acceptance criteria. Matrix interference [physical or chemical] is suspected.
			M6010D ICP	H3	Sample was received and analyzed past holding time.
		Molybdenum, total (3050)	M6010D ICP	H3	Sample was received and analyzed past holding time.
			M6010D ICP	H3	Sample was received and analyzed past holding time.
		Nickel, total (3050)	M6010D ICP	H3	Sample was received and analyzed past holding time.
			M6010D ICP	ZH	Serial Dilution exceeded the acceptance criteria. Matrix interference [physical or chemical] is suspected.
	WG487630	Selenium, total (3050)	M6020B ICP-MS	H3	Sample was received and analyzed past holding time.
	WG487810	Silver, total (3050)	M6020B ICP-MS	H3	Sample was received and analyzed past holding time.
	WG486512	Solids, Percent	D2216-80	H3	Sample was received and analyzed past holding time.
	WG487630	Thallium, total (3050)	M6020B ICP-MS	H3	Sample was received and analyzed past holding time.
	WG487350	Vanadium, total (3050)	M6010D ICP	H3	Sample was received and analyzed past holding time.
			M6010D ICP	M3	The spike recovery value is unusable since the analyte concentration in the sample is disproportionate to the spike level. The recovery of the associated control sample (LCS or LFB) was acceptable.
	WG487195	Zinc, total (3050)	M6010D ICP	H3	Sample was received and analyzed past holding time.
			M6010D ICP	ZH	Serial Dilution exceeded the acceptance criteria. Matrix interference [physical or chemical] is suspected.

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ACZ ID	WORKNUM	PARAMETER	METHOD	QUAL	DESCRIPTION
L55822-17	WG487350	Aluminum, total (3050)	M6010D ICP	H3	Sample was received and analyzed past holding time.
			M6010D ICP	M3	The spike recovery value is unusable since the analyte concentration in the sample is disproportionate to the spike level. The recovery of the associated control sample (LCS or LFB) was acceptable.
	WG487630	Antimony, total (3050)	M6020B ICP-MS	H3	Sample was received and analyzed past holding time.
			M6020B ICP-MS	M2	Matrix spike recovery was low, the recovery of the associated control sample (LCS or LFB) was acceptable.
		Arsenic, total (3050)	M6020B ICP-MS	H3	Sample was received and analyzed past holding time.
	WG487195	Barium, total (3050)	M6010D ICP	H3	Sample was received and analyzed past holding time.
			M6010D ICP	ZG	The ICP or ICP-MS Serial Dilution was not used for data validation because the sample concentration was less than 50 times the MDL.
	WG487630	Beryllium, total (3050)	M6020B ICP-MS	H3	Sample was received and analyzed past holding time.
	WG487195	Boron, total (3050)	M6010D ICP	H3	Sample was received and analyzed past holding time.
	WG487630	Cadmium, total (3050)	M6020B ICP-MS	H3	Sample was received and analyzed past holding time.
	WG487195	Chromium, total (3050)	M6010D ICP	H3	Sample was received and analyzed past holding time.
			M6010D ICP	ZH	Serial Dilution exceeded the acceptance criteria. Matrix interference [physical or chemical] is suspected.
		Cobalt, total (3050)	M6010D ICP	H3	Sample was received and analyzed past holding time.
			M6010D ICP	ZG	The ICP or ICP-MS Serial Dilution was not used for data validation because the sample concentration was less than 50 times the MDL.
		Copper, total (3050)	M6010D ICP	H3	Sample was received and analyzed past holding time.
		Iron, total (3050)	M6010D ICP	H3	Sample was received and analyzed past holding time.
			M6010D ICP	M3	The spike recovery value is unusable since the analyte concentration in the sample is disproportionate to the spike level. The recovery of the associated control sample (LCS or LFB) was acceptable.
			M6010D ICP	ZH	Serial Dilution exceeded the acceptance criteria. Matrix interference [physical or chemical] is suspected.
	WG487630	Lead, total (3050)	M6020B ICP-MS	H3	Sample was received and analyzed past holding time.
	WG487195	Manganese, total (3050)	M6010D ICP	H3	Sample was received and analyzed past holding time.
			M6010D ICP	M3	The spike recovery value is unusable since the analyte concentration in the sample is disproportionate to the spike level. The recovery of the associated control sample (LCS or LFB) was acceptable.
			M6010D ICP	ZH	Serial Dilution exceeded the acceptance criteria. Matrix interference [physical or chemical] is suspected.
		Molybdenum, total (3050)	M6010D ICP	H3	Sample was received and analyzed past holding time.
		Nickel, total (3050)	M6010D ICP	H3	Sample was received and analyzed past holding time.
			M6010D ICP	ZH	Serial Dilution exceeded the acceptance criteria. Matrix interference [physical or chemical] is suspected.
	WG487630	Selenium, total (3050)	M6020B ICP-MS	H3	Sample was received and analyzed past holding time.
	WG487810	Silver, total (3050)	M6020B ICP-MS	H3	Sample was received and analyzed past holding time.
	WG486512	Solids, Percent	D2216-80	H3	Sample was received and analyzed past holding time.
	WG487630	Thallium, total (3050)	M6020B ICP-MS	H3	Sample was received and analyzed past holding time.
	WG487195	Vanadium, total (3050)	M6010D ICP	H3	Sample was received and analyzed past holding time.
			M6010D ICP	M3	The spike recovery value is unusable since the analyte concentration in the sample is disproportionate to the spike level. The recovery of the associated control sample (LCS or LFB) was acceptable.
		Zinc, total (3050)	M6010D ICP	H3	Sample was received and analyzed past holding time.
			M6010D ICP	ZH	Serial Dilution exceeded the acceptance criteria. Matrix interference [physical or chemical] is suspected.

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ACZ ID	WORKNUM	PARAMETER	METHOD	QUAL	DESCRIPTION
L55822-18	WG487195	Aluminum, total (3050)	M6010D ICP	H3	Sample was received and analyzed past holding time.
			M6010D ICP	M3	The spike recovery value is unusable since the analyte concentration in the sample is disproportionate to the spike level. The recovery of the associated control sample (LCS or LFB) was acceptable.
	WG487630	Antimony, total (3050)	M6020B ICP-MS	H3	Sample was received and analyzed past holding time.
			M6020B ICP-MS	M2	Matrix spike recovery was low, the recovery of the associated control sample (LCS or LFB) was acceptable.
	WG487195	Arsenic, total (3050)	M6020B ICP-MS	H3	Sample was received and analyzed past holding time.
			M6010D ICP	H3	Sample was received and analyzed past holding time.
	WG487195	Barium, total (3050)	M6010D ICP	H3	Sample was received and analyzed past holding time.
			M6010D ICP	ZG	The ICP or ICP-MS Serial Dilution was not used for data validation because the sample concentration was less than 50 times the MDL.
	WG487630	Beryllium, total (3050)	M6020B ICP-MS	H3	Sample was received and analyzed past holding time.
			M6010D ICP	H3	Sample was received and analyzed past holding time.
	WG487195	Boron, total (3050)	M6010D ICP	H3	Sample was received and analyzed past holding time.
			M6020B ICP-MS	H3	Sample was received and analyzed past holding time.
	WG487630	Cadmium, total (3050)	M6020B ICP-MS	H3	Sample was received and analyzed past holding time.
			M6010D ICP	H3	Sample was received and analyzed past holding time.
	WG487195	Chromium, total (3050)	M6010D ICP	H3	Sample was received and analyzed past holding time.
			M6010D ICP	ZH	Serial Dilution exceeded the acceptance criteria. Matrix interference [physical or chemical] is suspected.
		Cobalt, total (3050)	M6010D ICP	H3	Sample was received and analyzed past holding time.
			M6010D ICP	ZG	The ICP or ICP-MS Serial Dilution was not used for data validation because the sample concentration was less than 50 times the MDL.
		Copper, total (3050)	M6010D ICP	H3	Sample was received and analyzed past holding time.
			M6010D ICP	H3	Sample was received and analyzed past holding time.
		Iron, total (3050)	M6010D ICP	H3	Sample was received and analyzed past holding time.
			M6010D ICP	M3	The spike recovery value is unusable since the analyte concentration in the sample is disproportionate to the spike level. The recovery of the associated control sample (LCS or LFB) was acceptable.
			M6010D ICP	ZH	Serial Dilution exceeded the acceptance criteria. Matrix interference [physical or chemical] is suspected.
			M6020B ICP-MS	H3	Sample was received and analyzed past holding time.
	WG487195	Lead, total (3050)	M6010D ICP	H3	Sample was received and analyzed past holding time.
			M6010D ICP	M3	The spike recovery value is unusable since the analyte concentration in the sample is disproportionate to the spike level. The recovery of the associated control sample (LCS or LFB) was acceptable.
			M6010D ICP	ZH	Serial Dilution exceeded the acceptance criteria. Matrix interference [physical or chemical] is suspected.
			M6010D ICP	H3	Sample was received and analyzed past holding time.
		Molybdenum, total (3050)	M6010D ICP	H3	Sample was received and analyzed past holding time.
			M6010D ICP	H3	Sample was received and analyzed past holding time.
		Nickel, total (3050)	M6010D ICP	H3	Sample was received and analyzed past holding time.
			M6010D ICP	ZH	Serial Dilution exceeded the acceptance criteria. Matrix interference [physical or chemical] is suspected.
	WG487630	Selenium, total (3050)	M6020B ICP-MS	H3	Sample was received and analyzed past holding time.
			M6020B ICP-MS	H3	Sample was received and analyzed past holding time.
	WG487810	Silver, total (3050)	M6020B ICP-MS	H3	Sample was received and analyzed past holding time.
			D2216-80	H3	Sample was received and analyzed past holding time.
	WG486512	Solids, Percent	M6020B ICP-MS	H3	Sample was received and analyzed past holding time.
			M6010D ICP	H3	Sample was received and analyzed past holding time.
	WG487350	Vanadium, total (3050)	M6010D ICP	M3	The spike recovery value is unusable since the analyte concentration in the sample is disproportionate to the spike level. The recovery of the associated control sample (LCS or LFB) was acceptable.
			M6010D ICP	H3	Sample was received and analyzed past holding time.
	WG487195	Zinc, total (3050)	M6010D ICP	H3	Sample was received and analyzed past holding time.
			M6010D ICP	ZH	Serial Dilution exceeded the acceptance criteria. Matrix interference [physical or chemical] is suspected.

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ACZ ID	WORKNUM	PARAMETER	METHOD	QUAL	DESCRIPTION
L55822-19	WG487350	Aluminum, total (3050)	M6010D ICP	H3	Sample was received and analyzed past holding time.
			M6010D ICP	M3	The spike recovery value is unusable since the analyte concentration in the sample is disproportionate to the spike level. The recovery of the associated control sample (LCS or LFB) was acceptable.
	WG487630	Antimony, total (3050)	M6020B ICP-MS	H3	Sample was received and analyzed past holding time.
			M6020B ICP-MS	M2	Matrix spike recovery was low, the recovery of the associated control sample (LCS or LFB) was acceptable.
		Arsenic, total (3050)	M6020B ICP-MS	H3	Sample was received and analyzed past holding time.
	WG487195	Barium, total (3050)	M6010D ICP	H3	Sample was received and analyzed past holding time.
			M6010D ICP	ZG	The ICP or ICP-MS Serial Dilution was not used for data validation because the sample concentration was less than 50 times the MDL.
	WG487630	Beryllium, total (3050)	M6020B ICP-MS	H3	Sample was received and analyzed past holding time.
	WG487195	Boron, total (3050)	M6010D ICP	H3	Sample was received and analyzed past holding time.
	WG487630	Cadmium, total (3050)	M6020B ICP-MS	H3	Sample was received and analyzed past holding time.
	WG487195	Chromium, total (3050)	M6010D ICP	H3	Sample was received and analyzed past holding time.
			M6010D ICP	ZH	Serial Dilution exceeded the acceptance criteria. Matrix interference [physical or chemical] is suspected.
		Cobalt, total (3050)	M6010D ICP	H3	Sample was received and analyzed past holding time.
			M6010D ICP	ZG	The ICP or ICP-MS Serial Dilution was not used for data validation because the sample concentration was less than 50 times the MDL.
		Copper, total (3050)	M6010D ICP	H3	Sample was received and analyzed past holding time.
		Iron, total (3050)	M6010D ICP	H3	Sample was received and analyzed past holding time.
			M6010D ICP	M3	The spike recovery value is unusable since the analyte concentration in the sample is disproportionate to the spike level. The recovery of the associated control sample (LCS or LFB) was acceptable.
			M6010D ICP	ZH	Serial Dilution exceeded the acceptance criteria. Matrix interference [physical or chemical] is suspected.
	WG487630	Lead, total (3050)	M6020B ICP-MS	H3	Sample was received and analyzed past holding time.
	WG487195	Manganese, total (3050)	M6010D ICP	H3	Sample was received and analyzed past holding time.
			M6010D ICP	M3	The spike recovery value is unusable since the analyte concentration in the sample is disproportionate to the spike level. The recovery of the associated control sample (LCS or LFB) was acceptable.
			M6010D ICP	ZH	Serial Dilution exceeded the acceptance criteria. Matrix interference [physical or chemical] is suspected.
		Molybdenum, total (3050)	M6010D ICP	H3	Sample was received and analyzed past holding time.
		Nickel, total (3050)	M6010D ICP	H3	Sample was received and analyzed past holding time.
			M6010D ICP	ZH	Serial Dilution exceeded the acceptance criteria. Matrix interference [physical or chemical] is suspected.
	WG487630	Selenium, total (3050)	M6020B ICP-MS	H3	Sample was received and analyzed past holding time.
	WG487810	Silver, total (3050)	M6020B ICP-MS	H3	Sample was received and analyzed past holding time.
	WG486512	Solids, Percent	D2216-80	H3	Sample was received and analyzed past holding time.
	WG487630	Thallium, total (3050)	M6020B ICP-MS	H3	Sample was received and analyzed past holding time.
	WG487350	Vanadium, total (3050)	M6010D ICP	H3	Sample was received and analyzed past holding time.
			M6010D ICP	M3	The spike recovery value is unusable since the analyte concentration in the sample is disproportionate to the spike level. The recovery of the associated control sample (LCS or LFB) was acceptable.
	WG487195	Zinc, total (3050)	M6010D ICP	H3	Sample was received and analyzed past holding time.
			M6010D ICP	ZH	Serial Dilution exceeded the acceptance criteria. Matrix interference [physical or chemical] is suspected.

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ACZ ID	WORKNUM	PARAMETER	METHOD	QUAL	DESCRIPTION
L55822-20	WG487350	Aluminum, total (3050)	M6010D ICP	H3	Sample was received and analyzed past holding time.
			M6010D ICP	M3	The spike recovery value is unusable since the analyte concentration in the sample is disproportionate to the spike level. The recovery of the associated control sample (LCS or LFB) was acceptable.
	WG487630	Antimony, total (3050)	M6020B ICP-MS	H3	Sample was received and analyzed past holding time.
			M6020B ICP-MS	M2	Matrix spike recovery was low, the recovery of the associated control sample (LCS or LFB) was acceptable.
	WG487195	Arsenic, total (3050)	M6020B ICP-MS	H3	Sample was received and analyzed past holding time.
			M6010D ICP	H3	Sample was received and analyzed past holding time.
	WG487195	Barium, total (3050)	M6010D ICP	H3	Sample was received and analyzed past holding time.
			M6010D ICP	ZG	The ICP or ICP-MS Serial Dilution was not used for data validation because the sample concentration was less than 50 times the MDL.
	WG487630	Beryllium, total (3050)	M6020B ICP-MS	H3	Sample was received and analyzed past holding time.
	WG487195	Boron, total (3050)	M6010D ICP	H3	Sample was received and analyzed past holding time.
	WG487630	Cadmium, total (3050)	M6020B ICP-MS	H3	Sample was received and analyzed past holding time.
	WG487195	Chromium, total (3050)	M6010D ICP	H3	Sample was received and analyzed past holding time.
			M6010D ICP	ZH	Serial Dilution exceeded the acceptance criteria. Matrix interference [physical or chemical] is suspected.
		Cobalt, total (3050)	M6010D ICP	H3	Sample was received and analyzed past holding time.
			M6010D ICP	ZG	The ICP or ICP-MS Serial Dilution was not used for data validation because the sample concentration was less than 50 times the MDL.
		Copper, total (3050)	M6010D ICP	H3	Sample was received and analyzed past holding time.
	WG487350	Iron, total (3050)	M6010D ICP	H3	Sample was received and analyzed past holding time.
			M6010D ICP	M3	The spike recovery value is unusable since the analyte concentration in the sample is disproportionate to the spike level. The recovery of the associated control sample (LCS or LFB) was acceptable.
	WG487630	Lead, total (3050)	M6020B ICP-MS	H3	Sample was received and analyzed past holding time.
	WG487195	Manganese, total (3050)	M6010D ICP	H3	Sample was received and analyzed past holding time.
			M6010D ICP	M3	The spike recovery value is unusable since the analyte concentration in the sample is disproportionate to the spike level. The recovery of the associated control sample (LCS or LFB) was acceptable.
			M6010D ICP	ZH	Serial Dilution exceeded the acceptance criteria. Matrix interference [physical or chemical] is suspected.
		Molybdenum, total (3050)	M6010D ICP	H3	Sample was received and analyzed past holding time.
		Nickel, total (3050)	M6010D ICP	H3	Sample was received and analyzed past holding time.
			M6010D ICP	ZH	Serial Dilution exceeded the acceptance criteria. Matrix interference [physical or chemical] is suspected.
	WG487630	Selenium, total (3050)	M6020B ICP-MS	H3	Sample was received and analyzed past holding time.
	WG487810	Silver, total (3050)	M6020B ICP-MS	H3	Sample was received and analyzed past holding time.
	WG486512	Solids, Percent	D2216-80	H3	Sample was received and analyzed past holding time.
	WG487630	Thallium, total (3050)	M6020B ICP-MS	H3	Sample was received and analyzed past holding time.
	WG487446	Vanadium, total (3050)	M6010D ICP	H3	Sample was received and analyzed past holding time.
			M6010D ICP	M3	The spike recovery value is unusable since the analyte concentration in the sample is disproportionate to the spike level. The recovery of the associated control sample (LCS or LFB) was acceptable.
	WG487195	Zinc, total (3050)	M6010D ICP	H3	Sample was received and analyzed past holding time.
			M6010D ICP	ZH	Serial Dilution exceeded the acceptance criteria. Matrix interference [physical or chemical] is suspected.

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ACZ ID	WORKNUM	PARAMETER	METHOD	QUAL	DESCRIPTION
L55822-21	WG487348	Aluminum, total (3050)	M6010D ICP	H3	Sample was received and analyzed past holding time.
			M6010D ICP	M3	The spike recovery value is unusable since the analyte concentration in the sample is disproportionate to the spike level. The recovery of the associated control sample (LCS or LFB) was acceptable.
	WG487337	Antimony, total (3050)	M6020B ICP-MS	H3	Sample was received and analyzed past holding time.
			M6020B ICP-MS	M2	Matrix spike recovery was low, the recovery of the associated control sample (LCS or LFB) was acceptable.
		Arsenic, total (3050)	M6020B ICP-MS	H3	Sample was received and analyzed past holding time.
	WG487254	Barium, total (3050)	M6010D ICP	H3	Sample was received and analyzed past holding time.
	WG487337	Beryllium, total (3050)	M6020B ICP-MS	H3	Sample was received and analyzed past holding time.
	WG487348	Boron, total (3050)	M6010D ICP	H3	Sample was received and analyzed past holding time.
	WG487337	Cadmium, total (3050)	M6020B ICP-MS	H3	Sample was received and analyzed past holding time.
	WG487348	Chromium, total (3050)	M6010D ICP	H3	Sample was received and analyzed past holding time.
	WG487254	Cobalt, total (3050)	M6010D ICP	H3	Sample was received and analyzed past holding time.
			M6010D ICP	ZG	The ICP or ICP-MS Serial Dilution was not used for data validation because the sample concentration was less than 50 times the MDL.
		Copper, total (3050)	M6010D ICP	H3	Sample was received and analyzed past holding time.
		Iron, total (3050)	M6010D ICP	H3	Sample was received and analyzed past holding time.
			M6010D ICP	M3	The spike recovery value is unusable since the analyte concentration in the sample is disproportionate to the spike level. The recovery of the associated control sample (LCS or LFB) was acceptable.
			M6010D ICP	ZH	Serial Dilution exceeded the acceptance criteria. Matrix interference [physical or chemical] is suspected.
	WG487337	Lead, total (3050)	M6020B ICP-MS	H3	Sample was received and analyzed past holding time.
	WG487254	Manganese, total (3050)	M6010D ICP	H3	Sample was received and analyzed past holding time.
			M6010D ICP	M3	The spike recovery value is unusable since the analyte concentration in the sample is disproportionate to the spike level. The recovery of the associated control sample (LCS or LFB) was acceptable.
		Molybdenum, total (3050)	M6010D ICP	H3	Sample was received and analyzed past holding time.
		Nickel, total (3050)	M6010D ICP	H3	Sample was received and analyzed past holding time.
	WG487337	Selenium, total (3050)	M6020B ICP-MS	H3	Sample was received and analyzed past holding time.
			M6020B ICP-MS	H3	Sample was received and analyzed past holding time.
		Silver, total (3050)	M6020B ICP-MS	H3	Sample was received and analyzed past holding time.
	WG486513	Solids, Percent	D2216-80	H3	Sample was received and analyzed past holding time.
	WG487337	Thallium, total (3050)	M6020B ICP-MS	H3	Sample was received and analyzed past holding time.
	WG487348	Vanadium, total (3050)	M6010D ICP	H3	Sample was received and analyzed past holding time.
			M6010D ICP	M1	Matrix spike recovery was high, the recovery of the associated control sample (LCS or LFB) was acceptable.
		Zinc, total (3050)	M6010D ICP	H3	Sample was received and analyzed past holding time.

