



August 29, 2019

Sarah Richman
Arizona Minerals Inc.
2210 E. Fort Lowell Rd
Tucson, AZ 85719

TEL (805) 617-9300
FAX

Work Order No.: 19H0256

RE: Ground Water

Dear Sarah Richman,

Turner Laboratories, Inc. received 1 sample(s) on 08/07/2019 for the analyses presented in the following report.

All results are intended to be considered in their entirety, and Turner Laboratories, Inc. is not responsible for use of less than the complete report. Results apply only to the samples analyzed. Samples will be disposed of 30 days after issue of our report unless special arrangements are made.

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Please call if you have any questions.

Respectfully submitted,

Turner Laboratories, Inc.
ADHS License AZ0066

Elizabeth Kasik
Laboratory Director

Client: Arizona Minerals Inc.
Project: Ground Water
Work Order: 19H0256
Date Received: 08/07/2019

Work Order Sample Summary

Lab Sample ID	Client Sample ID	Matrix	Collection Date/Time
19H0256-01	MW-9-080719-11:01	Ground Water	08/07/2019 1101

Client: Arizona Minerals Inc.
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Case Narrative

The Cyanide and Cyanide WAD analyses was performed by TestAmerica Laboratories, Inc. in Phoenix, AZ.

The radiochemistry analysis was performed by Radiation Safety Engineering, Inc. in Chandler, AZ.

- E4 Concentration estimated. Analyte was detected below laboratory Minimum Reporting Limit (MRL) but above MDL.
 - E8 Analyte reported to MDL per project specification. Target analyte was not detected in the sample.
 - H5 This test is specified to be performed in the field within 15 minutes of sampling; sample was received and analyzed past the regulatory holding time.
 - M1 Matrix spike recovery was high; the associated LCS/LCSD was acceptable.
 - M3 The spike recovery value is unusable since the analyte concentration in the sample is disproportionate to the spike level. The associated LCS/LCSD recovery was acceptable.
 - Q4 Sample was received and analyzed without chemical preservation
 - Q9 Insufficient sample received to meet method QC requirements.
 - R12 RPD/RSD exceeded the method acceptance limit. Result less than 5 times the PQL.
 - R13 MS/MSD RPD exceeded method acceptance limit. Matrix spike recovery was outside acceptance criteria. Batch precision and accuracy were demonstrated.
 - R5 MS/MSD RPD exceeded the laboratory acceptance limit. Recovery met the acceptance criteria.
- All soil, sludge, and solid matrix determinations are reported on a wet weight basis unless otherwise noted.
- ND Not Detected at or above the PQL
 - PQL Practical Quantitation Limit
 - DF Dilution Factor

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Lab Sample ID: 19H0256-01

Client Sample ID: MW-9-080719-11:01
Collection Date/Time: 08/07/2019 1101
Matrix: Ground Water

Analyses	Result	MDL	PQL	Qual	Units	DF	Prep Date	Analysis Date	Analyst
Hardness, Dissolved-[CALC]									
Hardness, Calcium/Magnesium (As CaCO3) Dissolved	84		22		mg/L	1	08/14/2019 1025	08/14/2019 1616	MH
Hardness-Calculation									
Hardness, Calcium/Magnesium (As CaCO3)	85				mg/L	1	08/08/2019 1600	08/14/2019 1506	MH
Nitrate + Nitrite Sum-Calculation									
Nitrate and Nitrite Sum	ND		0.10		mg/L	1	08/08/2019 0930	08/08/2019 1052	EJ
ICP Dissolved Metals-E 200.7 (4.4)									
Boron	0.15		0.10		mg/L	1	08/14/2019 1025	08/14/2019 1616	MH
Calcium	34		4.0		mg/L	1	08/14/2019 1025	08/14/2019 1616	MH
Iron	ND		0.30		mg/L	1	08/14/2019 1025	08/14/2019 1616	MH
Magnesium	ND		3.0		mg/L	1	08/14/2019 1025	08/14/2019 1616	MH
Potassium	ND		5.0		mg/L	1	08/14/2019 1025	08/14/2019 1616	MH
Sodium	73		5.0		mg/L	1	08/14/2019 1025	08/14/2019 1616	MH
Zinc	ND		0.040		mg/L	1	08/14/2019 1025	08/14/2019 1616	MH
ICP/MS Dissolved Metals-E 200.8 (5.4)									
Aluminum	ND		0.0400		mg/L	1	08/14/2019 1025	08/15/2019 1409	MH
Antimony	ND		0.00050		mg/L	1	08/14/2019 1025	08/15/2019 1409	MH
Arsenic	0.0053		0.00050		mg/L	1	08/14/2019 1025	08/15/2019 1409	MH
Barium	0.011		0.00050		mg/L	1	08/14/2019 1025	08/15/2019 1409	MH
Beryllium	ND		0.00025		mg/L	1	08/14/2019 1025	08/15/2019 1409	MH
Cadmium	ND		0.00025		mg/L	1	08/14/2019 1025	08/15/2019 1409	MH
Chromium	ND		0.00050		mg/L	1	08/14/2019 1025	08/15/2019 1409	MH
Cobalt	ND		0.00025		mg/L	1	08/14/2019 1025	08/15/2019 1409	MH
Copper	0.00080		0.00050		mg/L	1	08/14/2019 1025	08/15/2019 1409	MH
Lead	ND		0.00050		mg/L	1	08/14/2019 1025	08/15/2019 1409	MH
Manganese	0.094		0.00025		mg/L	1	08/14/2019 1025	08/15/2019 1409	MH
Nickel	0.0010		0.00050		mg/L	1	08/14/2019 1025	08/15/2019 1409	MH
Selenium	0.00033	0.00025	0.0015	E4	mg/L	1	08/14/2019 1025	08/15/2019 1409	MH
Silver	ND		0.00050		mg/L	1	08/14/2019 1025	08/15/2019 1409	MH
Thallium	ND		0.00050		mg/L	1	08/14/2019 1025	08/15/2019 1409	MH

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Collection Date/Time: 08/07/2019 1101
Matrix: Ground Water

Analyses	Result	MDL	PQL	Qual	Units	DF	Prep Date	Analysis Date	Analyst
CVAA Dissolved Mercury-E 245.1									
Mercury	ND	0.000079	0.00050	E8	mg/L	1	08/19/2019 1030	08/19/2019 1651	MH
pH-E150.1									
pH (pH Units)	7.4			H5	-	1	08/08/2019 0930	08/08/2019 0933	LXM
Temperature (°C)	23			H5	-	1	08/08/2019 0930	08/08/2019 0933	LXM
Turbidity-E180.1									
Turbidity	2.0		0.10		NTU	1	08/08/2019 1000	08/08/2019 1005	LXM
ICP Total Metals-E200.7 (4.4)									
Barium	ND		0.050		mg/L	1	08/08/2019 1600	08/14/2019 1507	MH
Boron	0.14		0.10		mg/L	1	08/08/2019 1600	08/14/2019 1507	MH
Calcium	34		4.0		mg/L	1	08/08/2019 1600	08/14/2019 1506	MH
Iron	ND		0.30		mg/L	1	08/08/2019 1600	08/14/2019 1506	MH
Magnesium	ND		3.0		mg/L	1	08/08/2019 1600	08/14/2019 1506	MH
Potassium	ND		5.0		mg/L	1	08/08/2019 1600	08/14/2019 1506	MH
Silica	15		0.20		mg/L	1	08/08/2019 1600	08/14/2019 1507	MH
Sodium	74		5.0		mg/L	1	08/08/2019 1600	08/14/2019 1506	MH
Zinc	ND		0.040		mg/L	1	08/08/2019 1600	08/14/2019 1507	MH
ICP/MS Total Metals-E200.8 (5.4)									
Aluminum	0.0551		0.0400		mg/L	1	08/13/2019 1030	08/14/2019 1822	MH
Antimony	ND		0.00050		mg/L	1	08/13/2019 1030	08/14/2019 1523	MH
Arsenic	0.0049		0.00050		mg/L	1	08/13/2019 1030	08/14/2019 1523	MH
Beryllium	ND		0.00025		mg/L	1	08/13/2019 1030	08/14/2019 1523	MH
Cadmium	ND		0.00025		mg/L	1	08/13/2019 1030	08/14/2019 1523	MH
Chromium	0.0013		0.00050		mg/L	1	08/13/2019 1030	08/14/2019 1523	MH
Cobalt	0.000250		0.000250		mg/L	1	08/13/2019 1030	08/14/2019 1523	MH
Copper	0.0011		0.00050		mg/L	1	08/13/2019 1030	08/14/2019 1523	MH
Lead	0.0048		0.00050		mg/L	1	08/13/2019 1030	08/14/2019 1523	MH
Manganese	0.10		0.00025		mg/L	1	08/13/2019 1030	08/14/2019 1523	MH
Nickel	0.0019		0.00050		mg/L	1	08/13/2019 1030	08/14/2019 1523	MH
Selenium	ND		0.0015		mg/L	1	08/13/2019 1030	08/14/2019 1523	MH
Silver	ND		0.00050		mg/L	1	08/13/2019 1030	08/14/2019 1523	MH
Thallium	ND		0.00050		mg/L	1	08/13/2019 1030	08/14/2019 1523	MH

