



75 Suttle Street
Durango, CO 81303
970.247.4220 Phone
970.247.4227 Fax
www.greenanalytical.com

21 December 2022

Bruce Smith
Western Water & Land, Inc.
743 Horizon Ct, Suite 330
Grand Junction, CO 81506
RE: Rule 411 & Rule 615

Enclosed are the results of analyses for samples received by the laboratory on 11/15/22 11:45. The data to follow was performed, in whole or in part, by Green Analytical Laboratories. Any data that was performed by a subcontract laboratory is included within the GAL report, or with an additional report attached.

If you need any further assistance, please feel free to contact me.

Sincerely,

A handwritten signature in blue ink that reads 'Jeremy D. Allen'.

Jeremy D Allen
Laboratory Director

All accredited analytes contained in this report are denoted by an asterisk (*). For a complete list of accredited analytes please do not hesitate to contact us via any of the contact information contained in this report. All of our certifications can be viewed at <http://greenanalytical.com/certifications/>

Green Analytical Laboratories is NELAP accredited through the Texas Commission on Environmental Quality. Accreditation applies to drinking water and non-potable water matrices for trace metals and a variety of inorganic parameters. Green Analytical Laboratories is also accredited through the Colorado Department of Public Health and Environment and EPA region 8 for trace metals, Cyanide, Fluoride, Nitrate, and Nitrite in drinking water. TNI Certificate Number: T104704514-22-15

Our affiliate laboratory, Cardinal Laboratories, is also NELAP accredited through the Texas Commission on Environmental Quality for a variety of organic constituents in drinking water, non-potable water and solid matrices. Cardinal is also accredited for regulated VOCs, TTHM, and HAA-5 in drinking water through the Colorado Department of Public Health and Environment and EPA region 8. TNI Certificate Number: T104704398-22-15



Western Water & Land, Inc.
743 Horizon Ct, Suite 330
Grand Junction CO, 81506

Project: Rule 411 & Rule 615
Project Name / Number: Grizzly Divide Creek
Project Manager: Bruce Smith

Reported:
12/21/22 10:59

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received	Notes
Divide Creek	2211178-01	Water	11/14/22 14:45	11/15/22 11:45	
Honea Spg 1	2211178-02	Water	11/14/22 13:25	11/15/22 11:45	
Fischer 314384	2211178-03	Water	11/14/22 12:20	11/15/22 11:45	
TB	2211178-04	Water	11/14/22 00:00	11/15/22 11:45	

Green Analytical Laboratories

Jeremy D Allen, Laboratory Director

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743 Horizon Ct, Suite 330
Grand Junction CO, 81506

Project: Rule 411 & Rule 615
Project Name / Number: Grizzly Divide Creek
Project Manager: Bruce Smith

Reported:
12/21/22 10:59

Fischer 314384

2211178-03 (Ground Water)

Analyte	Result	RL	MDL	Units	Dilution	Analyzed	Method	Notes	Analyst
General Chemistry									
Alkalinity, Bicarbonate as CaCO3*	270	10.0	2.27	mg/L	10	11/22/22 15:00	2320 B		HTB
Alkalinity, Carbonate as CaCO3*	<2.27	10.0	2.27	mg/L	10	11/22/22 15:00	2320 B	U	HTB
Alkalinity, Hydroxide as CaCO3*	<2.27	10.0	2.27	mg/L	10	11/22/22 15:00	2320 B	U	HTB
Alkalinity, Total as CaCO3*	270	10.0	2.27	mg/L	10	11/22/22 15:00	2320 B		HTB
Bromide	0.0740	0.100	0.0274	mg/L	1	11/22/22 03:54	EPA300.0	J	AES
Cation/Anion Balance	-1.33	-100	-100	%	1	12/02/22 14:42	Calculation		JDA
Chloride*	3.96	1.00	0.0555	mg/L	1	11/22/22 03:54	EPA300.0		AES
Conductivity*	467	1.00		umho/cm@25 C	1	11/16/22 15:00	2510 B		AWG
Fluoride*	0.286	0.100	0.00971	mg/L	1	11/22/22 03:54	EPA300.0		AES
Nitrate as N*	<0.007	0.020	0.007	mg/L	1	11/16/22 04:54	EPA300.0	U	AES
Nitrate+Nitrite as N by IC	<0.0400	0.0400	0.0110	mg/L	1	11/16/22 04:54	EPA300.0		AES
Nitrite as N*	<0.004	0.020	0.004	mg/L	1	11/16/22 04:54	EPA300.0	U	AES
pH*	8.16			pH Units	1	11/16/22 14:35	EPA150.1	H4	AWG
pH Temperature, degrees C	19.1			pH Units	1	11/16/22 14:35	EPA150.1		AWG
Phosphorus, Total	0.0585	0.0500	0.0164	mg P/L	1	11/16/22 15:29	EPA365.1		HTB
Total Dissolved Solids*	235	10.0		mg/L	1	11/21/22 15:46	EPA160.1		AES
Sulfate*	21.5	1.00	0.124	mg/L	1	11/22/22 03:54	EPA300.0		AES
Dissolved Metals by ICP									
Boron	<0.122	0.300	0.122	mg/L	1	11/30/22 11:08	EPA200.7	U	AES
Calcium*	8.85	0.100	0.024	mg/L	1	11/30/22 11:08	EPA200.7		AES
Hardness as CaCO3	70.1	0.662	0.186	mg/L	1	11/30/22 11:08	2340 B		AES
Iron*	<0.036	0.050	0.036	mg/L	1	11/30/22 11:08	EPA200.7	U	AES
Magnesium*	11.7	0.100	0.031	mg/L	1	11/30/22 11:08	EPA200.7		AES
Potassium*	3.15	1.00	0.065	mg/L	1	11/30/22 11:08	EPA200.7		AES
Silicon	6.13	0.500	0.032	mg/L	1	11/30/22 11:08	EPA200.7		AES
Sodium*	79.2	1.00	0.106	mg/L	1	11/30/22 11:08	EPA200.7		AES
Strontium*	0.201	0.100	0.004	mg/L	1	11/30/22 11:08	EPA200.7		AES
Dissolved Metals by ICPMS									
Barium*	0.117	0.0005	0.0003	mg/L	1	11/29/22 14:43	EPA200.8		AES
Manganese*	0.0162	0.0005	0.00009	mg/L	1	11/29/22 14:43	EPA200.8		AES
Selenium*	<0.0006	0.0010	0.0006	mg/L	1	11/29/22 14:43	EPA200.8	U	AES

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Jeremy D Allen, Laboratory Director

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Fischer 314384

2211178-03 (Ground Water)

Analyte	Result	RL	MDL	Units	Dilution	Analyzed	Method	Notes	Analyst
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Other

Iron-Related Bacteria	Medium Aggressivity			CFU/mL	1	11/15/22 17:00	Lab Procedure		LLG
Slime-Forming Bacteria	Low Aggressivity			CFU/mL	1	11/15/22 17:00	Lab Procedure		LLG
Sulfate-Reducing Bacteria	Low Aggressivity			CFU/mL	1	11/15/22 17:00	Lab Procedure		LLG

