

# Summit Scientific

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4653 Table Mountain Drive, Golden, Colorado 80403

303.277.9310

July 03, 2023

Chris Roy

Stantec

410 17th St Suite 1400

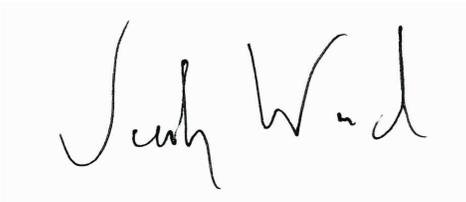
Denver, CO 80202

RE: Badger Wash

Work Order #2305620

Enclosed are the results of analyses for samples received by Summit Scientific on 05/26/23 16:39. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

A handwritten signature in blue ink that reads "Jacob Wood". The signature is written in a cursive style with a large initial "J" and a distinct "W".

Jacob Wood For Paul Shrewsbury

President



Stantec  
410 17th St Suite 1400  
Denver CO, 80202

Project: Badger Wash  
Project Number: 203723052  
Project Manager: Chris Roy

**Reported:**  
07/03/23 14:10

**ANALYTICAL REPORT FOR SAMPLES**

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
SS10@6'	2305620-01	Soil	05/24/23 10:30	05/26/23 16:39
SS10@7'	2305620-02	Soil	05/24/23 10:35	05/26/23 16:39
SS23@1'	2305620-06	Soil	05/25/23 14:05	05/26/23 16:39
SS11@2'	2305620-11	Soil	05/24/23 11:05	05/26/23 16:39
SS12@2'	2305620-16	Soil	05/24/23 11:35	05/26/23 16:39
SS13@2'	2305620-21	Soil	05/24/23 12:30	05/26/23 16:39
SS14@6'	2305620-26	Soil	05/24/23 13:05	05/26/23 16:39
SS14@7'	2305620-27	Soil	05/24/23 13:10	05/26/23 16:39
SS15@6'	2305620-31	Soil	05/25/23 10:05	05/26/23 16:39
SS15@7'	2305620-32	Soil	05/25/23 10:10	05/26/23 16:39
SS16@6'	2305620-36	Soil	05/25/23 10:45	05/26/23 16:39
SS16@7'	2305620-37	Soil	05/25/23 11:00	05/26/23 16:39
SS18@2.5'	2305620-41	Soil	05/25/23 15:05	05/26/23 16:39
SS19@2.5'	2305620-44	Soil	05/25/23 15:40	05/26/23 16:39
SS21@1'	2305620-47	Soil	05/24/23 14:30	05/26/23 16:39
SS21@2'	2305620-48	Soil	05/24/23 14:35	05/26/23 16:39
SS22@1'	2305620-52	Soil	05/24/23 15:05	05/26/23 16:39
SS22@2'	2305620-53	Soil	05/24/23 15:10	05/26/23 16:39
SS24	2305620-57	Soil	05/25/23 11:40	05/26/23 16:39
SS25	2305620-58	Soil	05/25/23 11:45	05/26/23 16:39
SS26	2305620-59	Soil	05/25/23 12:00	05/26/23 16:39
SS27	2305620-60	Soil	05/25/23 12:10	05/26/23 16:39
SS28	2305620-61	Soil	05/25/23 12:20	05/26/23 16:39
SS29	2305620-62	Soil	05/25/23 12:25	05/26/23 16:39
SS30	2305620-63	Soil	05/25/23 12:30	05/26/23 16:39
SS31	2305620-64	Soil	05/25/23 12:35	05/26/23 16:39
SS32	2305620-65	Soil	05/25/23 12:45	05/26/23 16:39

Summit Scientific

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Stantec  
 410 17th St Suite 1400  
 Denver CO, 80202

Project: Badger Wash

Project Number: 203723052  
 Project Manager: Chris Roy

**Reported:**  
 07/03/23 14:10

**ANALYTICAL REPORT FOR SAMPLES**

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
SS33	2305620-66	Soil	05/25/23 12:55	05/26/23 16:39

**Case Narrative**

Chris Roy took samples SS10@6', SS11@2', SS12@2', SS13@2', SS14@6', SS15@6', SS16@6', SS21@1', SS22@1', SS23@1', SS24, SS25, SS26, SS27, SS28, SS29, SS30, SS31, SS32, and SS33 off hold on 6/1/2023

Chris Roy requested that samples SS10@6' through SS23@1' only have BTEXN, TMBs, TPH, PAH, EC and Selenium reported on 6/9/2023.

Chris Roy requested Selenium & pH be added to SS18@2.5' & SS19@2.5' on 6/21/2023.

Chris Roy requested EC be added to SS18@2.5' & SS19@2.5' on 6/22/2023.

This report includes those results.

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2305620.3

# Summit Scientific

S<sub>2</sub>

4653 Table Mountain Drive ♦ Golden, Colorado 80403

303-277-9310 ♦ 303-374-5933 (f)

Page 3 of 7

Client: Stantec Project Manager: Chris Roy  
 Address: 410 17th St. Suite 1400 E-Mail: Chris.Roy@stantec.com  
 City/State/Zip: Denver, CO 80202  
 Phone: 303-879-5673 Project Name: Baldger Wash  
 Sampler Name: Kevin Eberhult Project Number: 203723052

ID	Sample Description	Date Sampled	Time Sampled	# of containers	Preservative				Matrix				Analysis Requested						Special Instructions			
					HCl	HNO3	None	Other	Water	Soil	Air-Canister #	Other	CASL 915									
1	SS13@2'	5/24/23	1230	2			X			X				X							HOLD	
2	SS13@3'		1240	2			X			X				X								
3	SS13@4'		1245	2			X			X				X								
4	SS13@5'		1250	2			X			X				X								
5	SS13@6'		1255	2			X			X				X								
6	SS14@6'		1305	2			X			X				X								
7	SS14@7'		1310	2			X			X				X								
8	SS14@8'		1315	2			X			X				X								
9	SS14@9'		1320	2			X			X				X								
10	SS14@10'	↓	1325	2			X			X				X								

Relinquished by: <u>Kevin Eberhult</u> Date/Time: <u>5/26/23 16:37</u>	Received by: <u>John Wood</u> Date/Time: <u>5/26/23 16:39</u>	Turn Around Time (Check) Same Day <input type="checkbox"/> 72 hours <input type="checkbox"/> 24 hours <input type="checkbox"/> Standard <input checked="" type="checkbox"/> 48 hours <input type="checkbox"/> Sample Integrity: Temperature Upon Receipt: <u>12.3</u> Samples Intact: <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Notes:
Relinquished by:	Received by:		
Relinquished by:	Received by:		



# Summit Scientific

S<sub>2</sub>

4653 Table Mountain Drive ♦ Golden, Colorado 80403

303-277-9310 ♦ 303-374-5933 (f)

Client: Stantec Project Manager: Chris Ray  
 Address: 4617<sup>th</sup> St. Suite 1400 E-Mail: Chris.Ray@stantec.com  
 City/State/Zip: Denver, CO 80202  
 Phone: 303-829-5673 Project Name: Budger Wash  
 Sampler Name: Kevin Eberhardt Project Number: 203723052

ID	Sample Description	Date Sampled	Time Sampled	# of containers	Preservative				Matrix				Analysis Requested					Special Instructions		
					HCl	HNO3	None	Other	Water	Soil	Air-Canister #	Other	EC	pH	SAR	Baron	Table 915 Method			
1	SS18@2.5'	5/25/23	1505	2			X			X				X	X	X	X	X		HOLD
2	SS18@7.5'	↓	1510	2			X			X				X	X	X	X	X		↓
3	SS18@10'	↓	1520	2			X			X				X	X	X	X	X		↓
4	SS19@2.5'	↓	1540	2			X			X				X	X	X	X	X		↓
5	SS19@7.5'	↓	1550	2			X			X				X	X	X	X	X		↓
6	SS19@10'	↓	1600	2			X			X				X	X	X	X	X		↓
7																				
8																				
9																				
10																				

Relinquished by: <u>Kevin Eberhardt</u>	Date/Time: <u>5/26/23 16:27</u>	Received by: <u>John Wood</u>	Date/Time: <u>5/26/23 16:39</u>	Turn Around Time (Check)	Notes:
Relinquished by:	Date/Time:	Received by:	Date/Time:	Same Day <input type="checkbox"/>	
Relinquished by:	Date/Time:	Received by:	Date/Time:	24 hours <input type="checkbox"/>	
				48 hours <input type="checkbox"/>	72 hours <input type="checkbox"/>
				Standard <input checked="" type="checkbox"/>	
				Sample Integrity:	
				Temperature Upon Receipt: <u>12.3</u>	
				Samples Intact: <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	





S<sub>2</sub>

Sample Receipt Checklist

S2 Work Order# 2305620

Client: Stantec Client Project ID: Badger Wash

Shipped Via: H.D./P.U./FedEx/UPS/USPS/Other [ ] Airbill #: [ ]

[X] [ ] [ ] [ ] [ ]

Matrix (Check all that apply) Air [ ] Soil/Solid [X] Water [ ] Other [ ]

Temp (°C) [12.3] Thermometer # [2]

