



Silver State Labs-Reno  
1135 Financial Blvd  
Reno, NV 89502  
(775) 857-2400 FAX: (888) 398-7002  
www.ssalabs.com

January 07, 2019  
Workorder **18121305**

Jay Flakus  
CITY OF YERINGTON  
102 South Main Street  
Yerington, NV 89447

Project: W07 (California Well RAW)

Dear Jay Flakus:

It is the policy of Silver State Analytical Laboratory - Reno to strictly adhere to a comprehensive Quality Assurance Plan that ensures the data presented in this report are both accurate and precise. Silver State Analytical Laboratory - Reno maintains accreditation in the State of Nevada (NV-00015) and the State of California (ELAP 2990).

The data presented in this report was obtained from the analysis of samples received under a chain of custody. Unless otherwise noted below, samples were received in good condition, properly preserved and within the hold time for the requested analyses. Any anomalies associated with the analysis of the samples have been flagged with an appropriate explanation in the Analysis Report section of the Laboratory Report.

Analytical Comments for SM 4500 H+ B, Sample 18121305-01A, Batch ID R24865 : Analytical Method hold time was exceeded by 5.866 days.

Analytical Comments for SM 4500 H+ B, Sample 18121305-01ADUP, Batch ID R24865 : Analytical Method hold time was exceeded by 5.866 days.

Sincerely,

Carly Wood  
Laboratory Director  
1135 Financial Blvd  
Reno, NV 89502



Silver State Labs-Reno  
1135 Financial Blvd  
Reno, NV 89502  
(775) 857-2400 FAX: (888) 398-7002  
www.ssalabs.com

## Analytical Report

Workorder#: 18121305  
Date Reported: 1/7/2019

**Client:** CITY OF YERINGTON  
**Project Name:** W07 (California Well RAW)  
**PO #:**

**Sampled By** Jay Flakus

**Laboratory Accreditation Number** NV015/CA2990

Laboratory ID	Client Sample ID	Date/Time Sampled	Date Received
18121305-01	W07 (California Well RAW)	12/27/2018 11:53	12/27/2018

Parameter	Method	Result	Units	MCL	Analyst	Date/Time Analyzed	Data Flag
Aluminum	EPA 200.7	<0.05	mg/L	0.2	KL	01/03/2019 19:32	
Chloride	EPA 300.0	14	mg/L	400	KL	12/31/2018 12:08	
Color	SM 2120B	< 5	Color Units	15	KK	12/28/2018 8:44	
Copper	EPA 200.8	<0.002	mg/L	1	JF	01/02/2019 17:57	
Digestion Turbidity Check	EPA 200.8	< 1.0	NTU		KL	01/02/2019 12:18	
Fluoride	EPA 300.0	0.2	mg/L	4	KL	12/31/2018 12:08	
Iron	EPA 200.7	<0.05	mg/L	0.6	KL	01/03/2019 19:32	
Magnesium	EPA 200.7	12	mg/L		KL	01/03/2019 19:32	
Manganese	EPA 200.8	0.048	mg/L	0.1	JF	01/02/2019 17:57	
MBAS	SM 5540 C	< 0.05	mg/L	0.5	LRB	12/28/2018 9:37	
Odor	SM 2150 B	< 1	T.O.N.	3	KK	12/28/2018 8:45	
pH	SM 4500 H+ B	8.00	pH Units	8.5	KK	01/02/2019 8:55	H
pH Temperature	SM 4500 H+ B	18.9	°C		KK	01/02/2019 8:55	H
Silver	EPA 200.8	<0.002	mg/L	0.1	JF	01/02/2019 17:57	
Sulfate	EPA 300.0	59	mg/L	500	KL	12/31/2018 12:29	
Total Dissolved Solids	SM 2540 C	280	mg/L	1000	AA	12/28/2018 11:36	
Zinc	EPA 200.8	<0.02	mg/L	5	JF	01/02/2019 17:57	