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ACZ ID	WORKNUM	PARAMETER	METHOD	QUAL	DESCRIPTION
L55822-22	WG487348	Aluminum, total (3050)	M6010D ICP	H3	Sample was received and analyzed past holding time.
			M6010D ICP	M3	The spike recovery value is unusable since the analyte concentration in the sample is disproportionate to the spike level. The recovery of the associated control sample (LCS or LFB) was acceptable.
	WG487337	Antimony, total (3050)	M6020B ICP-MS	H3	Sample was received and analyzed past holding time.
			M6020B ICP-MS	M2	Matrix spike recovery was low, the recovery of the associated control sample (LCS or LFB) was acceptable.
		Arsenic, total (3050)	M6020B ICP-MS	H3	Sample was received and analyzed past holding time.
	WG487254	Barium, total (3050)	M6010D ICP	H3	Sample was received and analyzed past holding time.
	WG487337	Beryllium, total (3050)	M6020B ICP-MS	H3	Sample was received and analyzed past holding time.
	WG487348	Boron, total (3050)	M6010D ICP	H3	Sample was received and analyzed past holding time.
	WG487337	Cadmium, total (3050)	M6020B ICP-MS	H3	Sample was received and analyzed past holding time.
	WG487348	Chromium, total (3050)	M6010D ICP	H3	Sample was received and analyzed past holding time.
	WG487254	Cobalt, total (3050)	M6010D ICP	H3	Sample was received and analyzed past holding time.
			M6010D ICP	ZG	The ICP or ICP-MS Serial Dilution was not used for data validation because the sample concentration was less than 50 times the MDL.
		Copper, total (3050)	M6010D ICP	H3	Sample was received and analyzed past holding time.
		Iron, total (3050)	M6010D ICP	H3	Sample was received and analyzed past holding time.
			M6010D ICP	M3	The spike recovery value is unusable since the analyte concentration in the sample is disproportionate to the spike level. The recovery of the associated control sample (LCS or LFB) was acceptable.
			M6010D ICP	ZH	Serial Dilution exceeded the acceptance criteria. Matrix interference [physical or chemical] is suspected.
	WG487337	Lead, total (3050)	M6020B ICP-MS	H3	Sample was received and analyzed past holding time.
	WG487254	Manganese, total (3050)	M6010D ICP	H3	Sample was received and analyzed past holding time.
			M6010D ICP	M3	The spike recovery value is unusable since the analyte concentration in the sample is disproportionate to the spike level. The recovery of the associated control sample (LCS or LFB) was acceptable.
		Molybdenum, total (3050)	M6010D ICP	H3	Sample was received and analyzed past holding time.
		Nickel, total (3050)	M6010D ICP	H3	Sample was received and analyzed past holding time.
	WG487337	Selenium, total (3050)	M6020B ICP-MS	H3	Sample was received and analyzed past holding time.
			M6020B ICP-MS	H3	Sample was received and analyzed past holding time.
		Silver, total (3050)	M6020B ICP-MS	H3	Sample was received and analyzed past holding time.
	WG486513	Solids, Percent	D2216-80	H3	Sample was received and analyzed past holding time.
	WG487337	Thallium, total (3050)	M6020B ICP-MS	H3	Sample was received and analyzed past holding time.
	WG487348	Vanadium, total (3050)	M6010D ICP	H3	Sample was received and analyzed past holding time.
			M6010D ICP	M1	Matrix spike recovery was high, the recovery of the associated control sample (LCS or LFB) was acceptable.
		Zinc, total (3050)	M6010D ICP	H3	Sample was received and analyzed past holding time.

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ACZ ID	WORKNUM	PARAMETER	METHOD	QUAL	DESCRIPTION
L55822-23	WG487348	Aluminum, total (3050)	M6010D ICP	H3	Sample was received and analyzed past holding time.
			M6010D ICP	M3	The spike recovery value is unusable since the analyte concentration in the sample is disproportionate to the spike level. The recovery of the associated control sample (LCS or LFB) was acceptable.
	WG487337	Antimony, total (3050)	M6020B ICP-MS	H3	Sample was received and analyzed past holding time.
			M6020B ICP-MS	M2	Matrix spike recovery was low, the recovery of the associated control sample (LCS or LFB) was acceptable.
		Arsenic, total (3050)	M6020B ICP-MS	H3	Sample was received and analyzed past holding time.
	WG487254	Barium, total (3050)	M6010D ICP	H3	Sample was received and analyzed past holding time.
	WG487337	Beryllium, total (3050)	M6020B ICP-MS	H3	Sample was received and analyzed past holding time.
	WG487348	Boron, total (3050)	M6010D ICP	H3	Sample was received and analyzed past holding time.
	WG487337	Cadmium, total (3050)	M6020B ICP-MS	H3	Sample was received and analyzed past holding time.
	WG487348	Chromium, total (3050)	M6010D ICP	H3	Sample was received and analyzed past holding time.
	WG487254	Cobalt, total (3050)	M6010D ICP	H3	Sample was received and analyzed past holding time.
			M6010D ICP	ZG	The ICP or ICP-MS Serial Dilution was not used for data validation because the sample concentration was less than 50 times the MDL.
		Copper, total (3050)	M6010D ICP	H3	Sample was received and analyzed past holding time.
		Iron, total (3050)	M6010D ICP	H3	Sample was received and analyzed past holding time.
			M6010D ICP	M3	The spike recovery value is unusable since the analyte concentration in the sample is disproportionate to the spike level. The recovery of the associated control sample (LCS or LFB) was acceptable.
			M6010D ICP	ZH	Serial Dilution exceeded the acceptance criteria. Matrix interference [physical or chemical] is suspected.
	WG487337	Lead, total (3050)	M6020B ICP-MS	H3	Sample was received and analyzed past holding time.
	WG487254	Manganese, total (3050)	M6010D ICP	H3	Sample was received and analyzed past holding time.
			M6010D ICP	M3	The spike recovery value is unusable since the analyte concentration in the sample is disproportionate to the spike level. The recovery of the associated control sample (LCS or LFB) was acceptable.
		Molybdenum, total (3050)	M6010D ICP	H3	Sample was received and analyzed past holding time.
		Nickel, total (3050)	M6010D ICP	H3	Sample was received and analyzed past holding time.
	WG487337	Selenium, total (3050)	M6020B ICP-MS	H3	Sample was received and analyzed past holding time.
			M6020B ICP-MS	H3	Sample was received and analyzed past holding time.
		Silver, total (3050)	M6020B ICP-MS	H3	Sample was received and analyzed past holding time.
	WG486513	Solids, Percent	D2216-80	H3	Sample was received and analyzed past holding time.
	WG487337	Thallium, total (3050)	M6020B ICP-MS	H3	Sample was received and analyzed past holding time.
	WG487348	Vanadium, total (3050)	M6010D ICP	H3	Sample was received and analyzed past holding time.
			M6010D ICP	M1	Matrix spike recovery was high, the recovery of the associated control sample (LCS or LFB) was acceptable.
		Zinc, total (3050)	M6010D ICP	H3	Sample was received and analyzed past holding time.

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ACZ ID	WORKNUM	PARAMETER	METHOD	QUAL	DESCRIPTION
L55822-24	WG487254	Aluminum, total (3050)	M6010D ICP	H3	Sample was received and analyzed past holding time.
			M6010D ICP	M3	The spike recovery value is unusable since the analyte concentration in the sample is disproportionate to the spike level. The recovery of the associated control sample (LCS or LFB) was acceptable.
	WG487337	Antimony, total (3050)	M6020B ICP-MS	H3	Sample was received and analyzed past holding time.
			M6020B ICP-MS	M2	Matrix spike recovery was low, the recovery of the associated control sample (LCS or LFB) was acceptable.
		Arsenic, total (3050)	M6020B ICP-MS	H3	Sample was received and analyzed past holding time.
	WG487254	Barium, total (3050)	M6010D ICP	H3	Sample was received and analyzed past holding time.
	WG487337	Beryllium, total (3050)	M6020B ICP-MS	H3	Sample was received and analyzed past holding time.
	WG487348	Boron, total (3050)	M6010D ICP	H3	Sample was received and analyzed past holding time.
	WG487337	Cadmium, total (3050)	M6020B ICP-MS	H3	Sample was received and analyzed past holding time.
	WG487348	Chromium, total (3050)	M6010D ICP	H3	Sample was received and analyzed past holding time.
	WG487254	Cobalt, total (3050)	M6010D ICP	H3	Sample was received and analyzed past holding time.
			M6010D ICP	ZG	The ICP or ICP-MS Serial Dilution was not used for data validation because the sample concentration was less than 50 times the MDL.
		Copper, total (3050)	M6010D ICP	H3	Sample was received and analyzed past holding time.
		Iron, total (3050)	M6010D ICP	H3	Sample was received and analyzed past holding time.
			M6010D ICP	M3	The spike recovery value is unusable since the analyte concentration in the sample is disproportionate to the spike level. The recovery of the associated control sample (LCS or LFB) was acceptable.
			M6010D ICP	ZH	Serial Dilution exceeded the acceptance criteria. Matrix interference [physical or chemical] is suspected.
	WG487337	Lead, total (3050)	M6020B ICP-MS	H3	Sample was received and analyzed past holding time.
	WG487254	Manganese, total (3050)	M6010D ICP	H3	Sample was received and analyzed past holding time.
			M6010D ICP	M3	The spike recovery value is unusable since the analyte concentration in the sample is disproportionate to the spike level. The recovery of the associated control sample (LCS or LFB) was acceptable.
		Molybdenum, total (3050)	M6010D ICP	H3	Sample was received and analyzed past holding time.
		Nickel, total (3050)	M6010D ICP	H3	Sample was received and analyzed past holding time.
	WG487337	Selenium, total (3050)	M6020B ICP-MS	H3	Sample was received and analyzed past holding time.
			M6020B ICP-MS	H3	Sample was received and analyzed past holding time.
		Silver, total (3050)	M6020B ICP-MS	H3	Sample was received and analyzed past holding time.
	WG486513	Solids, Percent	D2216-80	H3	Sample was received and analyzed past holding time.
	WG487337	Thallium, total (3050)	M6020B ICP-MS	H3	Sample was received and analyzed past holding time.
	WG487348	Vanadium, total (3050)	M6010D ICP	H3	Sample was received and analyzed past holding time.
			M6010D ICP	M1	Matrix spike recovery was high, the recovery of the associated control sample (LCS or LFB) was acceptable.
		Zinc, total (3050)	M6010D ICP	H3	Sample was received and analyzed past holding time.

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ACZ ID	WORKNUM	PARAMETER	METHOD	QUAL	DESCRIPTION
L55822-25	WG487348	Aluminum, total (3050)	M6010D ICP	H3	Sample was received and analyzed past holding time.
			M6010D ICP	M3	The spike recovery value is unusable since the analyte concentration in the sample is disproportionate to the spike level. The recovery of the associated control sample (LCS or LFB) was acceptable.
	WG487337	Antimony, total (3050)	M6020B ICP-MS	H3	Sample was received and analyzed past holding time.
			M6020B ICP-MS	M2	Matrix spike recovery was low, the recovery of the associated control sample (LCS or LFB) was acceptable.
		Arsenic, total (3050)	M6020B ICP-MS	H3	Sample was received and analyzed past holding time.
	WG487254	Barium, total (3050)	M6010D ICP	H3	Sample was received and analyzed past holding time.
	WG487337	Beryllium, total (3050)	M6020B ICP-MS	H3	Sample was received and analyzed past holding time.
	WG487348	Boron, total (3050)	M6010D ICP	H3	Sample was received and analyzed past holding time.
	WG487337	Cadmium, total (3050)	M6020B ICP-MS	H3	Sample was received and analyzed past holding time.
	WG487348	Chromium, total (3050)	M6010D ICP	H3	Sample was received and analyzed past holding time.
	WG487254	Cobalt, total (3050)	M6010D ICP	H3	Sample was received and analyzed past holding time.
			M6010D ICP	ZG	The ICP or ICP-MS Serial Dilution was not used for data validation because the sample concentration was less than 50 times the MDL.
		Copper, total (3050)	M6010D ICP	H3	Sample was received and analyzed past holding time.
		Iron, total (3050)	M6010D ICP	H3	Sample was received and analyzed past holding time.
			M6010D ICP	M3	The spike recovery value is unusable since the analyte concentration in the sample is disproportionate to the spike level. The recovery of the associated control sample (LCS or LFB) was acceptable.
			M6010D ICP	ZH	Serial Dilution exceeded the acceptance criteria. Matrix interference [physical or chemical] is suspected.
	WG487337	Lead, total (3050)	M6020B ICP-MS	H3	Sample was received and analyzed past holding time.
	WG487254	Manganese, total (3050)	M6010D ICP	H3	Sample was received and analyzed past holding time.
			M6010D ICP	M3	The spike recovery value is unusable since the analyte concentration in the sample is disproportionate to the spike level. The recovery of the associated control sample (LCS or LFB) was acceptable.
		Molybdenum, total (3050)	M6010D ICP	H3	Sample was received and analyzed past holding time.
		Nickel, total (3050)	M6010D ICP	H3	Sample was received and analyzed past holding time.
	WG487337	Selenium, total (3050)	M6020B ICP-MS	H3	Sample was received and analyzed past holding time.
			M6020B ICP-MS	H3	Sample was received and analyzed past holding time.
		Silver, total (3050)	M6020B ICP-MS	H3	Sample was received and analyzed past holding time.
	WG486513	Solids, Percent	D2216-80	H3	Sample was received and analyzed past holding time.
	WG487337	Thallium, total (3050)	M6020B ICP-MS	H3	Sample was received and analyzed past holding time.
	WG487348	Vanadium, total (3050)	M6010D ICP	H3	Sample was received and analyzed past holding time.
			M6010D ICP	M1	Matrix spike recovery was high, the recovery of the associated control sample (LCS or LFB) was acceptable.
		Zinc, total (3050)	M6010D ICP	H3	Sample was received and analyzed past holding time.

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ACZ ID	WORKNUM	PARAMETER	METHOD	QUAL	DESCRIPTION
L55822-26	WG487348	Aluminum, total (3050)	M6010D ICP	H3	Sample was received and analyzed past holding time.
			M6010D ICP	M3	The spike recovery value is unusable since the analyte concentration in the sample is disproportionate to the spike level. The recovery of the associated control sample (LCS or LFB) was acceptable.
	WG487337	Antimony, total (3050)	M6020B ICP-MS	H3	Sample was received and analyzed past holding time.
			M6020B ICP-MS	M2	Matrix spike recovery was low, the recovery of the associated control sample (LCS or LFB) was acceptable.
		Arsenic, total (3050)	M6020B ICP-MS	H3	Sample was received and analyzed past holding time.
	WG487254	Barium, total (3050)	M6010D ICP	H3	Sample was received and analyzed past holding time.
	WG487337	Beryllium, total (3050)	M6020B ICP-MS	H3	Sample was received and analyzed past holding time.
	WG487348	Boron, total (3050)	M6010D ICP	H3	Sample was received and analyzed past holding time.
	WG487337	Cadmium, total (3050)	M6020B ICP-MS	H3	Sample was received and analyzed past holding time.
	WG487348	Chromium, total (3050)	M6010D ICP	H3	Sample was received and analyzed past holding time.
	WG487254	Cobalt, total (3050)	M6010D ICP	H3	Sample was received and analyzed past holding time.
			M6010D ICP	ZG	The ICP or ICP-MS Serial Dilution was not used for data validation because the sample concentration was less than 50 times the MDL.
		Copper, total (3050)	M6010D ICP	H3	Sample was received and analyzed past holding time.
	WG487348	Iron, total (3050)	M6010D ICP	H3	Sample was received and analyzed past holding time.
			M6010D ICP	M3	The spike recovery value is unusable since the analyte concentration in the sample is disproportionate to the spike level. The recovery of the associated control sample (LCS or LFB) was acceptable.
	WG487337	Lead, total (3050)	M6020B ICP-MS	H3	Sample was received and analyzed past holding time.
	WG487254	Manganese, total (3050)	M6010D ICP	H3	Sample was received and analyzed past holding time.
			M6010D ICP	M3	The spike recovery value is unusable since the analyte concentration in the sample is disproportionate to the spike level. The recovery of the associated control sample (LCS or LFB) was acceptable.
		Molybdenum, total (3050)	M6010D ICP	H3	Sample was received and analyzed past holding time.
		Nickel, total (3050)	M6010D ICP	H3	Sample was received and analyzed past holding time.
	WG487337	Selenium, total (3050)	M6020B ICP-MS	H3	Sample was received and analyzed past holding time.
		Silver, total (3050)	M6020B ICP-MS	H3	Sample was received and analyzed past holding time.
	WG486513	Solids, Percent	D2216-80	H3	Sample was received and analyzed past holding time.
	WG487337	Thallium, total (3050)	M6020B ICP-MS	H3	Sample was received and analyzed past holding time.
	WG487445	Vanadium, total (3050)	M6010D ICP	H3	Sample was received and analyzed past holding time.
			M6010D ICP	M1	Matrix spike recovery was high, the recovery of the associated control sample (LCS or LFB) was acceptable.
	WG487348	Zinc, total (3050)	M6010D ICP	H3	Sample was received and analyzed past holding time.

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ACZ ID	WORKNUM	PARAMETER	METHOD	QUAL	DESCRIPTION
L55822-27	WG487348	Aluminum, total (3050)	M6010D ICP	H3	Sample was received and analyzed past holding time.
			M6010D ICP	M3	The spike recovery value is unusable since the analyte concentration in the sample is disproportionate to the spike level. The recovery of the associated control sample (LCS or LFB) was acceptable.
	WG487337	Antimony, total (3050)	M6020B ICP-MS	H3	Sample was received and analyzed past holding time.
			M6020B ICP-MS	M2	Matrix spike recovery was low, the recovery of the associated control sample (LCS or LFB) was acceptable.
		Arsenic, total (3050)	M6020B ICP-MS	H3	Sample was received and analyzed past holding time.
	WG487254	Barium, total (3050)	M6010D ICP	H3	Sample was received and analyzed past holding time.
	WG487337	Beryllium, total (3050)	M6020B ICP-MS	H3	Sample was received and analyzed past holding time.
	WG487348	Boron, total (3050)	M6010D ICP	H3	Sample was received and analyzed past holding time.
	WG487337	Cadmium, total (3050)	M6020B ICP-MS	H3	Sample was received and analyzed past holding time.
	WG487348	Chromium, total (3050)	M6010D ICP	H3	Sample was received and analyzed past holding time.
	WG487254	Cobalt, total (3050)	M6010D ICP	H3	Sample was received and analyzed past holding time.
			M6010D ICP	ZG	The ICP or ICP-MS Serial Dilution was not used for data validation because the sample concentration was less than 50 times the MDL.
	WG487348	Copper, total (3050)	M6010D ICP	DB	Sample required dilution due to low bias result.
			M6010D ICP	H3	Sample was received and analyzed past holding time.
		Iron, total (3050)	M6010D ICP	H3	Sample was received and analyzed past holding time.
			M6010D ICP	M3	The spike recovery value is unusable since the analyte concentration in the sample is disproportionate to the spike level. The recovery of the associated control sample (LCS or LFB) was acceptable.
	WG487337	Lead, total (3050)	M6020B ICP-MS	H3	Sample was received and analyzed past holding time.
	WG487254	Manganese, total (3050)	M6010D ICP	H3	Sample was received and analyzed past holding time.
			M6010D ICP	M3	The spike recovery value is unusable since the analyte concentration in the sample is disproportionate to the spike level. The recovery of the associated control sample (LCS or LFB) was acceptable.
		Molybdenum, total (3050)	M6010D ICP	H3	Sample was received and analyzed past holding time.
	WG487348	Nickel, total (3050)	M6010D ICP	H3	Sample was received and analyzed past holding time.
	WG487337	Selenium, total (3050)	M6020B ICP-MS	H3	Sample was received and analyzed past holding time.
		Silver, total (3050)	M6020B ICP-MS	H3	Sample was received and analyzed past holding time.
	WG486513	Solids, Percent	D2216-80	H3	Sample was received and analyzed past holding time.
	WG487337	Thallium, total (3050)	M6020B ICP-MS	H3	Sample was received and analyzed past holding time.
	WG487348	Vanadium, total (3050)	M6010D ICP	H3	Sample was received and analyzed past holding time.
			M6010D ICP	M1	Matrix spike recovery was high, the recovery of the associated control sample (LCS or LFB) was acceptable.
		Zinc, total (3050)	M6010D ICP	H3	Sample was received and analyzed past holding time.

Rise Grass Valley Inc.

ACZ Project ID: **L55822**

Soil Analysis

The following parameters are not offered for certification or are not covered by NELAC certificate #ACZ.

Solids, Percent

D2216-80

Rise Grass Valley Inc.

ACZ Project ID: L55822

Date Received: 11/11/2019 14:20

Received By:

Date Printed: 11/13/2019

Receipt Verification

	YES	NO	NA
1) Is a foreign soil permit included for applicable samples?	☐	☐	☒
2) Is the Chain of Custody form or other directive shipping papers present?	☒	☐	☐
3) Does this project require special handling procedures such as CLP protocol?	☐	☒	☐
4) Are any samples NRC licensable material?	☐	☐	☒
5) If samples are received past hold time, proceed with requested short hold time analyses?	☒	☐	☐
6) Is the Chain of Custody form complete and accurate?	☒	☐	☐
7) Were any changes made to the Chain of Custody form prior to ACZ receiving the samples?	☐	☒	☐

Samples/Containers

	YES	NO	NA
8) Are all containers intact and with no leaks?	☒	☐	☐
9) Are all labels on containers and are they intact and legible?	☒	☐	☐
10) Do the sample labels and Chain of Custody form match for Sample ID, Date, and Time?	☒	☐	☐
11) For preserved bottle types, was the pH checked and within limits? ¹	☐	☐	☒
12) Is there sufficient sample volume to perform all requested work?	☒	☐	☐
13) Is the custody seal intact on all containers?	☐	☐	☒
14) Are samples that require zero headspace acceptable?	☐	☐	☒
15) Are all sample containers appropriate for analytical requirements?	☒	☐	☐
16) Is there an Hg-1631 trip blank present?	☐	☐	☒
17) Is there a VOA trip blank present?	☐	☐	☒
18) Were all samples received within hold time?	☐	☒	☐

Some parameters were received past hold time.

NA indicates Not Applicable

Chain of Custody Related Remarks

Client Contact Remarks

Shipping Containers

Cooler Id	Temp (°C)	Temp Criteria (°C)	Rad (µR/Hr)	Custody Seal Intact?
NA31790	12.2	NA	14	N/A

Was ice present in the shipment container(s)?

No - Wet or gel ice was not present in the shipment container(s).

Client must contact an ACZ Project Manager if analysis should not proceed for samples received outside of their thermal preservation acceptance criteria.

Rise Grass Valley Inc.