Subcontracted -- Cardinal Laboratories 101 East Marland Hobbs, NM 88240

VOLATILES BY GC/MS

Benzene*	<0.09	0.5	0.09	ug/L	1	11/16/22 22:52	8260B	U	MS
Toluene*	<0.07	0.5	0.07	ug/L	1	11/16/22 22:52	8260B	U	MS
Ethylbenzene*	0.09	0.5	0.09	ug/L	1	11/16/22 22:52	8260B	J	MS
m+p - Xylene*	<0.5	1	0.5	ug/L	1	11/16/22 22:52	8260B	U	MS
o-Xylene*	<0.07	0.5	0.07	ug/L	1	11/16/22 22:52	8260B	U	MS
Total Xylenes*	<0.5	2	0.5	ug/L	1	11/16/22 22:52	8260B	U	MS
1,3,5-Trimethylbenzene	<0.03	0.5	0.03	ug/L	1	11/16/22 22:52	8260B	U	MS
1,2,4-Trimethylbenzene	<0.03	0.5	0.03	ug/L	1	11/16/22 22:52	8260B	U	MS
Naphthalene*	<0.04	1	0.04	ug/L	1	11/16/22 22:52	8260B	U	MS
<i>Surrogate: Dibromofluoromethane</i>			94.1 %	82.4-141		11/16/22 22:52	8260B		MS
<i>Surrogate: Toluene-d8</i>			98.2 %	87.1-110		11/16/22 22:52	8260B		MS
<i>Surrogate: 4-Bromofluorobenzene</i>			99.2 %	76.4-114		11/16/22 22:52	8260B		MS

Subcontracted -- SunStar Laboratories, Inc. 25712 Commercentre Drive Lake Forest, CA 92630

									I-02
RSK-175									
Methane	5.12	3.28	0.364	ug/l	1	11/29/22 11:33	RSK-175		WAE
Ethene	<1.19	5.74	1.19	ug/l	1	11/29/22 11:33	RSK-175		WAE
Ethane	<1.16	6.15	1.16	ug/l	1	11/29/22 11:33	RSK-175		WAE

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TB

2211178-04 (Water)

Analyte	Result	RL	MDL	Units	Dilution	Analyzed	Method	Notes	Analyst
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Subcontracted -- Cardinal Laboratories 101 East Marland Hobbs, NM 88240

VOLATILES BY GC/MS

Benzene*	<0.09	0.5	0.09	ug/L	1	11/16/22 23:07	8260B	U	MS
Toluene*	2	0.5	0.07	ug/L	1	11/16/22 23:07	8260B		MS
Ethylbenzene*	0.09	0.5	0.09	ug/L	1	11/16/22 23:07	8260B	J	MS
m+p - Xylene*	<0.5	1	0.5	ug/L	1	11/16/22 23:07	8260B	U	MS
o-Xylene*	<0.07	0.5	0.07	ug/L	1	11/16/22 23:07	8260B	U	MS
Total Xylenes*	<0.5	2	0.5	ug/L	1	11/16/22 23:07	8260B	U	MS
1,3,5-Trimethylbenzene	<0.03	0.5	0.03	ug/L	1	11/16/22 23:07	8260B	U	MS
1,2,4-Trimethylbenzene	0.03	0.5	0.03	ug/L	1	11/16/22 23:07	8260B	J	MS
Naphthalene*	<0.04	1	0.04	ug/L	1	11/16/22 23:07	8260B	U	MS
Surrogate: Dibromofluoromethane			96.4 %	82.4-141		11/16/22 23:07	8260B		MS
Surrogate: Toluene-d8			99.0 %	87.1-110		11/16/22 23:07	8260B		MS
Surrogate: 4-Bromofluorobenzene			99.0 %	76.4-114		11/16/22 23:07	8260B		MS

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General Chemistry - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch B223190 - General Prep - Wet Chem

Blank (B223190-BLK1)		Prepared & Analyzed: 11/15/22								
Chromium VI, Dissolved	ND	0.0100	mg/L							U

LCS (B223190-BS1)		Prepared & Analyzed: 11/15/22								
Chromium VI, Dissolved	0.0976	0.0100	mg/L	0.100		97.6	85-115			

LCS Dup (B223190-BSD1)		Prepared & Analyzed: 11/15/22								
Chromium VI, Dissolved	0.0928	0.0100	mg/L	0.100		92.8	85-115	5.03	20	

Matrix Spike (B223190-MS1)		Source: 2211170-01		Prepared & Analyzed: 11/15/22						
Chromium VI, Dissolved	0.0940	0.0100	mg/L	0.100	ND	94.0	80-120			

Matrix Spike Dup (B223190-MSD1)		Source: 2211170-01		Prepared & Analyzed: 11/15/22						
Chromium VI, Dissolved	0.100	0.0100	mg/L	0.100	ND	100	80-120	6.18	20	

Batch B223192 - IC- Ion Chromatograph

Blank (B223192-BLK1)		Prepared & Analyzed: 11/15/22								
Nitrate as N	ND	0.020	mg/L							U
Nitrite as N	ND	0.020	mg/L							U

LCS (B223192-BS1)		Prepared & Analyzed: 11/15/22								
Nitrate as N	1.03	0.020	mg/L	1.00		103	90-110			
Nitrite as N	0.988	0.020	mg/L	1.00		98.8	90-110			

LCS Dup (B223192-BSD1)		Prepared: 11/15/22		Analyzed: 11/16/22						
Nitrate as N	1.03	0.020	mg/L	1.00		103	90-110	0.0195	20	
Nitrite as N	0.984	0.020	mg/L	1.00		98.4	90-110	0.406	20	

Matrix Spike (B223192-MS1)		Source: 2211169-07		Prepared: 11/15/22 Analyzed: 11/16/22						
Nitrate as N	1.02	0.020	mg/L	1.00	0.009	101	85-115			
Nitrite as N	0.975	0.020	mg/L	1.00	ND	97.5	85-115			

Matrix Spike Dup (B223192-MSD1)		Source: 2211169-07		Prepared: 11/15/22 Analyzed: 11/16/22						
Nitrate as N	1.06	0.020	mg/L	1.00	0.009	105	85-115	4.17	20	
Nitrite as N	1.00	0.020	mg/L	1.00	ND	100	85-115	2.96	20	

Batch B223211 - Lachat

Blank (B223211-BLK1)		Prepared & Analyzed: 11/16/22								
Phosphorus, Total	ND	0.0500	mg P/L							U

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Project: Rule 411 & Rule 615
Project Name / Number: Grizzly Divide Creek
Project Manager: Bruce Smith

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12/21/22 10:59

**General Chemistry - Quality Control
(Continued)**

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch B223211 - Lachat (Continued)

LCS (B223211-BS1)		Prepared & Analyzed: 11/16/22								
Phosphorus, Total	2.53	0.0500	mg P/L	2.50		101	90-110			

LCS Dup (B223211-BS1)		Prepared & Analyzed: 11/16/22								
Phosphorus, Total	2.56	0.0500	mg P/L	2.50		102	90-110	1.19	20	

Matrix Spike (B223211-MS1)		Source: 2211178-01		Prepared & Analyzed: 11/16/22						
Phosphorus, Total	2.47	0.0500	mg P/L	2.50	0.0677	96.1	90-110			

Matrix Spike Dup (B223211-MS1)		Source: 2211178-01		Prepared & Analyzed: 11/16/22						
Phosphorus, Total	2.47	0.0500	mg P/L	2.50	0.0677	96.1	90-110	0.0405	20	

Batch B223232 - General Prep - Wet Chem

Duplicate (B223232-DUP1)		Source: 2211172-01		Prepared & Analyzed: 11/16/22						
pH	7.67		pH Units		7.66			0.130	20	
pH Temperature, degrees C	20.4		pH Units		20.2			0.985	200	

Duplicate (B223232-DUP2)		Source: 2211191-07		Prepared: 11/16/22		Analyzed: 11/28/22				
pH	7.30		pH Units		7.27			0.412	20	
pH Temperature, degrees C	18.6		pH Units		18.5			0.539	200	

Reference (B223232-SRM1)		Prepared & Analyzed: 11/16/22								
pH	7.04		pH Units	7.00		101	98.57-101.42			

Batch B223236 - General Prep - Wet Chem

Duplicate (B223236-DUP1)		Source: 2211172-01		Prepared & Analyzed: 11/16/22						
Conductivity	629	1.00	umho/cm@25C		628			0.159	20	

Duplicate (B223236-DUP2)		Source: 2211190-07		Prepared: 11/16/22		Analyzed: 11/28/22				
Conductivity	819	1.00	umho/cm@25C		830			1.33	20	