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Analyses	Result	MDL	PQL	Qual	Units	DF	Prep Date	Analysis Date	Analyst
CVAA Total Mercury-E245.1									
Mercury	ND	0.000079	0.0010	E8	mg/L	1	08/09/2019 1105	08/09/2019 1624	MH
Anions by Ion Chromatography-E300.0 (2.1)									
Chloride	3.8		1.0		mg/L	1	08/08/2019 0930	08/08/2019 1052	EJ
Fluoride	ND		0.50		mg/L	1	08/08/2019 0930	08/08/2019 1052	EJ
Nitrogen, Nitrate (As N)	ND		0.50		mg/L	1	08/08/2019 0930	08/08/2019 1052	EJ
Nitrogen, Nitrite (As N)	ND		0.10		mg/L	1	08/08/2019 0930	08/08/2019 1052	EJ
Sulfate	180		50		mg/L	10	08/14/2019 1620	08/15/2019 0704	EJ
Alkalinity-SM2320B									
Alkalinity, Bicarbonate (As CaCO3)	58		2.0		mg/L	1	08/08/2019 1350	08/08/2019 1524	EJ
Alkalinity, Carbonate (As CaCO3)	ND		2.0		mg/L	1	08/08/2019 1350	08/08/2019 1524	EJ
Alkalinity, Hydroxide (As CaCO3)	ND		2.0		mg/L	1	08/08/2019 1350	08/08/2019 1524	EJ
Alkalinity, Total (As CaCO3)	58		2.0		mg/L	1	08/08/2019 1350	08/08/2019 1524	EJ
Total Dissolved Solids (Residue, Filterable)-SM2540 C									
Total Dissolved Solids (Residue, Filterable)	360		20		mg/L	1	08/12/2019 1025	08/14/2019 1420	CR
Total Suspended Solids (Residue, Non-Filterable)-SM2540 D									
Total Suspended Solids	ND		10	Q9	mg/L	1	08/08/2019 0850	08/08/2019 1701	CR
Ammonia as N-SM4500-NH3 B,C									
Nitrogen, Ammonia (As N)	ND		0.50	Q4	mg/L	1	08/29/2019 0900	08/29/2019 1315	EJ
Silica-SM4500-SiO2 C									
Silica	16		10		mg/L	5	08/14/2019 1045	08/14/2019 1130	CR

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Date Received: 08/07/2019

QC Summary

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC %REC	%REC Limits	RPD RPD	RPD Limit	Qual
Batch 1908077 - E200.7 (4.4)										
Blank (1908077-BLK1)										
Prepared & Analyzed: 08/14/2019										
Barium	ND	0.050	mg/L							
Boron	ND	0.10	mg/L							
Calcium	ND	4.0	mg/L							
Iron	ND	0.30	mg/L							
Magnesium	ND	3.0	mg/L							
Potassium	ND	5.0	mg/L							
Silica	ND	0.20	mg/L							
Sodium	ND	5.0	mg/L							
Zinc	ND	0.040	mg/L							
LCS (1908077-BS1)										
Prepared & Analyzed: 08/14/2019										
Barium	2.0	0.050	mg/L	2.000		101	85-115			
Boron	1.0	0.10	mg/L	1.000		102	85-115			
Calcium	10	4.0	mg/L	10.00		103	85-115			
Iron	0.99	0.30	mg/L	1.000		99	85-115			
Magnesium	10	3.0	mg/L	10.00		102	85-115			
Potassium	10	5.0	mg/L	10.00		101	85-115			
Sodium	9.5	5.0	mg/L	10.00		95	85-115			
Zinc	0.48	0.040	mg/L	0.5000		96	85-115			
LCS (1908077-BS2)										
Prepared & Analyzed: 08/14/2019										
Silica	9.6	0.20	mg/L	10.00		96	85-115			
LCS Dup (1908077-BSD1)										
Prepared & Analyzed: 08/14/2019										
Barium	2.0	0.050	mg/L	2.000		101	85-115	0.4	20	
Boron	1.0	0.10	mg/L	1.000		102	85-115	0.3	20	
Calcium	10	4.0	mg/L	10.00		102	85-115	0.7	20	
Iron	0.99	0.30	mg/L	1.000		99	85-115	0.2	20	
Magnesium	10	3.0	mg/L	10.00		102	85-115	0.2	20	
Potassium	10	5.0	mg/L	10.00		101	85-115	0.4	20	
Sodium	9.6	5.0	mg/L	10.00		96	85-115	2	20	
Zinc	0.49	0.040	mg/L	0.5000		97	85-115	2	20	
LCS Dup (1908077-BSD2)										
Prepared & Analyzed: 08/14/2019										
Silica	9.3	0.20	mg/L	10.00		93	85-115	4	20	
Matrix Spike (1908077-MS1)										
Source: 19H0152-01 Prepared & Analyzed: 08/14/2019										
Barium	2.0	0.050	mg/L	2.000	0.031	97	70-130			
Boron	1.1	0.10	mg/L	1.000	0.032	104	70-130			
Calcium	76	4.0	mg/L	10.00	68	80	70-130			
Iron	0.98	0.30	mg/L	1.000	0.0093	97	70-130			
Magnesium	25	3.0	mg/L	10.00	15	101	70-130			
Potassium	11	5.0	mg/L	10.00	0.76	99	70-130			
Sodium	18	5.0	mg/L	10.00	8.1	97	70-130			
Zinc	0.48	0.040	mg/L	0.5000	0.0030	96	70-130			
Matrix Spike (1908077-MS2)										
Source: 19H0256-01 Prepared & Analyzed: 08/14/2019										
Silica	26	0.20	mg/L	10.00	15	106	70-130			
Batch 1908127 - E245.1										