ACZ Project ID: L55822

Date Received: 11/11/2019 14:20

Received By:

Date Printed: 11/13/2019

¹ The preservation of the following bottle types is not checked at sample receipt: Orange (oil and grease), Purple (total cyanide), Pink (dissolved cyanide), Brown (arsenic speciation), Sterile (fecal coliform), EDTA (sulfite), HCl preserved vial (organics), Na₂S₂O₃ preserved vial (organics), and HG-1631 (total/dissolved mercury by method 1631).

Laboratories, Inc. L55822

2773 Downhill Drive Steamboat Springs, CO 80487 (800) 334-5493

CHAIN of CUSTODY

Report to:

Name: Ben Mossman		Address: 333 Crown Point Circle Suite 215
Company: Rise Gold Corp.		Grass Valley Ca. 95945
E-mail: ceo@risegoldcorp.com		Telephone: 604-219-9072

Copy of Report to:

Name: Andy Kopania	E-mail: akopania@sbcglobal.net
Company: EMKO Environmental	Telephone: 916-718-5519

Invoice to:

Name: Ben Mossman		Address: 333 Crown Point Circle Suite 215
Company: Rise Gold Corp.		Grass Valley Ca. 95945
E-mail: ceo@risegoldcorp.com		Telephone: 604-219-9072

If sample(s) received past holding time (HT), or if insufficient HT remains to complete analysis before expiration, shall ACZ proceed with requested short HT analyses?

YES

NC

If "NO" then ACZ will contact client for further instruction. If neither "YES" nor "NO" is indicated, ACZ will proceed with the requested analyses, even if HT is expired, and data will be qualified.

Are samples for SDWA Compliance Monitoring?

Yes

No

If yes, please include state forms. Results will be reported to PQL for Colorado.

Sampler's Name: BM **Sampler's Site Information** **State** CA **Zip code** 95945 **Time Zone** PST

***Sampler's Signature:**

Sampler's Site Information

State CA

Zip code

Zip code 95945 Time Zone PST

*I attest to the authenticity and validity of this sample. I understand that intentionally mislabeling the time/date/location or tampering with the sample in anyway, is considered fraud and punishable by State Law.

PROJECT INFORMATION

ANALYSES REQUESTED (attach list or use quote number)

Quote #: PULP-2			# of Containers Metals by ICP & ICP/MS									
PO#:												
Reporting state for compliance testing: CA												
Check box if samples include NRC licensed material?		☐										
SAMPLE IDENTIFICATION		DATE:TIME	Matrix									
• Y973574	3/5/19:12:00 pm	T	1	☒	☐	☐	☐	☐	☐	☐	☐	☐
• Y973575	3/5/19:12:00 pm	T	1	☒	☐	☐	☐	☐	☐	☐	☐	☐
• Y973576	3/5/19:12:00 pm	T	1	☒	☐	☐	☐	☐	☐	☐	☐	☐
• Y973577	3/5/19:12:00 pm	T	1	☒	☐	☐	☐	☐	☐	☐	☐	☐
• Y973578	3/5/19:12:00 pm	T	1	☒	☐	☐	☐	☐	☐	☐	☐	☐
• Y973579	3/5/19:12:00 pm	T	1	☒	☐	☐	☐	☐	☐	☐	☐	☐
• Y973580	3/5/19:12:00 pm	T	1	☒	☐	☐	☐	☐	☐	☐	☐	☐
• Y973581	3/5/19:12:00 pm	T	1	☒	☐	☐	☐	☐	☐	☐	☐	☐
• Y973582	3/5/19:12:00 pm	T	1	☒	☐	☐	☐	☐	☐	☐	☐	☐
• Y973590	3/5/19:12:00 pm	T	1	☒	☐	☐	☐	☐	☐	☐	☐	☐
Matrix	SW (Surface Water) · GW (Ground Water) · WW (Waste Water) · DW (Drinking Water) · SL (Sludge) · SO (Soil) · OL (Oil) · Other (Specify)											

REMARKS

T = tailings (assay pulp)

Please refer to ACZ's terms & conditions located on the reverse side of this COC.

RELINQUISHED BY:	DATE:TIME	RECEIVED BY:	DATE:TIME
<i>AKZ</i>	<i>11/16/19</i> <i>2:15</i>	<i>Dem</i> <i>11/12/19</i>	<i>14:20</i>

FRMAD050.06.14.14

White - Return with sample.

Yellow - Retain for your records.



Laboratories, Inc. L55822

2773 Downhill Drive Steamboat Springs, CO 80487 (800) 334-5493

CHAIN of CUSTODY

Report to:

Name: Ben Mossman	Address: 333 Crown Point Circle Suite 215
Company: Rise Gold Corp.	Grass Valley Ca. 95945
E-mail: ceo@risegoldcorp.com	Telephone: 604-219-9072

Copy of Report to:

Name: Andy Kopania	E-mail: akopania@sbcglobal.net
Company: EMKO Environmental	Telephone: 916-718-5519

Invoice to:

Name: Ben Mossman	Address: 333 Crown Point Circle Suite 215
Company: Rise Gold Corp.	Grass Valley Ca. 95945
E-mail: ceo@risegoldcorp.com	Telephone: 604-219-9072

If sample(s) received past holding time (HT), or if insufficient HT remains to complete analysis before expiration, shall ACZ proceed with requested short HT analyses? YES ☒ NO ☐

If "NO" then ACZ will contact client for further instruction. If neither "YES" nor "NO" is indicated, ACZ will proceed with the requested analyses, even if HT is expired, and data will be qualified

Are samples for SDWA Compliance Monitoring? Yes ☐ No ☒

If yes, please include state forms. Results will be reported to PQL for Colorado.

Sampler's Name: BM Sampler's Site Information State CA Zip code 95945 Time Zone PST

*Sampler's Signature: *[Signature]* *I attest to the authenticity and validity of this sample. I understand that intentionally mislabeling the time/date/location or tampering with the sample in anyway, is considered fraud and punishable by State Law.

PROJECT INFORMATION

Quote #: PULP-2	# of Containers	Metals by ICP & ICP/MS	ANALYSES REQUESTED (attach list or use quote number)														
PO#:																	
Reporting state for compliance testing: CA																	
Check box if samples include NRC licensed material? ☐																	
SAMPLE IDENTIFICATION	DATE:TIME	Matrix															
• Y973591	3/5/19:12:00 pm	T	1	☒	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
• Y973592	3/5/19:12:00 pm	T	1	☒	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
• Y973593	3/5/19:12:00 pm	T	1	☒	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
• Y973594	3/5/19:12:00 pm	T	1	☒	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
• Y973595	3/5/19:12:00 pm	T	1	☒	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
• Y973596	3/5/19:12:00 pm	T	1	☒	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
• Y973597	3/5/19:12:00 pm	T	1	☒	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
				☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
				☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
				☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
Matrix	SW (Surface Water) · GW (Ground Water) · WW (Waste Water) · DW (Drinking Water) · SL (Sludge) · SO (Soil) · OL (Oil) · Other (Specify)																

REMARKS

T = tailings (assay pulp)

Please refer to ACZ's terms & conditions located on the reverse side of this COC.

RELINQUISHED BY:	DATE:TIME	RECEIVED BY:	DATE:TIME
<i>[Signature]</i>	11/5/19 2:15pm	<i>[Signature]</i>	11/12/19 12:20

FRMAD050.06.14.14

White - Return with sample. Yellow - Retain for your records.



Laboratories, Inc. L55822

CHAIN of CUSTODY

2773 Downhill Drive Steamboat Springs, CO 80487 (800) 334-5493

Report to:

Name: Ben Mossman
Company: Rise Gold Corp.
E-mail: ceo@risegoldcorp.com

Address: 333 Crown Point Circle Suite 215
Grass Valley Ca. 95945
Telephone: 604-219-9072

Copy of Report to:

Name: Andy Kopania
Company: EMKO Environmental

E-mail: akopania@sbcglobal.net
Telephone: 916-718-5519

Invoice to:

Name: Ben Mossman
Company: Rise Gold Corp.
E-mail: ceo@risegoldcorp.com

Address: 333 Crown Point Circle Suite 215
Grass Valley Ca. 95945
Telephone: 604-219-9072

If sample(s) received past holding time (HT), or if insufficient HT remains to complete analysis before expiration, shall ACZ proceed with requested short HT analyses?

YES ☒
NO ☐

If "NO" then ACZ will contact client for further instruction. If neither "YES" nor "NO" is indicated, ACZ will proceed with the requested analyses, even if HT is expired, and data will be qualified

Are samples for SDWA Compliance Monitoring?

Yes ☐ No ☒

If yes, please include state forms. Results will be reported to PQL for Colorado.

Sampler's Name: BM Sampler's Site Information State CA Zip code 95945 Time Zone PST

*Sampler's Signature: *[Signature]* *I attest to the authenticity and validity of this sample. I understand that intentionally mislabeling the time/date/location or tampering with the sample in anyway, is considered fraud and punishable by State Law.

PROJECT INFORMATION

ANALYSES REQUESTED (attach list or use quote number)

Quote #: PULP-2

PO#:

Reporting state for compliance testing: CA

Check box if samples include NRC licensed material? ☐

SAMPLE IDENTIFICATION			DATE:TIME	Matrix	# of Containers	Metals by ICP & ICPMS											
•	Y973564		3/5/19:12:00 pm	T	1	☒	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
•	Y973565		3/5/19:12:00 pm	T	1	☒	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
•	Y973566		3/5/19:12:00 pm	T	1	☒	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
•	Y973567		3/5/19:12:00 pm	T	1	☒	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
•	Y973568		3/5/19:12:00 pm	T	1	☒	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
•	Y973569		3/5/19:12:00 pm	T	1	☒	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
•	Y973570		3/5/19:12:00 pm	T	1	☒	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
•	Y973571		3/5/19:12:00 pm	T	1	☒	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
•	Y973572		3/5/19:12:00 pm	T	1	☒	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
•	Y973573		3/5/19:12:00 pm	T	1	☒	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐

Matrix SW (Surface Water) · GW (Ground Water) · WW (Waste Water) · DW (Drinking Water) · SL (Sludge) · SO (Soil) · OL (Oil) · Other (Specify)

REMARKS

T = tailings (assay pulp)

Please refer to ACZ's terms & conditions located on the reverse side of this CQC.

RELINQUISHED BY:	DATE:TIME	RECEIVED BY:	DATE:TIME
<i>AL 92</i>	11/6/19 2:15pm	<i>[Signature]</i>	11/12/19 14:20

FRMAD050.06.14.14

White - Return with sample. Yellow - Retain for your records.

L55822 Chain of Custody



Laboratories, Inc. *L 55822*

2773 Downhill Drive Steamboat Springs, CO 80487 (800) 334-5493

CHAIN of CUSTODY

Report to:

Name: Ben Mossman	Address: 333 Crown Point Circle Suite 215
Company: Rise Gold Corp.	Grass Valley Ca. 95945
E-mail: ceo@risegoldcorp.com	Telephone: 604-219-9072

Copy of Report to:

Name: Andy Kopania	E-mail: akopania@sbcglobal.net
Company: EMKO Environmental	Telephone: 916-718-5519

Invoice to:

Name: Ben Mossman	Address: 333 Crown Point Circle Suite 215
Company: Rise Gold Corp.	Grass Valley Ca. 95945
E-mail: ceo@risegoldcorp.com	Telephone: 604-219-9072

If sample(s) received past holding time (HT), or if insufficient HT remains to complete analysis before expiration, shall ACZ proceed with requested short HT analyses? YES ☒ NO ☐

If "NO" then ACZ will contact client for further instruction. If neither "YES" nor "NO" is indicated, ACZ will proceed with the requested analyses, even if HT is expired, and data will be qualified

Are samples for SDWA Compliance Monitoring? Yes ☐ No ☒

If yes, please include state forms. Results will be reported to PQL for Colorado.

Sampler's Name: BM Sampler's Site Information State CA Zip code 95945 Time Zone PST

*Sampler's Signature: *[Signature]* *I attest to the authenticity and validity of this sample. I understand that intentionally mislabeling the time/date/location or tampering with the sample in anyway, is considered fraud and punishable by State Law.

PROJECT INFORMATION

ANALYSES REQUESTED (attach list or use quote number)

Quote #: PULP-2	# of Containers	Metals by ICP & ICPMS										
PO#:												
Reporting state for compliance testing: CA												
Check box if samples include NRC licensed material? ☐												
SAMPLE IDENTIFICATION	DATE:TIME	Matrix										
• Y973574	3/5/19:12:00 pm	T	1	☒	☐	☐	☐	☐	☐	☐	☐	☐
• Y973575	3/5/19:12:00 pm	T	1	☒	☐	☐	☐	☐	☐	☐	☐	☐
• Y973576	3/5/19:12:00 pm	T	1	☒	☐	☐	☐	☐	☐	☐	☐	☐
• Y973577	3/5/19:12:00 pm	T	1	☒	☐	☐	☐	☐	☐	☐	☐	☐
• Y973578	3/5/19:12:00 pm	T	1	☒	☐	☐	☐	☐	☐	☐	☐	☐
• Y973579	3/5/19:12:00 pm	T	1	☒	☐	☐	☐	☐	☐	☐	☐	☐
• Y973580	3/5/19:12:00 pm	T	1	☒	☐	☐	☐	☐	☐	☐	☐	☐
• Y973581	3/5/19:12:00 pm	T	1	☒	☐	☐	☐	☐	☐	☐	☐	☐
• Y973582	3/5/19:12:00 pm	T	1	☒	☐	☐	☐	☐	☐	☐	☐	☐
• Y973590	3/5/19:12:00 pm	T	1	☒	☐	☐	☐	☐	☐	☐	☐	☐
Matrix	SW (Surface Water) · GW (Ground Water) · WW (Waste Water) · DW (Drinking Water) · SL (Sludge) · SO (Soil) · OL (Oil) · Other (Specify)											

REMARKS

T = tailings (assay pulp)

Please refer to ACZ's terms & conditions located on the reverse side of this COC.

RELINQUISHED BY:	DATE:TIME	RECEIVED BY:	DATE:TIME
<i>[Signature]</i>	11/16/19 2:15	<i>[Signature]</i>	11/12/19 14:20

FRMAD050.06.14.14

White - Return with sample. Yellow - Retain for your records.

2

Laboratories, Inc. L55822

2773 Downhill Drive Steamboat Springs, CO 80487 (800) 334-5493

CHAIN of CUSTODY

Report to:

Name: Ben Mossman	Address: 333 Crown Point Circle Suite 215 Grass Valley Ca. 95945 Telephone: 604-219-9072
Company: Rise Gold Corp.	
E-mail: ceo@risegoldcorp.com	

Copy of Report to:

Name: Andy Kopania	E-mail: akopania@sbcglobal.net
Company: EMKO Environmental	Telephone: 916-718-5519

Invoice to:

Name: Ben Mossman	Address: 333 Crown Point Circle Suite 215 Grass Valley Ca. 95945 Telephone: 604-219-9072
Company: Rise Gold Corp.	
E-mail: ceo@risegoldcorp.com	

If sample(s) received past holding time (HT), or if insufficient HT remains to complete analysis before expiration, shall ACZ proceed with requested short HT analyses?

YES	☒
NO	☐

If "NO" then ACZ will contact client for further instruction. If neither "YES" nor "NO" is indicated, ACZ will proceed with the requested analyses, even if HT is expired, and data will be qualified.

Are samples for SDWA Compliance Monitoring?

Yes	☐

No	☒

If yes, please include state forms. Results will be reported to PQL for Colorado.

Sampler's Name: BM
 Sampler's Site Information
 State CA
 Zip code 95945
 Time Zone PST

* I attest to the authenticity and validity of this sample. I understand that intentionally mislabeling the time/date/location or tampering with the sample in anyway is considered fraud and punishable by State Law.

PROJECT INFORMATION

ANALYSES REQUESTED (attach list or use quote number)

Quote #: PULP-2			# of Containers	Metals by ICP & ICP/MS																
PO#:																				
Reporting state for compliance testing: CA																				
Check box if samples include NRC licensed material?		☐																		
SAMPLE IDENTIFICATION		DATE:TIME	Matrix																	
• Y973591	3/5/19:12:00 pm	T	1	☒	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	
• Y973592	3/5/19:12:00 pm	T	1	☒	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	
• Y973593	3/5/19:12:00 pm	T	1	☒	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	
• Y973594	3/5/19:12:00 pm	T	1	☒	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	
• Y973595	3/5/19:12:00 pm	T	1	☒	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	
• Y973596	3/5/19:12:00 pm	T	1	☒	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	
• Y973597	3/5/19:12:00 pm	T	1	☒	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	
				☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	
				☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	
				☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	
Matrix	SW (Surface Water) · GW (Ground Water) · WW (Waste Water) · DW (Drinking Water) · SL (Sludge) · SO (Soil) · OL (Oil) · Other (Specify)																			

REMARKS

T = tailings (assay pulp)

Please refer to ACZ's terms & conditions located on the reverse side of this COC.

RELINQUISHED BY:	DATE:TIME	RECEIVED BY:	DATE:TIME
<i>CM 92</i>	<i>11/5/19 2:15pm</i>	<i>[Signature]</i>	<i>11/12/19 14:20</i>

February 18, 2020

Report to:

Ben Mossman
Rise Grass Valley Inc.
Suite 215 - 333 Crown Point Circle
Grass Valley, CA 95945

Bill to:

Ben Mossman
Rise Grass Valley Inc.
Suite 215 - 333 Crown Point Circle
Grass Valley, CA 95945

cc: Andy Kopania

Project ID:

ACZ Project ID: L57125

Ben Mossman:

Enclosed are the analytical results for sample(s) submitted to ACZ Laboratories, Inc. (ACZ) on January 29, 2020. This project has been assigned to ACZ's project number, L57125. Please reference this number in all future inquiries.

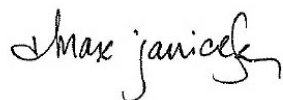
All analyses were performed according to ACZ's Quality Assurance Plan. The enclosed results relate only to the samples received under L57125. Each section of this report has been reviewed and approved by the appropriate Laboratory Supervisor, or a qualified substitute.

Except as noted, the test results for the methods and parameters listed on ACZ's current NELAC certificate letter (#ACZ) meet all requirements of NELAC.

This report shall be used or copied only in its entirety. ACZ is not responsible for the consequences arising from the use of a partial report.

All samples and sub-samples associated with this project will be disposed of after March 19, 2020. If the samples are determined to be hazardous, additional charges apply for disposal (typically \$11/sample). If you would like the samples to be held longer than ACZ's stated policy or to be returned, please contact your Project Manager or Customer Service Representative for further details and associated costs. ACZ retains analytical raw data reports for ten years.

If you have any questions or other needs, please contact your Project Manager.



Max Janicek has reviewed and
approved this report.



Rise Grass Valley Inc.

Project ID:

Sample ID: MA-1

ACZ Sample ID: **L57125-01**

Date Sampled: 10/29/19 10:45

Date Received: 01/29/20

Sample Matrix: Soil

Soil Analysis

Parameter	EPA Method	Dilution	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Acid Generation Potential (calc on Sulfur total)	M600/2-78-054 3.2.4		35.3			t CaCO3/Kt	0.31	3.1	02/18/20 0:00	calc
Acid Neutralization Potential (calc)	M600/2-78-054 1.3		241			t CaCO3/Kt	1	5	02/18/20 0:00	calc
Acid-Base Potential (calc on Sulfur total)	M600/2-78-054 1.3		206			t CaCO3/Kt			02/18/20 0:00	calc
ANP to AGP Ratio (calc)	M600/2-78-054 NV Modified Sobek Procedure		6.82			t CaCO3/Kt			02/18/20 0:00	calc
Neutralization Potential as CaCO3 pH, Saturated Paste	M600/2-78-054 NV Modified Sobek Procedure EPA 600/2-78-054 section 3.2.2	1	24.1		*	%	0.1	0.5	02/10/20 18:03	nnk
Max Particle Size		1	250		*	um			02/12/20 0:00	mlp
pH		1	9.4		*	units	0.1	0.1	02/12/20 0:00	mlp
Sulfur Forms	M600/2-78-054 3.2.4 & 3.2.6 NV Modified Sobek Proc									
Sulfur HCl Extractable		1	0.94		*	%	0.01	0.1	02/12/20 0:00	llr
Sulfur HNO3 Extractable		1	0.02	B	*	%	0.01	0.1	02/12/20 0:00	llr
Sulfur Hot H2O Extractable		1	0.13		*	%	0.01	0.1	02/12/20 0:00	llr
Sulfur Residual		1	0.04	B	*	%	0.01	0.1	02/12/20 0:00	llr
Sulfur Total		1	1.13		*	%	0.01	0.1	02/12/20 0:00	llr

Soil Preparation

Parameter	EPA Method	Dilution	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Crush and Pulverize (Ring & Puck)	EPA-600/2-78-054 3.1.3								02/10/20 15:12	jms
Saturated Paste Extraction	USDA No. 60 (2)								02/11/20 14:18	mlp

Rise Grass Valley Inc.

Project ID:

Sample ID: MA-2

ACZ Sample ID: **L57125-02**

Date Sampled: 10/29/19 11:05

Date Received: 01/29/20

Sample Matrix: Soil

Soil Analysis

Parameter	EPA Method	Dilution	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Acid Generation Potential (calc on Sulfur total)	M600/2-78-054 3.2.4		12.5			t CaCO3/Kt	0.31	3.1	02/18/20 0:00	calc
Acid Neutralization Potential (calc)	M600/2-78-054 1.3		150			t CaCO3/Kt	1	5	02/18/20 0:00	calc
Acid-Base Potential (calc on Sulfur total)	M600/2-78-054 1.3		138			t CaCO3/Kt			02/18/20 0:00	calc
ANP to AGP Ratio (calc)	M600/2-78-054 NV Modified Sobek Procedure		12			t CaCO3/Kt			02/18/20 0:00	calc
Neutralization Potential as CaCO3 pH, Saturated Paste	M600/2-78-054 NV Modified Sobek Procedure EPA 600/2-78-054 section 3.2.2	1	15.0		*	%	0.1	0.5	02/10/20 22:12	nnk
Max Particle Size		1	250		*	um			02/12/20 0:00	mlp
pH		1	9.4		*	units	0.1	0.1	02/12/20 0:00	mlp
Sulfur Forms	M600/2-78-054 3.2.4 & 3.2.6 NV Modified Sobek Proc									
Sulfur HCl Extractable		1	0.11		*	%	0.01	0.1	02/12/20 0:00	llr
Sulfur HNO3 Extractable		1	0.27		*	%	0.01	0.1	02/12/20 0:00	llr
Sulfur Hot H2O Extractable		1		U	*	%	0.01	0.1	02/12/20 0:00	llr
Sulfur Residual		1	0.03	B	*	%	0.01	0.1	02/12/20 0:00	llr
Sulfur Total		1	0.40		*	%	0.01	0.1	02/12/20 0:00	llr

Soil Preparation

Parameter	EPA Method	Dilution	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Crush and Pulverize (Ring & Puck)	EPA-600/2-78-054 3.1.3								02/10/20 15:17	jms
Saturated Paste Extraction	USDA No. 60 (2)								02/11/20 14:20	mlp

Rise Grass Valley Inc.