	Yes	No	N/A	Comments (if any)
If samples require cooling, is the temperature < 6°C? <sup>(1)</sup> <b>NOTE:</b> If samples are delivered the same day of sampling, this requirement is met if there is evidence that cooling has begun.	[X]	[ ]	[ ]	
If custody seals are present, are they intact? <sup>(1)</sup>	[ ]	[ ]	[X]	
Are samples due within 48 hours present?	[ ]	[X]	[ ]	
Are water samples with short hold times present? Note the short hold analysis in the comments column - pH, Nitrate/Nitrite, Ferrous Iron (Fe <sup>2+</sup> ), Hexavalent Chromium (Cr <sup>6+</sup> , Cr VI), COD/BOD, Total Coliform, E. Coli, Total Residual Chlorine (TRC), Dissolved Oxygen	[ ]	[ ]	[X]	
Is a chain-of-custody (COC) form present and filled out Completely? <sup>(1)</sup>	[X]	[ ]	[ ]	
Is the COC properly relinquished by the client w/ date and time recorded? <sup>(1)</sup>	[X]	[ ]	[ ]	
Were all samples received intact? <sup>(1)</sup>	[X]	[ ]	[ ]	
Was adequate sample volume provided? <sup>(1)</sup>	[X]	[ ]	[ ]	
Does the COC agree with the number and type of sample bottles received? <sup>(1)</sup>	[X]	[ ]	[ ]	
Do the sample IDs on the bottle labels match the COC? <sup>(1)</sup>	[X]	[ ]	[ ]	
For volatiles in water – is there headspace present? <b>If yes, contact client and note in narrative.</b>	[ ]	[ ]	[X]	
Are samples preserved that require preservation (excluding cooling)? <sup>(1)</sup> Note the type of preservative in the comments column – HCl, H <sub>2</sub> SO <sub>4</sub> , NaOH, HNO <sub>3</sub> , etc.	[ ]	[ ]	[X]	
If samples are acid preserved for metals, is the pH ≤ 2? <sup>(1)</sup> Record the pH in Comments.	[ ]	[ ]	[X]	
If dissolved metals are requested, were samples field filtered?	[ ]	[ ]	[X]	
Additional Comments (if any):				
<sup>(1)</sup> If NO, then contact the client before proceeding with analysis and note in case narrative.				

John Wad  
Custodian Printed Name

5/26/23 16:39  
Date/Time



Stantec  
410 17th St Suite 1400  
Denver CO, 80202

Project: Badger Wash  
Project Number: 203723052  
Project Manager: Chris Roy

**Reported:**  
07/03/23 14:10

**SS10@6'**  
**2305620-01 (Soil)**

**Summit Scientific**

**Volatile Organic Compounds by EPA Method 8260B**

Date Sampled: **05/24/23 10:30**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Benzene	ND	0.0020		mg/kg	1	BGF0182	06/06/23	06/07/23	EPA 8260B	
Toluene	ND	0.0050		"	"	"	"	"	"	
Ethylbenzene	ND	0.0050		"	"	"	"	"	"	
Xylenes (total)	ND	0.010		"	"	"	"	"	"	
1,2,4-Trimethylbenzene	ND	0.0050		"	"	"	"	"	"	
1,3,5-Trimethylbenzene	ND	0.0050		"	"	"	"	"	"	
Naphthalene	ND	0.0038		"	"	"	"	"	"	
Gasoline Range Hydrocarbons	ND	0.50		"	"	"	"	"	"	

Date Sampled: **05/24/23 10:30**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Surrogate: 1,2-Dichloroethane-d4	0.0389	97.4 %		50-150		"	"	"	"	
Surrogate: Toluene-d8	0.0387	96.8 %		50-150		"	"	"	"	
Surrogate: 4-Bromofluorobenzene	0.0383	95.8 %		50-150		"	"	"	"	

**Extractable Petroleum Hydrocarbons by 8015**

Date Sampled: **05/24/23 10:30**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
<b>C10-C28 (DRO)</b>	<b>60</b>	50		mg/kg	1	BGF0188	06/06/23	06/06/23	EPA 8015M	
C28-C36 (ORO)	ND	50		"	"	"	"	"	"	

Date Sampled: **05/24/23 10:30**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Surrogate: o-Terphenyl	10.8	86.1 %		30-150		"	"	"	"	

**PAH by EPA Method 8270D SIM**

Summit Scientific

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410 17th St Suite 1400  
Denver CO, 80202

Project: Badger Wash  
Project Number: 203723052  
Project Manager: Chris Roy

**Reported:**  
07/03/23 14:10

**SS10@6'**  
**2305620-01 (Soil)**

**Summit Scientific**

**PAH by EPA Method 8270D SIM**

Date Sampled: **05/24/23 10:30**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Acenaphthene	ND	0.00500	mg/kg	1	BGF0168	06/06/23	06/06/23	EPA 8270D SIM	
Anthracene	ND	0.00500	"	"	"	"	"	"	
Benzo (a) anthracene	ND	0.00500	"	"	"	"	"	"	
Benzo (a) pyrene	ND	0.00500	"	"	"	"	"	"	
Benzo (b) fluoranthene	ND	0.00500	"	"	"	"	"	"	
Benzo (k) fluoranthene	ND	0.00500	"	"	"	"	"	"	
Chrysene	ND	0.00500	"	"	"	"	"	"	
Dibenz (a,h) anthracene	ND	0.00500	"	"	"	"	"	"	
Fluoranthene	ND	0.00500	"	"	"	"	"	"	
Fluorene	ND	0.00500	"	"	"	"	"	"	
Indeno (1,2,3-cd) pyrene	ND	0.00500	"	"	"	"	"	"	
Pyrene	ND	0.00500	"	"	"	"	"	"	
1-Methylnaphthalene	ND	0.00500	"	"	"	"	"	"	
2-Methylnaphthalene	ND	0.00500	"	"	"	"	"	"	

Date Sampled: **05/24/23 10:30**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 2-Methylnaphthalene-d10	0.0156	46.7 %	40-150		"	"	"	"	
Surrogate: Fluoranthene-d10	0.0164	49.1 %	40-150		"	"	"	"	

**Total Metals by EPA 6020B**

Date Sampled: **05/24/23 10:30**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
<b>Selenium</b>	<b>0.399</b>	0.299	mg/kg dry	1	BGF0203	06/06/23	06/11/23	EPA 6020B	

**Physical Parameters by APHA/ASTM/EPA Methods**

Date Sampled: **05/24/23 10:30**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
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 410 17th St Suite 1400  
 Denver CO, 80202

Project: Badger Wash  
 Project Number: 203723052  
 Project Manager: Chris Roy

**Reported:**  
 07/03/23 14:10

**SS10@6'**  
**2305620-01 (Soil)**

**Summit Scientific**

**Physical Parameters by APHA/ASTM/EPA Methods**

% Solids	87.0	%	1	BGF0235	06/07/23	06/07/23	Calculation
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**Specific Conductance by EPA Method 120.1, Saturated Paste Extraction**

Date Sampled: **05/24/23 10:30**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Specific Conductance (EC)	4.94	0.0100	mmhos/cm	1	BGF0377	06/09/23	06/09/23	EPA 120.1	

Summit Scientific



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410 17th St Suite 1400  
Denver CO, 80202

Project: Badger Wash  
Project Number: 203723052  
Project Manager: Chris Roy

**Reported:**  
07/03/23 14:10

**SS10@7'**  
**2305620-02 (Soil)**

**Summit Scientific**

**Total Metals by EPA 6020B**

Date Sampled: **05/24/23 10:35**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
<b>Selenium</b>	<b>0.655</b>	0.294		mg/kg dry	1	BGF1045	06/29/23	07/01/23	EPA 6020B	

**Physical Parameters by APHA/ASTM/EPA Methods**

Date Sampled: **05/24/23 10:35**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
<b>% Solids</b>	<b>88.4</b>			%	1	BGF1127	06/30/23	06/30/23	Calculation	

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Project: Badger Wash  
Project Number: 203723052  
Project Manager: Chris Roy

**Reported:**  
07/03/23 14:10

**SS23@1'**  
**2305620-06 (Soil)**

**Summit Scientific**

**Volatile Organic Compounds by EPA Method 8260B**

Date Sampled: **05/25/23 14:05**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Benzene	ND	0.0020	mg/kg	1	BGF0182	06/06/23	06/07/23	EPA 8260B	
Toluene	ND	0.0050	"	"	"	"	"	"	
Ethylbenzene	ND	0.0050	"	"	"	"	"	"	
Xylenes (total)	ND	0.010	"	"	"	"	"	"	
1,2,4-Trimethylbenzene	ND	0.0050	"	"	"	"	"	"	
1,3,5-Trimethylbenzene	ND	0.0050	"	"	"	"	"	"	
Naphthalene	ND	0.0038	"	"	"	"	"	"	
Gasoline Range Hydrocarbons	ND	0.50	"	"	"	"	"	"	

Date Sampled: **05/25/23 14:05**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 1,2-Dichloroethane-d4	0.0381	95.3 %	50-150		"	"	"	"	
Surrogate: Toluene-d8	0.0394	98.6 %	50-150		"	"	"	"	
Surrogate: 4-Bromofluorobenzene	0.0378	94.6 %	50-150		"	"	"	"	

**Extractable Petroleum Hydrocarbons by 8015**

Date Sampled: **05/25/23 14:05**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
<b>C10-C28 (DRO)</b>	<b>99</b>	50	mg/kg	1	BGF0188	06/06/23	06/07/23	EPA 8015M	
C28-C36 (ORO)	ND	50	"	"	"	"	"	"	

Date Sampled: **05/25/23 14:05**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: o-Terphenyl	12.0	96.1 %	30-150		"	"	"	"	