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QC Summary

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC %REC	Limit	RPD	RPD Limit	Qual
Batch 1908127 - E245.1										
Blank (1908127-BLK1)				Prepared & Analyzed: 08/09/2019						
Mercury	ND	0.0010	mg/L							
LCS (1908127-BS1)				Prepared & Analyzed: 08/09/2019						
Mercury	0.0050	0.0010	mg/L	0.005000		101	85-115			
LCS Dup (1908127-BSD1)				Prepared & Analyzed: 08/09/2019						
Mercury	0.0050	0.0010	mg/L	0.005000		101	85-115	0.4	20	
Matrix Spike (1908127-MS1)				Source: 19H0014-01		Prepared & Analyzed: 08/09/2019				
Mercury	0.0047	0.0010	mg/L	0.005000	ND	95	70-130			
Matrix Spike (1908127-MS2)				Source: 19H0014-03		Prepared & Analyzed: 08/09/2019				
Mercury	0.0055	0.0010	mg/L	0.005000	0.00016	106	70-130			
Matrix Spike Dup (1908127-MSD1)				Source: 19H0014-01		Prepared & Analyzed: 08/09/2019				
Mercury	0.0048	0.0010	mg/L	0.005000	ND	96	70-130	2	20	
Matrix Spike Dup (1908127-MSD2)				Source: 19H0014-03		Prepared & Analyzed: 08/09/2019				
Mercury	0.0054	0.0010	mg/L	0.005000	0.00016	106	70-130	0.6	20	
Batch 1908157 - E 200.7 (4.4)										
Blank (1908157-BLK1)				Prepared & Analyzed: 08/14/2019						
Boron	ND	0.10	mg/L							
Calcium	ND	4.0	mg/L							
Iron	ND	0.30	mg/L							
Magnesium	ND	3.0	mg/L							
Potassium	ND	5.0	mg/L							
Sodium	ND	5.0	mg/L							
Zinc	ND	0.040	mg/L							
LCS (1908157-BS1)				Prepared & Analyzed: 08/14/2019						
Boron	1.1	0.10	mg/L	1.000		108	85-115			
Calcium	10	4.0	mg/L	10.00		104	85-115			
Iron	0.99	0.30	mg/L	1.000		99	85-115			
Magnesium	10	3.0	mg/L	10.00		103	85-115			
Potassium	10	5.0	mg/L	10.00		103	85-115			
Sodium	10	5.0	mg/L	10.00		101	85-115			
Zinc	0.51	0.040	mg/L	0.5000		101	85-115			
LCS Dup (1908157-BSD1)				Prepared & Analyzed: 08/14/2019						
Boron	1.1	0.10	mg/L	1.000		109	85-115	0.6	20	
Calcium	10	4.0	mg/L	10.00		104	85-115	0.6	20	
Iron	1.0	0.30	mg/L	1.000		100	85-115	1	20	
Magnesium	10	3.0	mg/L	10.00		104	85-115	0.9	20	
Potassium	10	5.0	mg/L	10.00		102	85-115	0.3	20	
Sodium	9.7	5.0	mg/L	10.00		97	85-115	4	20	
Zinc	0.51	0.040	mg/L	0.5000		102	85-115	0.4	20	

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QC Summary

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Batch 1908157 - E 200.7 (4.4)										
Matrix Spike (1908157-MS1)		Source: 19H0346-04			Prepared & Analyzed: 08/14/2019					
Boron	1.1		mg/L	1.000	0.034	107	70-130			
Calcium	41		mg/L	10.00	26	158	70-130			M3
Iron	3.1		mg/L	1.000	1.8	138	70-130			M3
Magnesium	29		mg/L	10.00	15	139	70-130			M3
Potassium	14		mg/L	10.00	1.7	123	70-130			
Sodium	29		mg/L	10.00	15	140	70-130			M3
Zinc	0.51		mg/L	0.5000	0.0048	101	70-130			
Batch 1908166 - E200.8 (5.4)										
Blank (1908166-BLK1)		Prepared: 08/13/2019 Analyzed: 08/14/2019								
Aluminum	ND	0.0400	mg/L							
Antimony	ND	0.00050	mg/L							
Arsenic	ND	0.00050	mg/L							
Beryllium	ND	0.00025	mg/L							
Cadmium	ND	0.00025	mg/L							
Chromium	ND	0.00050	mg/L							
Cobalt	ND	0.000250	mg/L							
Copper	ND	0.00050	mg/L							
Lead	ND	0.00050	mg/L							
Manganese	ND	0.00025	mg/L							
Nickel	ND	0.00050	mg/L							
Selenium	ND	0.0015	mg/L							
Silver	ND	0.00050	mg/L							
Thallium	ND	0.00050	mg/L							
LCS (1908166-BS1)										
Prepared: 08/13/2019 Analyzed: 08/14/2019										
Aluminum	0.105	0.0400	mg/L	0.1000		105	85-115			
Antimony	0.047	0.00050	mg/L	0.05000		94	85-115			
Arsenic	0.046	0.00050	mg/L	0.05000		92	85-115			
Beryllium	0.050	0.00025	mg/L	0.05000		99	85-115			
Cadmium	0.048	0.00025	mg/L	0.05000		96	85-115			
Chromium	0.048	0.00050	mg/L	0.05000		95	85-115			
Cobalt	0.0469	0.000250	mg/L	0.05000		94	85-115			
Copper	0.049	0.00050	mg/L	0.05000		97	85-115			
Lead	0.048	0.00050	mg/L	0.05000		96	85-115			
Manganese	0.048	0.00025	mg/L	0.05000		95	85-115			
Nickel	0.047	0.00050	mg/L	0.05000		94	85-115			
Selenium	0.047	0.0015	mg/L	0.05000		94	85-115			
Silver	0.047	0.00050	mg/L	0.05000		93	85-115			
Thallium	0.046	0.00050	mg/L	0.05000		93	85-115			

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QC Summary

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qual
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Batch 1908166 - E200.8 (5.4)

LCS Dup (1908166-BSD1)

Prepared: 08/13/2019 Analyzed: 08/14/2019

Aluminum	0.104	0.0400	mg/L	0.1000		104	85-115	0.8	20	
Antimony	0.046	0.00050	mg/L	0.05000		92	85-115	2	20	
Arsenic	0.045	0.00050	mg/L	0.05000		90	85-115	2	20	
Beryllium	0.049	0.00025	mg/L	0.05000		97	85-115	2	20	
Cadmium	0.047	0.00025	mg/L	0.05000		94	85-115	2	20	
Chromium	0.047	0.00050	mg/L	0.05000		93	85-115	2	20	
Cobalt	0.0465	0.000250	mg/L	0.05000		93	85-115	0.8	20	
Copper	0.047	0.00050	mg/L	0.05000		94	85-115	3	20	
Lead	0.047	0.00050	mg/L	0.05000		93	85-115	3	20	
Manganese	0.047	0.00025	mg/L	0.05000		93	85-115	2	20	
Nickel	0.047	0.00050	mg/L	0.05000		94	85-115	0.2	20	
Selenium	0.044	0.0015	mg/L	0.05000		88	85-115	6	20	
Silver	0.046	0.00050	mg/L	0.05000		92	85-115	2	20	
Thallium	0.046	0.00050	mg/L	0.05000		92	85-115	1	20	

Matrix Spike (1908166-MS1)

Source: 19H0222-01

Prepared: 08/13/2019 Analyzed: 08/14/2019

Aluminum	0.117	0.0800	mg/L	0.1000	0.0277	89	70-130			
Antimony	0.048	0.00050	mg/L	0.05000	0.000061	97	70-130			
Arsenic	0.052	0.00050	mg/L	0.05000	0.0033	97	70-130			
Beryllium	0.048	0.00025	mg/L	0.05000	ND	96	70-130			
Cadmium	0.048	0.00025	mg/L	0.05000	ND	96	70-130			
Chromium	0.052	0.0010	mg/L	0.05000	0.0018	100	70-130			
Cobalt	0.0467	0.000250	mg/L	0.05000	0.000130	93	70-130			
Copper	0.048	0.00050	mg/L	0.05000	0.0012	93	70-130			
Lead	0.052	0.00050	mg/L	0.05000	0.00025	103	70-130			
Manganese	0.060	0.00025	mg/L	0.05000	0.013	93	70-130			
Nickel	0.048	0.00050	mg/L	0.05000	0.0022	91	70-130			
Selenium	0.049	0.0015	mg/L	0.05000	0.0019	94	70-130			
Silver	0.038	0.00050	mg/L	0.05000	ND	76	70-130			
Thallium	0.050	0.00050	mg/L	0.05000	0.000058	100	70-130			