Reference (B223236-SRM1)		Prepared & Analyzed: 11/16/22								
Conductivity	730	1.00	umho/cm@25C	700		104	90-110			

Batch B223248 - General Prep - Wet Chem

Blank (B223248-BLK1)		Prepared & Analyzed: 11/21/22								
Total Dissolved Solids	ND	10.0	mg/L							

Duplicate (B223248-DUP1)		Source: 2211166-02		Prepared & Analyzed: 11/21/22						
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**General Chemistry - Quality Control
(Continued)**

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch B223248 - General Prep - Wet Chem (Continued)

Duplicate (B223248-DUP1) (Continued)

Source: 2211166-02 Prepared & Analyzed: 11/21/22

Total Dissolved Solids	280	10.0	mg/L		295			5.21	20	
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Reference (B223248-SRM1)

Prepared & Analyzed: 11/21/22

Total Dissolved Solids	400	20.0	mg/L	450		88.9	85-115			
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Batch B223259 - IC- Ion Chromatograph

Blank (B223259-BLK1)

Prepared & Analyzed: 11/21/22

Bromide	ND	0.100	mg/L							U
Chloride	ND	1.00	mg/L							U
Fluoride	ND	0.100	mg/L							U
Sulfate	ND	1.00	mg/L							U

LCS (B223259-BS1)

Prepared & Analyzed: 11/21/22

Bromide	2.51	0.100	mg/L	2.50		100	90-110			
Chloride	24.7	1.00	mg/L	25.0		98.9	90-110			
Fluoride	2.56	0.100	mg/L	2.50		102	90-110			
Sulfate	24.8	1.00	mg/L	25.0		99.2	90-110			

LCS Dup (B223259-BSD1)

Prepared & Analyzed: 11/21/22

Bromide	2.50	0.100	mg/L	2.50		100	90-110	0.200	20	
Chloride	24.7	1.00	mg/L	25.0		98.7	90-110	0.174	20	
Fluoride	2.55	0.100	mg/L	2.50		102	90-110	0.196	20	
Sulfate	24.8	1.00	mg/L	25.0		99.1	90-110	0.109	20	

Matrix Spike (B223259-MS1)

Source: 2211168-01 Prepared & Analyzed: 11/21/22

Bromide	2.37	0.100	mg/L	2.50	ND	94.7	85-115			
Chloride	37.9	1.00	mg/L	25.0	13.7	96.8	85-115			
Fluoride	2.53	0.100	mg/L	2.50	0.177	94.1	85-115			
Sulfate	67.8	1.00	mg/L	25.0	43.7	96.3	85-115			

Matrix Spike (B223259-MS2)

Source: 2211168-02 Prepared & Analyzed: 11/21/22

Bromide	2.53	0.100	mg/L	2.50	0.0820	98.0	85-115			
Chloride	38.8	1.00	mg/L	25.0	14.4	97.5	85-115			
Fluoride	2.69	0.100	mg/L	2.50	0.304	95.5	85-115			
Sulfate	68.8	1.00	mg/L	25.0	44.5	97.1	85-115			

Matrix Spike Dup (B223259-MSD1)

Source: 2211168-01 Prepared & Analyzed: 11/21/22

Bromide	2.47	0.100	mg/L	2.50	ND	98.8	85-115	4.22	20	
Chloride	38.7	1.00	mg/L	25.0	13.7	100	85-115	2.16	20	
Fluoride	2.61	0.100	mg/L	2.50	0.177	97.3	85-115	3.11	20	
Sulfate	68.6	1.00	mg/L	25.0	43.7	99.8	85-115	1.29	20	

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Project: Rule 411 & Rule 615
Project Name / Number: Grizzly Divide Creek
Project Manager: Bruce Smith

Reported:
12/21/22 10:59

**General Chemistry - Quality Control
(Continued)**

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch B223259 - IC- Ion Chromatograph (Continued)

Matrix Spike Dup (B223259-MSD2)		Source: 2211168-02		Prepared & Analyzed: 11/21/22						
Bromide	2.53	0.100	mg/L	2.50	0.0820	98.0	85-115	0.0395	20	
Chloride	38.9	1.00	mg/L	25.0	14.4	98.1	85-115	0.329	20	
Fluoride	2.70	0.100	mg/L	2.50	0.304	95.8	85-115	0.260	20	
Sulfate	68.9	1.00	mg/L	25.0	44.5	97.5	85-115	0.153	20	

Batch B223277 - General Prep - Wet Chem

Blank (B223277-BLK1)		Prepared & Analyzed: 11/22/22								
Alkalinity, Bicarbonate as CaCO3	ND	10.0	mg/L							U
Alkalinity, Carbonate as CaCO3	ND	10.0	mg/L							U
Alkalinity, Hydroxide as CaCO3	ND	10.0	mg/L							U
Alkalinity, Total as CaCO3	ND	10.0	mg/L							U

LCS (B223277-BS1)		Prepared & Analyzed: 11/22/22								
Alkalinity, Total as CaCO3	106	10.0	mg/L	100		106	85-115			

LCS Dup (B223277-BSD1)		Prepared & Analyzed: 11/22/22								
Alkalinity, Total as CaCO3	108	10.0	mg/L	100		108	85-115	1.87	20	

Matrix Spike (B223277-MS1)		Source: 2211138-01		Prepared & Analyzed: 11/22/22						
Alkalinity, Total as CaCO3	1510	10.0	mg/L	1000	530	98.0	80-120			

Matrix Spike (B223277-MS2)		Source: 2211164-01		Prepared & Analyzed: 11/22/22						
Alkalinity, Total as CaCO3	1270	10.0	mg/L	1000	283	98.7	80-120			

Matrix Spike Dup (B223277-MSD1)		Source: 2211138-01		Prepared & Analyzed: 11/22/22						
Alkalinity, Total as CaCO3	1450	10.0	mg/L	1000	530	92.0	80-120	4.05	20	

Matrix Spike Dup (B223277-MSD2)		Source: 2211164-01		Prepared & Analyzed: 11/22/22						
Alkalinity, Total as CaCO3	1320	10.0	mg/L	1000	283	104	80-120	3.86	20	

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Western Water & Land, Inc. 743 Horizon Ct, Suite 330 Grand Junction CO, 81506	Project: Rule 411 & Rule 615 Project Name / Number: Grizzly Divide Creek Project Manager: Bruce Smith	Reported: 12/21/22 10:59
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Dissolved Metals by ICP - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch B223321 - Dissolved ICP

Blank (B223321-BLK1)

Prepared: 11/29/22 Analyzed: 11/30/22

Boron	ND	0.300	mg/L							U
Calcium	ND	0.100	mg/L							U
Iron	ND	0.050	mg/L							U
Magnesium	ND	0.100	mg/L							U
Potassium	ND	1.00	mg/L							U
Silicon	ND	0.500	mg/L							U
Sodium	ND	1.00	mg/L							U
Strontium	ND	0.100	mg/L							U

LCS (B223321-BS1)

Prepared: 11/29/22 Analyzed: 11/30/22

Boron	4.04	0.300	mg/L	4.00		101	85-115			
Calcium	4.00	0.100	mg/L	4.00		100	85-115			
Iron	4.06	0.050	mg/L	4.00		102	85-115			
Magnesium	20.7	0.100	mg/L	20.0		103	85-115			
Potassium	8.32	1.00	mg/L	8.00		104	85-115			
Silicon	4.15	0.500	mg/L	4.00		104	85-115			
Sodium	3.30	1.00	mg/L	3.24		102	85-115			
Strontium	4.04	0.100	mg/L	4.00		101	85-115			

LCS Dup (B223321-BSD1)