**PAH by EPA Method 8270D SIM**

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Denver CO, 80202

Project: Badger Wash  
Project Number: 203723052  
Project Manager: Chris Roy

**Reported:**  
07/03/23 14:10

**SS23@1'**  
**2305620-06 (Soil)**

**Summit Scientific**

**PAH by EPA Method 8270D SIM**

Date Sampled: **05/25/23 14:05**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Acenaphthene	ND	0.00500	mg/kg	1	BGF0168	06/06/23	06/06/23	EPA 8270D SIM	
Anthracene	ND	0.00500	"	"	"	"	"	"	
Benzo (a) anthracene	ND	0.00500	"	"	"	"	"	"	
Benzo (a) pyrene	ND	0.00500	"	"	"	"	"	"	
Benzo (b) fluoranthene	ND	0.00500	"	"	"	"	"	"	
Benzo (k) fluoranthene	ND	0.00500	"	"	"	"	"	"	
Chrysene	ND	0.00500	"	"	"	"	"	"	
Dibenz (a,h) anthracene	ND	0.00500	"	"	"	"	"	"	
Fluoranthene	ND	0.00500	"	"	"	"	"	"	
Fluorene	ND	0.00500	"	"	"	"	"	"	
Indeno (1,2,3-cd) pyrene	ND	0.00500	"	"	"	"	"	"	
Pyrene	ND	0.00500	"	"	"	"	"	"	
<b>1-Methylnaphthalene</b>	<b>0.0208</b>	0.00500	"	"	"	"	"	"	
<b>2-Methylnaphthalene</b>	<b>0.0418</b>	0.00500	"	"	"	"	"	"	

Date Sampled: **05/25/23 14:05**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 2-Methylnaphthalene-d10	0.0193	57.8 %	40-150		"	"	"	"	
Surrogate: Fluoranthene-d10	0.0182	54.7 %	40-150		"	"	"	"	

**Total Metals by EPA 6020B**

Date Sampled: **05/25/23 14:05**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Selenium	ND	0.287	mg/kg dry	1	BGF0203	06/06/23	06/11/23	EPA 6020B	

**Physical Parameters by APHA/ASTM/EPA Methods**

Date Sampled: **05/25/23 14:05**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
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Stantec  
410 17th St Suite 1400  
Denver CO, 80202

Project: Badger Wash  
Project Number: 203723052  
Project Manager: Chris Roy

**Reported:**  
07/03/23 14:10

**SS23@1'**  
**2305620-06 (Soil)**

**Summit Scientific**

**Physical Parameters by APHA/ASTM/EPA Methods**

% Solids	90.6	%	1	BGF0235	06/07/23	06/07/23	Calculation
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**Specific Conductance by EPA Method 120.1, Saturated Paste Extraction**

Date Sampled: **05/25/23 14:05**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Specific Conductance (EC)	0.388	0.0100	mmhos/cm	1	BGF0377	06/09/23	06/09/23	EPA 120.1	

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Stantec  
410 17th St Suite 1400  
Denver CO, 80202

Project: Badger Wash  
Project Number: 203723052  
Project Manager: Chris Roy

**Reported:**  
07/03/23 14:10

**SS11@2'**  
**2305620-11 (Soil)**

**Summit Scientific**

**Volatile Organic Compounds by EPA Method 8260B**

Date Sampled: **05/24/23 11:05**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Benzene	ND	0.0020		mg/kg	1	BGF0182	06/06/23	06/07/23	EPA 8260B	
Toluene	ND	0.0050		"	"	"	"	"	"	
Ethylbenzene	ND	0.0050		"	"	"	"	"	"	
Xylenes (total)	ND	0.010		"	"	"	"	"	"	
1,2,4-Trimethylbenzene	ND	0.0050		"	"	"	"	"	"	
1,3,5-Trimethylbenzene	ND	0.0050		"	"	"	"	"	"	
Naphthalene	ND	0.0038		"	"	"	"	"	"	
Gasoline Range Hydrocarbons	ND	0.50		"	"	"	"	"	"	

Date Sampled: **05/24/23 11:05**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Surrogate: 1,2-Dichloroethane-d4	0.0383	95.8 %		50-150		"	"	"	"	
Surrogate: Toluene-d8	0.0399	99.8 %		50-150		"	"	"	"	
Surrogate: 4-Bromofluorobenzene	0.0383	95.8 %		50-150		"	"	"	"	

**Extractable Petroleum Hydrocarbons by 8015**

Date Sampled: **05/24/23 11:05**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
C10-C28 (DRO)	ND	50		mg/kg	1	BGF0188	06/06/23	06/07/23	EPA 8015M	
C28-C36 (ORO)	ND	50		"	"	"	"	"	"	

Date Sampled: **05/24/23 11:05**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Surrogate: o-Terphenyl	11.8	94.6 %		30-150		"	"	"	"	

**PAH by EPA Method 8270D SIM**

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Stantec  
410 17th St Suite 1400  
Denver CO, 80202

Project: Badger Wash  
Project Number: 203723052  
Project Manager: Chris Roy

**Reported:**  
07/03/23 14:10

**SS11@2'**  
**2305620-11 (Soil)**

**Summit Scientific**

**PAH by EPA Method 8270D SIM**

Date Sampled: **05/24/23 11:05**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Acenaphthene	ND	0.00500	mg/kg	1	BGF0168	06/06/23	06/06/23	EPA 8270D SIM	
Anthracene	ND	0.00500	"	"	"	"	"	"	
Benzo (a) anthracene	ND	0.00500	"	"	"	"	"	"	
Benzo (a) pyrene	ND	0.00500	"	"	"	"	"	"	
Benzo (b) fluoranthene	ND	0.00500	"	"	"	"	"	"	
Benzo (k) fluoranthene	ND	0.00500	"	"	"	"	"	"	
Chrysene	ND	0.00500	"	"	"	"	"	"	
Dibenz (a,h) anthracene	ND	0.00500	"	"	"	"	"	"	
Fluoranthene	ND	0.00500	"	"	"	"	"	"	
Fluorene	ND	0.00500	"	"	"	"	"	"	
Indeno (1,2,3-cd) pyrene	ND	0.00500	"	"	"	"	"	"	
Pyrene	ND	0.00500	"	"	"	"	"	"	
1-Methylnaphthalene	ND	0.00500	"	"	"	"	"	"	
2-Methylnaphthalene	ND	0.00500	"	"	"	"	"	"	

Date Sampled: **05/24/23 11:05**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 2-Methylnaphthalene-d10	0.0204	61.2 %	40-150		"	"	"	"	
Surrogate: Fluoranthene-d10	0.0193	57.9 %	40-150		"	"	"	"	

**Total Metals by EPA 6020B**

Date Sampled: **05/24/23 11:05**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Selenium	ND	0.294	mg/kg dry	1	BGF0203	06/06/23	06/11/23	EPA 6020B	

**Physical Parameters by APHA/ASTM/EPA Methods**

Date Sampled: **05/24/23 11:05**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
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410 17th St Suite 1400  
Denver CO, 80202

Project: Badger Wash  
Project Number: 203723052  
Project Manager: Chris Roy

**Reported:**  
07/03/23 14:10

**SS11@2'**  
**2305620-11 (Soil)**

**Summit Scientific**

**Physical Parameters by APHA/ASTM/EPA Methods**

% Solids	88.5	%	1	BGF0235	06/07/23	06/07/23	Calculation
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**Specific Conductance by EPA Method 120.1, Saturated Paste Extraction**

Date Sampled: **05/24/23 11:05**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Specific Conductance (EC)	<b>0.183</b>	0.0100	mmhos/cm	1	BGF0377	06/09/23	06/09/23	EPA 120.1	

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Project: Badger Wash  
Project Number: 203723052  
Project Manager: Chris Roy

**Reported:**  
07/03/23 14:10

**SS12@2'**  
**2305620-16 (Soil)**

**Summit Scientific**

**Volatile Organic Compounds by EPA Method 8260B**

Date Sampled: **05/24/23 11:35**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Benzene	ND	0.0020	mg/kg	1	BGF0182	06/06/23	06/07/23	EPA 8260B	
Toluene	ND	0.0050	"	"	"	"	"	"	
Ethylbenzene	ND	0.0050	"	"	"	"	"	"	
Xylenes (total)	ND	0.010	"	"	"	"	"	"	
1,2,4-Trimethylbenzene	ND	0.0050	"	"	"	"	"	"	
1,3,5-Trimethylbenzene	ND	0.0050	"	"	"	"	"	"	
Naphthalene	ND	0.0038	"	"	"	"	"	"	
Gasoline Range Hydrocarbons	ND	0.50	"	"	"	"	"	"	

Date Sampled: **05/24/23 11:35**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 1,2-Dichloroethane-d4	0.0380	94.9 %	50-150		"	"	"	"	
Surrogate: Toluene-d8	0.0386	96.6 %	50-150		"	"	"	"	
Surrogate: 4-Bromofluorobenzene	0.0381	95.3 %	50-150		"	"	"	"	

**Extractable Petroleum Hydrocarbons by 8015**

Date Sampled: **05/24/23 11:35**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
C10-C28 (DRO)	ND	50	mg/kg	1	BGF0188	06/06/23	06/07/23	EPA 8015M	
C28-C36 (ORO)	ND	50	"	"	"	"	"	"	

Date Sampled: **05/24/23 11:35**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: o-Terphenyl	11.8	94.3 %	30-150		"	"	"	"	