Batch 1908183 - E 200.8 (5.4)

Blank (1908183-BLK1)

Prepared & Analyzed: 08/15/2019

Aluminum	ND	0.0400	mg/L							
Antimony	ND	0.00050	mg/L							
Arsenic	ND	0.00050	mg/L							
Barium	ND	0.00050	mg/L							
Beryllium	ND	0.00025	mg/L							
Cadmium	ND	0.00025	mg/L							
Chromium	ND	0.00050	mg/L							
Cobalt	ND	0.00025	mg/L							
Copper	ND	0.00050	mg/L							
Lead	ND	0.00050	mg/L							
Manganese	ND	0.00025	mg/L							
Nickel	ND	0.00050	mg/L							
Selenium	ND	0.0015	mg/L							
Silver	ND	0.00050	mg/L							
Thallium	ND	0.00050	mg/L							

Client: Arizona Minerals Inc.
Project: Ground Water
Work Order: 19H0256
Date Received: 08/07/2019

QC Summary

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qual
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Batch 1908183 - E 200.8 (5.4)

LCS (1908183-BS1)

Prepared & Analyzed: 08/15/2019

Aluminum	0.107	0.0400	mg/L	0.1000		107	85-115			
Antimony	0.049	0.00050	mg/L	0.05000		97	85-115			
Arsenic	0.051	0.00050	mg/L	0.05000		101	85-115			
Barium	0.046	0.00050	mg/L	0.05000		91	85-115			
Beryllium	0.051	0.00025	mg/L	0.05000		103	85-115			
Cadmium	0.050	0.00025	mg/L	0.05000		100	85-115			
Chromium	0.053	0.00050	mg/L	0.05000		107	85-115			
Cobalt	0.053	0.00025	mg/L	0.05000		106	85-115			
Copper	0.052	0.00050	mg/L	0.05000		104	85-115			
Lead	0.050	0.00050	mg/L	0.05000		100	85-115			
Manganese	0.054	0.00025	mg/L	0.05000		109	85-115			
Nickel	0.051	0.00050	mg/L	0.05000		101	85-115			
Selenium	0.049	0.0015	mg/L	0.05000		99	85-115			
Silver	0.050	0.00050	mg/L	0.05000		99	85-115			
Thallium	0.050	0.00050	mg/L	0.05000		99	85-115			

LCS Dup (1908183-BSD1)

Prepared & Analyzed: 08/15/2019

Aluminum	0.107	0.0400	mg/L	0.1000		107	85-115	0.01	20	
Antimony	0.048	0.00050	mg/L	0.05000		96	85-115	1	20	
Arsenic	0.051	0.00050	mg/L	0.05000		101	85-115	0.01	20	
Barium	0.046	0.00050	mg/L	0.05000		92	85-115	0.2	20	
Beryllium	0.052	0.00025	mg/L	0.05000		104	85-115	0.9	20	
Cadmium	0.049	0.00025	mg/L	0.05000		98	85-115	2	20	
Chromium	0.053	0.00050	mg/L	0.05000		106	85-115	1	20	
Cobalt	0.051	0.00025	mg/L	0.05000		102	85-115	3	20	
Copper	0.050	0.00050	mg/L	0.05000		101	85-115	3	20	
Lead	0.049	0.00050	mg/L	0.05000		98	85-115	2	20	
Manganese	0.053	0.00025	mg/L	0.05000		105	85-115	4	20	
Nickel	0.050	0.00050	mg/L	0.05000		100	85-115	1	20	
Selenium	0.050	0.0015	mg/L	0.05000		99	85-115	0.09	20	
Silver	0.050	0.00050	mg/L	0.05000		100	85-115	0.5	20	
Thallium	0.049	0.00050	mg/L	0.05000		98	85-115	0.8	20	

Client: Arizona Minerals Inc.
Project: Ground Water
Work Order: 19H0256
Date Received: 08/07/2019

QC Summary

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qual
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Batch 1908183 - E 200.8 (5.4)

Matrix Spike (1908183-MS1)	Source: 19H0256-01			Prepared & Analyzed: 08/15/2019						
Aluminum	0.120	0.0400	mg/L	0.1000	0.0267	93	70-130			
Antimony	0.049	0.00050	mg/L	0.05000	0.00013	98	70-130			
Arsenic	0.059	0.00050	mg/L	0.05000	0.0053	108	70-130			
Barium	0.057	0.00050	mg/L	0.05000	0.011	92	70-130			
Beryllium	0.049	0.00025	mg/L	0.05000	ND	99	70-130			
Cadmium	0.048	0.00025	mg/L	0.05000	0.000051	97	70-130			
Chromium	0.051	0.00050	mg/L	0.05000	0.00041	100	70-130			
Cobalt	0.051	0.00025	mg/L	0.05000	0.00023	102	70-130			
Copper	0.047	0.00050	mg/L	0.05000	0.00080	93	70-130			
Lead	0.050	0.00050	mg/L	0.05000	0.00038	99	70-130			
Manganese	0.15	0.00025	mg/L	0.05000	0.094	119	70-130			
Nickel	0.050	0.00050	mg/L	0.05000	0.0010	97	70-130			
Selenium	0.053	0.0015	mg/L	0.05000	0.00033	105	70-130			
Silver	0.046	0.00050	mg/L	0.05000	ND	91	70-130			
Thallium	0.049	0.00050	mg/L	0.05000	0.000054	97	70-130			

Batch 1908231 - E 245.1

Blank (1908231-BLK1)	Prepared & Analyzed: 08/19/2019									
Mercury	ND	0.00050	mg/L							

LCS (1908231-BS1)	Prepared & Analyzed: 08/19/2019									
Mercury	0.0054	0.00050	mg/L	0.005000		107	85-115			

LCS Dup (1908231-BSD1)	Prepared & Analyzed: 08/19/2019									
Mercury	0.0052	0.00050	mg/L	0.005000		105	85-115	3	20	

Matrix Spike (1908231-MS1)	Source: 19H0359-01			Prepared & Analyzed: 08/19/2019						
Mercury	0.0052	0.00050	mg/L	0.005000	ND	104	85-115			

Matrix Spike Dup (1908231-MSD1)	Source: 19H0359-01			Prepared & Analyzed: 08/19/2019						
Mercury	0.0052	0.00050	mg/L	0.005000	ND	104	85-115	0.06	20	

Client: Arizona Minerals Inc.
 Project: Ground Water
 Work Order: 19H0256
 Date Received: 08/07/2019