Project ID:

Sample ID: MA-3

ACZ Sample ID: **L57125-03**

Date Sampled: 10/29/19 11:45

Date Received: 01/29/20

Sample Matrix: Soil

Soil Analysis

Parameter	EPA Method	Dilution	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Acid Generation Potential (calc on Sulfur total)	M600/2-78-054 3.2.4		1.25	B		t CaCO3/Kt	0.31	3.1	02/18/20 0:00	calc
Acid Neutralization Potential (calc)	M600/2-78-054 1.3		134			t CaCO3/Kt	1	5	02/18/20 0:00	calc
Acid-Base Potential (calc on Sulfur total)	M600/2-78-054 1.3		133			t CaCO3/Kt			02/18/20 0:00	calc
ANP to AGP Ratio (calc)	M600/2-78-054 NV Modified Sobek Procedure		107			t CaCO3/Kt			02/18/20 0:00	calc
Neutralization Potential as CaCO3 pH, Saturated Paste	M600/2-78-054 NV Modified Sobek Procedure EPA 600/2-78-054 section 3.2.2	1	13.4		*	%	0.1	0.5	02/11/20 2:20	nnk
Max Particle Size		1	250		*	um			02/12/20 0:00	mlp
pH		1	9.3		*	units	0.1	0.1	02/12/20 0:00	mlp
Sulfur Forms	M600/2-78-054 3.2.4 & 3.2.6 NV Modified Sobek Proc									
Sulfur HCl Extractable		1	0.01	B	*	%	0.01	0.1	02/12/20 0:00	llr
Sulfur HNO3 Extractable		1	0.04	B	*	%	0.01	0.1	02/12/20 0:00	llr
Sulfur Hot H2O Extractable		1		U	*	%	0.01	0.1	02/12/20 0:00	llr
Sulfur Residual		1		U	*	%	0.01	0.1	02/12/20 0:00	llr
Sulfur Total		1	0.04	B	*	%	0.01	0.1	02/12/20 0:00	llr

Soil Preparation

Parameter	EPA Method	Dilution	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Crush and Pulverize (Ring & Puck)	EPA-600/2-78-054 3.1.3								02/10/20 15:23	jms
Saturated Paste Extraction	USDA No. 60 (2)								02/11/20 14:22	mlp

Rise Grass Valley Inc.

Project ID:

Sample ID: MAA-1

ACZ Sample ID: **L57125-04**

Date Sampled: 10/29/19 11:20

Date Received: 01/29/20

Sample Matrix: Soil

Soil Analysis

Parameter	EPA Method	Dilution	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Acid Generation Potential (calc on Sulfur total)	M600/2-78-054 3.2.4		60.9			t CaCO3/Kt	0.31	3.1	02/18/20 0:00	calc
Acid Neutralization Potential (calc)	M600/2-78-054 1.3		83.0			t CaCO3/Kt	1	5	02/18/20 0:00	calc
Acid-Base Potential (calc on Sulfur total)	M600/2-78-054 1.3		22.1			t CaCO3/Kt			02/18/20 0:00	calc
ANP to AGP Ratio (calc)	M600/2-78-054 NV Modified Sobek Procedure		1.36			t CaCO3/Kt			02/18/20 0:00	calc
Neutralization Potential as CaCO3 pH, Saturated Paste	M600/2-78-054 NV Modified Sobek Procedure EPA 600/2-78-054 section 3.2.2	1	8.3		*	%	0.1	0.5	02/11/20 5:12	nnk
Max Particle Size		1	250		*	um			02/12/20 0:00	mlp
pH		1	9.7		*	units	0.1	0.1	02/12/20 0:00	mlp
Sulfur Forms	M600/2-78-054 3.2.4 & 3.2.6 NV Modified Sobek Proc									
Sulfur HCl Extractable		1		U	*	%	0.01	0.1	02/12/20 0:00	llr
Sulfur HNO3 Extractable		1	1.78		*	%	0.01	0.1	02/12/20 0:00	llr
Sulfur Hot H2O Extractable		1	0.16		*	%	0.01	0.1	02/12/20 0:00	llr
Sulfur Residual		1	0.04	B	*	%	0.01	0.1	02/12/20 0:00	llr
Sulfur Total		1	1.95		*	%	0.01	0.1	02/12/20 0:00	llr

Soil Preparation

Parameter	EPA Method	Dilution	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Crush and Pulverize (Ring & Puck)	EPA-600/2-78-054 3.1.3								02/10/20 15:28	jms
Saturated Paste Extraction	USDA No. 60 (2)								02/11/20 14:24	mlp

Rise Grass Valley Inc.

Project ID:

Sample ID: MS-1

ACZ Sample ID: **L57125-05**

Date Sampled: 10/29/19 11:00

Date Received: 01/29/20

Sample Matrix: Soil

Soil Analysis

Parameter	EPA Method	Dilution	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Acid Generation Potential (calc on Sulfur total)	M600/2-78-054 3.2.4		6.25			t CaCO3/Kt	0.31	3.1	02/18/20 0:00	calc
Acid Neutralization Potential (calc)	M600/2-78-054 1.3		200			t CaCO3/Kt	1	5	02/18/20 0:00	calc
Acid-Base Potential (calc on Sulfur total)	M600/2-78-054 1.3		194			t CaCO3/Kt			02/18/20 0:00	calc
ANP to AGP Ratio (calc)	M600/2-78-054 NV Modified Sobek Procedure		32			t CaCO3/Kt			02/18/20 0:00	calc
Neutralization Potential as CaCO3 pH, Saturated Paste	M600/2-78-054 NV Modified Sobek Procedure EPA 600/2-78-054 section 3.2.2	1	20.0		*	%	0.1	0.5	02/11/20 6:29	nnk
Max Particle Size		1	250		*	um			02/12/20 0:00	mlp
pH		1	9.8		*	units	0.1	0.1	02/12/20 0:00	mlp
Sulfur Forms	M600/2-78-054 3.2.4 & 3.2.6 NV Modified Sobek Proc									
Sulfur HCl Extractable		1	0.11		*	%	0.01	0.1	02/12/20 0:00	llr
Sulfur HNO3 Extractable		1	0.06	B	*	%	0.01	0.1	02/12/20 0:00	llr
Sulfur Hot H2O Extractable		1		U	*	%	0.01	0.1	02/12/20 0:00	llr
Sulfur Residual		1	0.05	B	*	%	0.01	0.1	02/12/20 0:00	llr
Sulfur Total		1	0.20		*	%	0.01	0.1	02/12/20 0:00	llr

Soil Preparation

Parameter	EPA Method	Dilution	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Crush and Pulverize (Ring & Puck)	EPA-600/2-78-054 3.1.3								02/10/20 15:33	jms
Saturated Paste Extraction	USDA No. 60 (2)								02/11/20 14:26	mlp

Rise Grass Valley Inc.

Project ID:

Sample ID: S-1

ACZ Sample ID: **L57125-06**

Date Sampled: 10/29/19 11:25

Date Received: 01/29/20

Sample Matrix: Soil

Soil Analysis

Parameter	EPA Method	Dilution	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Acid Generation Potential (calc on Sulfur total)	M600/2-78-054 3.2.4		4.38			t CaCO3/Kt	0.31	3.1	02/18/20 0:00	calc
Acid Neutralization Potential (calc)	M600/2-78-054 1.3		36.0			t CaCO3/Kt	1	5	02/18/20 0:00	calc
Acid-Base Potential (calc on Sulfur total)	M600/2-78-054 1.3		31.6			t CaCO3/Kt			02/18/20 0:00	calc
ANP to AGP Ratio (calc)	M600/2-78-054 NV Modified Sobek Procedure		8.23			t CaCO3/Kt			02/18/20 0:00	calc
Neutralization Potential as CaCO3 pH, Saturated Paste	M600/2-78-054 NV Modified Sobek Procedure EPA 600/2-78-054 section 3.2.2	1	3.6		*	%	0.1	0.5	02/11/20 7:52	nnk
Max Particle Size		1	250		*	um			02/12/20 0:00	mlp
pH		1	10.1		*	units	0.1	0.1	02/12/20 0:00	mlp
Sulfur Forms	M600/2-78-054 3.2.4 & 3.2.6 NV Modified Sobek Proc									
Sulfur HCl Extractable		1		U	*	%	0.01	0.1	02/12/20 0:00	llr
Sulfur HNO3 Extractable		1	0.13		*	%	0.01	0.1	02/12/20 0:00	llr
Sulfur Hot H2O Extractable		1		U	*	%	0.01	0.1	02/12/20 0:00	llr
Sulfur Residual		1	0.02	B	*	%	0.01	0.1	02/12/20 0:00	llr
Sulfur Total		1	0.14		*	%	0.01	0.1	02/12/20 0:00	llr

Soil Preparation

Parameter	EPA Method	Dilution	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Crush and Pulverize (Ring & Puck)	EPA-600/2-78-054 3.1.3								02/10/20 15:39	jms
Saturated Paste Extraction	USDA No. 60 (2)								02/11/20 14:28	mlp

Rise Grass Valley Inc.

Project ID:

Sample ID: F-1 (ABC)

ACZ Sample ID: **L57125-07**

Date Sampled: 11/04/19 12:00

Date Received: 01/29/20

Sample Matrix: Soil

Soil Analysis

Parameter	EPA Method	Dilution	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Acid Generation Potential (calc on Sulfur total)	M600/2-78-054 3.2.4		1.25	B		t CaCO3/Kt	0.31	3.1	02/18/20 0:00	calc
Acid Neutralization Potential (calc)	M600/2-78-054 1.3		199			t CaCO3/Kt	1	5	02/18/20 0:00	calc
Acid-Base Potential (calc on Sulfur total)	M600/2-78-054 1.3		198			t CaCO3/Kt			02/18/20 0:00	calc
ANP to AGP Ratio (calc)	M600/2-78-054 NV Modified Sobek Procedure		159			t CaCO3/Kt			02/18/20 0:00	calc
Neutralization Potential as CaCO3 pH, Saturated Paste	M600/2-78-054 NV Modified Sobek Procedure EPA 600/2-78-054 section 3.2.2	1	19.9		*	%	0.1	0.5	02/11/20 10:38	nnk
Max Particle Size		1	250		*	um			02/12/20 0:00	mlp
pH		1	8.6		*	units	0.1	0.1	02/12/20 0:00	mlp
Sulfur Forms	M600/2-78-054 3.2.4 & 3.2.6 NV Modified Sobek Proc									
Sulfur HCl Extractable		1		U	*	%	0.01	0.1	02/12/20 0:00	llr
Sulfur HNO3 Extractable		1	0.04	B	*	%	0.01	0.1	02/12/20 0:00	llr
Sulfur Hot H2O Extractable		1		U	*	%	0.01	0.1	02/12/20 0:00	llr
Sulfur Residual		1		U	*	%	0.01	0.1	02/12/20 0:00	llr
Sulfur Total		1	0.04	B	*	%	0.01	0.1	02/12/20 0:00	llr

Soil Preparation

Parameter	EPA Method	Dilution	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Crush and Pulverize (Ring & Puck)	EPA-600/2-78-054 3.1.3								02/10/20 15:44	jms
Saturated Paste Extraction	USDA No. 60 (2)								02/11/20 14:30	mlp

Rise Grass Valley Inc.

Project ID:

Sample ID: F-2 (ABC)

ACZ Sample ID: **L57125-08**

Date Sampled: 11/04/19 12:00

Date Received: 01/29/20

Sample Matrix: Soil

Soil Analysis

Parameter	EPA Method	Dilution	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Acid Generation Potential (calc on Sulfur total)	M600/2-78-054 3.2.4		1.56	B		t CaCO3/Kt	0.31	3.1	02/18/20 0:00	calc
Acid Neutralization Potential (calc)	M600/2-78-054 1.3		194			t CaCO3/Kt	1	5	02/18/20 0:00	calc
Acid-Base Potential (calc on Sulfur total)	M600/2-78-054 1.3		192			t CaCO3/Kt			02/18/20 0:00	calc
ANP to AGP Ratio (calc)	M600/2-78-054 NV Modified Sobek Procedure		124			t CaCO3/Kt			02/18/20 0:00	calc
Neutralization Potential as CaCO3 pH, Saturated Paste	M600/2-78-054 NV Modified Sobek Procedure EPA 600/2-78-054 section 3.2.2	1	19.4		*	%	0.1	0.5	02/11/20 14:46	nnk
Max Particle Size		1	250		*	um			02/12/20 0:00	mlp
pH		1	8.3		*	units	0.1	0.1	02/12/20 0:00	mlp
Sulfur Forms	M600/2-78-054 3.2.4 & 3.2.6 NV Modified Sobek Proc									
Sulfur HCl Extractable		1		U	*	%	0.01	0.1	02/12/20 0:00	llr
Sulfur HNO3 Extractable		1	0.04	B	*	%	0.01	0.1	02/12/20 0:00	llr
Sulfur Hot H2O Extractable		1	0.01	B	*	%	0.01	0.1	02/12/20 0:00	llr
Sulfur Residual		1		U	*	%	0.01	0.1	02/12/20 0:00	llr
Sulfur Total		1	0.05	B	*	%	0.01	0.1	02/12/20 0:00	llr

Soil Preparation

Parameter	EPA Method	Dilution	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Crush and Pulverize (Ring & Puck)	EPA-600/2-78-054 3.1.3								02/10/20 15:49	jms
Saturated Paste Extraction	USDA No. 60 (2)								02/11/20 14:32	mlp

Rise Grass Valley Inc.

Project ID:

Sample ID: F-3 (AB)

ACZ Sample ID: **L57125-09**

Date Sampled: 11/04/19 12:00

Date Received: 01/29/20

Sample Matrix: Soil

Soil Analysis

Parameter	EPA Method	Dilution	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Acid Generation Potential (calc on Sulfur total)	M600/2-78-054 3.2.4		1.88	B		t CaCO3/Kt	0.31	3.1	02/18/20 0:00	calc
Acid Neutralization Potential (calc)	M600/2-78-054 1.3		204			t CaCO3/Kt	1	5	02/18/20 0:00	calc
Acid-Base Potential (calc on Sulfur total)	M600/2-78-054 1.3		202			t CaCO3/Kt			02/18/20 0:00	calc
ANP to AGP Ratio (calc)	M600/2-78-054 NV Modified Sobek Procedure		109			t CaCO3/Kt			02/18/20 0:00	calc
Neutralization Potential as CaCO3 pH, Saturated Paste	M600/2-78-054 NV Modified Sobek Procedure EPA 600/2-78-054 section 3.2.2	1	20.4		*	%	0.1	0.5	02/11/20 18:55	nnk
Max Particle Size		1	250		*	um			02/12/20 0:00	mlp
pH		1	8.9		*	units	0.1	0.1	02/12/20 0:00	mlp
Sulfur Forms	M600/2-78-054 3.2.4 & 3.2.6 NV Modified Sobek Proc									
Sulfur HCl Extractable		1		U	*	%	0.01	0.1	02/12/20 0:00	llr
Sulfur HNO3 Extractable		1	0.06	B	*	%	0.01	0.1	02/12/20 0:00	llr
Sulfur Hot H2O Extractable		1		U	*	%	0.01	0.1	02/12/20 0:00	llr
Sulfur Residual		1		U	*	%	0.01	0.1	02/12/20 0:00	llr
Sulfur Total		1	0.06	B	*	%	0.01	0.1	02/12/20 0:00	llr

Soil Preparation

Parameter	EPA Method	Dilution	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Crush and Pulverize (Ring & Puck)	EPA-600/2-78-054 3.1.3								02/10/20 15:54	jms
Saturated Paste Extraction	USDA No. 60 (2)								02/11/20 14:35	mlp

Rise Grass Valley Inc.
Project ID:
Sample ID: F-4 (AB)

ACZ Sample ID: **L57125-10**
Date Sampled: 11/04/19 12:00
Date Received: 01/29/20
Sample Matrix: Soil

Soil Analysis

Parameter	EPA Method	Dilution	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Acid Generation Potential (calc on Sulfur total)	M600/2-78-054 3.2.4		1.88	B		t CaCO3/Kt	0.31	3.1	02/18/20 0:00	calc
Acid Neutralization Potential (calc)	M600/2-78-054 1.3		189			t CaCO3/Kt	1	5	02/18/20 0:00	calc
Acid-Base Potential (calc on Sulfur total)	M600/2-78-054 1.3		187			t CaCO3/Kt			02/18/20 0:00	calc
ANP to AGP Ratio (calc)	M600/2-78-054 NV Modified Sobek Procedure		101			t CaCO3/Kt			02/18/20 0:00	calc
Neutralization Potential as CaCO3 pH, Saturated Paste	M600/2-78-054 NV Modified Sobek Procedure EPA 600/2-78-054 section 3.2.2	1	18.9		*	%	0.1	0.5	02/11/20 23:03	nnk
Max Particle Size		1	250		*	um			02/12/20 0:00	mlp
pH		1	8.7		*	units	0.1	0.1	02/12/20 0:00	mlp
Sulfur Forms	M600/2-78-054 3.2.4 & 3.2.6 NV Modified Sobek Proc									
Sulfur HCl Extractable		1		U	*	%	0.01	0.1	02/12/20 0:00	llr
Sulfur HNO3 Extractable		1	0.05	B	*	%	0.01	0.1	02/12/20 0:00	llr
Sulfur Hot H2O Extractable		1	0.01	B	*	%	0.01	0.1	02/12/20 0:00	llr
Sulfur Residual		1		U	*	%	0.01	0.1	02/12/20 0:00	llr
Sulfur Total		1	0.06	B	*	%	0.01	0.1	02/12/20 0:00	llr

Soil Preparation

Parameter	EPA Method	Dilution	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Crush and Pulverize (Ring & Puck)	EPA-600/2-78-054 3.1.3								02/10/20 16:00	jms
Saturated Paste Extraction	USDA No. 60 (2)								02/11/20 14:37	mlp

Report Header Explanations

<i>Batch</i>	A distinct set of samples analyzed at a specific time
<i>Found</i>	Value of the QC Type of interest
<i>Limit</i>	Upper limit for RPD, in %.
<i>Lower</i>	Lower Recovery Limit, in % (except for LCSS, mg/Kg)
<i>MDL</i>	Method Detection Limit. Same as Minimum Reporting Limit unless omitted or equal to the PQL (see comment #5). Allows for instrument and annual fluctuations.
<i>PCN/SCN</i>	A number assigned to reagents/standards to trace to the manufacturer's certificate of analysis
<i>PQL</i>	Practical Quantitation Limit. Synonymous with the EPA term "minimum level".
<i>QC</i>	True Value of the Control Sample or the amount added to the Spike
<i>Rec</i>	Recovered amount of the true value or spike added, in % (except for LCSS, mg/Kg)
<i>RPD</i>	Relative Percent Difference, calculation used for Duplicate QC Types
<i>Upper</i>	Upper Recovery Limit, in % (except for LCSS, mg/Kg)
<i>Sample</i>	Value of the Sample of interest

QC Sample Types

<i>AS</i>	Analytical Spike (Post Digestion)	<i>LCSWD</i>	Laboratory Control Sample - Water Duplicate
<i>ASD</i>	Analytical Spike (Post Digestion) Duplicate	<i>LFB</i>	Laboratory Fortified Blank
<i>CCB</i>	Continuing Calibration Blank	<i>LFM</i>	Laboratory Fortified Matrix
<i>CCV</i>	Continuing Calibration Verification standard	<i>LFMD</i>	Laboratory Fortified Matrix Duplicate
<i>DUP</i>	Sample Duplicate	<i>LRB</i>	Laboratory Reagent Blank
<i>ICB</i>	Initial Calibration Blank	<i>MS</i>	Matrix Spike
<i>ICV</i>	Initial Calibration Verification standard	<i>MSD</i>	Matrix Spike Duplicate
<i>ICSAB</i>	Inter-element Correction Standard - A plus B solutions	<i>PBS</i>	Prep Blank - Soil
<i>LCSS</i>	Laboratory Control Sample - Soil	<i>PBW</i>	Prep Blank - Water
<i>LCSSD</i>	Laboratory Control Sample - Soil Duplicate	<i>PQV</i>	Practical Quantitation Verification standard
<i>LCSW</i>	Laboratory Control Sample - Water	<i>SDL</i>	Serial Dilution

QC Sample Type Explanations

Blanks	Verifies that there is no or minimal contamination in the prep method or calibration procedure.
Control Samples	Verifies the accuracy of the method, including the prep procedure.
Duplicates	Verifies the precision of the instrument and/or method.
Spikes/Fortified Matrix	Determines sample matrix interferences, if any.
Standard	Verifies the validity of the calibration.

ACZ Qualifiers (Qual)

B	Analyte concentration detected at a value between MDL and PQL. The associated value is an estimated quantity.
H	Analysis exceeded method hold time. pH is a field test with an immediate hold time.
L	Target analyte response was below the laboratory defined negative threshold.
U	The material was analyzed for, but was not detected above the level of the associated value. The associated value is either the sample quantitation limit or the sample detection limit.

Method References

(1)	EPA 600/4-83-020. Methods for Chemical Analysis of Water and Wastes, March 1983.
(2)	EPA 600/R-93-100. Methods for the Determination of Inorganic Substances in Environmental Samples, August 1993.
(3)	EPA 600/R-94-111. Methods for the Determination of Metals in Environmental Samples - Supplement I, May 1994.
(4)	EPA SW-846. Test Methods for Evaluating Solid Waste.
(5)	Standard Methods for the Examination of Water and Wastewater.

Comments

(1)	QC results calculated from raw data. Results may vary slightly if the rounded values are used in the calculations.
(2)	Soil, Sludge, and Plant matrices for Inorganic analyses are reported on a dry weight basis.
(3)	Animal matrices for Inorganic analyses are reported on an "as received" basis.
(4)	An asterisk in the "XQ" column indicates there is an extended qualifier and/or certification qualifier associated with the result.
(5)	If the MDL equals the PQL or the MDL column is omitted, the PQL is the reporting limit.