**PAH by EPA Method 8270D SIM**

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Denver CO, 80202

Project: Badger Wash  
Project Number: 203723052  
Project Manager: Chris Roy

**Reported:**  
07/03/23 14:10

**SS12@2'**  
**2305620-16 (Soil)**

**Summit Scientific**

**PAH by EPA Method 8270D SIM**

Date Sampled: **05/24/23 11:35**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Acenaphthene	ND	0.00500	mg/kg	1	BGF0168	06/06/23	06/06/23	EPA 8270D SIM	
Anthracene	ND	0.00500	"	"	"	"	"	"	
Benzo (a) anthracene	ND	0.00500	"	"	"	"	"	"	
Benzo (a) pyrene	ND	0.00500	"	"	"	"	"	"	
Benzo (b) fluoranthene	ND	0.00500	"	"	"	"	"	"	
Benzo (k) fluoranthene	ND	0.00500	"	"	"	"	"	"	
Chrysene	ND	0.00500	"	"	"	"	"	"	
Dibenz (a,h) anthracene	ND	0.00500	"	"	"	"	"	"	
Fluoranthene	ND	0.00500	"	"	"	"	"	"	
Fluorene	ND	0.00500	"	"	"	"	"	"	
Indeno (1,2,3-cd) pyrene	ND	0.00500	"	"	"	"	"	"	
Pyrene	ND	0.00500	"	"	"	"	"	"	
1-Methylnaphthalene	ND	0.00500	"	"	"	"	"	"	
2-Methylnaphthalene	ND	0.00500	"	"	"	"	"	"	

Date Sampled: **05/24/23 11:35**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 2-Methylnaphthalene-d10	0.0177	53.0 %	40-150		"	"	"	"	
Surrogate: Fluoranthene-d10	0.0163	48.9 %	40-150		"	"	"	"	

**Total Metals by EPA 6020B**

Date Sampled: **05/24/23 11:35**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Selenium	ND	0.293	mg/kg dry	1	BGF0203	06/06/23	06/11/23	EPA 6020B	

**Physical Parameters by APHA/ASTM/EPA Methods**

Date Sampled: **05/24/23 11:35**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
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Denver CO, 80202

Project: Badger Wash  
Project Number: 203723052  
Project Manager: Chris Roy

**Reported:**  
07/03/23 14:10

**SS12@2'**  
**2305620-16 (Soil)**

**Summit Scientific**

**Physical Parameters by APHA/ASTM/EPA Methods**

% Solids	88.8	%	1	BGF0235	06/07/23	06/07/23	Calculation
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**Specific Conductance by EPA Method 120.1, Saturated Paste Extraction**

Date Sampled: **05/24/23 11:35**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Specific Conductance (EC)	0.193	0.0100	mmhos/cm	1	BGF0377	06/09/23	06/09/23	EPA 120.1	

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Project: Badger Wash  
Project Number: 203723052  
Project Manager: Chris Roy

**Reported:**  
07/03/23 14:10

**SS13@2'**  
**2305620-21 (Soil)**

**Summit Scientific**

**Volatile Organic Compounds by EPA Method 8260B**

Date Sampled: **05/24/23 12:30**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Benzene	ND	0.0020	mg/kg	1	BGF0182	06/06/23	06/07/23	EPA 8260B	
Toluene	ND	0.0050	"	"	"	"	"	"	
Ethylbenzene	ND	0.0050	"	"	"	"	"	"	
Xylenes (total)	ND	0.010	"	"	"	"	"	"	
1,2,4-Trimethylbenzene	ND	0.0050	"	"	"	"	"	"	
1,3,5-Trimethylbenzene	ND	0.0050	"	"	"	"	"	"	
Naphthalene	ND	0.0038	"	"	"	"	"	"	
Gasoline Range Hydrocarbons	ND	0.50	"	"	"	"	"	"	

Date Sampled: **05/24/23 12:30**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 1,2-Dichloroethane-d4	0.0383	95.8 %	50-150		"	"	"	"	
Surrogate: Toluene-d8	0.0396	99.0 %	50-150		"	"	"	"	
Surrogate: 4-Bromofluorobenzene	0.0392	98.0 %	50-150		"	"	"	"	

**Extractable Petroleum Hydrocarbons by 8015**

Date Sampled: **05/24/23 12:30**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
C10-C28 (DRO)	ND	50	mg/kg	1	BGF0188	06/06/23	06/07/23	EPA 8015M	
C28-C36 (ORO)	ND	50	"	"	"	"	"	"	

Date Sampled: **05/24/23 12:30**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: o-Terphenyl	11.9	94.9 %	30-150		"	"	"	"	

**PAH by EPA Method 8270D SIM**

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Stantec  
410 17th St Suite 1400  
Denver CO, 80202

Project: Badger Wash  
Project Number: 203723052  
Project Manager: Chris Roy

**Reported:**  
07/03/23 14:10

**SS13@2'**  
**2305620-21 (Soil)**

**Summit Scientific**

**PAH by EPA Method 8270D SIM**

Date Sampled: **05/24/23 12:30**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Acenaphthene	ND	0.00500	mg/kg	1	BGF0168	06/06/23	06/06/23	EPA 8270D SIM	
Anthracene	ND	0.00500	"	"	"	"	"	"	
Benzo (a) anthracene	ND	0.00500	"	"	"	"	"	"	
Benzo (a) pyrene	ND	0.00500	"	"	"	"	"	"	
Benzo (b) fluoranthene	ND	0.00500	"	"	"	"	"	"	
Benzo (k) fluoranthene	ND	0.00500	"	"	"	"	"	"	
Chrysene	ND	0.00500	"	"	"	"	"	"	
Dibenz (a,h) anthracene	ND	0.00500	"	"	"	"	"	"	
Fluoranthene	ND	0.00500	"	"	"	"	"	"	
Fluorene	ND	0.00500	"	"	"	"	"	"	
Indeno (1,2,3-cd) pyrene	ND	0.00500	"	"	"	"	"	"	
Pyrene	ND	0.00500	"	"	"	"	"	"	
1-Methylnaphthalene	ND	0.00500	"	"	"	"	"	"	
2-Methylnaphthalene	ND	0.00500	"	"	"	"	"	"	

Date Sampled: **05/24/23 12:30**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 2-Methylnaphthalene-d10	0.0206	61.8 %	40-150		"	"	"	"	
Surrogate: Fluoranthene-d10	0.0226	67.7 %	40-150		"	"	"	"	

**Total Metals by EPA 6020B**

Date Sampled: **05/24/23 12:30**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
<b>Selenium</b>	<b>0.207</b>	0.278	mg/kg dry	1	BGF0203	06/06/23	06/11/23	EPA 6020B	

**Physical Parameters by APHA/ASTM/EPA Methods**

Date Sampled: **05/24/23 12:30**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
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410 17th St Suite 1400  
Denver CO, 80202

Project: Badger Wash  
Project Number: 203723052  
Project Manager: Chris Roy

**Reported:**  
07/03/23 14:10

**SS13@2'**  
**2305620-21 (Soil)**

**Summit Scientific**

**Physical Parameters by APHA/ASTM/EPA Methods**

% Solids	93.6	%	1	BGF0235	06/07/23	06/07/23	Calculation
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**Specific Conductance by EPA Method 120.1, Saturated Paste Extraction**

Date Sampled: **05/24/23 12:30**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Specific Conductance (EC)	0.665	0.0100	mmhos/cm	1	BGF0377	06/09/23	06/09/23	EPA 120.1	

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Project: Badger Wash  
Project Number: 203723052  
Project Manager: Chris Roy

**Reported:**  
07/03/23 14:10

**SS14@6'**  
**2305620-26 (Soil)**

**Summit Scientific**

**Volatile Organic Compounds by EPA Method 8260B**

Date Sampled: **05/24/23 13:05**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Benzene	ND	0.0020	mg/kg	1	BGF0182	06/06/23	06/07/23	EPA 8260B	
Toluene	ND	0.0050	"	"	"	"	"	"	
Ethylbenzene	ND	0.0050	"	"	"	"	"	"	
Xylenes (total)	ND	0.010	"	"	"	"	"	"	
1,2,4-Trimethylbenzene	ND	0.0050	"	"	"	"	"	"	
1,3,5-Trimethylbenzene	ND	0.0050	"	"	"	"	"	"	
Naphthalene	ND	0.0038	"	"	"	"	"	"	
Gasoline Range Hydrocarbons	ND	0.50	"	"	"	"	"	"	

Date Sampled: **05/24/23 13:05**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 1,2-Dichloroethane-d4	0.0372	93.1 %	50-150		"	"	"	"	
Surrogate: Toluene-d8	0.0388	97.0 %	50-150		"	"	"	"	
Surrogate: 4-Bromofluorobenzene	0.0385	96.2 %	50-150		"	"	"	"	

**Extractable Petroleum Hydrocarbons by 8015**

Date Sampled: **05/24/23 13:05**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
C10-C28 (DRO)	ND	50	mg/kg	1	BGF0188	06/06/23	06/07/23	EPA 8015M	
C28-C36 (ORO)	ND	50	"	"	"	"	"	"	

Date Sampled: **05/24/23 13:05**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: o-Terphenyl	12.0	96.4 %	30-150		"	"	"	"	

**PAH by EPA Method 8270D SIM**

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410 17th St Suite 1400  
Denver CO, 80202