QC Summary

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC %REC	Limits	RPD	RPD Limit	Qual
Batch 1908100 - SM2540 D										
Duplicate (1908100-DUP1) Source: 19H0011-01 Prepared & Analyzed: 08/08/2019										
Total Suspended Solids	1.0	10	mg/L		1.0			0	5	Q9
Duplicate (1908100-DUP2) Source: 19H0012-01 Prepared & Analyzed: 08/08/2019										
Total Suspended Solids	1.0	10	mg/L		ND			200	5	Q9, R12
Batch 1908109 - E150.1										
Duplicate (1908109-DUP1) Source: 19H0256-01 Prepared & Analyzed: 08/08/2019										
pH (pH Units)	7.4		-		7.4			0.5	200	H5
Temperature (°C)	23		-		23			0	200	H5
Batch 1908110 - E180.1										
Duplicate (1908110-DUP1) Source: 19H0256-01 Prepared & Analyzed: 08/08/2019										
Turbidity	2.0	0.10	NTU		2.0			0	10	
Batch 1908123 - SM2320B										
Blank (1908123-BLK1) Prepared & Analyzed: 08/08/2019										
Alkalinity, Bicarbonate (As CaCO3)	ND	2.0	mg/L							
Alkalinity, Total (As CaCO3)	ND	2.0	mg/L							
LCS (1908123-BS1) Prepared & Analyzed: 08/08/2019										
Alkalinity, Total (As CaCO3)	250	2.0	mg/L	250.0		102	90-110			
LCS Dup (1908123-BSD1) Prepared & Analyzed: 08/08/2019										
Alkalinity, Total (As CaCO3)	250	2.0	mg/L	250.0		100	90-110	2	10	
Matrix Spike (1908123-MS1) Source: 19H0073-01 Prepared & Analyzed: 08/08/2019										
Alkalinity, Total (As CaCO3)	300	2.0	mg/L	250.0	60	96	70-130			
Matrix Spike Dup (1908123-MSD1) Source: 19H0073-01 Prepared & Analyzed: 08/08/2019										
Alkalinity, Total (As CaCO3)	300	2.0	mg/L	250.0	60	96	70-130	0	10	
Batch 1908139 - SM2540 C										
Duplicate (1908139-DUP1) Source: 19H0219-01 Prepared: 08/12/2019 Analyzed: 08/15/2019										
Total Dissolved Solids (Residue, Filterable)	560	20	mg/L		570			2	5	
Duplicate (1908139-DUP2) Source: 19H0295-01 Prepared: 08/12/2019 Analyzed: 08/14/2019										
Total Dissolved Solids (Residue, Filterable)	2800	20	mg/L		2800			0.04	5	
Batch 1908195 - SM4500-SiO2 C										
Blank (1908195-BLK1) Prepared & Analyzed: 08/14/2019										
Silica	ND	2.0	mg/L							
LCS (1908195-BS1) Prepared & Analyzed: 08/14/2019										
Silica	7.9	2.0	mg/L	8.000		99	90-110			
LCS Dup (1908195-BSD1) Prepared & Analyzed: 08/14/2019										
Silica	8.0	2.0	mg/L	8.000		100	90-110	0.4	20	

Client: Arizona Minerals Inc.
 Project: Ground Water
 Work Order: 19H0256
 Date Received: 08/07/2019

QC Summary

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qual
Batch 1908195 - SM4500-SiO2 C										
Matrix Spike (1908195-MS1)		Source: 19H0256-01			Prepared & Analyzed: 08/14/2019					
Silica	58	10	mg/L	40.00	16	104	85-115			
Matrix Spike Dup (1908195-MSD1)		Source: 19H0256-01			Prepared & Analyzed: 08/14/2019					
Silica	57	10	mg/L	40.00	16	103	85-115	0.8	20	
Batch 1908372 - SM4500-NH3 B,C										
Blank (1908372-BLK1)					Prepared & Analyzed: 08/29/2019					
Nitrogen, Ammonia (As N)	ND	0.50	mg/L							
LCS (1908372-BS1)					Prepared & Analyzed: 08/29/2019					
Nitrogen, Ammonia (As N)	4.7	0.50	mg/L	5.000		94	90-110			
LCS Dup (1908372-BSD1)					Prepared & Analyzed: 08/29/2019					
Nitrogen, Ammonia (As N)	4.9	0.50	mg/L	5.000		99	90-110	5	10	
Matrix Spike (1908372-MS1)		Source: 19H0590-01			Prepared & Analyzed: 08/29/2019					
Nitrogen, Ammonia (As N)	5.3	0.50	mg/L	5.000	0.72	91	75-120			
Matrix Spike (1908372-MS2)		Source: 19H0623-01			Prepared & Analyzed: 08/29/2019					
Nitrogen, Ammonia (As N)	29	2.5	mg/L	25.00	5.7	95	75-120			
Matrix Spike Dup (1908372-MSD1)		Source: 19H0590-01			Prepared & Analyzed: 08/29/2019					
Nitrogen, Ammonia (As N)	5.3	0.50	mg/L	5.000	0.72	92	75-120	0.4	20	
Matrix Spike Dup (1908372-MSD2)		Source: 19H0623-01			Prepared & Analyzed: 08/29/2019					
Nitrogen, Ammonia (As N)	29	2.5	mg/L	25.00	5.7	94	75-120	0.4	20	

Client: Arizona Minerals Inc.
Project: Ground Water
Work Order: 19H0256
Date Received: 08/07/2019

QC Summary

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC %REC	%REC Limits	RPD RPD	RPD Limit	Qual
Batch 1908103 - E300.0 (2.1)										
Blank (1908103-BLK1) Prepared & Analyzed: 08/08/2019										
Chloride	ND	1.0	mg/L							
Fluoride	ND	0.50	mg/L							
Nitrogen, Nitrate (As N)	ND	0.50	mg/L							
Nitrogen, Nitrite (As N)	ND	0.10	mg/L							
Sulfate	ND	5.0	mg/L							
LCS (1908103-BS1) Prepared & Analyzed: 08/08/2019										
Chloride	12	1.0	mg/L	12.50		95	90-110			
Fluoride	2.0	0.50	mg/L	2.000		100	90-110			
Nitrogen, Nitrate (As N)	4.9	0.50	mg/L	5.000		97	90-110			
Nitrogen, Nitrite (As N)	2.5	0.10	mg/L	2.500		102	90-110			
Sulfate	12	5.0	mg/L	12.50		98	90-110			
LCS Dup (1908103-BSD1) Prepared & Analyzed: 08/08/2019										
Chloride	12	1.0	mg/L	12.50		97	90-110	1	10	
Fluoride	2.0	0.50	mg/L	2.000		101	90-110	1	10	
Nitrogen, Nitrate (As N)	4.9	0.50	mg/L	5.000		98	90-110	0.8	10	
Nitrogen, Nitrite (As N)	2.6	0.10	mg/L	2.500		103	90-110	1	10	
Sulfate	12	5.0	mg/L	12.50		98	90-110	0.1	10	
Matrix Spike (1908103-MS1) Source: 19H0246-02 Prepared & Analyzed: 08/08/2019										
Chloride	12	1.0	mg/L	12.50	ND	98	80-120			
Fluoride	2.0	0.50	mg/L	2.000	ND	102	80-120			
Nitrogen, Nitrate (As N)	5.0	0.50	mg/L	5.000	ND	99	80-120			
Nitrogen, Nitrite (As N)	2.6	0.10	mg/L	2.500	ND	104	80-120			
Sulfate	13	5.0	mg/L	12.50	ND	100	80-120			
Matrix Spike (1908103-MS2) Source: 19H0246-03 Prepared & Analyzed: 08/08/2019										
Chloride	23	1.0	mg/L	12.50	8.6	117	80-120			
Fluoride	3.4	0.50	mg/L	2.000	1.1	113	80-120			
Nitrogen, Nitrate (As N)	5.5	0.50	mg/L	5.000	ND	110	80-120			
Nitrogen, Nitrite (As N)	2.8	0.10	mg/L	2.500	ND	112	80-120			
Matrix Spike (1908103-MS3) Source: 19H0245-01 Prepared & Analyzed: 08/08/2019										
Chloride	100	5.0	mg/L	62.50	34	105	80-120			
Fluoride	11	2.5	mg/L	10.00	ND	111	80-120			
Nitrogen, Nitrate (As N)	32	2.5	mg/L	25.00	6.8	101	80-120			
Nitrogen, Nitrite (As N)	13	0.50	mg/L	12.50	ND	104	80-120			
Sulfate	130	25	mg/L	62.50	70	92	80-120			
Matrix Spike Dup (1908103-MSD1) Source: 19H0246-02 Prepared & Analyzed: 08/08/2019										
Chloride	12	1.0	mg/L	12.50	ND	98	80-120	0.6	10	
Fluoride	2.1	0.50	mg/L	2.000	ND	103	80-120	1	10	
Nitrogen, Nitrate (As N)	5.0	0.50	mg/L	5.000	ND	100	80-120	0.6	10	
Nitrogen, Nitrite (As N)	2.6	0.10	mg/L	2.500	ND	104	80-120	0.6	10	
Sulfate	13	5.0	mg/L	12.50	ND	102	80-120	1	10	