For a complete list of ACZ's Extended Qualifiers, please click:

<https://acz.com/wp-content/uploads/2019/04/Ext-Qual-List.pdf>

Rise Grass Valley Inc.

ACZ Project ID: **L57125**

ACZ ID	WORKNUM	PARAMETER	METHOD	QUAL	DESCRIPTION
L57125-01	WG491537	Neutralization Potential as CaCO ₃	M600/2-78-054 NV Modified Sobek Procedure	M1	Matrix spike recovery was high, the recovery of the associated control sample (LCS or LFB) was acceptable.
	WG491527	Sulfur HCl Extractable	M600/2-78-054 3.2.4 & 3.2.6 NV Modified Sobek Proc	RA	Relative Percent Difference (RPD) was not used for data validation because the concentration of the duplicated sample is too low for accurate evaluation (< 10x MDL).
		Sulfur HNO ₃ Extractable	M600/2-78-054 3.2.4 & 3.2.6 NV Modified Sobek Proc	RA	Relative Percent Difference (RPD) was not used for data validation because the concentration of the duplicated sample is too low for accurate evaluation (< 10x MDL).
		Sulfur Hot H ₂ O Extractable	M600/2-78-054 3.2.4 & 3.2.6 NV Modified Sobek Proc	RA	Relative Percent Difference (RPD) was not used for data validation because the concentration of the duplicated sample is too low for accurate evaluation (< 10x MDL).
		Sulfur Residual	M600/2-78-054 3.2.4 & 3.2.6 NV Modified Sobek Proc	RA	Relative Percent Difference (RPD) was not used for data validation because the concentration of the duplicated sample is too low for accurate evaluation (< 10x MDL).
		Sulfur Total	M600/2-78-054 3.2.4 & 3.2.6 NV Modified Sobek Proc	RA	Relative Percent Difference (RPD) was not used for data validation because the concentration of the duplicated sample is too low for accurate evaluation (< 10x MDL).
L57125-02	WG491537	Neutralization Potential as CaCO ₃	M600/2-78-054 NV Modified Sobek Procedure	M1	Matrix spike recovery was high, the recovery of the associated control sample (LCS or LFB) was acceptable.
	WG491527	Sulfur HCl Extractable	M600/2-78-054 3.2.4 & 3.2.6 NV Modified Sobek Proc	RA	Relative Percent Difference (RPD) was not used for data validation because the concentration of the duplicated sample is too low for accurate evaluation (< 10x MDL).
		Sulfur HNO ₃ Extractable	M600/2-78-054 3.2.4 & 3.2.6 NV Modified Sobek Proc	RA	Relative Percent Difference (RPD) was not used for data validation because the concentration of the duplicated sample is too low for accurate evaluation (< 10x MDL).
		Sulfur Hot H ₂ O Extractable	M600/2-78-054 3.2.4 & 3.2.6 NV Modified Sobek Proc	RA	Relative Percent Difference (RPD) was not used for data validation because the concentration of the duplicated sample is too low for accurate evaluation (< 10x MDL).
		Sulfur Residual	M600/2-78-054 3.2.4 & 3.2.6 NV Modified Sobek Proc	RA	Relative Percent Difference (RPD) was not used for data validation because the concentration of the duplicated sample is too low for accurate evaluation (< 10x MDL).
		Sulfur Total	M600/2-78-054 3.2.4 & 3.2.6 NV Modified Sobek Proc	RA	Relative Percent Difference (RPD) was not used for data validation because the concentration of the duplicated sample is too low for accurate evaluation (< 10x MDL).
L57125-03	WG491537	Neutralization Potential as CaCO ₃	M600/2-78-054 NV Modified Sobek Procedure	M1	Matrix spike recovery was high, the recovery of the associated control sample (LCS or LFB) was acceptable.
	WG491527	Sulfur HCl Extractable	M600/2-78-054 3.2.4 & 3.2.6 NV Modified Sobek Proc	RA	Relative Percent Difference (RPD) was not used for data validation because the concentration of the duplicated sample is too low for accurate evaluation (< 10x MDL).
		Sulfur HNO ₃ Extractable	M600/2-78-054 3.2.4 & 3.2.6 NV Modified Sobek Proc	RA	Relative Percent Difference (RPD) was not used for data validation because the concentration of the duplicated sample is too low for accurate evaluation (< 10x MDL).
		Sulfur Hot H ₂ O Extractable	M600/2-78-054 3.2.4 & 3.2.6 NV Modified Sobek Proc	RA	Relative Percent Difference (RPD) was not used for data validation because the concentration of the duplicated sample is too low for accurate evaluation (< 10x MDL).
		Sulfur Residual	M600/2-78-054 3.2.4 & 3.2.6 NV Modified Sobek Proc	RA	Relative Percent Difference (RPD) was not used for data validation because the concentration of the duplicated sample is too low for accurate evaluation (< 10x MDL).
		Sulfur Total	M600/2-78-054 3.2.4 & 3.2.6 NV Modified Sobek Proc	RA	Relative Percent Difference (RPD) was not used for data validation because the concentration of the duplicated sample is too low for accurate evaluation (< 10x MDL).

Rise Grass Valley Inc.

ACZ Project ID: **L57125**

ACZ ID	WORKNUM	PARAMETER	METHOD	QUAL	DESCRIPTION
L57125-04	WG491538	Neutralization Potential as CaCO ₃	M600/2-78-054 NV Modified Sobek Procedure	M2	Matrix spike recovery was low, the recovery of the associated control sample (LCS or LFB) was acceptable.
	WG491527	Sulfur HCl Extractable	M600/2-78-054 3.2.4 & 3.2.6 NV Modified Sobek Proc	RA	Relative Percent Difference (RPD) was not used for data validation because the concentration of the duplicated sample is too low for accurate evaluation (< 10x MDL).
		Sulfur HNO ₃ Extractable	M600/2-78-054 3.2.4 & 3.2.6 NV Modified Sobek Proc	RA	Relative Percent Difference (RPD) was not used for data validation because the concentration of the duplicated sample is too low for accurate evaluation (< 10x MDL).
		Sulfur Hot H ₂ O Extractable	M600/2-78-054 3.2.4 & 3.2.6 NV Modified Sobek Proc	RA	Relative Percent Difference (RPD) was not used for data validation because the concentration of the duplicated sample is too low for accurate evaluation (< 10x MDL).
		Sulfur Residual	M600/2-78-054 3.2.4 & 3.2.6 NV Modified Sobek Proc	RA	Relative Percent Difference (RPD) was not used for data validation because the concentration of the duplicated sample is too low for accurate evaluation (< 10x MDL).
		Sulfur Total	M600/2-78-054 3.2.4 & 3.2.6 NV Modified Sobek Proc	RA	Relative Percent Difference (RPD) was not used for data validation because the concentration of the duplicated sample is too low for accurate evaluation (< 10x MDL).
L57125-05	WG491537	Neutralization Potential as CaCO ₃	M600/2-78-054 NV Modified Sobek Procedure	M1	Matrix spike recovery was high, the recovery of the associated control sample (LCS or LFB) was acceptable.
	WG491527	Sulfur HCl Extractable	M600/2-78-054 3.2.4 & 3.2.6 NV Modified Sobek Proc	RA	Relative Percent Difference (RPD) was not used for data validation because the concentration of the duplicated sample is too low for accurate evaluation (< 10x MDL).
		Sulfur HNO ₃ Extractable	M600/2-78-054 3.2.4 & 3.2.6 NV Modified Sobek Proc	RA	Relative Percent Difference (RPD) was not used for data validation because the concentration of the duplicated sample is too low for accurate evaluation (< 10x MDL).
		Sulfur Hot H ₂ O Extractable	M600/2-78-054 3.2.4 & 3.2.6 NV Modified Sobek Proc	RA	Relative Percent Difference (RPD) was not used for data validation because the concentration of the duplicated sample is too low for accurate evaluation (< 10x MDL).
		Sulfur Residual	M600/2-78-054 3.2.4 & 3.2.6 NV Modified Sobek Proc	RA	Relative Percent Difference (RPD) was not used for data validation because the concentration of the duplicated sample is too low for accurate evaluation (< 10x MDL).
		Sulfur Total	M600/2-78-054 3.2.4 & 3.2.6 NV Modified Sobek Proc	RA	Relative Percent Difference (RPD) was not used for data validation because the concentration of the duplicated sample is too low for accurate evaluation (< 10x MDL).
L57125-06	WG491538	Neutralization Potential as CaCO ₃	M600/2-78-054 NV Modified Sobek Procedure	M2	Matrix spike recovery was low, the recovery of the associated control sample (LCS or LFB) was acceptable.
	WG491527	Sulfur HCl Extractable	M600/2-78-054 3.2.4 & 3.2.6 NV Modified Sobek Proc	RA	Relative Percent Difference (RPD) was not used for data validation because the concentration of the duplicated sample is too low for accurate evaluation (< 10x MDL).
		Sulfur HNO ₃ Extractable	M600/2-78-054 3.2.4 & 3.2.6 NV Modified Sobek Proc	RA	Relative Percent Difference (RPD) was not used for data validation because the concentration of the duplicated sample is too low for accurate evaluation (< 10x MDL).
		Sulfur Hot H ₂ O Extractable	M600/2-78-054 3.2.4 & 3.2.6 NV Modified Sobek Proc	RA	Relative Percent Difference (RPD) was not used for data validation because the concentration of the duplicated sample is too low for accurate evaluation (< 10x MDL).
		Sulfur Residual	M600/2-78-054 3.2.4 & 3.2.6 NV Modified Sobek Proc	RA	Relative Percent Difference (RPD) was not used for data validation because the concentration of the duplicated sample is too low for accurate evaluation (< 10x MDL).
		Sulfur Total	M600/2-78-054 3.2.4 & 3.2.6 NV Modified Sobek Proc	RA	Relative Percent Difference (RPD) was not used for data validation because the concentration of the duplicated sample is too low for accurate evaluation (< 10x MDL).

Rise Grass Valley Inc.

ACZ Project ID: **L57125**

ACZ ID	WORKNUM	PARAMETER	METHOD	QUAL	DESCRIPTION
L57125-07	WG491537	Neutralization Potential as CaCO ₃	M600/2-78-054 NV Modified Sobek Procedure	M1	Matrix spike recovery was high, the recovery of the associated control sample (LCS or LFB) was acceptable.
	WG491527	Sulfur HCl Extractable	M600/2-78-054 3.2.4 & 3.2.6 NV Modified Sobek Proc	RA	Relative Percent Difference (RPD) was not used for data validation because the concentration of the duplicated sample is too low for accurate evaluation (< 10x MDL).
		Sulfur HNO ₃ Extractable	M600/2-78-054 3.2.4 & 3.2.6 NV Modified Sobek Proc	RA	Relative Percent Difference (RPD) was not used for data validation because the concentration of the duplicated sample is too low for accurate evaluation (< 10x MDL).
		Sulfur Hot H ₂ O Extractable	M600/2-78-054 3.2.4 & 3.2.6 NV Modified Sobek Proc	RA	Relative Percent Difference (RPD) was not used for data validation because the concentration of the duplicated sample is too low for accurate evaluation (< 10x MDL).
		Sulfur Residual	M600/2-78-054 3.2.4 & 3.2.6 NV Modified Sobek Proc	RA	Relative Percent Difference (RPD) was not used for data validation because the concentration of the duplicated sample is too low for accurate evaluation (< 10x MDL).
		Sulfur Total	M600/2-78-054 3.2.4 & 3.2.6 NV Modified Sobek Proc	RA	Relative Percent Difference (RPD) was not used for data validation because the concentration of the duplicated sample is too low for accurate evaluation (< 10x MDL).
L57125-08	WG491537	Neutralization Potential as CaCO ₃	M600/2-78-054 NV Modified Sobek Procedure	M1	Matrix spike recovery was high, the recovery of the associated control sample (LCS or LFB) was acceptable.
	WG491527	Sulfur HCl Extractable	M600/2-78-054 3.2.4 & 3.2.6 NV Modified Sobek Proc	RA	Relative Percent Difference (RPD) was not used for data validation because the concentration of the duplicated sample is too low for accurate evaluation (< 10x MDL).
		Sulfur HNO ₃ Extractable	M600/2-78-054 3.2.4 & 3.2.6 NV Modified Sobek Proc	RA	Relative Percent Difference (RPD) was not used for data validation because the concentration of the duplicated sample is too low for accurate evaluation (< 10x MDL).
		Sulfur Hot H ₂ O Extractable	M600/2-78-054 3.2.4 & 3.2.6 NV Modified Sobek Proc	RA	Relative Percent Difference (RPD) was not used for data validation because the concentration of the duplicated sample is too low for accurate evaluation (< 10x MDL).
		Sulfur Residual	M600/2-78-054 3.2.4 & 3.2.6 NV Modified Sobek Proc	RA	Relative Percent Difference (RPD) was not used for data validation because the concentration of the duplicated sample is too low for accurate evaluation (< 10x MDL).
		Sulfur Total	M600/2-78-054 3.2.4 & 3.2.6 NV Modified Sobek Proc	RA	Relative Percent Difference (RPD) was not used for data validation because the concentration of the duplicated sample is too low for accurate evaluation (< 10x MDL).
L57125-09	WG491537	Neutralization Potential as CaCO ₃	M600/2-78-054 NV Modified Sobek Procedure	M1	Matrix spike recovery was high, the recovery of the associated control sample (LCS or LFB) was acceptable.
	WG491527	Sulfur HCl Extractable	M600/2-78-054 3.2.4 & 3.2.6 NV Modified Sobek Proc	RA	Relative Percent Difference (RPD) was not used for data validation because the concentration of the duplicated sample is too low for accurate evaluation (< 10x MDL).
		Sulfur HNO ₃ Extractable	M600/2-78-054 3.2.4 & 3.2.6 NV Modified Sobek Proc	RA	Relative Percent Difference (RPD) was not used for data validation because the concentration of the duplicated sample is too low for accurate evaluation (< 10x MDL).
		Sulfur Hot H ₂ O Extractable	M600/2-78-054 3.2.4 & 3.2.6 NV Modified Sobek Proc	RA	Relative Percent Difference (RPD) was not used for data validation because the concentration of the duplicated sample is too low for accurate evaluation (< 10x MDL).
		Sulfur Residual	M600/2-78-054 3.2.4 & 3.2.6 NV Modified Sobek Proc	RA	Relative Percent Difference (RPD) was not used for data validation because the concentration of the duplicated sample is too low for accurate evaluation (< 10x MDL).
		Sulfur Total	M600/2-78-054 3.2.4 & 3.2.6 NV Modified Sobek Proc	RA	Relative Percent Difference (RPD) was not used for data validation because the concentration of the duplicated sample is too low for accurate evaluation (< 10x MDL).

Rise Grass Valley Inc.

ACZ Project ID: **L57125**

ACZ ID	WORKNUM	PARAMETER	METHOD	QUAL	DESCRIPTION
L57125-10	WG491537	Neutralization Potential as CaCO ₃	M600/2-78-054 NV Modified Sobek Procedure	M1	Matrix spike recovery was high, the recovery of the associated control sample (LCS or LFB) was acceptable.
	WG491527	Sulfur HCl Extractable	M600/2-78-054 3.2.4 & 3.2.6 NV Modified Sobek Proc	RA	Relative Percent Difference (RPD) was not used for data validation because the concentration of the duplicated sample is too low for accurate evaluation (< 10x MDL).
		Sulfur HNO ₃ Extractable	M600/2-78-054 3.2.4 & 3.2.6 NV Modified Sobek Proc	RA	Relative Percent Difference (RPD) was not used for data validation because the concentration of the duplicated sample is too low for accurate evaluation (< 10x MDL).
		Sulfur Hot H ₂ O Extractable	M600/2-78-054 3.2.4 & 3.2.6 NV Modified Sobek Proc	RA	Relative Percent Difference (RPD) was not used for data validation because the concentration of the duplicated sample is too low for accurate evaluation (< 10x MDL).
		Sulfur Residual	M600/2-78-054 3.2.4 & 3.2.6 NV Modified Sobek Proc	RA	Relative Percent Difference (RPD) was not used for data validation because the concentration of the duplicated sample is too low for accurate evaluation (< 10x MDL).
		Sulfur Total	M600/2-78-054 3.2.4 & 3.2.6 NV Modified Sobek Proc	RA	Relative Percent Difference (RPD) was not used for data validation because the concentration of the duplicated sample is too low for accurate evaluation (< 10x MDL).

Rise Grass Valley Inc.ACZ Project ID: **L57125**

Soil Analysis

The following parameters are not offered for certification or are not covered by NELAC certificate #ACZ.

Neutralization Potential as CaCO ₃	M600/2-78-054 NV Modified Sobek Procedure
pH, Saturated Paste	EPA 600/2-78-054 section 3.2.2
Sulfur HCl Extractable	M600/2-78-054 3.2.4 & 3.2.6 NV Modified Sobek Procedure
Sulfur HNO ₃ Extractable	M600/2-78-054 3.2.4 & 3.2.6 NV Modified Sobek Procedure
Sulfur Hot H ₂ O Extractable	M600/2-78-054 3.2.4 & 3.2.6 NV Modified Sobek Procedure
Sulfur Residual	M600/2-78-054 3.2.4 & 3.2.6 NV Modified Sobek Procedure
Sulfur Total	M600/2-78-054 3.2.4 & 3.2.6 NV Modified Sobek Procedure

Rise Grass Valley Inc.

ACZ Project ID: L57125

Date Received: 01/29/2020 11:12

Received By:

Date Printed: 1/30/2020

Receipt Verification

	YES	NO	NA
1) Is a foreign soil permit included for applicable samples?	☐	☐	☒
2) Is the Chain of Custody form or other directive shipping papers present?	☒	☐	☐
3) Does this project require special handling procedures such as CLP protocol?	☐	☒	☐
4) Are any samples NRC licensable material?	☐	☐	☒
5) If samples are received past hold time, proceed with requested short hold time analyses?	☒	☐	☐
6) Is the Chain of Custody form complete and accurate?	☒	☐	☐
7) Were any changes made to the Chain of Custody form prior to ACZ receiving the samples?	☐	☒	☐

Samples/Containers

	YES	NO	NA
8) Are all containers intact and with no leaks?	☒	☐	☐
9) Are all labels on containers and are they intact and legible?	☒	☐	☐
10) Do the sample labels and Chain of Custody form match for Sample ID, Date, and Time?	☒	☐	☐
11) For preserved bottle types, was the pH checked and within limits? ¹	☐	☐	☒
12) Is there sufficient sample volume to perform all requested work?	☒	☐	☐
13) Is the custody seal intact on all containers?	☐	☐	☒
14) Are samples that require zero headspace acceptable?	☐	☐	☒
15) Are all sample containers appropriate for analytical requirements?	☒	☐	☐
16) Is there an Hg-1631 trip blank present?	☐	☐	☒
17) Is there a VOA trip blank present?	☐	☐	☒
18) Were all samples received within hold time?	☒	☐	☐

NA indicates Not Applicable

Chain of Custody Related Remarks

Client Contact Remarks

Shipping Containers

Cooler Id	Temp (°C)	Temp Criteria (°C)	Rad (µR/Hr)	Custody Seal Intact?
-----	-----	-----	-----	-----
UNKNOWN		NA		

Was ice present in the shipment container(s)?

No - Wet or gel ice was not present in the shipment container(s).

Client must contact an ACZ Project Manager if analysis should not proceed for samples received outside of their thermal preservation acceptance criteria.

Rise Grass Valley Inc.

ACZ Project ID: L57125

Date Received: 01/29/2020 11:12

Received By:

Date Printed: 1/30/2020

¹ The preservation of the following bottle types is not checked at sample receipt: Orange (oil and grease), Purple (total cyanide), Pink (dissolved cyanide), Brown (arsenic speciation), Sterile (fecal coliform), EDTA (sulfite), HCl preserved vial (organics), Na₂S₂O₃ preserved vial (organics), and HG-1631 (total/dissolved mercury by method 1631).

ACZ

Laboratories, Inc.

2773 Downhill Drive Steamboat Springs, CO 80487 (800) 334-5493

55806

1/29/20

CHAIN of CUSTODY

Report to:

Name: Ben Mossman

Company: Rise Gold Corp.

E-mail: ceo@risegoldcorp.com

Address: 333 Crown Point Circle Suite 215

Grass Valley Ca. 95945

Telephone: 604-219-9072

Copy of Report to:

Name: Andy Kopania

Company: EMKO Environmental

E-mail: akopania@sbcglobal.net

Telephone: 916-718-5519

Invoice to:

Name: Ben Mossman

Company: Rise Gold Corp.

E-mail: ceo@risegoldcorp.com

Address: 333 Crown Point Circle Suite 215

Grass Valley Ca. 95945

Telephone: 604-219-9072

If sample(s) received past holding time (HT), or if insufficient HT remains to complete analysis before expiration, shall ACZ proceed with requested short HT analyses?

YES ☒

NO ☐

If "NO" then ACZ will contact client for further instruction. If neither "YES" nor "NO" is indicated, ACZ will proceed with the requested analyses, even if HT is expired, and data will be qualified

Are samples for SDWA Compliance Monitoring?

Yes ☐

No ☒

If yes, please include state forms. Results will be reported to PQL for Colorado.

Sampler's Name: AH

Sampler's Site Information

State CA

Zip code 95945

Time Zone PST

*Sampler's Signature:

*I attest to the authenticity and validity of this sample. I understand that intentionally mislabeling the time/date/location or tampering with the sample in anyway, is considered fraud and punishable by State Law.

PROJECT INFORMATION

Quote #: CORE-Tailings-2

PO#:

Reporting state for compliance testing: CA

Check box if samples include NRC licensed material?

☐

SAMPLE IDENTIFICATION

DATE:TIME

Matrix

of Containers

Metals by ICP & ICP/MS

DI-WET leach

Leachate-Metals by ICP & ICP/MS

PH

Percent Solids

Wet Chemistry

MA-1

10/29/19:10:45 am

R

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MA-2

10/29/19:11:05 am

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MA-3

10/29/19:11:45 am

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MAA-1

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Matrix

SW (Surface Water) · GW (Ground Water) · WW (Waste Water) · DW (Drinking Water) · SL (Sludge) · SO (Soil) · OL (Oil) · Other (Specify)

REMARKS

R = rock matrix

Please refer to ACZ's terms & conditions located on the reverse side of this COC.

