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

June 05, 2018 Workorder 18051321

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.

Sincerely,

Carly Wood Laboratory Director 1135 Financial Blvd Reno, NV 89502



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**Analytical Report** 

Workorder#:

Sampled By J. Flakus

18051321

Date Reported:

6/5/2018

**Client:** CITY OF YERINGTON

**Project Name:** W07- California Well raw

PO #:

Laboratory Accreditation Number NV015/CA2990

**Date Received** Laboratory ID **Client Sample ID Date/Time Sampled** 18051321-01 W07- California Well raw 05/25/2018 10:24 5/25/2018

Date/Time Data Result Units **MCL** Analyzed Flag **Parameter** Method Analyst EPA 200.8 0.004 0.01 05/29/2018 19:22 Arsenic mg/L RM0.060 RMBarium EPA 200.8 mg/L 2 05/29/2018 19:22 Cadmium EPA 200.8 < 0.001 mg/L 0.005 RM05/29/2018 19:22 Chromium EPA 200.8 < 0.001 mg/L 0.1 RM05/29/2018 19:22 **Digestion Turbidity Check** NTU ΚK 05/29/2018 12:24 EPA 200.8 < 1.0 Fluoride EPA 300.0 <0.1 mg/L 4 JF 05/26/2018 2:32 S 0.015 05/29/2018 19:22 Lead < 0.001 RMEPA 200.8 mg/L Mercury EPA 245.1 < 0.0001 mg/L 0.002 KL 05/31/2018 12:30 < 0.05 JF Nitrate as N EPA 300.0 mg/L 10 05/26/2018 2:32 Nitrite as N EPA 300.0 < 0.05 1 JF 05/26/2018 2:32 mg/L Selenium EPA 200.8 < 0.005 mg/L 0.05 RM05/29/2018 19:22



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# **Quality Control Report**

WO#: **18051321** 

6/6/2018

Analysis: Anions 300.0

**Method:** EPA 300.0 **Batch ID: R18361** 

#### **Method Blank**

RunID: 18361 SeqNo 382199 Units: mg/L Analysis Date: 4/30/2018 11:21:02 AM Analysi: JF

Analyte	Result	Rep Limit	Rep Qual
Fluoride	< 0.10	0.10	
Nitrate as N	< 0.050	0.050	
Nitrite as N	< 0.050	0.050	

#### **Laboratory Control Sample (LCS)**

RunID: 18361 SeqNo 382201 Units: mg/L Analysis Date: 4/30/2018 12:39:38 PM Analysi: JF

Analyte	LCS Spike Added	LCS Result		 	LCSD % Recovery	RPD	RPD Limit	Low Limit	High Limit	Qual
Fluoride	2.000	1.9	95.7							
Nitrate as N	0.9030	0.91	101							
Nitrite as N	1.220	1.3	104							

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

Sample Spiked: 18051300-01A

RunID: 18361 SeqNo 382214 Units: mg/L Analysis Date: 5/25/2018 8:00:06 PM Analyst: JF

Analyte	Sample Result	_	MS Result	MS % Recovery	MSD Spike Added	MSD Result	MSD % Recovery	RPD	RPD Limit	Low Limit	High Limit	Qual
Fluoride	0	100.0	87	86.6	100.0	87	86.9	0.359	20	90	110	S
Nitrate as N	0	100.0	97	97.1	100.0	97	96.7	0.434	20	90	110	
Nitrite as N	0	100.0	92	92.1	100.0	92	92.1	0.0224	20	90	110	

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

Sample Spiked: 18051312-04A

RunID: 18361 SeqNo 382223 Units: mg/L Analysis Date: 5/25/2018 11:55:45 PM Analysi: JF

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
Fluoride	0	10.00	9.0	89.7	10.00	9.0	90.2	0.587	20	90	110	
Nitrate as N	0.5160	10.00	10	97.8	10.00	10	98.0	0.278	20	90	110	
Nitrite as N	0	10.00	9.5	94.8	10.00	9.6	95.8	1.05	20	90	110	



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## **Quality Control Report**

Batch ID:

R18403

WO#: **18051321** 

6/6/2018

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

Sample Spiked: 18051323-03A

RunID: 18361 SeqNo 382235 Units: mg/L Analysis Date: 5/26/2018 5:09:56 AM Analysi: JF

Analyte	Sample Result	-	MS Result	MS % Recovery	MSD Spike Added	MSD Result	MSD % Recovery	RPD	RPD Limit	Low Limit	High Limit	Qual
Nitrate as N	0	10.00	9.9	99.4	10.00	9.8	98.1	1.30	20	90	110	
Nitrite as N	0	10.00	9.0	90.0	10.00	9.1	90.6	0.670	20	90	110	

**Analysis:** Metals 200.8 **Method:** EPA 200.8

**Method Blank** 

RunID: 18403 SeqNo 383215 Units: mg/L Analysis Date: 5/29/2018 4:14:18 PM Analyst: RM

Analyte	Result	Rep Limit	Rep Qual
Arsenic	< 0.0010	0.0010	
Barium	< 0.0050	0.0050	
Cadmium	< 0.0010	0.0010	
Chromium	< 0.0010	0.0010	
Lead	< 0.0010	0.0010	
Selenium	< 0.0050	0.0050	