Client: Arizona Minerals Inc.
Project: Ground Water
Work Order: 19H0256
Date Received: 08/07/2019

QC Summary

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qual
Batch 1908103 - E300.0 (2.1)										
Matrix Spike Dup (1908103-MSD2)		Source: 19H0246-03			Prepared & Analyzed: 08/08/2019					
Chloride	22	1.0	mg/L	12.50	8.6	108	80-120	5	10	
Fluoride	3.2	0.50	mg/L	2.000	1.1	103	80-120	6	10	
Nitrogen, Nitrate (As N)	5.0	0.50	mg/L	5.000	ND	101	80-120	8	10	
Nitrogen, Nitrite (As N)	2.6	0.10	mg/L	2.500	ND	104	80-120	8	10	
Matrix Spike Dup (1908103-MSD3)		Source: 19H0245-01			Prepared & Analyzed: 08/08/2019					
Chloride	120	5.0	mg/L	62.50	34	132	80-120	16	10	M1, R13
Fluoride	11	2.5	mg/L	10.00	ND	113	80-120	1	10	
Nitrogen, Nitrate (As N)	32	2.5	mg/L	25.00	6.8	101	80-120	0.2	10	
Nitrogen, Nitrite (As N)	13	0.50	mg/L	12.50	ND	104	80-120	0.2	10	
Sulfate	140	25	mg/L	62.50	70	118	80-120	12	10	R5

Groundwater Suite

Analyte	LABORATORY		
	Total	Dissolved	Other
Metals			
Aluminum	X	X	
Antimony	X	X	
Arsenic	X	X	
Barium	X	X	
Beryllium	X	X	
Boron	X	X	
Cadmium	X	X	
Chromium	X	X	
Cobalt	X	X	
Copper	X	X	
Iron	X	X	
Lead	X	X	
Manganese	X	X	
Mercury	X	X	
Nickel	X	X	
Selenium	X	X	
Silver	X	X	
Thallium	X	X	
Zinc	X	X	
Major Cations			
Ammonium	X		
Calcium	X	X	
Magnesium	X	X	
Potassium	X	X	
Sodium	X	X	
Iron	X	X	
Hardness	X	X	
Major Anions			
Total Alkalinity	X		
Acidity	X		
Chloride	X	X	
Fluoride	X	X	
Nitrate – Nitrite as N	X	X	
Nitrite - N	X	X	
Silica	X	X	
Sulfate	X	X	
Sulfide			
Parameters			
Total Dissolved Solids		X	
Total Suspended Solids	X		

ANALYTICAL REPORT

Eurofins TestAmerica, Phoenix
4625 East Cotton Ctr Blvd
Suite 189
Phoenix, AZ 85040
Tel: (602)437-3340

Laboratory Job ID: 550-127647-1
Client Project/Site: 19H0256

For:
Turner Laboratories, Inc.
2445 North Coyote Drive
Suite 104
Tucson, Arizona 85745

Attn: Elizabeth Kasik



Authorized for release by:
8/15/2019 4:14:09 PM

Ken Baker, Project Manager II
(602)659-7624
ken.baker@testamericainc.com

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This report has been electronically signed and authorized by the signatory. Electronic signature is intended to be the legally binding equivalent of a traditionally handwritten signature.

Results relate only to the items tested and the sample(s) as received by the laboratory.



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Definitions/Glossary

Client: Turner Laboratories, Inc.
Project/Site: 19H0256

Job ID: 550-127647-1

Qualifiers

General Chemistry

Qualifier	Qualifier Description
E8	Analyte reported to MDL per project specification. Target analyte was not detected in the sample.

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
▫	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CNF	Contains No Free Liquid
DER	Duplicate Error Ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL	Detection Limit (DoD/DOE)
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision Level Concentration (Radiochemistry)
EDL	Estimated Detection Limit (Dioxin)
LOD	Limit of Detection (DoD/DOE)
LOQ	Limit of Quantitation (DoD/DOE)
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
NC	Not Calculated
ND	Not Detected at the reporting limit (or MDL or EDL if shown)
PQL	Practical Quantitation Limit
QC	Quality Control
RER	Relative Error Ratio (Radiochemistry)
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)

Case Narrative

Client: Turner Laboratories, Inc.
Project/Site: 19H0256

Job ID: 550-127647-1

Job ID: 550-127647-1

Laboratory: Eurofins TestAmerica, Phoenix

Narrative

**Job Narrative
550-127647-1**

Comments

No additional comments.

Receipt

The sample was received on 8/9/2019 11:45 AM; the sample arrived in good condition, properly preserved and, where required, on ice. The temperature of the cooler at receipt was 2.0° C.

General Chemistry

Method(s) SM 4500 CN I: Total cyanide analysis was performed for sample 19H0256-01 (550-127647-1), and the result obtained was a non-detect. As such, the weak acid dissociable cyanide analysis was not performed, and the result for this analyte was reported as non-detect.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

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Sample Summary

Client: Turner Laboratories, Inc.
Project/Site: 19H0256

Job ID: 550-127647-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Asset ID
550-127647-1	19H0256-01	Water	08/07/19 11:01	08/09/19 11:45	

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Detection Summary

Client: Turner Laboratories, Inc.
Project/Site: 19H0256

Job ID: 550-127647-1

Client Sample ID: 19H0256-01

Lab Sample ID: 550-127647-1

No Detections.

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This Detection Summary does not include radiochemical test results.

Eurofins TestAmerica, Phoenix

Client Sample Results

Client: Turner Laboratories, Inc.
Project/Site: 19H0256

Job ID: 550-127647-1

Client Sample ID: 19H0256-01

Lab Sample ID: 550-127647-1

Date Collected: 08/07/19 11:01

Matrix: Water

Date Received: 08/09/19 11:45

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cyanide, Total	ND	E8	0.0050	0.0025	mg/L		08/12/19 14:24	08/13/19 12:16	1
Cyanide, Weak Acid Dissociable	ND	E8	0.025	0.013	mg/L		08/12/19 12:25	08/13/19 12:28	1

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QC Sample Results

Client: Turner Laboratories, Inc.
Project/Site: 19H0256

Job ID: 550-127647-1

Method: SM 4500 CN E - Cyanide, Total (Low Level)

Lab Sample ID: MB 440-562649/1-A
Matrix: Water
Analysis Batch: 562863

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 562649

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cyanide, Total	ND	E8	0.0050	0.0025	mg/L		08/12/19 14:23	08/13/19 12:15	1

Lab Sample ID: LCS 440-562649/2-A
Matrix: Water
Analysis Batch: 562863

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 562649

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	Limits
Cyanide, Total	0.100	0.0978		mg/L		98	80 - 120