Original

**Analysis:** Color - Apparent

**Method:** SM 2120B

**Batch ID:** R24770

**Analysis:** Total Dissolved Solids

**Method:** SM 2540 C

**Batch ID:** R24787

**Method Blank**

RunID: 24787 SeqNo 558970 Units: mg/L

Analysis Date: 12/28/2018 11:36:00 AM Analyst: AA

Analyte	Result	Rep Limit	Rep Qual
Total Dissolved Solids	< 10	10	

**Laboratory Control Sample (LCS)**

RunID: 24787 SeqNo 558971 Units: mg/L

Analysis Date: 12/28/2018 11:36:00 AM Analyst: AA

Analyte	LCS Spike Added	LCS Result	LCS % Recovery	LCSD Spike Added	LCSD Result	LCSD % Recovery	RPD	RPD Limit	Low Limit	High Limit	Qual
Total Dissolved Solids	500.0	484	96.8								

**Analysis:** MBAS (surfactants)

**Method:** SM 5540 C

**Batch ID:** R24793

**Method Blank**

RunID: 24793 SeqNo 558057 Units: mg/L

Analysis Date: 12/28/2018 9:37:00 AM Analyst: LRB

Analyte	Result	Rep Limit	Rep Qual
MBAS	< 0.050	0.050	

**Laboratory Control Sample (LCS)**

RunID: 24793 SeqNo 558058 Units: mg/L

Analysis Date: 12/28/2018 9:37:00 AM Analyst: LRB

Analyte	LCS Spike Added	LCS Result	LCS % Recovery	LCSD Spike Added	LCSD Result	LCSD % Recovery	RPD	RPD Limit	Low Limit	High Limit	Qual
MBAS	0.7500	0.684	91.2								

**Matrix Spike (MS) / Matrix Spike Duplicate (MSD)**

Sample Spiked: 18121305-01A

RunID: 24793 SeqNo 558061 Units: mg/L

Analysis Date: 12/28/2018 9:37:00 AM Analyst: LRB

Analyte	Sample Result	MS Spike Added	MS Result	MS % Recovery	MSD Spike Added	MSD Result	MSD % Recovery	RPD	RPD Limit	Low Limit	High Limit	Qual
MBAS	0	0.5000	0.504	101								

**Analysis:** pH

**Method:** SM 4500 H+B

**Batch ID:** R24865

Original

## Laboratory Control Sample (LCS)

RunID: 24865 SeqNo 559363 Units: pH Units  
Analysis Date: 1/2/2019 8:55:24 AM Analyst: KK

Analyte	LCS Spike Added	LCS Result	LCS % Recovery	LCSD Spike Added	LCSD Result	LCSD % Recovery	RPD	RPD Limit	Low Limit	High Limit	Qual
pH	7.000	7.03	100								
pH Temperature		19.5	0								

**Analysis:** Anions 300.0

**Method:** EPA 300.0

**Batch ID:** R24891

## Method Blank

RunID: 24891 SeqNo 560013 Units: mg/L  
Analysis Date: 7/27/2018 12:25:00 PM Analyst: KL

Analyte	Result	Rep Limit	Rep Qual
Chloride	< 0.50	0.50	
Fluoride	< 0.10	0.10	
Sulfate	< 0.20	0.20	

## Method Blank

RunID: 24891 SeqNo 560068 Units: mg/L  
Analysis Date: 7/27/2018 2:23:00 PM Analyst: KL

Analyte	Result	Rep Limit	Rep Qual
Chloride	< 0.50	0.50	
Fluoride	< 0.10	0.10	
Sulfate	< 0.20	0.20	

## Laboratory Control Sample (LCS)

RunID: 24891 SeqNo 560087 Units: mg/L  
Analysis Date: 7/27/2018 3:23:00 PM Analyst: KL

Analyte	LCS Spike Added	LCS Result	LCS % Recovery	LCSD Spike Added	LCSD Result	LCSD % Recovery	RPD	RPD Limit	Low Limit	High Limit	Qual
Chloride	8.000	7.8	97.8								
Fluoride	4.000	3.8	95.7								
Sulfate	8.000	8.1	101								

## Matrix Spike (MS) / Matrix Spike Duplicate (MSD)

Sample Spiked: 18121305-01A

RunID: 24891 SeqNo 560026 Units: mg/L  
Analysis Date: 12/31/2018 12:50:00 PM Analyst: KL

Analyte	Sample Result	MS Spike Added	MS Result	MS % Recovery	MSD Spike Added	MSD Result	MSD % Recovery	RPD	RPD Limit	Low Limit	High Limit	Qual
Chloride	12.94	100.0	110	98.2	100.0	110	101	2.80	20	90	110	
Fluoride	0	100.0	98	98.3	100.0	100	101	2.34	20	90	110	
Sulfate	59.50	100.0	170	106	100.0	170	108	0.731	20	90	110	