#### **Laboratory Control Sample (LCS)**

RunID: 18403 SeqNo 383189 Units: mg/L Analysis Date: 5/29/2018 2:14:57 PM Analysi: RM

Analyte	LCS Spike Added	LCS Result	LCS % Recovery	LCSD Spike Added	 LCSD % Recovery	RPD	RPD Limit	Low Limit	High Limit	Qu
Arsenic	0.1000	0.099	99.0							
Barium	0.1000	0.10	99.9							
Cadmium	0.1000	0.099	98.7	1						
Chromium	0.1000	0.099	99.0							
Lead	0.1000	0.10	100							
Selenium	0.5000	0.50	100							

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

Sample Spiked: 18051253-01A

RunID: 18403 SeqNo 383221 Units: mg/L Analysis Date: 5/29/2018 4:41:49 PM Analyst: RM

Analyte	Sample Result	-	MS Result	MS % Recovery	MSD Spike Added	MSD Result	MSD % Recovery	RPD	RPD Limit	Low Limit	High Limit	Qual
Arsenic	0.008870	0.1000	0.11	101	0.1000	0.11	101	0.273	20	70	130	
Barium	0.02450	0.1000	0.13	102	0.1000	0.13	101	1.19	20	70	130	
Cadmium	0	0.1000	0.099	98.7	0.1000	0.097	96.8	1.95	20	70	130	
Chromium	0.002420	0.1000	0.096	93.5	0.1000	0.094	91.8	1.74	20	70	130	



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**Quality Control Report** 

WO#:

18051321

6/6/2018

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Lead	0	0.1000	0.10	105	0.1000	0.11	106	0.760	20	70	130	
Selenium	0.003510	0.5000	0.52	103	0.5000	0.52	104	1.11	20	70	130	

**Analysis:** Mercury, RCRA

**Method:** EPA 7470 **Batch ID: R18412** 

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

Sample Spiked: 18051320-01A

RunID: 18412 SeqNo 383383 Units: mg/L Analysis Date: 5/31/2018 12:30:00 PM Analyst: KL

	Analyte	Sample Result		MS Result	MS % Recovery	MSD Spike Added	MSD Result	MSD % Recovery	RPD	RPD Limit	Low Limit	High Limit	Qual
ĺ	Mercury	0005900	0.05000	0.0526	104	0.05000	0.0453	89.4	14.9	20	80	120	

Analysis: Mercury

**Method:** EPA 245.1 **Batch ID: R18412** 

**Method Blank** 

RunID: 18412 SeqNo 383360 Units: mg/L Analysis Date: 5/31/2018 12:30:00 PM Analyst: KL

Analyte	Result	Rep Limit	Rep Qual
Mercury	< 0.0001	0.0001	

#### **Laboratory Control Sample (LCS)**

RunID: 18412 SeqNo 383361 Units: mg/L Analysis Date: 5/31/2018 12:30:00 PM Analyst: KL

Analyte	LCS Spike Added	LCS Result	LCS % Recovery	 Result	 RPD	RPD Limit	Low Limit	High Limit	Qual
Mercury	0.006000	0.00599	99.8						

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

Sample Spiked: 18051202-02B

RunID: 18412 SeqNo 383364 Units: mg/L Analysis Date: 5/31/2018 12:30:00 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
Mercury	0	.005000	0.00488	97.6	.005000	0.00476	95.2	2.49	20	70	130	_

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

Sample Spiked: 18051321-01B

RunID: 18412 SeqNo 383377 Units: mg/L Analysis Date: 5/31/2018 12:30:00 PM Analysi: KL

Analyte	Sample	MS	MS	MS %	MSD	MSD	MSD %	RPD	RPD	Low	High	Qual
-	Result	Spike	Result	Recovery	Spike	Result	Recovery		Limit	Limit	Limit	
		Added			Added		_					



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# **Quality Control Report**

WO#: 18051321

6/6/2018

Mercury	0.005000 0.00493	98.6 005000 0.00484	96.8 1.8	4 20	70	130	

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Preservative\*\* 1=H<sub>2</sub>SO<sub>4</sub>, 2=HNO<sub>3</sub>, 3=HCl, 4=NaOH, 5=Na<sub>2</sub>S<sub>2</sub>O<sub>3</sub>, 6=None, 7=Other Authorization is required to process samples. This obligates your organization for service fees. SSAL Standard T & C's or other written agreement applies. If colled legal services are required to recover said fees, your organization will be responsible for all fees and costs in addition to service fees. Matrix\* DW-Drinking Water, WW-Waste Water, GW-Ground Water, SW-Surface Water, SS-Soil, S-Solid, OT-Other

COYPW SDW SAMPLE COC 2018

less other arrangements are made and storage fees may apply he report. these samples as they are received by the laboratory.

ontainer\*\*\* P-Plastic, G-Glass, V-Voa Vial, OT-Other



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### **Definitions & Qualifiers**

WO#: 18051321 Date: 6/5/2018

#### 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.

POL: 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.

#### **Oualifiers:**

- \* 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 POL.
- 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 recieved was out of limit as specified by method.