Lab Sample ID: LCSD 440-562649/3-A
Matrix: Water
Analysis Batch: 562863

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 562649

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	Limits	RPD	Limit
Cyanide, Total	0.100	0.0952		mg/L		95	80 - 120	3	20

Lab Sample ID: 550-127419-C-2-B MS
Matrix: Water
Analysis Batch: 562863

Client Sample ID: Matrix Spike
Prep Type: Total/NA
Prep Batch: 562649

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	Limits
Cyanide, Total	0.0040	E4	0.100	0.0982		mg/L		94	75 - 125

Lab Sample ID: 550-127419-C-2-C MSD
Matrix: Water
Analysis Batch: 562863

Client Sample ID: Matrix Spike Duplicate
Prep Type: Total/NA
Prep Batch: 562649

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	Limits	RPD	Limit
Cyanide, Total	0.0040	E4	0.100	0.106		mg/L		102	75 - 125	8	20

QC Association Summary

Client: Turner Laboratories, Inc.
Project/Site: 19H0256

Job ID: 550-127647-1

General Chemistry

Prep Batch: 562649

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
550-127647-1	19H0256-01	Total/NA	Water	Distill/CN	
MB 440-562649/1-A	Method Blank	Total/NA	Water	Distill/CN	
LCS 440-562649/2-A	Lab Control Sample	Total/NA	Water	Distill/CN	
LCSD 440-562649/3-A	Lab Control Sample Dup	Total/NA	Water	Distill/CN	
550-127419-C-2-B MS	Matrix Spike	Total/NA	Water	Distill/CN	
550-127419-C-2-C MSD	Matrix Spike Duplicate	Total/NA	Water	Distill/CN	

Analysis Batch: 562863

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
550-127647-1	19H0256-01	Total/NA	Water	SM 4500 CN E	562649
MB 440-562649/1-A	Method Blank	Total/NA	Water	SM 4500 CN E	562649
LCS 440-562649/2-A	Lab Control Sample	Total/NA	Water	SM 4500 CN E	562649
LCSD 440-562649/3-A	Lab Control Sample Dup	Total/NA	Water	SM 4500 CN E	562649
550-127419-C-2-B MS	Matrix Spike	Total/NA	Water	SM 4500 CN E	562649
550-127419-C-2-C MSD	Matrix Spike Duplicate	Total/NA	Water	SM 4500 CN E	562649

Prep Batch: 562867

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
550-127647-1	19H0256-01	Total/NA	Water	SM 4500 CN I	

Analysis Batch: 562869

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
550-127647-1	19H0256-01	Total/NA	Water	SM 4500 CN I	562867

Lab Chronicle

Client: Turner Laboratories, Inc.
Project/Site: 19H0256

Job ID: 550-127647-1

Client Sample ID: 19H0256-01

Lab Sample ID: 550-127647-1

Date Collected: 08/07/19 11:01

Matrix: Water

Date Received: 08/09/19 11:45

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	Distill/CN			562649	08/12/19 14:24	KMY	TAL IRV
Total/NA	Analysis	SM 4500 CN E		1	562863	08/13/19 12:16	KMY	TAL IRV
Total/NA	Prep	SM 4500 CN I			562867	08/12/19 12:25	KMY	TAL IRV
Total/NA	Analysis	SM 4500 CN I		1	562869	08/13/19 12:28	KMY	TAL IRV

Laboratory References:

TAL IRV = Eurofins TestAmerica, Irvine, 17461 Derian Ave, Suite 100, Irvine, CA 92614-5817, TEL (949)261-1022

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Accreditation/Certification Summary

Client: Turner Laboratories, Inc.
Project/Site: 19H0256

Job ID: 550-127647-1

Laboratory: Eurofins TestAmerica, Phoenix

The accreditations/certifications listed below are applicable to this report.

Authority	Program	EPA Region	Identification Number	Expiration Date
Arizona	State Program	9	AZ0728	06-09-20

Laboratory: Eurofins TestAmerica, Irvine

Unless otherwise noted, all analytes for this laboratory were covered under each accreditation/certification below.

Authority	Program	EPA Region	Identification Number	Expiration Date
Arizona	State Program	9	AZ0671	10-14-19

The following analytes are included in this report, but the laboratory is not certified by the governing authority. This list may include analytes for which the agency does not offer certification.

Analysis Method	Prep Method	Matrix	Analyte
SM 4500 CN I	SM 4500 CN I	Water	Cyanide, Weak Acid Dissociable



Method Summary

Client: Turner Laboratories, Inc.
Project/Site: 19H0256

Job ID: 550-127647-1

Method	Method Description	Protocol	Laboratory
SM 4500 CN E	Cyanide, Total (Low Level)	SM	TAL IRV
SM 4500 CN I	Cyanide, Weak Acid Dissociable	SM	TAL IRV
Distill/CN	Distillation, Cyanide	None	TAL IRV
SM 4500 CN I	Cyanide, Distillation for Weak Acid Dissociable	SM	TAL IRV

Protocol References:

None = None

SM = "Standard Methods For The Examination Of Water And Wastewater"

Laboratory References:

TAL IRV = Eurofins TestAmerica, Irvine, 17461 Derian Ave, Suite 100, Irvine, CA 92614-5817, TEL (949)261-1022



127647

SUBCONTRACT ORDER

Turner Laboratories, Inc.

19H0256

SENDING LABORATORY:

Turner Laboratories, Inc.
2445 N. Coyote Drive, Ste #104
Tucson, AZ 85745
Phone: 520.882.5880
Fax: 520.882.9788
Project Manager: Elizabeth Kasik

RECEIVING LABORATORY:

TestAmerica Phoenix
4625 East Cotton Center Boulevard Suite 189
Phoenix, AZ 85540
Phone : (602) 437-3340
Fax:
Please CC Kevin Brim Kbrim@turnerlabs.com

Analysis	Expires	Laboratory ID	Comments
-01			
Sample ID: 19H0256-01 Drinking Water	Sampled: 08/07/2019 11:01		
Cyanide WAD	08/21/2019 11:01		
Cyanide	08/21/2019 11:01		
Containers Supplied:			



TA-PHX

~~Released By~~ 8/8/19 16:00 UPS 8/8/19 16:00
 Date Received By Date
 Released By UPS 8/8/19 11:45
 Date Received By 8/8/19 11:45
 Date

TEMP 2.00



Login Sample Receipt Checklist

Client: Turner Laboratories, Inc.

Job Number: 550-127647-1

Login Number: 127647

List Source: Eurofins TestAmerica, Phoenix

List Number: 1

Creator: Gravlin, Andrea

Question	Answer	Comment
Radioactivity wasn't checked or is \leq background as measured by a survey meter.	True	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <math><6\text{mm}</math> (1/4").	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	False	Check done at department level as required.

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Login Sample Receipt Checklist

Client: Turner Laboratories, Inc.

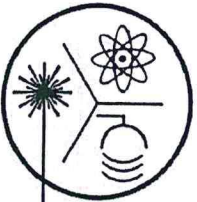
Job Number: 550-127647-1

Login Number: 127647
List Number: 2
Creator: Ornelas, Olga

List Source: Eurofins TestAmerica, Irvine
List Creation: 08/10/19 12:25 PM

Question	Answer	Comment
Radioactivity wasn't checked or is </= background as measured by a survey meter.	True	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	N/A	Not Present
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	N/A	Received project as a subcontract.
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	N/A	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	





Radiation Safety Engineering, Inc.