**Analysis:** Metals 200.8

**Method:** EPA 200.8

**Batch ID:** R24920

## Laboratory Control Sample (LCS)

RunID: 24920 SeqNo 560614 Units: mg/L  
Analysis Date: 1/2/2019 5:44:40 PM Analyst: JF

Analyte	LCS Spike Added	LCS Result	LCS % Recovery	LCSD Spike Added	LCSD Result	LCSD % Recovery	RPD	RPD Limit	Low Limit	High Limit	Qual
Copper	0.1000	0.10	101								
Manganese	0.1000	0.098	98.1								
Silver	0.1000	0.098	97.7								
Zinc	0.1000	0.096	95.7								

## Matrix Spike (MS) / Matrix Spike Duplicate (MSD)

Sample Spiked: 18121305-01B

RunID: 24920 SeqNo 560617 Units: mg/L  
Analysis Date: 1/2/2019 6:04:23 PM Analyst: JF

Original

# Quality Control Report

WO#: 18121305  
1/7/2019

Analyte	Sample Result	MS Spike Added	MS Result	MS % Recovery	MSD Spike Added	MSD Result	MSD % Recovery	RPD	RPD Limit	Low Limit	High Limit	Qual
Copper	0007936	0.2000	0.20	97.6	0.2000	0.20	100	2.77	20	70	130	
Manganese	0.04800	0.2000	0.23	92.8	0.2000	0.24	96.6	3.22	20	70	130	
Silver	0	0.2000	0.19	95.0	0.2000	0.20	97.8	2.94	20	70	130	
Zinc	0	0.2000	0.19	96.4	0.2000	0.20	99.9	3.62	20	70	130	

**Analysis:** Metals 200.7

**Method:** EPA 200.7

**Batch ID:** R24956

**Method Blank**

RunID: 24956 SeqNo 561363 Units: mg/L

Analysis Date: 1/3/2019 4:35:41 PM Analyst: KL

Analyte	Result	Rep Limit	Rep Qual
Aluminum	< 0.050	0.050	
Iron	< 0.050	0.050	
Magnesium	< 0.50	0.50	

Original



Silver State Labs-Reno  
1135 Financial Blvd  
Reno, NV 89502  
(775) 857-2400 FAX: (888) 398-7002  
www.ssalabs.com

## Quality Control Report

WO#: 18121305  
1/7/2019

---

### Method Blank

RunID: 24956      SeqNo 561389      Units: mg/L  
Analysis Date: 1/4/2019 4:20:00 PM      Analyst: KL

Analyte	Result	Rep Limit	Rep Qual
Aluminum	< 0.050	0.050	
Iron	< 0.050	0.050	
Magnesium	< 0.50	0.50	

---

Original

## Method Blank

RunID: 24956 SeqNo 561415 Units: mg/L  
Analysis Date: 1/3/2019 6:27:43 PM Analyst: KL

Analyte	Result	Rep Limit	Rep Qual
Aluminum	< 0.050	0.050	
Iron	< 0.050	0.050	
Magnesium	< 0.50	0.50	

## Laboratory Control Sample (LCS)

RunID: 24956 SeqNo 561361 Units: mg/L  
Analysis Date: 1/3/2019 4:31:23 PM Analyst: KL

Analyte	LCS Spike Added	LCS Result	LCS % Recovery	LCSD Spike Added	LCSD Result	LCSD % Recovery	RPD	RPD Limit	Low Limit	High Limit	Qual
Aluminum	6.000	6.0	100								
Iron	6.000	6.1	101								
Magnesium	30.00	30	101								

## Matrix Spike (MS) / Matrix Spike Duplicate (MSD)

Sample Spiked: 18121284-01B

RunID: 24956 SeqNo 561371 Units: mg/L  
Analysis Date: 1/3/2019 4:52:57 PM Analyst: KL

Analyte	Sample Result	MS Spike Added	MS Result	MS % Recovery	MSD Spike Added	MSD Result	MSD % Recovery	RPD	RPD Limit	Low Limit	High Limit	Qual
Aluminum	0.7122	5.000	6.0	105	5.000	6.2	111	4.45	20	70	130	
Iron	1.410	5.000	6.5	102	5.000	6.5	102	0.0900	20	70	130	
Magnesium	20.02	20.00	42	108	20.00	41	104	1.85	20	70	130	