RELINQUISHED BY:

DATE:TIME

RECEIVED BY:

DATE:TIME

AL

11/1/19

of me

11/1/19 1420

2:15pm

57125 Chain of Custody

**Laboratories, Inc.**

2773 Downhill Drive Steamboat Springs, CO 80487 (800) 334-5493

CHAIN of CUSTODY**Report to:**

Name: Ben Mossman

Company: Rise Gold Corp.

E-mail: ceo@risegoldcorp.com

Address: 333 Crown Point Circle Suite 215

Grass Valley Ca. 95945

Telephone: 604-219-9072

Copy of Report to:

Name: Andy Kopania

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Name: Ben Mossman

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Address: 333 Crown Point Circle Suite 215

Grass Valley Ca. 95945

Telephone: 604-219-9072

If sample(s) received past holding time (HT), or if insufficient HT remains to complete analysis before expiration, shall ACZ proceed with requested short HT analyses?

YES

☒

NO

☐

If "NO" then ACZ will contact client for further instruction. If neither "YES" nor "NO" is indicated, ACZ will proceed with the requested analyses, even if HT is expired, and data will be qualified

Are samples for SDWA Compliance Monitoring?

Yes

☐

No

☒

If yes, please include state forms. Results will be reported to PQL for Colorado.

Sampler's Name: BM

Sampler's Site Information

State CA

Zip code 95945

Time Zone PST

*Sampler's Signature:

*I attest to the authenticity and validity of this sample. I understand that intentionally mislabeling the time/date/location or tampering with the sample in anyway, is considered fraud and punishable by State Law.

PROJECT INFORMATION

ANALYSES REQUESTED (attach list or use quote number)

Quote #: Core-Tailings-2

PO#:

Reporting state for compliance testing: CA

Check box if samples include NRC licensed material?

☐

SAMPLE IDENTIFICATION	DATE:TIME	Matrix	# of Containers	Metals by ICP & ICP/MS	DI-WET leach	Leachate-Metals by ICP & ICP/MS	pH	Percent Solids	Wet Chemistry		
F-1 (ABC)	11/4/19:12:00 pm	T	1	☒	☒	☒	☒	☒	☒	☐	☐
F-2 (ABC)	11/4/19:12:00 pm	T	1	☒	☒	☒	☒	☒	☒	☐	☐
F-3 (AB)	11/4/19:12:00 pm	T	1	☒	☒	☒	☒	☒	☒	☐	☐
F-4 (AB)	11/4/19:12:00 pm	T	1	☒	☒	☒	☒	☒	☒	☐	☐
				☐	☐	☐	☐	☐	☐	☐	☐
				☐	☐	☐	☐	☐	☐	☐	☐
				☐	☐	☐	☐	☐	☐	☐	☐
				☐	☐	☐	☐	☐	☐	☐	☐
				☐	☐	☐	☐	☐	☐	☐	☐
				☐	☐	☐	☐	☐	☐	☐	☐
				☐	☐	☐	☐	☐	☐	☐	☐

Matrix SW (Surface Water) · GW (Ground Water) · WW (Waste Water) · DW (Drinking Water) · SL (Sludge) · SO (Soil) · OL (Oil) · Other (Specify)

REMARKS

T = tailings (assay pulp)

Please refer to ACZ's terms & conditions located on the reverse side of this COC.

RELINQUISHED BY:

DATE:TIME

RECEIVED BY:

DATE:TIME

FRMAD050.06.14.14

White - Return with sample. Yellow - Retain for your records.

RE19043337 - Finalized

CLIENT : "SIRROE - Rise Gold Corp"

of SAMPLES : 47

DATE RECEIVED : 2019-02-20 DATE FINALIZED : 2019-03-05

PROJECT : "Idaho Maryland"

CERTIFICATE COMMENTS : "ME-MS41:Gold determinations by this method are semi-quantitative c

PO NUMBER : "NA"

SAMPLE	DESCRIPTION	Hole ID	From (ft)	To (ft)	Length (ft)	Description	Lithology
1 Y973586	✓	I-18-11	4107.8	4117.55	9.75	Geochem s	Diabase Dike
2 Y973559	✓	I-19-13	967	977	10	2%+ pyrite	Meta Sediments
3 Y973560	✓	I-19-13	1067	1077	10	2%+ pyrite	Meta Sediments
4 Y973561	✓	I-19-13	1157	1167	10	2%+ pyrite	Meta Sediments
5 Y973562	✓	I-19-13	1267	1277	10	2%+ pyrite	Meta Sediments
6 Y973563	✓	I-19-13	1367	1377	10	2%+ pyrite	Meta Sediments
7 Y973583	✓	I-18-02	948	958	10	Geochem s	Meta-Andesite Volcanics
8 Y973584	✓	I-18-10	2926	2936	10	Geochem s	Meta-Andesite Volcanics
9 Y973585	✓	I-18-10	3104.35	3114.35	10	Geochem s	Meta-Andesite Volcanics
10 Y973587	✓	I-18-10	3332	3342	10	Geochem s	Meta-Andesite Volcanics
11 Y973589	✓	I-18-12	3665.65	3675.65	10	Geochem s	Meta-Andesite Volcanics
12 Y973588	✓	I-18-12	3819.9	3829.9	10	Geochem s	Meta-Andesite Volcanics
13 Y973551	✓	I-19-13	167	177	10	Unminerali	Meta-Andesite Volcanics
14 Y973552	✓	I-19-13	267	277	10	Unminerali	Meta-Andesite Volcanics
15 Y973553	✓	I-19-13	367	377	10	Unminerali	Meta-Andesite Volcanics
16 Y973554	✓	I-19-13	467	477	10	Unminerali	Meta-Andesite Volcanics
17 Y973555	✓	I-19-13	567	577	10	Unminerali	Meta-Andesite Volcanics
18 Y973556	✓	I-19-13	667	677	10	Unminerali	Meta-Andesite Volcanics
19 Y973557	✓	I-19-13	767	777	10	Unminerali	Meta-Andesite Volcanics
20 Y973558	✓	I-19-13	867	877	10	Unminerali	Meta-Andesite Volcanics
21 Y973564	✓	I-19-13	1467	1477	10	Unminerali	Meta-Andesite Volcanics
22 Y973565	✓	I-19-13	1577	1587	10	Unminerali	Meta-Andesite Volcanics
23 Y973566	✓	I-19-13	1677	1687	10	Unminerali	Meta-Andesite Volcanics
24 Y973567	✓	I-19-13	1777	1787	10	Unminerali	Meta-Andesite Volcanics
25 Y973568	✓	I-19-13	1890	1900	10	Unminerali	Meta-Andesite Volcanics
26 Y973569	✓	I-19-13	1977	1987	10	Unminerali	Meta-Andesite Volcanics
27 Y973570	✓	I-19-13	2077	2087	10	Unminerali	Meta-Andesite Volcanics
28 Y973571	✓	I-19-13	2187	2197	10	Unminerali	Meta-Andesite Volcanics
29 Y973572	✓	I-19-13	2277	2287	10	Unminerali	Meta-Andesite Volcanics
30 Y973573	✓	I-19-13	2387	2397	10	Unminerali	Meta-Andesite Volcanics
31 Y973574	✓	I-19-13	2477	2487	10	Unminerali	Meta-Andesite Volcanics
32 Y973575	✓	I-19-13	2587	2597	10	Unminerali	Meta-Andesite Volcanics
33 Y973576	✓	I-19-13	2677	2687	10	Unminerali	Meta-Andesite Volcanics
34 Y973577	✓	I-19-13	2757	2767	10	Unminerali	Meta-Andesite Volcanics
35 Y973578	✓	I-19-13	2837	2847	10	Unminerali	Meta-Andesite Volcanics
36 Y973579	✓	I-19-13	2917	2927	10	Unminerali	Meta-Andesite Volcanics
37 Y973580	✓	I-19-13	3017	3027	10	Unminerali	Meta-Andesite Volcanics

38 Y973581 ✓	I-19-13	3117	3127	10 Unminerali Meta-Andesite Volcanics
39 Y973582 ✓	I-19-13	3217	3227	10 Unminerali Meta-Andesite Volcanics
40 Y973590 ✓	I-19-13	3583	3593	10 Unminerali Meta-Andesite Volcanics
41 Y973591 ✓	I-19-13	3687	3697	10 Unminerali Meta-Andesite Volcanics
42 Y973592 ✓	I-19-13	3781.2	3791.2	10 Unminerali Meta-Andesite Volcanics
43 Y973593 ✓	I-19-13	3878.3	3888.3	10 Unminerali Meta-Andesite Volcanics
44 Y973594 ✓	I-19-13	3959.7	3969.7	10 Unminerali Meta-Andesite Volcanics
45 Y973595 ✓	I-19-13	4313	4323	10 Unminerali Meta-Andesite Volcanics
46 Y973596 ✓	I-19-13	4767.9	4772.7	4.8 Meta-volca Serpentinite
47 Y973597 ✓	I-19-13	4772.7	4774.6	1.9 Serpentinite Serpentinite



1016 Greg Street, Sparks, Nevada 89431
(775) 356-1300 * FAX (775) 356-8917
E-Mail: MLI@METTEST.COM

Name:	<u>Benchmark Resources</u>	Project Name:	<u></u>
Person:	<u>Andrew Heinemann</u>	Phone No.:	<u></u>
Address:	<u>2515 East Bidwell Street</u>	Fax No.:	<u></u>
City/State/Zip:	<u>Folsom, CA 95630</u>	P.O. #:	<u></u>
Phone:	<u>(916)983-9193</u>		
Shipping Method:	☒ Express ☐ Overnight ☐ Registered Mail ☐ Signature Required ☐ Insured ☐ Signature Confirmation		
Delivery Method:	☒ X UPS ☐ Hand Deliver ☐ Other: DHL		

[illegible]

Jared Olson jaredolson@mettest.com
775-356-1300 Ext 125

Signature	Print Name	Date/Time		Company
ed By: <i>L. Hartley</i>	L. Hartley	11/04/19	12:00 PM	MLI
By:				
ed By:				
iv:				

Client Name:	Client MLI (McClelland Labs, Inc.)	Date:	04-Nov-19
Contact:	Jared Olson	MLI Project #:	4466
Batch Name:	4466 Benchmark	Location:	
Project Name:		Project Manager:	
Packages:			

B19-1863

4466 Benchmark

Page 1 of 1

SAMPLE INFORMATION

[illegible]

SPECIAL INSTRUCTIONS

Signature	Print Name	Date / Time
Relinquished by:		
Received by:		
Date Received:		

Appendix E – Drill Core Photos: Rise Drillhole B-17-01

Drillhole B-17-01: Collared South of Brunswick Shaft. Dip -58 degrees. 1 ft downhole = ~0.84 ft bgs.

Plate 1 – B-17-01: 18.0 ft to 66.5 ft



Plate 2 – B-17-01: 66.5 ft to 105.0 ft



Plate 3 – B-17-01: 105.0 ft to 125.5 ft



Plate 4 – B-17-01: 125.5ft to 143.0 ft



Plate 5 – B-17-01: 143.0 ft to 160.8 ft



Appendix F – Drill Core Photos: Rise Drillhole B-18-04

Drillhole B-18-04: Collared South of Brunswick Shaft. Dip -51 degrees. 1 ft downhole = ~0.78 ft bgs.

Plate 6 – B-18-04: 50.0 ft to 83.0 ft



Plate 7 – B-18-04: 83.0 ft to 112.0 ft



Plate 8 – B-13-04: 112.0 ft to 139.0 ft



Plate 9 – B-18-04: 139.0 ft to 168.0 ft



Plate 10 – B-18-04: 168.0 ft to 199.6 ft



Appendix G – Drill Core Photos: Rise Drillhole Z-18-09 (labelled Z-18-02)

Drillhole Z-18-09: Collared West of Union Hill Shaft. Dip -65 degrees. 1 ft downhole = ~0.91 ft bgs.

Plate 11 – Z-18-09: 0 ft to 51.7 ft



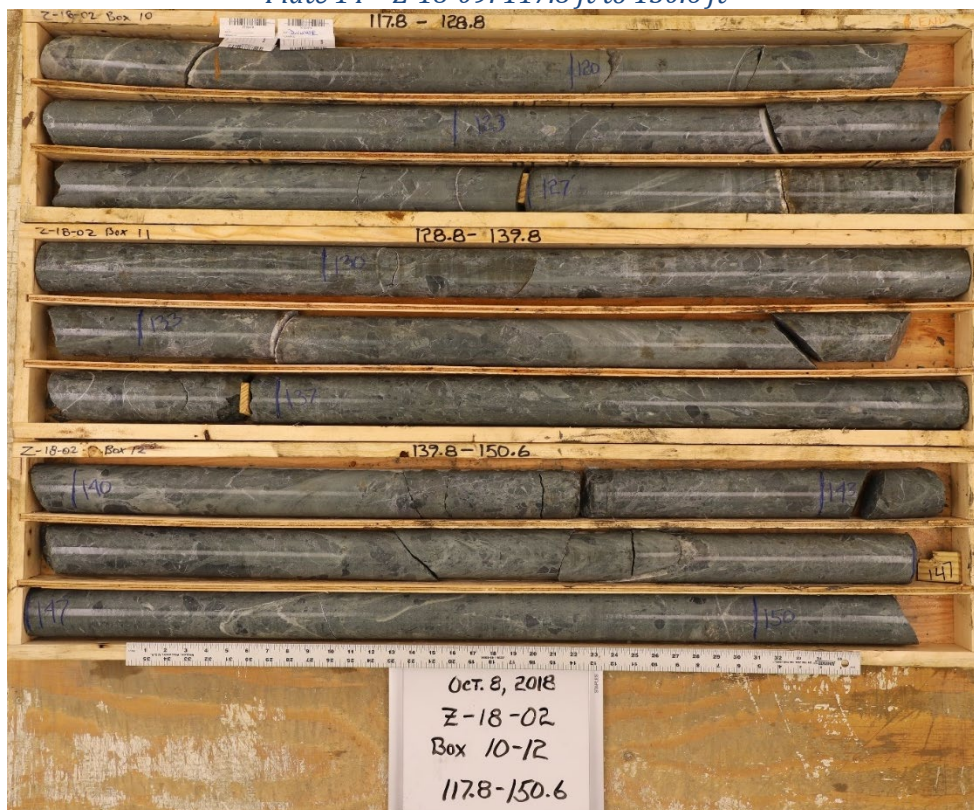
Plate 12 – Z-18-09: 51.7 ft to 81.9 ft



Plate 13 – Z-18-09: 81.9 ft to 117.8 ft



Plate 14 – Z-18-09: 117.8 ft to 150.6 ft



Appendix H – McClelland Metallurgical Testing Report



McClelland Laboratories, Inc.

1016 Greg Street, Sparks, Nevada 89431
(775) 356-1300 * FAX (775) 356-8917
E-Mail: MLI@METTEST.COM

January 29, 2020

Mr. Ben Mossman
Rise Grass Valley Inc.
333 Crown Point Circle, Suite 215
Grass Valley, CA 95945

Dear Ben:

Enclosed is our report concerning results from gravity/flotation concentration testing of samples from the Maryland Mine.

Our invoice for the completed work will be sent under separate cover.

Thank you for allowing us the opportunity to serve you on the Maryland Mine project.

Sincerely,

Jared R. Olson, P.E.
Metallurgist / V.P. Operations

JRO:lj/mb
Enclosure



**Report
on
Gravity/Flotation Concentration Testing -
Maryland Mine Flotation Composite
MLI Job No. 4466
January 29, 2020**

for

**Mr. Ben Mossman
Rise Grass Valley Inc.
333 Crown Point Circle, Suite 215
Grass Valley, CA 95945**

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McClelland Laboratories, Inc.

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E-Mail: MLI@METTEST.COM

**Report
on
Gravity/Flotation Concentration Testing -
Maryland Mine Flotation Composite
MLI Job No. 4466
January 29, 2020**

for

**Mr. Ben Mossman
Rise Grass Valley Inc.
333 Crown Point Circle, Suite 215
Grass Valley, CA 95945**

SUMMARY

A sample from the Maryland mine, designated as the “flotation composite” was subjected to gravity concentration with bulk sulfide flotation of the gravity concentration tails, at feed sizes ranging from 80%-300 μ m to 80%-75 μ m. The average gold and silver grades of the flotation composite were 3.96 gAu/mt and 1.3 gAg/mt. In addition to generating metallurgical processing data, this testing was done to generate tailings for environmental characterization. Results from the environmental characterization will be discussed in a separate report.

Summary results from the gravity and flotation concentration tests are presented in Table 1.

**Table 1. - Summary Gravity/Flotation Concentration Testing Results,
Maryland Mine Flotation Composite**

Feed Size, P80, μ m		Weight, %		gAu/mt				Au Distribution, % of total			
		Gravity	Flotation	Gravity	Flotation	Flotation	Calc'd.	Gravity	Flotation	Combined	Flotation
Grav.	Flot.	Cl. Conc.	Ro. Conc.	Cl. Conc.	Ro. Conc.	Ro. Tails	Head	Cl. Conc.	Ro. Conc.	Conc.	Ro. Tails
180	75	0.28	6.19	576	46	0.10	4.55	35.4	62.5	97.9	2.1
180	180 *	0.28	5.20	576	52	0.13	4.44	36.3	60.9	97.2	2.8
212	212 *	0.14	7.52	1,480	35	0.21	4.91	42.2	53.8	96.0	4.0
300	300 *	0.16	6.84	823	38	0.23	4.13	31.9	62.9	94.8	5.2

* Flotation testing feeds “polish” ground for 1 to 2 minutes to remove oxidation from sulfide mineral surfaces.

Summary results show that the flotation composite responded well to gravity concentration with tailings flotation. Gold recovery to the combined (gravity and flotation) concentrate ranged from 94.8% to 97.9%. Weight pulls to the rougher flotation concentrate were reasonable and ranged from 5.2% to 7.5% of the feed weight. The combined (gravity plus flotation) concentrate was equivalent to 5.5% to 7.7% of the feed weight, and would assay 56 to 79 gAu/mt. It is expected that the concentrate grade could be somewhat improved, and the weight pull could be somewhat reduced, by optimization of the flotation testing conditions.

Results show that the flotation gold recovery, and the combined recovery, increased slightly with decreasing flotation feed size. The highest combined recovery (97.9%) was achieved with the finest flotation feed (80%-75 μ m). Gold recovery by gravity concentration was similar at the different grind sizes tested (80%-300 μ m to 80%-180 μ m). It should be noted that due to polish grinding, some of the flotation feeds were likely somewhat finer than indicated in Table 1. The indicated P₈₀ sizes of the flotation tailings ranged from 83 μ m to 227 μ m.

SAMPLE PREPARATION PROCEDURES AND HEAD ANALYSIS

A total of seven buckets containing 6 separate samples were received from the Maryland mine on July 10th, 2019. The samples weighed 4 to 47 kg, and appeared to be approximately -6mm in size. The largest sample ("flotation composite") was intended for analysis and metallurgical testing, as well as environmental characterization of the testing products. The five remaining samples were indicated to be waste rock samples of various types, for environmental characterization.

The flotation composite material was thoroughly blended by repeated coning and quartered to obtain two 12 kg splits for finer crushing. One of the 12 kg splits was stage-crushed to 100%-6 mesh (3.4mm) and then used for a Bond ball mill work index determination. The second 12 kg split was crushed to 100%-1.7mm. The -1.7mm material was further split using a rotary type splitter to obtain triplicate 0.5 kg splits for head analysis and 10 kg for a gravity concentration test. Later in the testing program, all of the remaining flotation composite material was crushed to -1.7mm, and then split to obtain two approximately 12 kg splits for additional gravity concentration tests.

Preparation and analysis of the waste rock samples will be discussed in a separate report.

The triplicate head assay samples from the flotation composite were analyzed for gold and silver content by conventional fire assay fusion and geochemical procedures. A single sulfide sulfur analysis was also conducted on one of the splits from the flotation composite using a sodium carbonate digestion and LECO analysis. Gold and silver head assay results and head grade comparisons for the flotation composite are presented in Table 2. Sulfide sulfur analysis results are shown in Table 3.

The grindability of the flotation composite was determined in terms of a Bond ball mill work index (BWi) using equipment and procedures in accordance with the Bond method. The test was conducted with a 150µm closing screen. Detailed Bond ball mill work index determination results are provided in Section 1 of the Appendix. The index was determined to be 18.8 kW-hr/mt, and the sample was classified as “hard.”

Table 2. - Gold and Silver Head Assay Results and Head Grade Comparisons, Maryland Mine Flotation Composite

Determination Method	Head Grade, g/mt ore	
	Au	Ag
Direct Assay, Init.	3.33	1.4
Direct Assay, Dup.	3.37	1.3
Direct Assay, Trip.	3.57	1.3
Calc'd. Gravity Conc. Test		
80%-180µm	4.56	1.3
80%-212µm	4.03	1.4
80%-300µm	4.92	1.3
Average	3.96	1.3
Std. Deviation	0.66	0.1
Relative Std. Deviation, %	16.7	7.7

The average gold head grade of the flotation composite was 3.96 gAu/mt ore. Gold head grade relative standard deviation (16.7%) was slightly elevated. This relatively high degree of head grade variability is likely due to the presence of relatively coarse particulate gold, which was observed during gravity concentration testing. It was noted that the direct assay results were somewhat lower than the head grades calculated from the gravity concentration tests. Considering that this material contains some coarse gold, and the much larger size of the gravity concentration test ore charges relative to the fire assay pulps, it is expected that the calculated gravity concentration test head grades are more representative of the sample grade, than the direct fire assay results. The average gravity concentration test calculated head grade was 4.50 gAu/mt ore.

The average silver head grade of the flotation composite was 1.3 gAg/mt ore. Silver head grade agreement was good. Because of the low silver grade of the composite, silver recoveries will not be discussed in detail in this report.

Table 3. - Sulfide Sulfur Head Assay Result, Maryland Mine Flotation Composite

Composite	% Sulfide Sulfur
Flotation Composite	1.6

GRAVITY/FLOTATION CONCENTRATION TESTING PROCEDURES AND RESULTS

A series of tests consisting of gravity concentration followed by bulk sulfide flotation concentration of the gravity tailings was conducted on the Maryland mine flotation composite. These tests were conducted at varied gravity and flotation feed sizes. Tests were conducted to determine response of the composite to gravity and flotation concentration treatment, gold and silver recoveries, gold and silver concentrate grades, and sensitivity to grind size. Tests were also conducted to generate samples of flotation tailings for environmental characterization.