3245 N. WASHINGTON ST. • CHANDLER, ARIZONA 85225-1121
 Website: www.radsafe.com


(480) 897-9459
 FAX (480) 892-5446

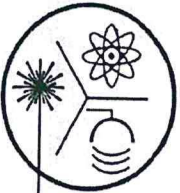
Radiochemical Activity in Water (pCi/L)

Turner Laboratories
 2445 N. Coyote Drive, Ste. 104
 Tucson, AZ 85745

Sampling Date: August 07, 2019
 Sample Received: August 13, 2019
 Analysis Completed: August 29, 2019

Sample ID	Gross Alpha Activity Method 600/00-02 (pCi/L)	Uranium Activity Method ASTM D6239 (pCi/L)	Adjusted Gross Alpha (pCi/L)	Gross Beta Activity Method 900.0 (pCi/L)	Radium 226 Activity Method GammaRay HPGE (pCi/L)	Radium 228 Activity Method GammaRay HPGE (pCi/L)	Total Radium (pCi/L)
19H0256-01	2.2 ± 0.6	2.9 ± 0.6	< 1.0	< 2.1	< 0.4	< 0.7	< 0.7
Date of Analysis	8/19/2019	8/24/2019	8/24/2019	8/14/2019	8/16/2019	8/16/2019	8/16/2019


 Robert L. Metzger, Ph.D., C.H.P. Date 8/29/2019
 Laboratory License Number AZ0462



Radiation Safety Engineering, Inc.

3245 N. WASHINGTON ST. • CHANDLER, ARIZONA 85225-1121
Website: www.radsafe.com

(480) 897-9459
FAX (480) 892-5446

Isotopic Uranium Analysis

Turner Laboratories
2445 N. Coyote Drive, Ste. 104
Tucson, AZ 85745

Sampling Date: August 07, 2019
Sample Received: August 13, 2019
Uranium Analysis Date: August 24, 2019

Sample No.	²³⁸ U	²³⁵ U	²³⁴ U	Total	Activity (pCi/L)
	19H0256-01	1.4 ± 0.3	0.064 ± 0.002		
	4.1 ± 0.8	0.030 ± 0.001	0.00023 ± 0.00005	4.1 ± 0.8	Content (µg/L)
Comments:					


Robert L. Metzger, Ph.D., C.H.P.

Date

8/29/2019

Laboratory License Number AZ0462

Arizona Department of Environmental Quality
Drinking Water Radionuclides-Adjusted Gross Alpha, Radium 226 & 228, Uranium Analysis Report
 Samples To Be Taken At Entry Point Into Distribution System (EPDS) Only

PWS ID#: AZ04 _____

PWS Name: _____

August 7, 2019 11:01 (24 hour clock)
 Sample Date Sample Time

Owner/Contact Person _____

Owner/Contact Fax Number _____

Owner/Contact Phone Number _____

Sample Collection Point
 EPDS # _____

Compliance Sample Type:

- Reduced Monitoring
- Quarterly
- Composite of four quarterly samples

Date Q1 collected: _____
 Date Q2 collected: _____
 Date Q3 collected: _____
 Date Q4 collected: _____

RADIOCHEMICAL ANALYSIS

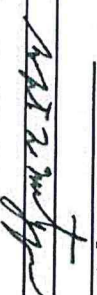
>>>To be filled out by laboratory personnel<<<<

Combined Uranium must be reported in micrograms per liter

Analysis Method	MCL	Reporting Limit	Contaminant Name	Cont. Code	Analyses Run Date	Result	Exceed MCL
600/00-02	15 pCi/L	3 pCi/L	Adjusted Gross Alpha	4000	8/24/2019	< 1.0	
7500 - Rn			Gross Alpha	4002	8/19/2019	2.2 ± 0.6	
ASTM D6239	30 µg/L	1 µg/L	Radon	4004			
			Combined Uranium	4006	8/24/2019	4.1 ± 0.8 µg/L	
			Uranium 234	4007	8/24/2019	0.00023 ± 0.00005	
			Uranium 235	4008	8/24/2019	0.030 ± 0.001	
			Uranium 238	4009	8/24/2019	4.1 ± 0.8	
			Combined Radium (226,228)	4010	8/16/2019	< 0.7	
GammaRay HRGE	5 pCi/L	1 pCi/L	Radium 226	4020	8/16/2019	< 0.4	
GammaRay HRGE	1 pCi/L	1 pCi/L	Radium 228	4030	8/16/2019	< 0.7	

LABORATORY INFORMATION

>>>To be filled out by laboratory personnel<<<<

Specimen Number: RSE62689
 Lab ID Number: AZ0462
 Lab Name: Radiation Safety Engineering, Inc.
 Printed Name and Phone Number of Laboratory Contact: Robert L. Metzger, Ph.D., C.H.P. (480) 897-9459
 Comments: 19H0256-01
 Authorized Signature: 
 Date Public Water System Notified: _____
 DWA/R 6. 11/2007

Arizona Department of Environmental Quality
Drinking Water Radionuclides-Adjusted Gross Alpha, Radium 226 & 228, Uranium Analysis Report
 Samples To Be Taken At Entry Point Into Distribution System (EPDS) Only

PWS ID#: AZ04 _____ PWS Name: _____

August 7, 2019 11:01 (24 hour clock) _____

Sample Date Sample Time _____ Owner/Contact Person _____

Owner/Contact Fax Number _____ Owner/Contact Phone Number _____

Sample Collection Point _____
 EPDS # _____

Compliance Sample Type:

- Reduced Monitoring _____ Date Q1 collected: _____
- Quarterly _____ Date Q2 collected: _____
- Composite of four quarterly samples _____ Date Q3 collected: _____
 _____ Date Q4 collected: _____

RADIOCHEMICAL ANALYSIS

>>>To be filled out by laboratory personnel<<<<

Combined Uranium must be reported in micrograms per liter

Analysis Method	MCL	Reporting Limit	Contaminant Name	Cont. Code	Analyses Run Date	Result	Exceed MCL
900	4 mrem	4 pCi/L	Gross Beta	4100	8/14/2019	< 4 mrem	
906	20,000 pCi/L	1,000 pCi/L	Tritium	4102			
		10 pCi/L	Strontium-89	4172			
	8 pCi/L	2 pCi/L	Strontium-90	4174			
		1 pCi/L	Iodine-131	4264			
		10 pCi/L	Cesium-134	4270			

LABORATORY INFORMATION

>>>To be filled out by laboratory personnel<<<

Specimen Number: RSE62689
 Lab ID Number: AZ0462
 Lab Name: Radiation Safety Engineering, Inc.
 Printed Name and Phone Number of Laboratory Contact: Robert L. Metzger, Ph.D., C.H.P. (480) 897-9459
 Comments: 19H0256-01
 Authorized Signature: Robert L. Metzger
 Date Public Water System Notified: _____
 DWAAR 6A: 11/2007

SUBCONTRACT ORDER
Turner Laboratories, Inc.
19H0256

SENDING LABORATORY:

Turner Laboratories, Inc.
2445 N. Coyote Drive, Ste #104
Tucson, AZ 85745
Phone: 520.882.5880
Fax: 520.882.9788
Project Manager: Elizabeth Kasik

RECEIVING LABORATORY:

Radiation Safety Engineering, Inc.
3245 N. Washington St.
Chandler, AZ 85225-1121
Phone: (480) 897-9459
Fax: (480) 892-5446
Please CC Kevin Brim Kbrim@turnerlabs.com

Analysis

Expires

Laboratory ID

Comments

Sample ID: 19H0256-01 Drinking Water Sampled: 08/07/2019 11:01



Radiochemistry, Uranium

02/03/2020 11:01

Radiochemistry, Radium 226/228

09/06/2019 11:01

Radiochemistry, Gross Alpha Beta

02/03/2020 11:01

Containers Supplied:

6 2689

~~Released By:~~

8/12/19

Date

16:00

Received By

WBS

8/12/19

Date

16:00

Released By

Date

Received By

GA Flannery

8-13-19

Date

10:00