Prepared: 11/29/22 Analyzed: 11/30/22

Boron	3.98	0.300	mg/L	4.00		99.6	85-115	1.54	20	
Calcium	3.85	0.100	mg/L	4.00		96.2	85-115	3.95	20	
Iron	3.94	0.050	mg/L	4.00		98.5	85-115	3.10	20	
Magnesium	20.2	0.100	mg/L	20.0		101	85-115	2.24	20	
Potassium	8.21	1.00	mg/L	8.00		103	85-115	1.43	20	
Silicon	4.11	0.500	mg/L	4.00		103	85-115	1.11	20	
Sodium	3.25	1.00	mg/L	3.24		100	85-115	1.35	20	
Strontium	4.01	0.100	mg/L	4.00		100	85-115	0.912	20	

Matrix Spike (B223321-MS1)

Source: 2211172-01

Prepared: 11/29/22 Analyzed: 11/30/22

Boron	4.26	0.300	mg/L	4.00	0.232	101	70-130			
Calcium	52.6	0.100	mg/L	4.00	51.7	24.0	70-130			M3
Iron	4.00	0.050	mg/L	4.00	0.037	99.2	70-130			
Magnesium	32.3	0.100	mg/L	20.0	12.6	98.7	70-130			
Potassium	22.1	1.00	mg/L	8.00	14.8	91.2	70-130			
Silicon	6.36	0.500	mg/L	4.00	2.19	104	70-130			
Sodium	52.1	1.00	mg/L	3.24	51.4	21.9	70-130			M3
Strontium	4.40	0.100	mg/L	4.00	0.368	101	70-130			

Matrix Spike (B223321-MS2)

Source: 2211178-01

Prepared: 11/29/22 Analyzed: 11/30/22

Boron	4.27	0.300	mg/L	4.00	ND	107	70-130			
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Jeremy D Allen, Laboratory Director

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Western Water & Land, Inc. 743 Horizon Ct, Suite 330 Grand Junction CO, 81506	Project: Rule 411 & Rule 615 Project Name / Number: Grizzly Divide Creek Project Manager: Bruce Smith	Reported: 12/21/22 10:59
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**Dissolved Metals by ICP - Quality Control
(Continued)**

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch B223321 - Dissolved ICP (Continued)

Matrix Spike (B223321-MS2) (Continued)	Source: 2211178-01		Prepared: 11/29/22		Analyzed: 11/30/22					
Calcium	66.9	0.100	mg/L	4.00	64.3	63.9	70-130			M3
Iron	4.30	0.050	mg/L	4.00	0.195	103	70-130			
Magnesium	58.4	0.100	mg/L	20.0	39.3	95.7	70-130			
Potassium	12.1	1.00	mg/L	8.00	3.97	101	70-130			
Silicon	14.5	0.500	mg/L	4.00	10.9	91.0	70-130			
Sodium	99.3	1.00	mg/L	3.24	99.9	NR	70-130			M3
Strontium	5.33	0.100	mg/L	4.00	1.27	101	70-130			

Matrix Spike Dup (B223321-MSD1)	Source: 2211172-01		Prepared: 11/29/22		Analyzed: 11/30/22					
Boron	4.19	1.50	mg/L	4.00	ND	105	70-130	1.67	20	
Calcium	52.8	0.500	mg/L	4.00	51.7	29.3	70-130	0.405	20	M3
Iron	3.89	0.250	mg/L	4.00	ND	97.3	70-130	2.80	20	
Magnesium	31.9	0.500	mg/L	20.0	12.6	96.8	70-130	1.18	20	
Potassium	21.8	5.00	mg/L	8.00	14.8	87.8	70-130	1.24	20	
Silicon	5.97	2.50	mg/L	4.00	2.19	94.4	70-130	6.37	20	
Sodium	52.7	5.00	mg/L	3.24	51.4	41.2	70-130	1.19	20	M3
Strontium	4.21	0.500	mg/L	4.00	0.368	96.1	70-130	4.30	20	

Matrix Spike Dup (B223321-MSD2)	Source: 2211178-01		Prepared: 11/29/22		Analyzed: 11/30/22					
Boron	4.28	1.50	mg/L	4.00	ND	107	70-130	0.315	20	
Calcium	65.6	0.500	mg/L	4.00	64.3	32.0	70-130	1.93	20	M3
Iron	4.21	0.250	mg/L	4.00	0.195	100	70-130	2.04	20	
Magnesium	59.1	0.500	mg/L	20.0	39.3	99.1	70-130	1.16	20	
Potassium	11.6	5.00	mg/L	8.00	3.97	95.9	70-130	3.43	20	
Silicon	14.5	2.50	mg/L	4.00	10.9	88.9	70-130	0.570	20	
Sodium	99.8	5.00	mg/L	3.24	99.9	NR	70-130	0.593	20	M3
Strontium	5.22	0.500	mg/L	4.00	1.27	98.7	70-130	2.09	20	

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Western Water & Land, Inc. 743 Horizon Ct, Suite 330 Grand Junction CO, 81506	Project: Rule 411 & Rule 615 Project Name / Number: Grizzly Divide Creek Project Manager: Bruce Smith	Reported: 12/21/22 10:59
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Dissolved Metals by ICPMS - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch B223271 - Dissolved ICPMS

Blank (B223271-BLK1)

Prepared & Analyzed: 11/22/22

Arsenic	ND	0.0005	mg/L							U
Barium	ND	0.0005	mg/L							U
Cadmium	ND	0.0005	mg/L							U
Chromium	ND	0.0010	mg/L							U
Copper	ND	0.0005	mg/L							U
Lead	ND	0.0005	mg/L							U
Manganese	ND	0.0005	mg/L							U
Nickel	ND	0.0005	mg/L							U
Selenium	ND	0.0010	mg/L							U
Silver	ND	0.0002	mg/L							U
Zinc	ND	0.0020	mg/L							U

LCS (B223271-BS1)

Prepared & Analyzed: 11/22/22

Arsenic	0.0492	0.0005	mg/L	0.0500		98.3	85-115			
Barium	0.0483	0.0005	mg/L	0.0500		96.6	85-115			
Cadmium	0.0487	0.0005	mg/L	0.0500		97.4	85-115			
Chromium	0.0474	0.0010	mg/L	0.0500		94.7	85-115			
Copper	0.0488	0.0005	mg/L	0.0500		97.7	85-115			
Lead	0.0488	0.0005	mg/L	0.0500		97.6	85-115			
Manganese	0.0504	0.0005	mg/L	0.0500		101	85-115			
Nickel	0.0492	0.0005	mg/L	0.0500		98.4	85-115			
Selenium	0.242	0.0010	mg/L	0.250		96.8	85-115			
Silver	0.0480	0.0002	mg/L	0.0500		96.0	85-115			
Zinc	0.0484	0.0020	mg/L	0.0500		96.9	85-115			

LCS Dup (B223271-BSD1)

Prepared & Analyzed: 11/22/22

Arsenic	0.0479	0.0005	mg/L	0.0500		95.8	85-115	2.60	20	
Barium	0.0498	0.0005	mg/L	0.0500		99.6	85-115	3.04	20	
Cadmium	0.0483	0.0005	mg/L	0.0500		96.6	85-115	0.830	20	
Chromium	0.0494	0.0010	mg/L	0.0500		98.7	85-115	4.14	20	
Copper	0.0491	0.0005	mg/L	0.0500		98.2	85-115	0.542	20	
Lead	0.0497	0.0005	mg/L	0.0500		99.4	85-115	1.81	20	
Manganese	0.0512	0.0005	mg/L	0.0500		102	85-115	1.60	20	
Nickel	0.0500	0.0005	mg/L	0.0500		100	85-115	1.63	20	
Selenium	0.235	0.0010	mg/L	0.250		94.0	85-115	2.89	20	
Silver	0.0478	0.0002	mg/L	0.0500		95.6	85-115	0.511	20	
Zinc	0.0482	0.0020	mg/L	0.0500		96.4	85-115	0.498	20	

Matrix Spike (B223271-MS1)

Source: 2211154-03

Prepared & Analyzed: 11/22/22

Arsenic	0.0590	0.0005	mg/L	0.0500	0.0004	117	70-130			
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Western Water & Land, Inc.
743 Horizon Ct, Suite 330
Grand Junction CO, 81506