A total of three gravity concentration tests were conducted. Procedures were the same for each test except that the initial grind size was varied from 80%-180 μ m to 300 μ m. For each test, a 10 to 12 kg split was batch ground in a laboratory steel ball mill to the target size. The ground feed was processed once through a Knelson concentrator to produce a rougher concentrate and rougher tailings. The Knelson concentrator used was a laboratory (3" bowl) fixed bed, centrifugally enhanced concentrator (MD3). The rougher concentrate was cleaned once by hand panning to produce a cleaner concentrate and cleaner tailings (middlings).

The cleaner concentrate and middlings were examined using a microscope to determine the presence of any visible gold particles. Each product was dried and weighed. The cleaner concentrate and cleaner tailings were assayed to determine gold and silver content, with the cleaner concentrate being used entirely for the assay. The rougher tails were blended, split, and assayed in triplicate to determine residual gold and silver content. Representative splits were also taken from middlings and rougher tails, which were combined on a properly weighted basis to generate 1 kg splits of gravity tailings for flotation testing.

In one case, the 1 kg split of gravity concentration tailings was re-ground to a target size of 80%-75 μ m using a laboratory steel ball mill. For the three remaining tests, the gravity tailings splits were subjected to a short (1 to 2 minute) "polish grind." This was done to generate fresh sulfide mineral surfaces before flotation.

Flotation was conducted using a Denver laboratory scale flotation unit at 1,200 rpm. The gravity tailings samples were slurried with water to achieve 33 weight percent solids, and conditioned for three minutes with 0.25 kg/mt $\text{CuSO}_4 \cdot 5\text{H}_2\text{O}$ (copper sulfate). Flotation was conducted in 5 stages with incremental additions, at each stage, of 0.005 kg/mt ore of PAX (potassium amyl xanthate) and 0.010 kg/mt ore of AERO 208 promoter (alkyl dithiophosphate). Total addition of reagents was 0.025 kg/mt ore PAX and 0.050 kg/mt ore AERO 208. AEROFROTH 65 (polyglycol) was used as a frother. The pulp was floated at natural pH. The 5 stages of concentrate from each test were combined into a single flotation rougher concentrate.

Flotation rougher concentrates and rougher tails were dried and weighed. The rougher tails were screened to determine particle size distribution. Screened size fractions were weighed and then recombined. The rougher concentrates and rougher tails were each assayed to determine residual gold, silver, and sulfide sulfur content. The rougher tailings from two select tests were also subjected to environmental characterization (discussed in a separate report).

Gravity concentration testing results are presented in Tables 4 through 6. Flotation concentration testing results are given in Tables 7 through 10. Combined results from gravity and flotation concentration testing are shown in Tables 11 through 14. Particle size distributions for the flotation tailings are given in Tables 15 through 18 and shown graphically in Figure 1. Photographs of gravity concentration testing products are provided in Section 2 of the Appendix. Detailed flotation testing data are provided in Section 3 of the Appendix.

**Table 4. - Gravity Concentration Test Results (Test G-1),
Maryland Mine Flotation Composite, 80%-180µm Feed Size**

Product	Weight, %	Cum. Wt., %	Assay, g/mt		Distribution			
					Au		Ag	
			Au	Ag	%	Cum. %	%	Cum. %
Cl. Conc.	0.28	0.28	576	99	35.4	35.4	21.7	21.7
Cl. Tail	0.71	0.99	74.4	15	11.6	47.0	8.4	30.1
Ro. Tail	99.01	100.00	2.44	0.9	53.0	100.0	69.9	100.0
Composite	100.00		4.56	1.3	100.0		100.0	

**Table 5. - Gravity Concentration Test Results (Test G-3),
Maryland Mine Flotation Composite, 80%-212µm Feed Size**

Product	Weight, %	Cum. Wt., %	Assay, g/mt		Distribution			
					Au		Ag	
			Au	Ag	%	Cum. %	%	Cum. %
Cl. Conc.	0.14	0.14	1,480	295	42.1	42.1	29.8	29.8
Cl. Tail	0.53	0.67	52.6	15	5.7	47.8	5.7	35.5
Ro. Tail	99.33	100.00	2.59	0.9	52.2	100.0	64.5	100.0
Composite	100.00		4.92	1.4	100.0		100.0	

**Table 6. - Gravity Concentration Test Results (Test G-2),
Maryland Mine Flotation Composite, 80%-300µm Feed Size**

Product	Weight, %	Cum. Wt., %	Assay, g/mt		Distribution			
					Au		Ag	
			Au	Ag	%	Cum. %	%	Cum. %
Cl. Conc.	0.16	0.16	823	153	32.7	32.7	18.8	18.8
Cl. Tail	0.55	0.71	34.8	11	4.7	37.4	4.7	23.5
Ro. Tail	99.29	100.00	2.54	1.0	62.6	100.0	76.5	100.0
Composite	100.00		4.03	1.3	100.0		100.0	

**Table 7. - Flotation Concentration Test Results (Test F-1), Maryland Mine
Gravity Test G-1 Recombined Tails, 80%-75µm Re-grind Size**

Product	Weight, %	Cum. Wt., %	Assay			Distribution					
			gAu/mt	gAg/mt	% S ⁻	Au		Ag		% S ⁻	
						%	Cum. %	%	Cum. %	%	Cum. %
Ro. Conc.	6.2	6.2	46	3	23.4	96.8	96.8	28.4	28.4	96.3	96.3
Ro. Tail	93.8	100.0	0.10	0.5	0.06	3.2	100.0	71.6	100.0	3.7	100.0
Composite	100.0		2.95	1	1.51	100.0		100.0		100.0	

**Table 8. - Flotation Concentration Test Results (Test F-2), Maryland Mine
Gravity Test G-1 Recombined Tails, 80%-180µm (Polish Grind) Feed Size**

Product	Weight, %	Cum. Wt., %	Assay			Distribution					
			gAu/mt	gAg/mt	% S ⁻	Au		Ag		% S ⁻	
						%	Cum. %	%	Cum. %	%	Cum. %
Ro. Conc.	5.2	5.2	52	3	27.4	95.6	95.6	24.8	24.8	96.2	96.2
Ro. Tail	94.8	100.0	0.13	0.5	0.06	4.4	100.0	75.2	100.0	3.8	100.0
Composite	100.0		2.83	1	1.48	100.0		100.0		100.0	

**Table 9. - Flotation Concentration Test Results (Test F-4), Maryland Mine
Gravity Test G-3 Recombined Tails, 80%-212µm (Polish Grind) Feed Size**

Product	Weight, %	Cum. Wt., %	Assay			Distribution					
			gAu/mt	gAg/mt	% S ⁻	Au		Ag		% S ⁻	
						%	Cum. %	%	Cum. %	%	Cum. %
Ro. Conc.	7.5	7.5	35.1	9	19	93.1	93.1	64.6	64.6	93.9	93.9
Ro. Tail	92.5	100.0	0.21	0.4	0.10	6.9	100.0	35.4	100.0	6.1	100.0
Composite	100.0		2.83	1	1.52	100.0		100.0		100.0	

**Table 10. - Flotation Concentration Test Results (Test F-3), Maryland Mine
Gravity Test G-2 Recombined Tails, 80%-300µm Re-grind Size**

Product	Weight, %	Cum. Wt., %	Assay			Distribution					
			gAu/mt	gAg/mt	% S ⁻	Au		Ag		% S ⁻	
						%	Cum. %	%	Cum. %	%	Cum. %
Ro. Conc.	6.9	6.9	38	6	21.3	92.4	92.4	69.0	69.0	92.9	92.9
Ro. Tail	93.1	100.0	0.23	0.2	0.12	7.6	100.0	31.0	100.0	7.1	100.0
Composite	100.0		2.84	1	1.58	100.0		100.0		100.0	

**Table 11. - Combined Gravity (G-1) and Flotation Concentration (F-1) Test Results,
Maryland Mine Flotation Composite, 80%-180µm Primary Grind Size,
80%-75µm Flotation Re-Grind Size**

Product	Weight, %	Cum. Wt., %	Assay			Distribution					
			gAu/mt	gAg/mt	% S ⁼	Au		Ag		% S ⁼	
						%	Cum. %	%	Cum. %	%	Cum. %
Grav. Cl. Conc.	0.28	0.28	576	99	N/A	35.4	35.4	29.7	29.7	N/A	N/A
Flot. Ro. Conc.	6.19	6.47	46	3	23.4	62.5	97.9	20.0	49.7	96.3	96.3
Flot. Ro. Tail	93.53	100.00	0.10	0.5	0.06	2.1	100.0	50.3	100.0	3.7	100.0
Composite	100.00		4.55	1	1.50	100.0		100.0		100.0	

**Table 12. - Combined Gravity (G-1) and Flotation Concentration (F-2) Test Results,
Maryland Mine Flotation Composite, 80%-180µm Feed Size**

Product	Weight, %	Cum. Wt., %	Assay			Distribution					
			gAu/mt	gAg/mt	% S ⁼	Au		Ag		% S ⁼	
						%	Cum. %	%	Cum. %	%	Cum. %
Grav. Cl. Conc.	0.28	0.28	576	99	N/A	36.3	36.3	30.6	30.6	N/A	N/A
Flot. Ro. Conc.	5.20	5.48	52	3	27.4	60.9	97.2	17.2	47.8	96.2	96.2
Flot. Ro. Tail	94.52	100.00	0.13	0.5	0.06	2.8	100.0	52.2	100.0	3.8	100.0
Composite	100.00		4.44	1	1.48	100.0		100.0		100.0	

**Table 13. - Combined Gravity (G-3) and Flotation Concentration (F-4) Test Results,
Maryland Mine Flotation Composite, 80%-212µm Feed Size**

Product	Weight, %	Cum. Wt., %	Assay			Distribution					
			gAu/mt	gAg/mt	% S ⁼	Au		Ag		% S ⁼	
						%	Cum. %	%	Cum. %	%	Cum. %
Grav. Cl. Conc.	0.14	0.14	1,480	295	N/A	42.2	42.2	28.3	28.3	N/A	N/A
Flot. Ro. Conc.	7.52	7.66	35.1	9	19	53.8	96.0	46.4	74.7	93.9	93.9
Flot. Ro. Tail	92.34	100.00	0.21	0.4	0.10	4.0	100.0	25.3	100.0	6.1	100.0
Composite	100.00		4.91	1	1.52	100.0		100.0		100.0	

**Table 14. - Combined Gravity (G-2) and Flotation Concentration (F-3) Test Results,
Maryland Mine Flotation Composite, 80%-300µm Feed Size**

Product	Weight, %	Cum. Wt., %	Assay			Distribution					
			gAu/mt	gAg/mt	% S ⁼	Au		Ag		% S ⁼	
						%	Cum. %	%	Cum. %	%	Cum. %
Grav. Cl. Conc.	0.16	0.16	823	153	N/A	31.9	31.9	29.1	29.1	N/A	N/A
Flot. Ro. Conc.	6.84	7.00	38	6	21.3	62.9	94.8	48.8	77.9	92.9	92.9
Flot. Ro. Tail	93.00	100.00	0.23	0.2	0.12	5.2	100.0	22.1	100.0	7.1	100.0
Composite	100.00		4.13	1	1.57	100.0		100.0		100.0	

The Maryland mine flotation composite responded very well to gravity concentration treatment with tailings flotation. Total recoveries (gravity recovery plus flotation recovery) ranged from 94.8% to 97.9%. Total gold recovery did increase slightly with decreasing flotation feed size, and the highest total recovery (97.9%) was observed with a 75µm re-grind size of the flotation feed.

Combined results show that 31.9% to 42.2% of the contained gold was recovered to the gravity cleaner concentrates. Gravity cleaner concentrate gold grades ranged from 576 to 1,480 gAu/mt. Gravity concentrate weights were equivalent to 0.14% to 0.28% of the feed weight. Gravity concentration gold recovery and concentrate grade were not significantly sensitive to grind size, within the range of grind sizes tested (180µm to 300µm). Gravity concentrate grade and recovery did vary, but this is likely due to sample variability and not to feed size sensitivity. The presence of relatively coarse particulate gold was observed in the clean concentrates of the flotation composite.

Combined results show that nearly all of the gold that remained in the gravity concentration tailings was recovered to the rougher flotation concentrate. Flotation gold recovery increased slightly with decreasing feed size. Relative to the portion of gold contained in the gravity tailings, gold recoveries to the flotation concentrates at feed sizes of 75, 180, 212, and 300µm were 96.8%, 95.6%, 93.1%, and 92.4%, respectively. Flotation concentrate grade and weight pulls were not correlated with feed size.

Flotation weight pulls ranged from 5.20% to 7.52% of the feed weight. Flotation rougher concentrate gold grades ranged from 35 to 52 gAu/mt. It is expected that the grade of the flotation concentrate could be improved, and the weight pull reduced, by adding cleaner flotation to this process.

Sulfide sulfur recoveries to the flotation concentrate were high and ranged from 92.9% to 96.3%. The sulfide sulfur grade of the tailings was reduced to 0.06% to 0.12%.

The combined weight of the flotation and gravity concentrate ranged from 5.48% to 7.66% of the feed weight. This combined concentrate would assay 56 to 79 gAu/mt.

**Table 15. - Particle Size Distribution Results,
Maryland Mine Flotation Rougher Tailings (F-1), 80%-75µm Feed Size**

Size Fraction	Weight	
	%	Cum. %
+212µm	0.1	0.1
-212+150µm	1.4	1.5
-150+106µm	8.4	9.9
-106+75µm	14.1	24.0
-75+53µm	10.8	34.8
-53+45µm	5.4	40.2
-45µm	59.8	100.0
Composite	100.0	
Calculated P ₈₀ Size, µm:		83

**Table 16. - Particle Size Distribution Results,
Maryland Mine Flotation Rougher Tailings (F-2), 80%-180µm Feed Size**

Size Fraction	Weight	
	%	Cum. %
+212µm	4.5	4.5
-212+150µm	13.3	17.8
-150+106µm	15.1	32.9
-106+75µm	12.0	44.9
-75+53µm	7.1	52.0
-53+45µm	3.3	55.3
-45µm	44.7	100.0
Composite	100.0	
Calculated P ₈₀ Size, µm:		143

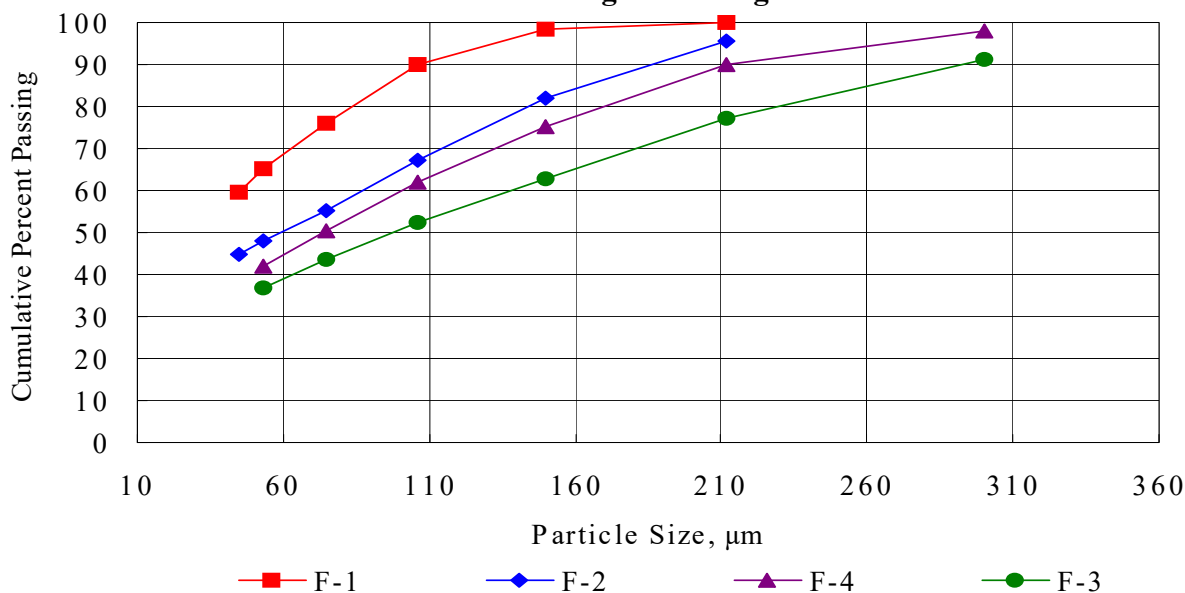
**Table 17. - Particle Size Distribution Results,
Maryland Mine Flotation Rougher Tailings (F-4), 80%-212µm Feed Size**

Size Fraction	Weight	
	%	Cum. %
+300µm	2.1	2.1
-300+212µm	7.8	9.9
-212+150µm	14.8	24.7
-150+106µm	13.4	38.1
-106+75µm	11.6	49.7
-75+53µm	8.3	58.0
-53µm	42.0	100.0
Composite	100.0	
Calculated P ₈₀ Size, µm:		167

**Table 18. - Particle Size Distribution Results,
Maryland Mine Flotation Rougher Tailings (F-3), 80%-300 μ m Feed Size**

Size Fraction	Weight	
	%	Cum. %
+300 μ m	8.9	8.9
-300+212 μ m	13.8	22.7
-212+150 μ m	14.5	37.2
-150+106 μ m	10.2	47.4
-106+75 μ m	8.8	56.2
-75+53 μ m	6.9	63.1
-53 μ m	36.9	100.0
Composite	100.0	
Calculated P ₈₀ Size, μ m: 227		

**Figure 1. - Particle Size Distribution,
Flotation Rougher Tailings**



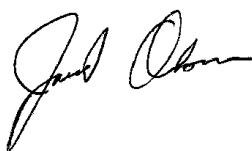
Particle size distribution analysis results for the flotation tailings indicate that the feed to flotation test F-1 may have been slightly under-ground to a particle size of 80%-83 μ m (target size 75 μ m). It should be noted; however, that the particle size distribution of the flotation tailings may be different from that of the flotation feed. For the three remaining flotation tests, results indicate that the flotation feeds were significantly finer than the gravity test target grind sizes. This is primarily due to the short polish grind that is required for bench scale flotation testing feeds, to remove surface oxidation from sulfide particles that may have been generated between the initial grinding (prior to gravity concentration) and flotation testing.

CONCLUSIONS

- The flotation composite responded well to combined gravity concentration and flotation concentration treatment. The highest combined gold recovery (97.9%) was achieved to a 6.19% concentrate mass pull with a gravity concentration feed size of 80%-180 μ m and a flotation feed re-grind to 80%-75 μ m.
- Gold recovery to the gravity cleaner concentrate ranged from 31.9% to 42.2%, and was not sensitive to feed size within the range of sizes tested.
- Bulk sulfide flotation gold recovery increased slightly with decreasing feed size, and was highest at the finest grind size tested (75 μ m).
- Bulk sulfide rougher flotation mass pulls were equivalent to between 5.2% and 7.5% of the feed weight. Flotation mass pull was not sensitive to feed size.

RECOMMENDATIONS

It is recommended that additional flotation testing be conducted to optimize the flotation reagent addition scheme. Additional testing should include evaluation of cleaner flotation to increase concentrate grade and reduce mass pull. Testing should also be done to determine an appropriate method for recovering gold from the Maryland mine concentrate (e.g. cyanidation).



Jared R. Olson, P.E.
Metallurgist / V.P. Operations

JRO:lj/mb

APPENDIX

Section 1 - Ball Mill Work Index Results

Section 2 - Gravity Concentration Testing Product Photographs

Section 3 - Detailed Flotation Testing Results

APPENDIX

Section 1 - Ball Mill Work Index Results



McClelland Laboratories, Inc.

BOND BALL MILL GRINDABILITY TEST

BALL MILL GRINDABILITY TEST # BM-01

PROJECT # 4466

DATE: 7/22/2019

PURPOSE: To determine the ball mill grindability of the test sample in terms of a Bond work index number.

SAMPLE: **Flotation Comp**

PROCEDURE: The equipment and procedure duplicate the Bond method for determining ball-mill work indices.

TEST CONDITIONS: Tyler Mesh of Grind (product top size): 100 150 Microns
 Weight of compacted 700 CC of feed: 1301.8 grams
 Weight of undersize product for 250% circulating load: 371.9 grams
 Weight % of undersize material in the ball mill feed: 12.2 %

Cycle	New Feed g	Undersize		Mill Revolutions	Undersize in Product g	Undersize Produced	
		In feed g	To be ground g			Total wt g	Per Mill Revolution g
1	1301.8	158.8	213.1	150	310.4	151.6	1.01
2	315.1	38.4	333.5	330	379.7	341.3	1.03
3	382.3	46.6	325.3	316	382.7	336.1	1.06
4	385.6	47.0	324.9	307	390.2	343.2	1.12
5	392.2	47.8	324.1	289	367.5	319.7	1.11
6	369.6	45.1	326.8	294	364.2	319.1	1.09
Average of last three cycles =							1.11

$$W_i = \frac{44.5}{P_1^{0.23} \times GPR^{0.82} \left[\left(\frac{10}{P^{0.5}} \right) - \left(\frac{10}{F^{0.5}} \right) \right]}$$

Where: P₁ = 100% passing size of product = 150 microns
 GPR = Grams per Revolution = 1.11 grams
 P = 80% passing size of product = 105 microns
 F = 80% passing size of feed = 2114 microns

Ball Mill Work Index = 17.06 kW-hr/st
18.80 kW-hr/mt

Screen Analysis

SCREEN TEST No: BM-01

PROJECT No: 4466

DATE: 7/18/2019

SAMPLE: Flotation Comp

Ball mill feed

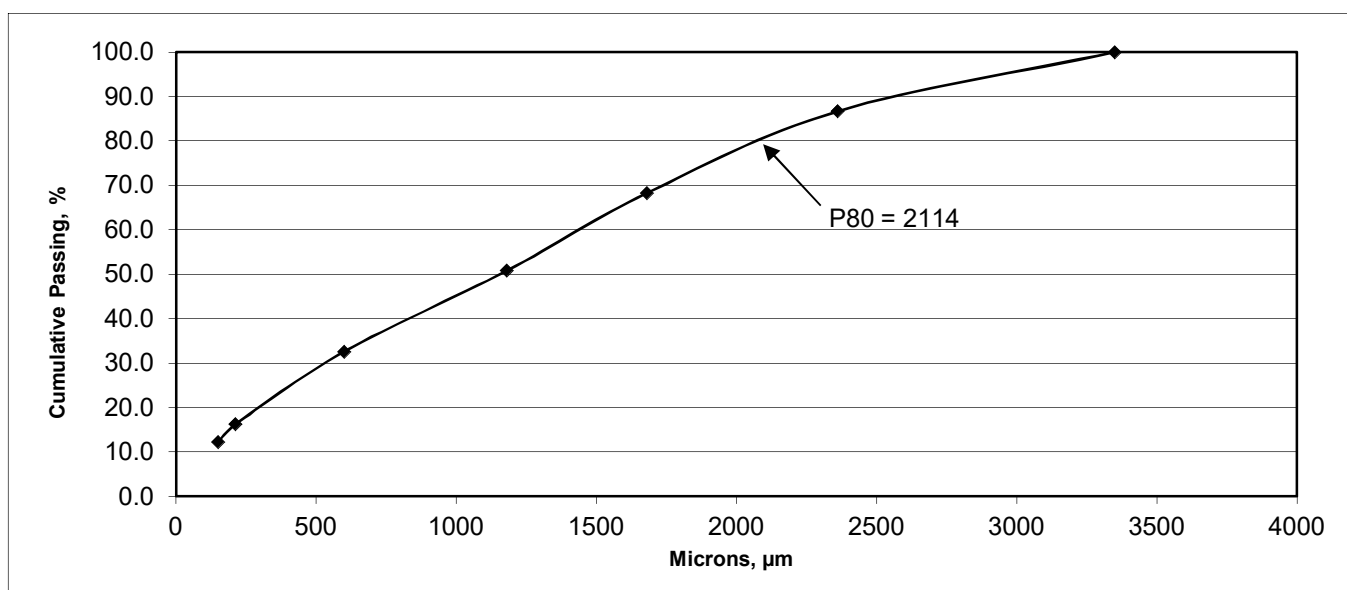
PROCEDURE: Dry screen the crushed feed on the following screens.