## Matrix Spike (MS) / Matrix Spike Duplicate (MSD)

Sample Spiked: 18121378-16B

RunID: 24956 SeqNo 561403 Units: mg/L  
Analysis Date: 1/3/2019 6:01:53 PM Analyst: KL

Analyte	Sample Result	MS Spike Added	MS Result	MS % Recovery	MSD Spike Added	MSD Result	MSD % Recovery	RPD	RPD Limit	Low Limit	High Limit	Qual
Aluminum	0	5.000	4.8	95.5	5.000	4.7	94.4	1.16	20	70	130	
Iron	0.01463	5.000	4.9	96.8	5.000	4.8	96.1	0.746	20	70	130	
Magnesium	31.50	20.00	50	90.3	20.00	50	92.7	0.970	20	70	130	

## Matrix Spike (MS) / Matrix Spike Duplicate (MSD)

Sample Spiked: 19010040-01C

RunID: 24956 SeqNo 561439 Units: mg/L  
Analysis Date: 1/3/2019 7:19:24 PM Analyst: KL

Analyte	Sample Result	MS Spike Added	MS Result	MS % Recovery	MSD Spike Added	MSD Result	MSD % Recovery	RPD	RPD Limit	Low Limit	High Limit	Qual
Aluminum												
Iron												
Magnesium												

Original



## Quality Control Report

WO#: 18121305  
1/7/2019

Aluminum	0.2053	5.000	5.1	97.2	5.000	5.1	98.2	0.925	20	70	130	
Iron	0.3009	5.000	5.2	98.1	5.000	5.2	98.5	0.409	20	70	130	
Magnesium	12.11	20.00	32	99.0	20.00	32	99.1	0.0654	20	70	130	

### Matrix Spike (MS) / Matrix Spike Duplicate (MSD)

Sample Spiked: 19010025-01B

RunID: 24956 SeqNo 561449 Units: mg/L

Analysis Date: 1/3/2019 7:40:58 PM Analyst: KL

Analyte	Sample Result	MS Spike Added	MS Result	MS % Recovery	MSD Spike Added	MSD Result	MSD % Recovery	RPD	RPD Limit	Low Limit	High Limit	Qual
Aluminum	0	10.00	10	100	10.00	10	101	0.339	20	70	130	
Iron	0.03168	10.00	10	101	10.00	10	101	0.0920	20	70	130	
Magnesium	4.869	40.00	46	103	40.00	46	102	0.426	20	70	130	



### Definitions:

LCS: Laboratory Control Sample; prepared by adding a known mass of target analytes to a specified amount of de-ionized water and prepared with the batch of samples, used to calculate Accuracy (%REC).

LCSD: LCS Duplicate; used to calculate both Accuracy (%REC) and Precision (%RPD)

MBLK: Method Blank; a sample of similar matrix that is processed simultaneously with and under the same conditions as samples through all steps of the analytical procedure, and in which no target analytes or interferences are present at concentrations that impact the analytical results for sample analyses.

MS: Matrix Spike; prepared by adding a known mass of target analytes to a specified amount of matrix sample for which an independent estimate of target analyte concentration is available, used to calculate Accuracy (%REC)

MSD: Matrix Spike Duplicate; used to calculate both Accuracy (%REC) and Precision (%RPD)

RPD: Relative Percent Difference; comparison between sample and duplicate and/or MS and MSD.

PQL: Practical Quantitation Limit; the limit to which data is quantitated for reporting.

MDL: Method Detection Limit; the limit to which the instrument can reliably detect.

MCL: Maximum Contaminant Level; value set according to EPA guidelines.

### Qualifiers:

\* - Analyte exceeds Safe Drinking Water Act MCL, does not meet drinking water standards.

C - Analyte value below Safe Drinking Water Act MCL, does not meet drinking water standards.

B - Analyte found above the PQL in associated method blank.

G - Calibration blank analyte detected above PQL.

H - Sample analyzed beyond holding time for this parameter.

J - Estimated Value; Analyte found between MDL and PQL limits.

L - Sample concentration is at least 5 times greater than spike contribution. Spike recovery criteria do not apply.

R - RPD between sample and duplicate sample outside the RPD acceptance limits.

S - Batch MS and/or MSD were outside acceptance limits, batch LCS was acceptable.

W - Sample temperature when received was out of limit as specified by method.