Project: Rule 411 & Rule 615
Project Name / Number: Grizzly Divide Creek
Project Manager: Bruce Smith

Reported:
12/21/22 10:59

**Dissolved Metals by ICPMS - Quality Control
(Continued)**

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch B223271 - Dissolved ICPMS (Continued)

Matrix Spike (B223271-MS1) (Continued)

Source: 2211154-03 Prepared & Analyzed: 11/22/22

Barium	0.0898	0.0005	mg/L	0.0500	0.0389	102	70-130			
Cadmium	0.0549	0.0005	mg/L	0.0500	ND	110	70-130			
Chromium	0.0520	0.0010	mg/L	0.0500	0.0007	103	70-130			
Copper	0.0476	0.0005	mg/L	0.0500	0.0012	92.9	70-130			
Lead	0.0541	0.0005	mg/L	0.0500	ND	108	70-130			
Manganese	0.0500	0.0005	mg/L	0.0500	0.0005	99.0	70-130			
Nickel	0.0489	0.0005	mg/L	0.0500	0.0014	95.0	70-130			
Selenium	0.307	0.0010	mg/L	0.250	0.0009	122	70-130			
Silver	0.0475	0.0002	mg/L	0.0500	ND	95.0	70-130			
Zinc	0.0555	0.0020	mg/L	0.0500	0.0043	102	70-130			

Matrix Spike (B223271-MS2)

Source: 2211168-03 Prepared & Analyzed: 11/22/22

Arsenic	0.0592	0.0005	mg/L	0.0500	0.0004	118	70-130			
Barium	0.0916	0.0005	mg/L	0.0500	0.0413	101	70-130			
Cadmium	0.0545	0.0005	mg/L	0.0500	ND	109	70-130			
Chromium	0.0520	0.0010	mg/L	0.0500	0.0008	102	70-130			
Copper	0.0481	0.0005	mg/L	0.0500	0.0012	94.0	70-130			
Lead	0.0528	0.0005	mg/L	0.0500	ND	106	70-130			
Manganese	0.0500	0.0005	mg/L	0.0500	0.0005	98.9	70-130			
Nickel	0.0495	0.0005	mg/L	0.0500	0.0014	96.3	70-130			
Selenium	0.305	0.0010	mg/L	0.250	0.0009	122	70-130			
Silver	0.0468	0.0002	mg/L	0.0500	ND	93.7	70-130			
Zinc	0.0526	0.0020	mg/L	0.0500	0.0014	102	70-130			

Matrix Spike Dup (B223271-MSD1)

Source: 2211154-03 Prepared & Analyzed: 11/22/22

Arsenic	0.0602	0.0005	mg/L	0.0500	0.0004	120	70-130	1.93	20	
Barium	0.0899	0.0005	mg/L	0.0500	0.0389	102	70-130	0.170	20	
Cadmium	0.0545	0.0005	mg/L	0.0500	ND	109	70-130	0.781	20	
Chromium	0.0520	0.0010	mg/L	0.0500	0.0007	103	70-130	0.0757	20	
Copper	0.0484	0.0005	mg/L	0.0500	0.0012	94.5	70-130	1.67	20	
Lead	0.0535	0.0005	mg/L	0.0500	ND	107	70-130	1.17	20	
Manganese	0.0499	0.0005	mg/L	0.0500	0.0005	98.8	70-130	0.186	20	
Nickel	0.0492	0.0005	mg/L	0.0500	0.0014	95.6	70-130	0.634	20	
Selenium	0.308	0.0010	mg/L	0.250	0.0009	123	70-130	0.482	20	
Silver	0.0467	0.0002	mg/L	0.0500	ND	93.5	70-130	1.61	20	
Zinc	0.0560	0.0020	mg/L	0.0500	0.0043	103	70-130	1.05	20	

Matrix Spike Dup (B223271-MSD2)

Source: 2211168-03 Prepared & Analyzed: 11/22/22

Arsenic	0.0588	0.0005	mg/L	0.0500	0.0004	117	70-130	0.779	20	
Barium	0.0940	0.0005	mg/L	0.0500	0.0413	105	70-130	2.55	20	

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Western Water & Land, Inc.
743 Horizon Ct, Suite 330
Grand Junction CO, 81506

Project: Rule 411 & Rule 615
Project Name / Number: Grizzly Divide Creek
Project Manager: Bruce Smith

Reported:
12/21/22 10:59

**Dissolved Metals by ICPMS - Quality Control
(Continued)**

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch B223271 - Dissolved ICPMS (Continued)

Matrix Spike Dup (B223271-MSD2) (Continued)		Source: 2211168-03		Prepared & Analyzed: 11/22/22						
Cadmium	0.0538	0.0005	mg/L	0.0500	ND	108	70-130	1.32	20	
Chromium	0.0524	0.0010	mg/L	0.0500	0.0008	103	70-130	0.810	20	
Copper	0.0483	0.0005	mg/L	0.0500	0.0012	94.2	70-130	0.278	20	
Lead	0.0531	0.0005	mg/L	0.0500	ND	106	70-130	0.570	20	
Manganese	0.0506	0.0005	mg/L	0.0500	0.0005	100	70-130	1.18	20	
Nickel	0.0493	0.0005	mg/L	0.0500	0.0014	95.8	70-130	0.474	20	
Selenium	0.306	0.0010	mg/L	0.250	0.0009	122	70-130	0.190	20	
Silver	0.0464	0.0002	mg/L	0.0500	ND	92.7	70-130	1.04	20	
Zinc	0.0530	0.0020	mg/L	0.0500	0.0014	103	70-130	0.864	20	

Batch B223319 - Dissolved ICPMS

Blank (B223319-BLK1)		Prepared & Analyzed: 11/29/22								
Barium	ND	0.0005	mg/L							U
Manganese	0.0002	0.0005	mg/L							J
Selenium	ND	0.0010	mg/L							U

LCS (B223319-BS1)		Prepared & Analyzed: 11/29/22								
Barium	0.0506	0.0005	mg/L	0.0500		101	85-115			
Manganese	0.0521	0.0005	mg/L	0.0500		104	85-115			
Selenium	0.258	0.0010	mg/L	0.250		103	85-115			

LCS Dup (B223319-BSD1)		Prepared & Analyzed: 11/29/22								
Barium	0.0512	0.0005	mg/L	0.0500		102	85-115	1.01	20	
Manganese	0.0530	0.0005	mg/L	0.0500		106	85-115	1.68	20	
Selenium	0.263	0.0010	mg/L	0.250		105	85-115	2.21	20	

Matrix Spike (B223319-MS1)		Source: 2211178-02		Prepared & Analyzed: 11/29/22						
Barium	0.128	0.0005	mg/L	0.0500	0.0779	101	70-130			
Manganese	0.0497	0.0005	mg/L	0.0500	0.0003	98.9	70-130			
Selenium	0.331	0.0010	mg/L	0.250	0.0018	132	70-130			M1

Matrix Spike (B223319-MS2)		Source: 2211190-01		Prepared & Analyzed: 11/29/22						
Barium	0.0878	0.0005	mg/L	0.0500	0.0360	104	70-130			
Manganese	0.111	0.0005	mg/L	0.0500	0.0611	99.2	70-130			
Selenium	0.319	0.0010	mg/L	0.250	0.0009	127	70-130			

Matrix Spike Dup (B223319-MSD1)		Source: 2211178-02		Prepared & Analyzed: 11/29/22						
Barium	0.129	0.0005	mg/L	0.0500	0.0779	103	70-130	0.750	20	
Manganese	0.0501	0.0005	mg/L	0.0500	0.0003	99.6	70-130	0.780	20	
Selenium	0.329	0.0010	mg/L	0.250	0.0018	131	70-130	0.564	20	M1