RESULTS:

Individual		
Screen Fraction (Tyler) Mesh	Weight g	Weight %
+ 6 mesh	0.1	0.0
-6 + 8 mesh	53.6	13.3
-8 + 10 mesh	74.2	18.4
-10 + 14 mesh	70.3	17.5
-14 + 28 mesh	73.4	18.2
-28 + 65 mesh	65.8	16.3
-65 + 100 mesh	16.4	4.1
-100 mesh	49.0	12.2
Total	402.8	100.0

Cumulative Passing		
(Tyler) Mesh	Microns	Weight %
6	3350	100.0
8	2360	86.7
10	1680	68.2
14	1180	50.8
28	600	32.6
65	212	16.2
100	150	12.2

(Rev. 4/08)





McClelland Laboratories, Inc.

Screen Analysis

SCREEN TEST No: BM-01

PROJECT No: 4466

DATE: 7/23/2019

SAMPLE: Flotation Comp
Ball mill product

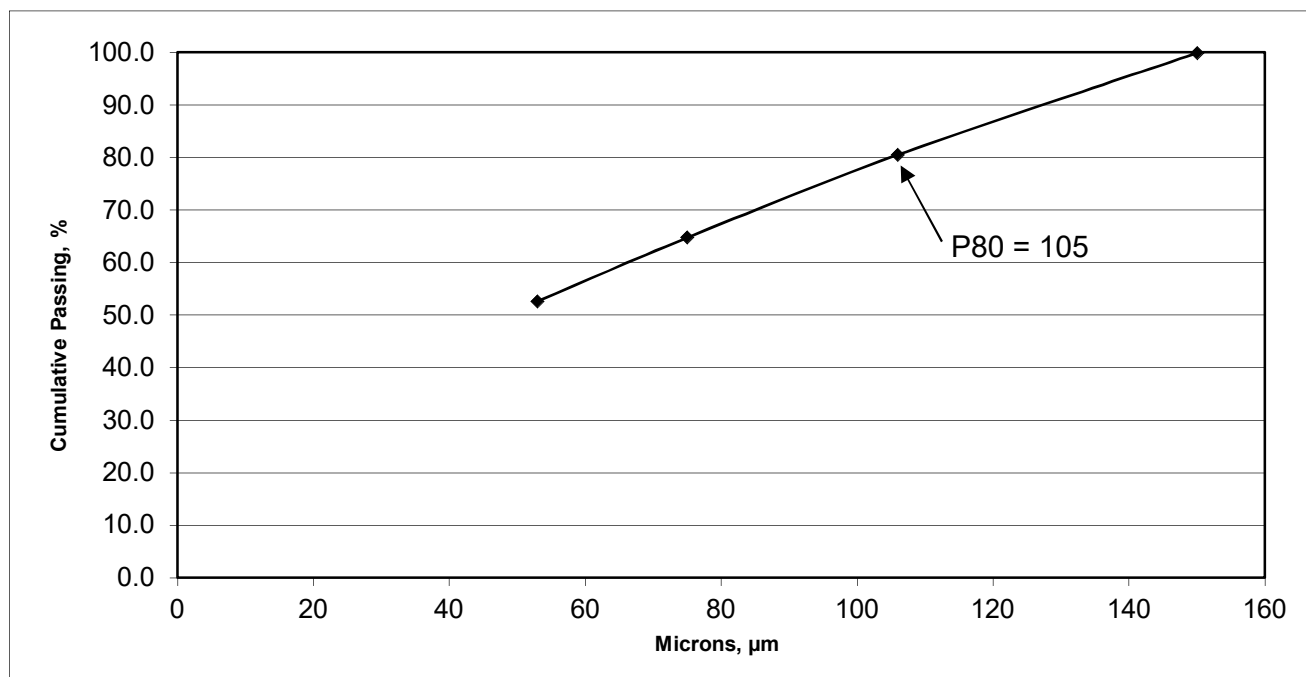
PROCEDURE: Wet screen at 270 mesh. Dry screen on the sieves listed below.

RESULTS:

Individual		
Screen Fraction (Tyler) Mesh	Weight g	Weight %
+100 mesh	0.3	0.1
-100+ 150 mesh	48.0	19.4
-150+ 200 mesh	39.1	15.8
-200 + 270 mesh	30.0	12.1
-270 mesh	130.4	52.6
Total	247.8	100.0

Cumulative Passing		
(Tyler) Mesh	Microns	Weight %
100	150	99.9
150	106	80.5
200	75	64.7
270	53	52.6

(Rev. 4/2008)

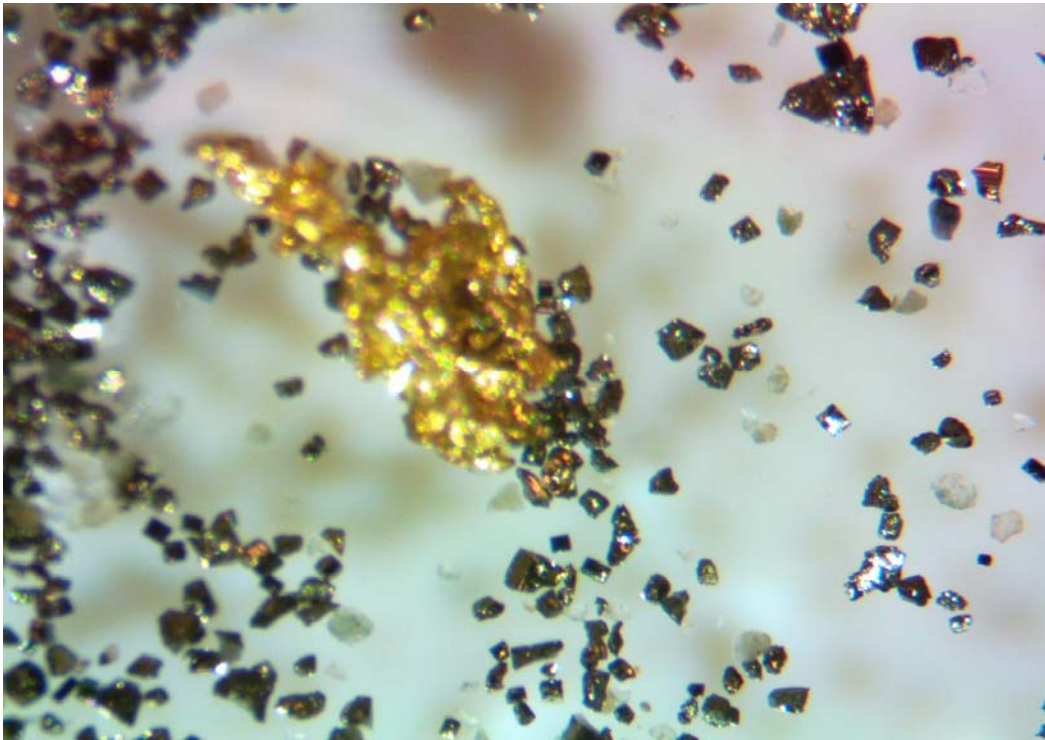


APPENDIX

Section 2 - Gravity Concentration Testing Product Photographs

Gravity Pictures - MLI Job No. 4466

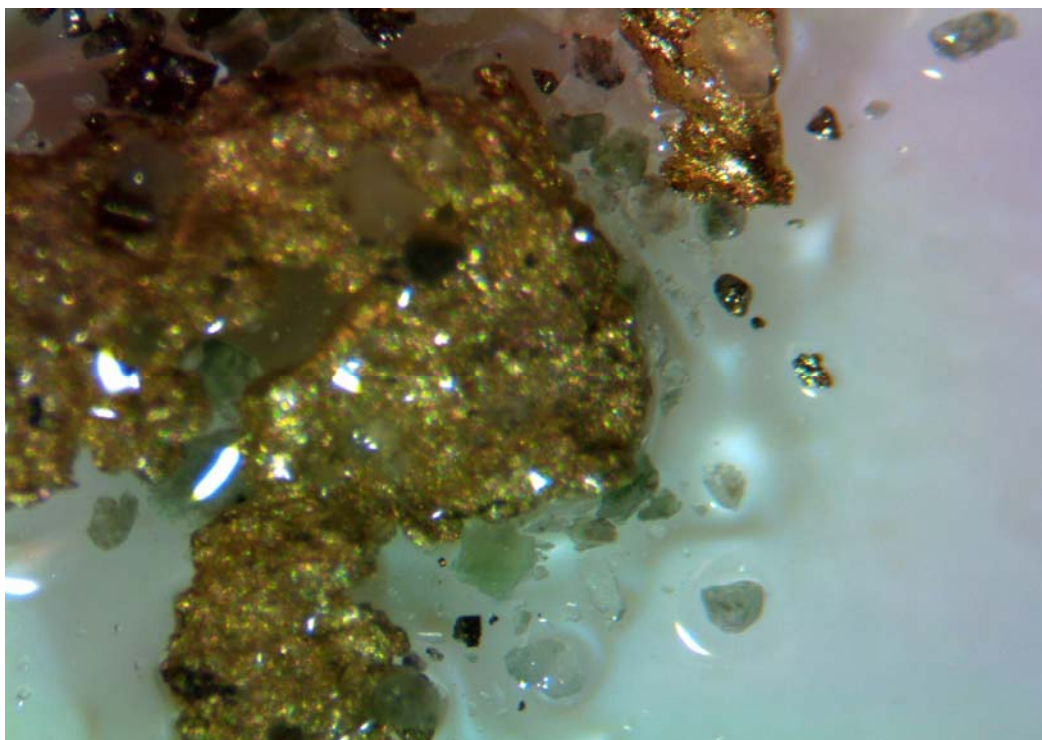
Maryland Mine



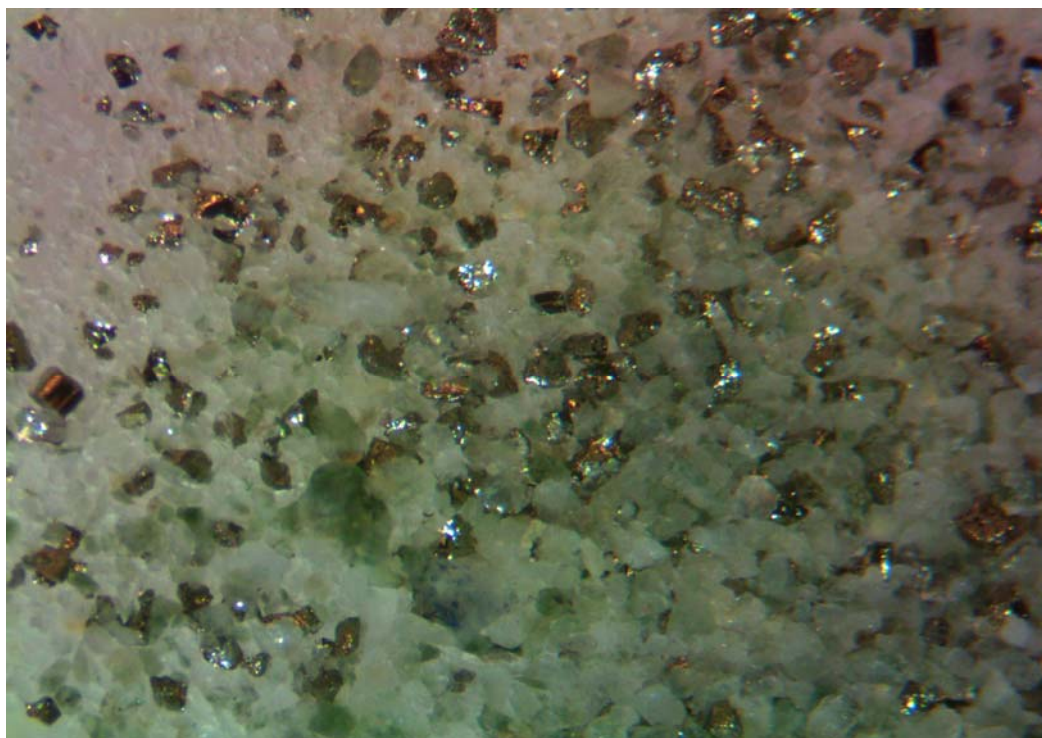
Flotation Composite, Test G-2, Cl. Conc. (Free Gold)

Gravity Pictures - MLI Job No. 4466

Maryland Mine



Flotation Composite, Test G-3, Cl. Conc. (Free Gold)



Flotation Composite, Test G-3, Cl. Tail

APPENDIX

Section 3 - Detailed Flotation Testing Results

Test: **F-1**

Sample I.D. **G-1 Recombined Tails**

Purpose: **Bulk Sulfide Rougher/Cleaner flotation test, Flotation using standard reagent additions.**

Feed Size: **P₈₀ 75µm**

Products	Reagents Added, kg/mt ore						Product Weights, g			Agitation Rate, RPM	Pull Time		Slurry Measurements			Assays		
	CuSO ₄ ·5H ₂ O	PAX	AERO 208	Grams Aerofroth 65	Aerofroth 65 kg/mt ore	Soda Ash	Slurry	Dry Solids	Water		Min.	Cum. Min.	Wt. %	pH	mV (vs. Ag/AgCl)	gAu/mt	gAg/mt	% S [−]
Initial	0.25					0.0	3055.4	1008.3	2047.1				33.0%	8.4	90			
After Conditioning														8.0	92			
Cl. Conc.																		
Cl. Tail																		
Cl. Flot. Feed																		
Ro. Conc.							866.5	61.5	805.0				7.1%			46.0	3.0	23.4
Ro. Conc. Pull 1		0.005	0.010	0.07	0.071	0.0				1200	4.0	4.0		8.4	85			
Ro. Conc. Pull 2		0.005	0.010	0.05	0.050	0.0				1200	3.0	7.0		8.3	85			
Ro. Conc. Pull 3		0.005	0.010	0.06	0.061	0.0				1200	3.0	10.0		8.4	88			
Ro. Conc. Pull 4		0.005	0.010	0.02	0.020	0.0				1200	2.0	12.0		8.6	92			
Ro. Conc. Pull 5		0.005	0.010	0.00	0.000	0.0				1200	2.0	14.0		8.6	84			
Ro. Tail							5924.4	929.3	4995.1				15.7%			0.10	0.50	0.06
Composite	0.250	0.025	0.050		0.202	0.0		990.8			14.0							

Test: **F-2**

Sample I.D. **G-1 Recombined Tails**

Purpose: **Bulk Sulfide Rougher/Cleaner flotation test, Flotation using standard reagent additions.**

Feed Size: **P₈₀ 180µm (Polish)**

Products	Reagents Added, kg/mt ore						Product Weights, g			Agitation Rate, RPM	Pull Time		Slurry Measurements			Assays		
	CuSO ₄ ·5H ₂ O	PAX	AERO 208	Grams Aerofroth 65	Aerofroth 65 kg/mt ore	Soda Ash	Slurry	Dry Solids	Water		Min.	Cum. Min.	Wt. %	pH	mV (vs. Ag/AgCl)	gAu/mt	gAg/mt	% S [−]
Initial	0.25					0.0	3101.2	1023.4	2077.8				33.0%	7.8	137			
After Conditioning																		
Cl. Conc.																		
Cl. Tail																		
Cl. Flot. Feed																		
Ro. Conc.							986.3	52.8	933.5	1200			5.4%			52.0	3.0	27.4
Ro. Conc. Pull 1		0.005	0.010	0.07	0.069	0.0				1200	4.0	4.0		7.8	111			
Ro. Conc. Pull 2		0.005	0.010	0.04	0.040	0.0				1200	3.0	7.0		7.8	131			
Ro. Conc. Pull 3		0.005	0.010	0.06	0.059	0.0				1200	3.0	10.0		7.9	124			
Ro. Conc. Pull 4		0.005	0.010	0.02	0.020	0.0				1200	2.0	12.0		8.1	131			
Ro. Conc. Pull 5		0.005	0.010	0.00	0.000	0.0				1200	2.0	14.0		8.1	125			
Ro. Tail							3605.9	958.9	2647.0				26.6%			0.13	0.50	0.06
Composite	0.250	0.025	0.050		0.188	0.0		1011.7			14.0							

Test: **F-3**

Sample I.D. **G-2 Recombined Tails**

Purpose: **Bulk Sulfide Rougher/Cleaner flotation test, Flotation using standard reagent additions.**

Feed Size: **P₈₀ 300µm (Polish)**

Products	Reagents Added, kg/mt ore						Product Weights, g			Agitation Rate, RPM	Pull Time		Slurry Measurements			Assays		
	CuSO ₄ ·5H ₂ O	PAX	AERO 208	Grams Aerofroth 65	Aerofroth 65 kg/mt ore	Soda Ash	Slurry	Dry Solids	Water		Solids Density		Redox.		Assays			
											Min.	Cum. Min.	Wt. %	pH	mV (vs. Ag/AgCl)	gAu/mt	gAg/mt	% S ⁼⁼
Initial	0.25					0.0	3041.2	1003.6	2037.6				33.0%	8.2	94			
After Conditioning														7.8	105			
Cl. Conc.																		
Cl. Tail																		
Cl. Flot. Feed																		
Ro. Conc.							1259.5	68.2	1191.3	1200			5.4%			38.0	6.0	21.3
Ro. Conc. Pull 1	0.005	0.010	0.03	0.032	0.0					1200	4.0	4.0		8.4	92			
Ro. Conc. Pull 2	0.005	0.010	0.00	0.000	0.0					1200	3.0	7.0		8.5	85			
Ro. Conc. Pull 3	0.005	0.010	0.01	0.013	0.0					1200	3.0	10.0		8.6	80			
Ro. Conc. Pull 4	0.005	0.010	0.00	0.000	0.0					1200	2.0	12.0		8.6	78			
Ro. Conc. Pull 5	0.005	0.010	0.00	0.000	0.0					1200	2.0	14.0		8.6	75			
Ro. Tail							3685.3	927.3	2758.0				25.2%			0.23	0.20	0.12
Composite	0.250	0.025	0.050		0.044	0.0		995.5			14.0							

Test: **F-4**

Sample I.D. **G-3 Recombined Tails**

Purpose: **Bulk Sulfide Rougher/Cleaner flotation test, Flotation using standard reagent additions.**

Feed Size: **P₈₀ 212µm (Polish)**

Products	Reagents Added, kg/mt ore						Product Weights, g			Agitation Rate, RPM	Pull Time		Slurry Measurements			Assays		
	CuSO ₄ ·5H ₂ O	PAX	AERO 208	Grams Aerofroth 65	Aerofroth 65 kg/mt ore	Soda Ash	Slurry	Dry Solids	Water		Solids Density		Redox.		Assays			
											Min.	Cum. Min.	Wt. %	pH	mV (vs. Ag/AgCl)	gAu/mt	gAg/mt	% S [™]
Initial	0.25					0.0	3040.9	1003.5	2037.4				33.0%	8.3	70			
After Conditioning														7.9	110			
Cl. Conc.																		
Cl. Tail																		
Cl. Flot. Feed																		
Ro. Conc.							1308.2	75.2	1233.0	1200			5.7%			35.1	9.0	19.0
Ro. Conc. Pull 1	0.005	0.010	0.03	0.029	0.0					1200	4.0	4.0		8.4	95			
Ro. Conc. Pull 2	0.005	0.010	0.02	0.016	0.0					1200	3.0	7.0		8.5	83			
Ro. Conc. Pull 3	0.005	0.010	0.00	0.000	0.0					1200	3.0	10.0		8.6	82			
Ro. Conc. Pull 4	0.005	0.010	0.00	0.000	0.0					1200	2.0	12.0		8.6	84			
Ro. Conc. Pull 5	0.005	0.010	0.00	0.000	0.0					1200	2.0	14.0		8.6	78			
Ro. Tail							3488.7	924.0	2564.7				26.5%			0.21	0.40	0.10
Composite	0.250	0.025	0.050		0.044	0.0		999.2			14.0							

Table A3-1. - Flotation Rougher Tail Assay Results, Recombined Gravity Tailings, Maryland Mine

MLI		Feed Size	gAu/mt ore					gAg/mt ore					Sulfide Sulfur
Test #	Composite		Init.	Dup.	Trip.	Avg.	Std. Dev.	Init.	Dup.	Trip.	Avg.	Std. Dev.	%
F-1	G-1 Recombined Tails	P80-75µm	0.08	0.106	0.108	0.10	0.02	0.4	0.5	0.5	0.5	0	0.06
F-2	G-1 Recombined Tails	P80-180µm (Polish)	0.129	0.126	0.121	0.13	0.00	0.5	0.5	0.4	0.5	0	0.06
F-3	G-2 Recombined Tails	P80-300µm (Polish)	0.269	0.183	0.25	0.23	0.05	0.2	0.1	0.2	0.2	0.1	0.12
F-4	G-3 Recombined Tails	P80-212µm (Polish)	0.197	0.203	0.225	0.21	0.01	0.5	0.4	0.4	0.4	0.1	0.10