Project: Badger Wash  
Project Number: 203723052  
Project Manager: Chris Roy

**Reported:**  
07/03/23 14:10

**SS14@6'**  
**2305620-26 (Soil)**

**Summit Scientific**

**PAH by EPA Method 8270D SIM**

Date Sampled: **05/24/23 13:05**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Acenaphthene	ND	0.00500	mg/kg	1	BGF0168	06/06/23	06/06/23	EPA 8270D SIM	
Anthracene	ND	0.00500	"	"	"	"	"	"	
Benzo (a) anthracene	ND	0.00500	"	"	"	"	"	"	
Benzo (a) pyrene	ND	0.00500	"	"	"	"	"	"	
Benzo (b) fluoranthene	ND	0.00500	"	"	"	"	"	"	
Benzo (k) fluoranthene	ND	0.00500	"	"	"	"	"	"	
Chrysene	ND	0.00500	"	"	"	"	"	"	
Dibenz (a,h) anthracene	ND	0.00500	"	"	"	"	"	"	
Fluoranthene	ND	0.00500	"	"	"	"	"	"	
Fluorene	ND	0.00500	"	"	"	"	"	"	
Indeno (1,2,3-cd) pyrene	ND	0.00500	"	"	"	"	"	"	
Pyrene	ND	0.00500	"	"	"	"	"	"	
1-Methylnaphthalene	ND	0.00500	"	"	"	"	"	"	
2-Methylnaphthalene	ND	0.00500	"	"	"	"	"	"	

Date Sampled: **05/24/23 13:05**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 2-Methylnaphthalene-d10	0.0137	41.2 %	40-150		"	"	"	"	
Surrogate: Fluoranthene-d10	0.0138	41.5 %	40-150		"	"	"	"	

**Total Metals by EPA 6020B**

Date Sampled: **05/24/23 13:05**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
<b>Selenium</b>	<b>0.431</b>	0.313	mg/kg dry	1	BGF0203	06/06/23	06/11/23	EPA 6020B	

**Physical Parameters by APHA/ASTM/EPA Methods**

Date Sampled: **05/24/23 13:05**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
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410 17th St Suite 1400  
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Project: Badger Wash  
Project Number: 203723052  
Project Manager: Chris Roy

**Reported:**  
07/03/23 14:10

**SS14@6'**  
**2305620-26 (Soil)**

**Summit Scientific**

**Physical Parameters by APHA/ASTM/EPA Methods**

% Solids	83.1	%	1	BGF0235	06/07/23	06/07/23	Calculation
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**Specific Conductance by EPA Method 120.1, Saturated Paste Extraction**

Date Sampled: **05/24/23 13:05**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Specific Conductance (EC)	7.83	0.0100	mmhos/cm	1	BGF0377	06/09/23	06/09/23	EPA 120.1	

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Stantec  
410 17th St Suite 1400  
Denver CO, 80202

Project: Badger Wash  
Project Number: 203723052  
Project Manager: Chris Roy

**Reported:**  
07/03/23 14:10

**SS14@7'**  
**2305620-27 (Soil)**

**Summit Scientific**

**Total Metals by EPA 6020B**

Date Sampled: **05/24/23 13:10**

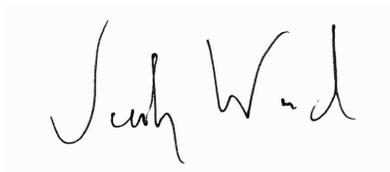
Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
<b>Selenium</b>	<b>1.16</b>	0.301		mg/kg dry	1	BGF1045	06/29/23	07/01/23	EPA 6020B	

**Physical Parameters by APHA/ASTM/EPA Methods**

Date Sampled: **05/24/23 13:10**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
<b>% Solids</b>	<b>86.5</b>			%	1	BGF1127	06/30/23	06/30/23	Calculation	

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410 17th St Suite 1400  
Denver CO, 80202

Project: Badger Wash  
Project Number: 203723052  
Project Manager: Chris Roy

**Reported:**  
07/03/23 14:10

**SS15@6'**  
**2305620-31 (Soil)**

**Summit Scientific**

**Volatile Organic Compounds by EPA Method 8260B**

Date Sampled: **05/25/23 10:05**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Benzene	ND	0.0020	mg/kg	1	BGF0182	06/06/23	06/07/23	EPA 8260B	
Toluene	ND	0.0050	"	"	"	"	"	"	
Ethylbenzene	ND	0.0050	"	"	"	"	"	"	
Xylenes (total)	ND	0.010	"	"	"	"	"	"	
1,2,4-Trimethylbenzene	ND	0.0050	"	"	"	"	"	"	
1,3,5-Trimethylbenzene	ND	0.0050	"	"	"	"	"	"	
Naphthalene	ND	0.0038	"	"	"	"	"	"	
Gasoline Range Hydrocarbons	ND	0.50	"	"	"	"	"	"	

Date Sampled: **05/25/23 10:05**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 1,2-Dichloroethane-d4	0.0386	96.4 %	50-150		"	"	"	"	
Surrogate: Toluene-d8	0.0378	94.6 %	50-150		"	"	"	"	
Surrogate: 4-Bromofluorobenzene	0.0379	94.7 %	50-150		"	"	"	"	

**Extractable Petroleum Hydrocarbons by 8015**

Date Sampled: **05/25/23 10:05**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
C10-C28 (DRO)	ND	50	mg/kg	1	BGF0188	06/06/23	06/07/23	EPA 8015M	
C28-C36 (ORO)	ND	50	"	"	"	"	"	"	

Date Sampled: **05/25/23 10:05**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: o-Terphenyl	11.8	94.7 %	30-150		"	"	"	"	

**PAH by EPA Method 8270D SIM**

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Stantec  
410 17th St Suite 1400  
Denver CO, 80202

Project: Badger Wash  
Project Number: 203723052  
Project Manager: Chris Roy

**Reported:**  
07/03/23 14:10

**SS15@6'**  
**2305620-31 (Soil)**

**Summit Scientific**

**PAH by EPA Method 8270D SIM**

Date Sampled: **05/25/23 10:05**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Acenaphthene	ND	0.00500	mg/kg	1	BGF0168	06/06/23	06/06/23	EPA 8270D SIM	
Anthracene	ND	0.00500	"	"	"	"	"	"	
Benzo (a) anthracene	ND	0.00500	"	"	"	"	"	"	
Benzo (a) pyrene	ND	0.00500	"	"	"	"	"	"	
Benzo (b) fluoranthene	ND	0.00500	"	"	"	"	"	"	
Benzo (k) fluoranthene	ND	0.00500	"	"	"	"	"	"	
Chrysene	ND	0.00500	"	"	"	"	"	"	
Dibenz (a,h) anthracene	ND	0.00500	"	"	"	"	"	"	
Fluoranthene	ND	0.00500	"	"	"	"	"	"	
Fluorene	ND	0.00500	"	"	"	"	"	"	
Indeno (1,2,3-cd) pyrene	ND	0.00500	"	"	"	"	"	"	
Pyrene	ND	0.00500	"	"	"	"	"	"	
1-Methylnaphthalene	ND	0.00500	"	"	"	"	"	"	
2-Methylnaphthalene	ND	0.00500	"	"	"	"	"	"	

Date Sampled: **05/25/23 10:05**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 2-Methylnaphthalene-d10	0.0204	61.3 %	40-150		"	"	"	"	
Surrogate: Fluoranthene-d10	0.0200	59.9 %	40-150		"	"	"	"	

**Total Metals by EPA 6020B**

Date Sampled: **05/25/23 10:05**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
<b>Selenium</b>	<b>0.369</b>	0.294	mg/kg dry	1	BGF0203	06/06/23	06/11/23	EPA 6020B	

**Physical Parameters by APHA/ASTM/EPA Methods**

Date Sampled: **05/25/23 10:05**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
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Stantec  
410 17th St Suite 1400  
Denver CO, 80202

Project: Badger Wash  
Project Number: 203723052  
Project Manager: Chris Roy

**Reported:**  
07/03/23 14:10

**SS15@6'**  
**2305620-31 (Soil)**

**Summit Scientific**

**Physical Parameters by APHA/ASTM/EPA Methods**

% Solids	88.4	%	1	BGF0235	06/07/23	06/07/23	Calculation
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**Specific Conductance by EPA Method 120.1, Saturated Paste Extraction**

Date Sampled: **05/25/23 10:05**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Specific Conductance (EC)	6.82	0.0100	mmhos/cm	1	BGF0377	06/09/23	06/09/23	EPA 120.1	

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Denver CO, 80202

Project: Badger Wash  
Project Number: 203723052  
Project Manager: Chris Roy

**Reported:**  
07/03/23 14:10

**SS15@7'**  
**2305620-32 (Soil)**

**Summit Scientific**

**Total Metals by EPA 6020B**

Date Sampled: **05/25/23 10:10**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
<b>Selenium</b>	<b>0.886</b>	0.280		mg/kg dry	1	BGF1045	06/29/23	07/01/23	EPA 6020B	

**Physical Parameters by APHA/ASTM/EPA Methods**

Date Sampled: **05/25/23 10:10**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
<b>% Solids</b>	<b>92.8</b>			%	1	BGF1127	06/30/23	06/30/23	Calculation	

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Project: Badger Wash  
Project Number: 203723052  
Project Manager: Chris Roy

**Reported:**  
07/03/23 14:10

**SS16@6'**  
**2305620-36 (Soil)**

**Summit Scientific**

**Volatile Organic Compounds by EPA Method 8260B**

Date Sampled: **05/25/23 10:45**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Benzene	ND	0.0020		mg/kg	1	BGF0182	06/06/23	06/07/23	EPA 8260B	
Toluene	ND	0.0050		"	"	"	"	"	"	
Ethylbenzene	ND	0.0050		"	"	"	"	"	"	
Xylenes (total)	ND	0.010		"	"	"	"	"	"	
1,2,4-Trimethylbenzene	ND	0.0050		"	"	"	"	"	"	
1,3,5-Trimethylbenzene	ND	0.0050		"	"	"	"	"	"	
Naphthalene	ND	0.0038		"	"	"	"	"	"	
Gasoline Range Hydrocarbons	ND	0.50		"	"	"	"	"	"	