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Western Water & Land, Inc.
743 Horizon Ct, Suite 330
Grand Junction CO, 81506

Project: Rule 411 & Rule 615
Project Name / Number: Grizzly Divide Creek
Project Manager: Bruce Smith

Reported:
12/21/22 10:59

**Dissolved Metals by ICPMS - Quality Control
(Continued)**

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch B223319 - Dissolved ICPMS (Continued)

Matrix Spike Dup (B223319-MSD2)

Source: 2211190-01

Prepared & Analyzed: 11/29/22

Barium	0.0879	0.0005	mg/L	0.0500	0.0360	104	70-130	0.0981	20	
Manganese	0.112	0.0005	mg/L	0.0500	0.0611	102	70-130	1.35	20	
Selenium	0.326	0.0010	mg/L	0.250	0.0009	130	70-130	2.05	20	

RSK-175 - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch 22K0475 - EPA 3810m Headspace

Blank (22K0475-BLK1)

Prepared: 11/28/22 Analyzed: 11/29/22

Ethane	ND	6.15	ug/l							
Ethene	ND	5.74	ug/l							
Methane	ND	3.28	ug/l							

LCS (22K0475-BS1)

Prepared: 11/28/22 Analyzed: 11/29/22

Ethane	1370	6.15	ug/l	1230		111	75-125			
Ethene	1200	5.74	ug/l	1150		104	75-125			
Methane	750	3.28	ug/l	656		114	75-125			

Duplicate (22K0475-DUP1)

Source: 2211178-02

Prepared: 11/28/22 Analyzed: 11/29/22

Ethane	ND	6.15	ug/l		ND				20	
Ethene	ND	5.74	ug/l		ND				20	
Methane	4.04	3.28	ug/l		3.65			10.1	20	

Green Analytical Laboratories

Jeremy D Allen, Laboratory Director

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Western Water & Land, Inc.
743 Horizon Ct, Suite 330
Grand Junction CO, 81506

Project: Rule 411 & Rule 615
Project Name / Number: Grizzly Divide Creek
Project Manager: Bruce Smith

Reported:
12/21/22 10:59

Petroleum Hydrocarbons by GC FID - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch 2112305 - General Prep - Organics

Blank (2112305-BLK1)

Prepared & Analyzed: 11/23/22

Surrogate: 1-Chlorooctadecane	4670		ug/L	5000		93.5	39.8-162			
Surrogate: 1-Chlorooctane	4580		ug/L	5000		91.6	44.9-146			
DRO >C10-C28	ND	1000	ug/L							U
EXT DRO >C28-C36	ND	1000	ug/L							U
GRO C6-C10	ND	1000	ug/L							U

LCS (2112305-BS1)

Prepared & Analyzed: 11/23/22

Surrogate: 1-Chlorooctadecane	5330		ug/L	5000		107	39.8-162			
Surrogate: 1-Chlorooctane	5730		ug/L	5000		115	44.9-146			
DRO >C10-C28	48200	1000	ug/L	50000		96.4	70-121			
GRO C6-C10	44400	1000	ug/L	50000		88.8	72.4-116			

LCS Dup (2112305-BSD1)

Prepared & Analyzed: 11/23/22

Surrogate: 1-Chlorooctadecane	5850		ug/L	5000		117	39.8-162			
Surrogate: 1-Chlorooctane	6570		ug/L	5000		131	44.9-146			
DRO >C10-C28	55000	1000	ug/L	50000		110	70-121	13.1	24.8	
GRO C6-C10	51800	1000	ug/L	50000		104	72.4-116	15.4	8.73	QR-04

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Western Water & Land, Inc. 743 Horizon Ct, Suite 330 Grand Junction CO, 81506	Project: Rule 411 & Rule 615 Project Name / Number: Grizzly Divide Creek Project Manager: Bruce Smith	Reported: 12/21/22 10:59
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VOLATILES BY GC/MS - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch 2111629 - Volatiles

Blank (2111629-BLK1)

Prepared & Analyzed: 11/16/22

1,2,4-Trimethylbenzene	0.2	0.5	ug/L							J
1,3,5-Trimethylbenzene	0.1	0.5	ug/L							J
<i>Surrogate: 4-Bromofluorobenzene</i>	24.9		ug/L	25.0		99.5	76.4-114			
Benzene	ND	0.5	ug/L							U
<i>Surrogate: Dibromofluoromethane</i>	23.6		ug/L	25.0		94.6	82.4-141			
Ethylbenzene	0.2	0.5	ug/L							J
m+p - Xylene	ND	1	ug/L							U
Naphthalene	0.5	0.5	ug/L							
o-Xylene	0.09	0.5	ug/L							J
Toluene	ND	0.5	ug/L							U
<i>Surrogate: Toluene-d8</i>	24.4		ug/L	25.0		97.7	87.1-110			
Total Xylenes	ND	2	ug/L							U

LCS (2111629-BS1)

Prepared & Analyzed: 11/16/22

1,2,4-Trimethylbenzene	20	0.5	ug/L	20.0		97.9	85.2-120			
1,3,5-Trimethylbenzene	20	0.5	ug/L	20.0		98.8	84.3-120			
<i>Surrogate: 4-Bromofluorobenzene</i>	25.1		ug/L	25.0		100	76.4-114			
Benzene	19	0.5	ug/L	20.0		97.2	85.9-114			
<i>Surrogate: Dibromofluoromethane</i>	24.6		ug/L	25.0		98.4	82.4-141			
Ethylbenzene	19	0.5	ug/L	20.0		95.6	81.8-127			
m+p - Xylene	39	1	ug/L	40.0		98.4	72.4-134			
Naphthalene	18	0.5	ug/L	20.0		89.8	59.3-140			
o-Xylene	20	0.5	ug/L	20.0		98.6	76.2-135			
Toluene	19	0.5	ug/L	20.0		96.4	78.8-121			
<i>Surrogate: Toluene-d8</i>	25.0		ug/L	25.0		100	87.1-110			
Total Xylenes	59	2	ug/L	60.0		98.5	74.3-134			

LCS Dup (2111629-BSD1)

Prepared & Analyzed: 11/16/22

1,2,4-Trimethylbenzene	19	0.5	ug/L	20.0		95.4	85.2-120	2.64	8.94	
1,3,5-Trimethylbenzene	19	0.5	ug/L	20.0		96.2	84.3-120	2.72	16.5	
<i>Surrogate: 4-Bromofluorobenzene</i>	25.2		ug/L	25.0		101	76.4-114			
Benzene	19	0.5	ug/L	20.0		97.2	85.9-114	0.00	4.16	
<i>Surrogate: Dibromofluoromethane</i>	24.1		ug/L	25.0		96.5	82.4-141			
Ethylbenzene	19	0.5	ug/L	20.0		96.0	81.8-127	0.417	4.83	
m+p - Xylene	40	1	ug/L	40.0		99.9	72.4-134	1.49	5.77	
Naphthalene	17	0.5	ug/L	20.0		86.8	59.3-140	3.46	33.5	
o-Xylene	20	0.5	ug/L	20.0		98.9	76.2-135	0.304	6.29	
Toluene	19	0.5	ug/L	20.0		96.8	78.8-121	0.466	5.67	

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Jeremy D Allen, Laboratory Director

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Western Water & Land, Inc. 743 Horizon Ct, Suite 330 Grand Junction CO, 81506	Project: Rule 411 & Rule 615 Project Name / Number: Grizzly Divide Creek Project Manager: Bruce Smith	Reported: 12/21/22 10:59
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**VOLATILES BY GC/MS - Quality Control
(Continued)**

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch 2111629 - Volatiles (Continued)

LCS Dup (2111629-BSD1) (Continued)

Prepared & Analyzed: 11/16/22

Surrogate: Toluene-d8	24.9		ug/L	25.0		99.8	87.1-110			
Total Xylenes	60	2	ug/L	60.0		99.6	74.3-134	1.09	5.83	

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Western Water & Land, Inc.
743 Horizon Ct, Suite 330
Grand Junction CO, 81506

Project: Rule 411 & Rule 615
Project Name / Number: Grizzly Divide Creek
Project Manager: Bruce Smith

Reported:
12/21/22 10:59

Polynuclear Aromatic Compounds by GC/MS - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch 2111713 - SW846-3510

Blank (2111713-BLK1)

Prepared: 11/17/22 Analyzed: 11/21/22

1-Methylnaphthalene	ND	0.5	ug/L							U
<i>Surrogate: 2-Fluorobiphenyl</i>	<i>19.5</i>		<i>ug/L</i>	<i>50.0</i>		<i>39.1</i>	<i>18.9-97.9</i>			
2-Methylnaphthalene	ND	1	ug/L							U
Acenaphthene	ND	1	ug/L							U
Acenaphthylene	ND	1	ug/L							U
Anthracene	ND	1	ug/L							U
Benzo[a]anthracene	ND	1	ug/L							U
Benzo[a]pyrene	ND	0.2	ug/L							U
Benzo[b]flouranthene	ND	1	ug/L							U
Benzo[g,h,i]perylene	ND	1	ug/L							U
Benzo[k]flouranthene	ND	1	ug/L							U
Carbazole	ND	1	ug/L							U
Chrysene	ND	1	ug/L							U
Dibenz[a,h]anthracene	ND	1	ug/L							U
Fluoranthene	ND	1	ug/L							U
Fluorene	ND	1	ug/L							U
Indeno[1,2,3-cd]pyrene	ND	1	ug/L							U
Naphthalene	ND	1	ug/L							U
<i>Surrogate: Nitrobenzene-d5</i>	<i>14.8</i>		<i>ug/L</i>	<i>50.0</i>		<i>29.5</i>	<i>20.3-96.6</i>			
Phenanthrene	ND	1	ug/L							U
Pyrene	ND	1	ug/L							U
<i>Surrogate: Terphenyl-dl4</i>	<i>19.0</i>		<i>ug/L</i>	<i>50.0</i>		<i>38.1</i>	<i>14.7-112</i>			

LCS (2111713-BS1)

Prepared: 11/17/22 Analyzed: 11/21/22

1-Methylnaphthalene	7	0.5	ug/L	10.0		74.1	21.2-116			
<i>Surrogate: 2-Fluorobiphenyl</i>	<i>33.4</i>		<i>ug/L</i>	<i>50.0</i>		<i>66.9</i>	<i>18.9-97.9</i>			
2-Methylnaphthalene	7	1	ug/L	10.0		74.1	21-115			
Acenaphthene	8	1	ug/L	10.0		77.7	21.5-122			
Acenaphthylene	8	1	ug/L	10.0		84.6	24.2-119			
Anthracene	8	1	ug/L	10.0		76.8	27-127			
Benzo[a]anthracene	7	1	ug/L	10.0		69.0	21.9-134			
Benzo[a]pyrene	7	0.2	ug/L	10.0		74.7	23.6-140			
Benzo[b]flouranthene	7	1	ug/L	10.0		73.1	20.4-144			
Benzo[g,h,i]perylene	9	1	ug/L	10.0		94.8	24.8-126			
Benzo[k]flouranthene	7	1	ug/L	10.0		70.0	21.8-139			
Carbazole	8	1	ug/L	10.0		80.9	26.4-128			
Chrysene	7	1	ug/L	10.0		73.8	22.2-133			
Dibenz[a,h]anthracene	10	1	ug/L	10.0		103	20.3-133			
Fluoranthene	7	1	ug/L	10.0		70.5	27.2-128			

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Western Water & Land, Inc.
743 Horizon Ct, Suite 330
Grand Junction CO, 81506

Project: Rule 411 & Rule 615
Project Name / Number: Grizzly Divide Creek
Project Manager: Bruce Smith

Reported:
12/21/22 10:59

**Polynuclear Aromatic Compounds by GC/MS - Quality Control
(Continued)**

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch 2111713 - SW846-3510 (Continued)

LCS (2111713-BS1) (Continued)

Prepared: 11/17/22 Analyzed: 11/21/22

Fluorene	8	1	ug/L	10.0		75.7	22.9-124			
Indeno[1,2,3-cd]pyrene	8	1	ug/L	10.0		78.8	21.8-132			
Naphthalene	8	1	ug/L	10.0		79.6	18.1-117			
<i>Surrogate: Nitrobenzene-d5</i>	<i>27.2</i>		ug/L	<i>50.0</i>		<i>54.4</i>	<i>20.3-96.6</i>			
Phenanthrene	8	1	ug/L	10.0		78.8	25.6-128			
Pyrene	6	1	ug/L	10.0		62.9	19.1-137			
<i>Surrogate: Terphenyl-d14</i>	<i>32.1</i>		ug/L	<i>50.0</i>		<i>64.2</i>	<i>14.7-112</i>			

LCS Dup (2111713-BS1)

Prepared: 11/17/22 Analyzed: 11/21/22

1-Methylnaphthalene	8	0.5	ug/L	10.0		76.1	21.2-116	2.66	4.3	
<i>Surrogate: 2-Fluorobiphenyl</i>	<i>33.7</i>		ug/L	<i>50.0</i>		<i>67.4</i>	<i>18.9-97.9</i>			
2-Methylnaphthalene	7	1	ug/L	10.0		74.2	21-115	0.135	4.47	
Acenaphthene	8	1	ug/L	10.0		77.6	21.5-122	0.129	3.77	
Acenaphthylene	9	1	ug/L	10.0		85.9	24.2-119	1.52	3.88	
Anthracene	8	1	ug/L	10.0		76.2	27-127	0.784	4.49	
Benzo[a]anthracene	7	1	ug/L	10.0		70.2	21.9-134	1.72	3.03	
Benzo[a]pyrene	7	0.2	ug/L	10.0		73.9	23.6-140	1.08	3.27	
Benzo[b]flouranthene	8	1	ug/L	10.0		75.4	20.4-144	3.10	6.95	
Benzo[g,h,i]perylene	9	1	ug/L	10.0		90.9	24.8-126	4.20	6.35	
Benzo[k]flouranthene	7	1	ug/L	10.0		73.4	21.8-139	4.74	8.16	
Carbazole	8	1	ug/L	10.0		81.3	26.4-128	0.493	4.78	
Chrysene	7	1	ug/L	10.0		73.9	22.2-133	0.135	3.42	
Dibenz[a,h]anthracene	10	1	ug/L	10.0		99.2	20.3-133	4.05	4.77	
Fluoranthene	7	1	ug/L	10.0		71.7	27.2-128	1.69	6.19	
Fluorene	8	1	ug/L	10.0		78.3	22.9-124	3.38	4.31	
Indeno[1,2,3-cd]pyrene	8	1	ug/L	10.0		75.8	21.8-132	3.88	4.11	
Naphthalene	8	1	ug/L	10.0		78.2	18.1-117	1.77	3.46	
<i>Surrogate: Nitrobenzene-d5</i>	<i>27.0</i>		ug/L	<i>50.0</i>		<i>53.9</i>	<i>20.3-96.6</i>			
Phenanthrene	8	1	ug/L	10.0		77.9	25.6-128	1.15	5.04	
Pyrene	6	1	ug/L	10.0		64.4	19.1-137	2.36	7.75	
<i>Surrogate: Terphenyl-d14</i>	<i>33.3</i>		ug/L	<i>50.0</i>		<i>66.7</i>	<i>14.7-112</i>			

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Western Water & Land, Inc.
743 Horizon Ct, Suite 330
Grand Junction CO, 81506

Project: Rule 411 & Rule 615
Project Name / Number: Grizzly Divide Creek
Project Manager: Bruce Smith