Date Sampled: **05/25/23 10:45**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Surrogate: 1,2-Dichloroethane-d4	0.0396	99.1 %		50-150		"	"	"	"	
Surrogate: Toluene-d8	0.0387	96.8 %		50-150		"	"	"	"	
Surrogate: 4-Bromofluorobenzene	0.0391	97.8 %		50-150		"	"	"	"	

**Extractable Petroleum Hydrocarbons by 8015**

Date Sampled: **05/25/23 10:45**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
C10-C28 (DRO)	ND	50		mg/kg	1	BGF0188	06/06/23	06/07/23	EPA 8015M	
C28-C36 (ORO)	ND	50		"	"	"	"	"	"	

Date Sampled: **05/25/23 10:45**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Surrogate: o-Terphenyl	12.2	97.4 %		30-150		"	"	"	"	

**PAH by EPA Method 8270D SIM**

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Stantec  
410 17th St Suite 1400  
Denver CO, 80202

Project: Badger Wash  
Project Number: 203723052  
Project Manager: Chris Roy

**Reported:**  
07/03/23 14:10

**SS16@6'**  
**2305620-36 (Soil)**

**Summit Scientific**

**PAH by EPA Method 8270D SIM**

Date Sampled: **05/25/23 10:45**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Acenaphthene	ND	0.00500	mg/kg	1	BGF0168	06/06/23	06/06/23	EPA 8270D SIM	
Anthracene	ND	0.00500	"	"	"	"	"	"	
Benzo (a) anthracene	ND	0.00500	"	"	"	"	"	"	
Benzo (a) pyrene	ND	0.00500	"	"	"	"	"	"	
Benzo (b) fluoranthene	ND	0.00500	"	"	"	"	"	"	
Benzo (k) fluoranthene	ND	0.00500	"	"	"	"	"	"	
Chrysene	ND	0.00500	"	"	"	"	"	"	
Dibenz (a,h) anthracene	ND	0.00500	"	"	"	"	"	"	
Fluoranthene	ND	0.00500	"	"	"	"	"	"	
Fluorene	ND	0.00500	"	"	"	"	"	"	
Indeno (1,2,3-cd) pyrene	ND	0.00500	"	"	"	"	"	"	
Pyrene	ND	0.00500	"	"	"	"	"	"	
1-Methylnaphthalene	ND	0.00500	"	"	"	"	"	"	
2-Methylnaphthalene	ND	0.00500	"	"	"	"	"	"	

Date Sampled: **05/25/23 10:45**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 2-Methylnaphthalene-d10	0.0172	51.5 %	40-150		"	"	"	"	
Surrogate: Fluoranthene-d10	0.0169	50.8 %	40-150		"	"	"	"	

**Total Metals by EPA 6020B**

Date Sampled: **05/25/23 10:45**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Selenium	1.11	0.299	mg/kg dry	1	BGF0203	06/06/23	06/19/23	EPA 6020B	

**Physical Parameters by APHA/ASTM/EPA Methods**

Date Sampled: **05/25/23 10:45**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
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Stantec  
410 17th St Suite 1400  
Denver CO, 80202

Project: Badger Wash  
Project Number: 203723052  
Project Manager: Chris Roy

**Reported:**  
07/03/23 14:10

**SS16@6'**  
**2305620-36 (Soil)**

**Summit Scientific**

**Physical Parameters by APHA/ASTM/EPA Methods**

% Solids	87.0	%	1	BGF0235	06/07/23	06/07/23	Calculation
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**Specific Conductance by EPA Method 120.1, Saturated Paste Extraction**

Date Sampled: **05/25/23 10:45**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Specific Conductance (EC)	5.42	0.0100	mmhos/cm	1	BGF0377	06/09/23	06/09/23	EPA 120.1	

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Stantec  
410 17th St Suite 1400  
Denver CO, 80202

Project: Badger Wash  
Project Number: 203723052  
Project Manager: Chris Roy

**Reported:**  
07/03/23 14:10

**SS16@7'**  
**2305620-37 (Soil)**

**Summit Scientific**

**Total Metals by EPA 6020B**

Date Sampled: **05/25/23 11:00**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
<b>Selenium</b>	<b>1.04</b>	0.298		mg/kg dry	1	BGF1045	06/29/23	07/01/23	EPA 6020B	

**Physical Parameters by APHA/ASTM/EPA Methods**

Date Sampled: **05/25/23 11:00**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
<b>% Solids</b>	<b>87.3</b>			%	1	BGF1127	06/30/23	06/30/23	Calculation	

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Stantec  
410 17th St Suite 1400  
Denver CO, 80202

Project: Badger Wash  
Project Number: 203723052  
Project Manager: Chris Roy

**Reported:**  
07/03/23 14:10

**SS18@2.5'**  
**2305620-41 (Soil)**

**Summit Scientific**

**Total Metals by EPA 6020B**

Date Sampled: **05/25/23 15:05**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Selenium	1.09	0.318	mg/kg dry	1	BGF1045	06/29/23	07/01/23	EPA 6020B	

**Physical Parameters by APHA/ASTM/EPA Methods**

Date Sampled: **05/25/23 15:05**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
% Solids	81.9		%	1	BGF1053	06/29/23	06/29/23	Calculation	

**Physical Parameters by APHA/ASTM/EPA Methods, Saturated Paste Extraction**

Date Sampled: **05/25/23 15:05**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
pH	8.54		pH Units	1	BGF0803	06/22/23	06/22/23	EPA 9045D	

**Saturation Paste by the Western Region Soil, Plant and Water Reference Methods 2013**

Date Sampled: **05/25/23 15:05**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Specific Conductance (EC)	0.304	0.0100	mmhos/cm	1	BGF0915	06/26/23	06/26/23	EPA 120.1	I-02

Summit Scientific

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Stantec  
410 17th St Suite 1400  
Denver CO, 80202

Project: Badger Wash  
Project Number: 203723052  
Project Manager: Chris Roy

**Reported:**  
07/03/23 14:10

**SS19@2.5'**  
**2305620-44 (Soil)**

**Summit Scientific**

**Total Metals by EPA 6020B**

Date Sampled: **05/25/23 15:40**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Selenium	0.576	0.289	mg/kg dry	1	BGF1045	06/29/23	07/01/23	EPA 6020B	

**Physical Parameters by APHA/ASTM/EPA Methods**

Date Sampled: **05/25/23 15:40**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
% Solids	90.0		%	1	BGF1127	06/30/23	06/30/23	Calculation	

**Physical Parameters by APHA/ASTM/EPA Methods, Saturated Paste Extraction**

Date Sampled: **05/25/23 15:40**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
pH	8.77		pH Units	1	BGF0803	06/22/23	06/22/23	EPA 9045D	

**Saturation Paste by the Western Region Soil, Plant and Water Reference Methods 2013**

Date Sampled: **05/25/23 15:40**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Specific Conductance (EC)	0.282	0.0100	mmhos/cm	1	BGF0915	06/26/23	06/26/23	EPA 120.1	I-02

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Stantec  
410 17th St Suite 1400  
Denver CO, 80202

Project: Badger Wash  
Project Number: 203723052  
Project Manager: Chris Roy

**Reported:**  
07/03/23 14:10

**SS21@1'**  
**2305620-47 (Soil)**

**Summit Scientific**

**Volatile Organic Compounds by EPA Method 8260B**

Date Sampled: **05/24/23 14:30**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Benzene	ND	0.0020		mg/kg	1	BGF0182	06/06/23	06/07/23	EPA 8260B	
Toluene	ND	0.0050		"	"	"	"	"	"	
Ethylbenzene	ND	0.0050		"	"	"	"	"	"	
Xylenes (total)	ND	0.010		"	"	"	"	"	"	
1,2,4-Trimethylbenzene	ND	0.0050		"	"	"	"	"	"	
1,3,5-Trimethylbenzene	ND	0.0050		"	"	"	"	"	"	
Naphthalene	ND	0.0038		"	"	"	"	"	"	
Gasoline Range Hydrocarbons	ND	0.50		"	"	"	"	"	"	

Date Sampled: **05/24/23 14:30**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Surrogate: 1,2-Dichloroethane-d4	0.0411	103 %		50-150		"	"	"	"	
Surrogate: Toluene-d8	0.0396	99.1 %		50-150		"	"	"	"	
Surrogate: 4-Bromofluorobenzene	0.0382	95.5 %		50-150		"	"	"	"	

**Extractable Petroleum Hydrocarbons by 8015**

Date Sampled: **05/24/23 14:30**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
C10-C28 (DRO)	ND	50		mg/kg	1	BGF0188	06/06/23	06/07/23	EPA 8015M	
C28-C36 (ORO)	ND	50		"	"	"	"	"	"	

Date Sampled: **05/24/23 14:30**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Surrogate: o-Terphenyl	11.7	93.4 %		30-150		"	"	"	"	

**PAH by EPA Method 8270D SIM**

Summit Scientific

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Stantec  
410 17th St Suite 1400  
Denver CO, 80202

Project: Badger Wash  
Project Number: 203723052  
Project Manager: Chris Roy

**Reported:**  
07/03/23 14:10

**SS21@1'**  
**2305620-47 (Soil)**

**Summit Scientific**

**PAH by EPA Method 8270D SIM**

Date Sampled: **05/24/23 14:30**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Acenaphthene	ND	0.00500	mg/kg	1	BGF0168	06/06/23	06/06/23	EPA 8270D SIM	
Anthracene	ND	0.00500	"	"	"	"	"	"	
Benzo (a) anthracene	ND	0.00500	"	"	"	"	"	"	
Benzo (a) pyrene	ND	0.00500	"	"	"	"	"	"	
Benzo (b) fluoranthene	ND	0.00500	"	"	"	"	"	"	
Benzo (k) fluoranthene	ND	0.00500	"	"	"	"	"	"	
Chrysene	ND	0.00500	"	"	"	"	"	"	
Dibenz (a,h) anthracene	ND	0.00500	"	"	"	"	"	"	
Fluoranthene	ND	0.00500	"	"	"	"	"	"	
Fluorene	ND	0.00500	"	"	"	"	"	"	
Indeno (1,2,3-cd) pyrene	ND	0.00500	"	"	"	"	"	"	
Pyrene	ND	0.00500	"	"	"	"	"	"	
1-Methylnaphthalene	ND	0.00500	"	"	"	"	"	"	
2-Methylnaphthalene	ND	0.00500	"	"	"	"	"	"	

Date Sampled: **05/24/23 14:30**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 2-Methylnaphthalene-d10	0.0147	44.1 %	40-150		"	"	"	"	
Surrogate: Fluoranthene-d10	0.0158	47.5 %	40-150		"	"	"	"	

**Total Metals by EPA 6020B**

Date Sampled: **05/24/23 14:30**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Selenium	<b>1.34</b>	0.279	mg/kg dry	1	BGF0203	06/06/23	06/11/23	EPA 6020B	

**Physical Parameters by APHA/ASTM/EPA Methods**

Date Sampled: **05/24/23 14:30**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
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Stantec  
 410 17th St Suite 1400  
 Denver CO, 80202

Project: Badger Wash  
 Project Number: 203723052  
 Project Manager: Chris Roy

**Reported:**  
 07/03/23 14:10

**SS21@1'**  
**2305620-47 (Soil)**

**Summit Scientific**

**Physical Parameters by APHA/ASTM/EPA Methods**

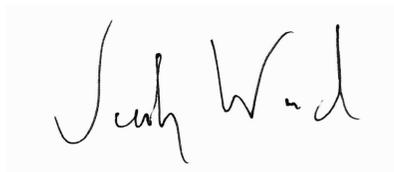
% Solids	93.2	%	1	BGF0235	06/07/23	06/07/23	Calculation
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**Specific Conductance by EPA Method 120.1, Saturated Paste Extraction**

Date Sampled: **05/24/23 14:30**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Specific Conductance (EC)	0.711	0.0100	mmhos/cm	1	BGF0377	06/09/23	06/09/23	EPA 120.1	

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Denver CO, 80202

Project: Badger Wash  
Project Number: 203723052  
Project Manager: Chris Roy

**Reported:**  
07/03/23 14:10

**SS21@2'**  
**2305620-48 (Soil)**

**Summit Scientific**

**Total Metals by EPA 6020B**

Date Sampled: **05/24/23 14:35**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
<b>Selenium</b>	<b>0.399</b>	0.274		mg/kg dry	1	BGF1045	06/29/23	07/01/23	EPA 6020B	

**Physical Parameters by APHA/ASTM/EPA Methods**

Date Sampled: **05/24/23 14:35**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
<b>% Solids</b>	<b>94.8</b>			%	1	BGF1127	06/30/23	06/30/23	Calculation	

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Denver CO, 80202

Project: Badger Wash  
Project Number: 203723052  
Project Manager: Chris Roy

**Reported:**  
07/03/23 14:10

**SS22@1'**  
**2305620-52 (Soil)**

**Summit Scientific**

**Volatile Organic Compounds by EPA Method 8260B**

Date Sampled: **05/24/23 15:05**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Benzene	ND	0.0020	mg/kg	1	BGF0182	06/06/23	06/07/23	EPA 8260B	
Toluene	ND	0.0050	"	"	"	"	"	"	
Ethylbenzene	ND	0.0050	"	"	"	"	"	"	
Xylenes (total)	ND	0.010	"	"	"	"	"	"	
1,2,4-Trimethylbenzene	ND	0.0050	"	"	"	"	"	"	
1,3,5-Trimethylbenzene	ND	0.0050	"	"	"	"	"	"	
Naphthalene	ND	0.0038	"	"	"	"	"	"	
Gasoline Range Hydrocarbons	ND	0.50	"	"	"	"	"	"	

Date Sampled: **05/24/23 15:05**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 1,2-Dichloroethane-d4	0.0395	98.8 %	50-150		"	"	"	"	
Surrogate: Toluene-d8	0.0388	97.1 %	50-150		"	"	"	"	
Surrogate: 4-Bromofluorobenzene	0.0398	99.4 %	50-150		"	"	"	"	

**Extractable Petroleum Hydrocarbons by 8015**

Date Sampled: **05/24/23 15:05**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
C10-C28 (DRO)	ND	50	mg/kg	1	BGF0188	06/06/23	06/07/23	EPA 8015M	
C28-C36 (ORO)	ND	50	"	"	"	"	"	"	

Date Sampled: **05/24/23 15:05**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: o-Terphenyl	12.0	95.9 %	30-150		"	"	"	"	

**PAH by EPA Method 8270D SIM**

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Denver CO, 80202

Project: Badger Wash  
Project Number: 203723052  
Project Manager: Chris Roy

**Reported:**  
07/03/23 14:10

**SS22@1'**  
**2305620-52 (Soil)**

**Summit Scientific**

**PAH by EPA Method 8270D SIM**

Date Sampled: **05/24/23 15:05**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Acenaphthene	ND	0.00500	mg/kg	1	BGF0168	06/06/23	06/06/23	EPA 8270D SIM	
Anthracene	ND	0.00500	"	"	"	"	"	"	
Benzo (a) anthracene	ND	0.00500	"	"	"	"	"	"	
Benzo (a) pyrene	ND	0.00500	"	"	"	"	"	"	
Benzo (b) fluoranthene	ND	0.00500	"	"	"	"	"	"	
Benzo (k) fluoranthene	ND	0.00500	"	"	"	"	"	"	
Chrysene	ND	0.00500	"	"	"	"	"	"	
Dibenz (a,h) anthracene	ND	0.00500	"	"	"	"	"	"	
Fluoranthene	ND	0.00500	"	"	"	"	"	"	
Fluorene	ND	0.00500	"	"	"	"	"	"	
Indeno (1,2,3-cd) pyrene	ND	0.00500	"	"	"	"	"	"	
Pyrene	ND	0.00500	"	"	"	"	"	"	
1-Methylnaphthalene	ND	0.00500	"	"	"	"	"	"	
2-Methylnaphthalene	ND	0.00500	"	"	"	"	"	"	

Date Sampled: **05/24/23 15:05**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 2-Methylnaphthalene-d10	0.0147	44.2 %	40-150		"	"	"	"	
Surrogate: Fluoranthene-d10	0.0148	44.5 %	40-150		"	"	"	"	

**Total Metals by EPA 6020B**

Date Sampled: **05/24/23 15:05**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
<b>Selenium</b>	<b>0.262</b>	0.279	mg/kg dry	1	BGF0203	06/06/23	06/11/23	EPA 6020B	

**Physical Parameters by APHA/ASTM/EPA Methods**

Date Sampled: **05/24/23 15:05**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
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 Denver CO, 80202

Project: Badger Wash  
 Project Number: 203723052  
 Project Manager: Chris Roy

**Reported:**  
 07/03/23 14:10

**SS22@1'**  
**2305620-52 (Soil)**

**Summit Scientific**

**Physical Parameters by APHA/ASTM/EPA Methods**

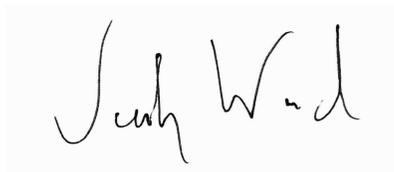
% Solids	93.2	%	1	BGF0235	06/07/23	06/07/23	Calculation
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**Specific Conductance by EPA Method 120.1, Saturated Paste Extraction**

Date Sampled: **05/24/23 15:05**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Specific Conductance (EC)	0.367	0.0100	mmhos/cm	1	BGF0377	06/09/23	06/09/23	EPA 120.1	

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Project: Badger Wash  
Project Number: 203723052  
Project Manager: Chris Roy

**Reported:**  
07/03/23 14:10

**SS22@2'**  
**2305620-53 (Soil)**

**Summit Scientific**

**Total Metals by EPA 6020B**

Date Sampled: **05/24/23 15:10**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
<b>Selenium</b>	<b>0.520</b>	0.285		mg/kg dry	1	BGF1045	06/29/23	07/01/23	EPA 6020B	

**Physical Parameters by APHA/ASTM/EPA Methods**

Date Sampled: **05/24/23 15:10**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
<b>% Solids</b>	<b>91.3</b>			%	1	BGF1127	06/30/23	06/30/23	Calculation	

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Project: Badger Wash  
Project Number: 203723052  
Project Manager: Chris Roy

**Reported:**  
07/03/23 14:10

**SS24**  
**2305620-57 (Soil)**

**Summit Scientific**

**Volatile Organic Compounds by EPA Method 8260B**

Date Sampled: **05/25/23 11:40**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Benzene	ND	0.0020	mg/kg	1	BGF0182	06/06/23	06/07/23	EPA 8260B	
Toluene	ND	0.0050	"	"	"	"	"	"	
Ethylbenzene	ND	0.0050	"	"	"	"	"	"	
Xylenes (total)	ND	0.010	"	"	"	"	"	"	
1,2,4-Trimethylbenzene	ND	0.0050	"	"	"	"	"	"	
1,3,5-Trimethylbenzene	ND	0.0050	"	"	"	"	"	"	
Naphthalene	ND	0.0038	"	"	"	"	"	"	
Gasoline Range Hydrocarbons	ND	0.50	"	"	"	"	"	"	