Reported:
12/21/22 10:59

Notes and Definitions

- U Analyte included in the analysis, but not detected
- QR-04 The RPD for the BS/BSD was outside of historical limits.
- M3 Matrix spike recovery did not meet acceptance criteria. Accuracy of the spike is reduced since the analyte concentration in the sample is more than four times the spike level.
- M1 Matrix spike recovery was above laboratory acceptance criteria.
- Ja Detected but below the Standard Reporting Limit; therefore, result is an estimated concentration (CLP J-Flag).
- J Detected but below the Reporting Limit; therefore, result is an estimated concentration (CLP J-Flag).
- I-02 This result was analyzed outside of the EPA recommended holding time.
- H4 pH analysis performed more than 48 hours after sampling.
- DET Analyte DETECTED
- ND Analyte NOT DETECTED at or above the reporting limit
- NR Not Reported
- dry Sample results reported on a dry weight basis
*Results reported on as received basis unless designated as dry.
- RPD Relative Percent Difference
- LCS Laboratory Control Sample (Blank Spike)
- RL Report Limit
- MDL Method Detection Limit

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GAL Analytical Laboratories

(970) 247-4220
 Fax: (970) 247-4227

dzufelt@greenanalytical.com
 75 Suttle St Durango, CO 81303

CHAIN-OF-CUSTODY AND ANALYSIS REQUEST
 FORM-006
 COC - Revision 6.0

Company or Client: Western Water and Land
 Address: 743 Horizon Court Ste. 330
 City: Grand Junction State: CO Zip: 81506
 Phone #: 970-242-0170
 Contact Person: Bruce Smith
 Email Report to: bsmith@westernwaterandland.com
 Project Name(optional): Gristly Divide Creek
 Bill to (if different):
 P.O. #:
 Company: TEP Rocky Mountain LLC
 Attn: Tammy Gese
 Address: 1056 CR 215
 City: Parachute
 State: CO Zip: 81635
 Phone #: 970-712-6049
 Email: tammy.gese@terrapin.com

For Lab Use	Sample Name or Location	Collected		Matrix (check one)						# of containers		ANALYSIS REQUEST									
		Date	Time	GROUNDWATER	SURFACEWATER	WASTEWATER	PRODUCEDWATER	SOIL	DRINKING WATER	OTHER :	No preservation (general)	HNO ₃	HCl	H ₂ SO ₄	Other:						
2011-178																					
01	Osidge Creek	11/14/12	1445		<input checked="" type="checkbox"/>																
02	Honea Seg 1	11/14/12	1325		<input checked="" type="checkbox"/>																
03	Fischer 314384	11/14/12	1220		<input checked="" type="checkbox"/>																
04	Trip Blank																				

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Relinquished by: Alex Kubala
 Date: 11/14/12
 Time: 6:00pm
 Received by: Fed Ex
 Date: 11/15/12
 Time: 1145
 Relinquished by: Fed Ex
 Date: 11/15/12
 Time: 1145
 Received by: M. M. M. M. M.
 Date: 11/15/12
 Time: 1145
 Received by: M. M. M. M. M.
 Date: 11/15/12
 Time: 1145
 Received by: M. M. M. M. M.

* GAL cannot always accept verbal changes. Please fax or email written change requests.
 † Chain of Custody must be signed in "Relinquished By:" as an acceptance of services and all applicable charges.

Laboratory Sample ID: 2211-178-02

Start Date: 11/15/22

Sample Name: Honea Spg 1

BART Type :

APB
Purple
(Acid Producing Bacteria)

	1	2	3	4	5	6	7	8	9	10
Time Lag (days)										
Approx. Population	475,000	82,000	14000	4500	450	75	10	< 2	n/a	n/a
Reaction Code										

IRB
Red
(Iron Related Bacteria)

	11/16/22	11/17/22	11/18/22	11/19/22	11/20/22	11/21/22	11/22/22	11/23/22	11/24/22	11/25/22
Time Lag (days)	1	2	3	4	5	6	7	8	9	10
Approx. Population	570,000	140,000	35,000	9000	2200	500	150	25	8	< 1
Reaction Code	A	A	A	FO	FO	FO/BR	FO/BR	FO/BR	FO/BR	FO/BR

SLYM
Green
(Slime Forming Bacteria)

	11/16/22	11/17/22	11/18/22	11/19/22	11/20/22	11/21/22	11/22/22	11/23/22	11/24/22	11/25/22
Time Lag (days)	1	2	3	4	5	6	7	8	9	10
Approx. Population	1,750,000	440,000	67,000	13,000	2500	500	100	< 20	n/a	n/a
Reaction Code	A	A	A	A	A	PB	PB	PB	PB	PB

SRB
Black
(Sulfate Reducing Bacteria)

	11/16/22	11/17/22	11/18/22	11/19/22	11/20/22	11/21/22	11/22/22	11/23/22	11/24/22	11/25/22
Time Lag (days)	1	2	3	4	5	6	7	8	9	10
Approx. Population	2,200,000	500,000	115,000	27,000	6,000	1400	325	75	20	< 5
Reaction Code	A	A	A	A	A	A	C	C	C	C

Aggressivity:	High	Medium	Low
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Reaction Code Summary: APB
Purple

ABSENT = A

IRB

FO - Foam
BR - Brown Ring
BG - Brown Gel
BC - Brown Clouds
GC - Green Cloudy
RC - Red Cloudy
CL - Cloudy
BL - Black

SLYM

DS - Dense Slime
SR - Slime Ring
CL - Cloudy
CP - Cloudy Layered Plates
PB - Pale Blue Glowing
BL - Blackened Liquid
TH - Thread Like Strands

SRB

BB - Black Base
BT - Black Ball/Top
BT/BB - Black Top & Base
Cloudy
*n/a - Not Aggressive

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Laboratory Sample ID: 2211-178-03

Start Date: 11/15/22

Sample Name: Fischer 314384

BART Type :

APB
Purple
(Acid Producing Bacteria)

	1	2	3	4	5	6	7	8	9	10
Time Lag (days)										
Approx. Population	475,000	82,000	14000	4500	450	75	10	< 2	n/a	n/a
Reaction Code										

IRB
Red
(Iron Related Bacteria)

	11/16/22	11/17/22	11/18/22	11/19/22	11/20/22	11/21/22	11/22/22	11/23/22	11/24/22	11/25/22
Time Lag (days)	1	2	3	4	5	6	7	8	9	10
Approx. Population	570,000	140,000	35,000	9000	2200	500	150	25	8	< 1
Reaction Code	A	A	A	A	FO	FO/BR	BR	BR	BR	BR

SLYM
Green
(Slime Forming Bacteria)

	11/16/22	11/17/22	11/18/22	11/19/22	11/20/22	11/21/22	11/22/22	11/23/22	11/24/22	11/25/22
Time Lag (days)	1	2	3	4	5	6	7	8	9	10
Approx. Population	1,750,000	440,000	67,000	13,000	2500	500	100	< 20	n/a	n/a
Reaction Code	A	A	A	A	A	A	PB	PB	PB	PB

SRB
Black
(Sulfate Reducing Bacteria)

	11/16/22	11/17/22	11/18/22	11/19/22	11/20/22	11/21/22	11/22/22	11/23/22	11/24/22	11/25/22
Time Lag (days)	1	2	3	4	5	6	7	8	9	10
Approx. Population	2,200,000	500,000	115,000	27,000	6,000	1400	325	75	20	< 5
Reaction Code	A	A	A	A	A	A	A	A	A	A

Aggressivity:	High	Medium	Low
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Reaction Code Summary: APB
Purple

ABSENT = A

IRB

FO - Foam
BR - Brown Ring
BG - Brown Gel
BC - Brown Clouds
GC - Green Cloudy
RC - Red Cloudy
CL - Cloudy
BL - Black

SLYM

DS - Dense Slime
SR - Slime Ring
CL - Cloudy
CP - Cloudy Layered Plates
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SRB

BB - Black Base
BT - Black Ball/Top
BT/BB - Black Top & Base
Cloudy
*n/a - Not Aggressive

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