Date Sampled: **05/25/23 11:40**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 1,2-Dichloroethane-d4	0.0387	96.8 %	50-150		"	"	"	"	
Surrogate: Toluene-d8	0.0382	95.5 %	50-150		"	"	"	"	
Surrogate: 4-Bromofluorobenzene	0.0380	95.0 %	50-150		"	"	"	"	

**Extractable Petroleum Hydrocarbons by 8015**

Date Sampled: **05/25/23 11:40**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
C10-C28 (DRO)	ND	50	mg/kg	1	BGF0188	06/06/23	06/07/23	EPA 8015M	
C28-C36 (ORO)	ND	50	"	"	"	"	"	"	

Date Sampled: **05/25/23 11:40**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: o-Terphenyl	12.2	97.7 %	30-150		"	"	"	"	

**PAH by EPA Method 8270D SIM**

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Stantec  
410 17th St Suite 1400  
Denver CO, 80202

Project: Badger Wash  
Project Number: 203723052  
Project Manager: Chris Roy

**Reported:**  
07/03/23 14:10

**SS24**  
**2305620-57 (Soil)**

**Summit Scientific**

**PAH by EPA Method 8270D SIM**

Date Sampled: **05/25/23 11:40**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Acenaphthene	ND	0.00500	mg/kg	1	BGF0168	06/06/23	06/06/23	EPA 8270D SIM	
Anthracene	ND	0.00500	"	"	"	"	"	"	
Benzo (a) anthracene	ND	0.00500	"	"	"	"	"	"	
Benzo (a) pyrene	ND	0.00500	"	"	"	"	"	"	
Benzo (b) fluoranthene	ND	0.00500	"	"	"	"	"	"	
Benzo (k) fluoranthene	ND	0.00500	"	"	"	"	"	"	
Chrysene	ND	0.00500	"	"	"	"	"	"	
Dibenz (a,h) anthracene	ND	0.00500	"	"	"	"	"	"	
Fluoranthene	ND	0.00500	"	"	"	"	"	"	
Fluorene	ND	0.00500	"	"	"	"	"	"	
Indeno (1,2,3-cd) pyrene	ND	0.00500	"	"	"	"	"	"	
Pyrene	ND	0.00500	"	"	"	"	"	"	
1-Methylnaphthalene	ND	0.00500	"	"	"	"	"	"	
2-Methylnaphthalene	ND	0.00500	"	"	"	"	"	"	

Date Sampled: **05/25/23 11:40**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 2-Methylnaphthalene-d10	0.0189	56.6 %	40-150		"	"	"	"	
Surrogate: Fluoranthene-d10	0.0211	63.3 %	40-150		"	"	"	"	

**Total Metals by EPA 6020B Hot Water Soluble Extraction**

Date Sampled: **05/25/23 11:40**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
<b>Boron</b>	<b>0.263</b>	0.0100	mg/L	1	BGF0228	06/07/23	06/15/23	EPA 6020B	

**Total Metals by EPA 6020B**

Date Sampled: **05/25/23 11:40**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
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410 17th St Suite 1400  
Denver CO, 80202

Project: Badger Wash  
Project Number: 203723052  
Project Manager: Chris Roy

**Reported:**  
07/03/23 14:10

**SS24**  
**2305620-57 (Soil)**

**Summit Scientific**

**Total Metals by EPA 6020B**

Analyte	Result	Limit	Units	Dilution	Batch	Prepared	Analyzed	Method
Arsenic	1.47	0.217	mg/kg dry	1	BGF0203	06/06/23	06/11/23	EPA 6020B
Barium	155	0.433	"	"	"	"	"	"
Cadmium	0.279	0.217	"	"	"	"	"	"
Copper	2.31	0.433	"	"	"	"	"	"
Lead	9.91	0.217	"	"	"	"	"	"
Nickel	2.68	0.433	"	"	"	"	"	"
Selenium	0.193	0.281	"	"	"	"	"	"
Silver	0.0576	0.0217	"	"	"	"	"	"
Zinc	10.3	0.433	"	"	"	"	"	"
Selenium	ND	0.281	"	"	"	"	"	"

**Hexavalent Chromium by EPA Method 7196**

Date Sampled: **05/25/23 11:40**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Chromium, Hexavalent	ND	0.30	mg/kg dry	1	BGF0430	06/12/23	06/12/23	EPA 7196A	

**Soluble Nutrients by EPA 6020/USDA60 6(2) - Saturated Paste Extraction**

Date Sampled: **05/25/23 11:40**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Calcium	422	0.0541	mg/L dry	1	BGF0276	06/08/23	06/12/23	EPA 6020B	
Magnesium	93.3	0.0541	"	"	"	"	"	"	
Sodium	56.3	0.0541	"	"	"	"	"	"	

**Calculated Analysis**

Date Sampled: **05/25/23 11:40**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	0.646	0.00100	units	1	BGF0565	06/15/23	06/15/23	Calculation	

**Physical Parameters by APHA/ASTM/EPA Methods**

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410 17th St Suite 1400  
Denver CO, 80202

Project: Badger Wash  
Project Number: 203723052  
Project Manager: Chris Roy

**Reported:**  
07/03/23 14:10

**SS24**  
**2305620-57 (Soil)**

**Summit Scientific**

**Physical Parameters by APHA/ASTM/EPA Methods**

Date Sampled: **05/25/23 11:40**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
% Solids	92.4		%	1	BGF0235	06/07/23	06/07/23	Calculation	

**Specific Conductance by EPA Method 120.1, Saturated Paste Extraction**

Date Sampled: **05/25/23 11:40**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Specific Conductance (EC)	3.51	0.0100	mmhos/cm	1	BGF0377	06/09/23	06/09/23	EPA 120.1	

**Physical Parameters by APHA/ASTM/EPA Methods, Saturated Paste Extraction**

Date Sampled: **05/25/23 11:40**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
pH	7.81		pH Units	1	BGF0378	06/09/23	06/09/23	EPA 9045D	

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Denver CO, 80202

Project: Badger Wash  
Project Number: 203723052  
Project Manager: Chris Roy

**Reported:**  
07/03/23 14:10

**SS25**  
**2305620-58 (Soil)**

**Summit Scientific**

**Volatile Organic Compounds by EPA Method 8260B**

Date Sampled: **05/25/23 11:45**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Benzene	ND	0.0020		mg/kg	1	BGF0182	06/06/23	06/07/23	EPA 8260B	
Toluene	ND	0.0050		"	"	"	"	"	"	
Ethylbenzene	ND	0.0050		"	"	"	"	"	"	
Xylenes (total)	ND	0.010		"	"	"	"	"	"	
1,2,4-Trimethylbenzene	ND	0.0050		"	"	"	"	"	"	
1,3,5-Trimethylbenzene	ND	0.0050		"	"	"	"	"	"	
Naphthalene	ND	0.0038		"	"	"	"	"	"	
Gasoline Range Hydrocarbons	ND	0.50		"	"	"	"	"	"	

Date Sampled: **05/25/23 11:45**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Surrogate: 1,2-Dichloroethane-d4	0.0395	98.8 %		50-150		"	"	"	"	
Surrogate: Toluene-d8	0.0389	97.2 %		50-150		"	"	"	"	
Surrogate: 4-Bromofluorobenzene	0.0380	95.0 %		50-150		"	"	"	"	

**Extractable Petroleum Hydrocarbons by 8015**

Date Sampled: **05/25/23 11:45**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
C10-C28 (DRO)	ND	50		mg/kg	1	BGF0188	06/06/23	06/07/23	EPA 8015M	
C28-C36 (ORO)	ND	50		"	"	"	"	"	"	

Date Sampled: **05/25/23 11:45**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Surrogate: o-Terphenyl	12.1	96.4 %		30-150		"	"	"	"	

**PAH by EPA Method 8270D SIM**

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Denver CO, 80202

Project: Badger Wash  
Project Number: 203723052  
Project Manager: Chris Roy

**Reported:**  
07/03/23 14:10

**SS25**  
**2305620-58 (Soil)**

**Summit Scientific**

**PAH by EPA Method 8270D SIM**

Date Sampled: **05/25/23 11:45**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Acenaphthene	ND	0.00500	mg/kg	1	BGF0168	06/06/23	06/06/23	EPA 8270D SIM	
Anthracene	ND	0.00500	"	"	"	"	"	"	
Benzo (a) anthracene	ND	0.00500	"	"	"	"	"	"	
Benzo (a) pyrene	ND	0.00500	"	"	"	"	"	"	
Benzo (b) fluoranthene	ND	0.00500	"	"	"	"	"	"	
Benzo (k) fluoranthene	ND	0.00500	"	"	"	"	"	"	
Chrysene	ND	0.00500	"	"	"	"	"	"	
Dibenz (a,h) anthracene	ND	0.00500	"	"	"	"	"	"	
Fluoranthene	ND	0.00500	"	"	"	"	"	"	
Fluorene	ND	0.00500	"	"	"	"	"	"	
Indeno (1,2,3-cd) pyrene	ND	0.00500	"	"	"	"	"	"	
Pyrene	ND	0.00500	"	"	"	"	"	"	
1-Methylnaphthalene	ND	0.00500	"	"	"	"	"	"	
2-Methylnaphthalene	ND	0.00500	"	"	"	"	"	"	

Date Sampled: **05/25/23 11:45**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 2-Methylnaphthalene-d10	0.0145	43.4 %	40-150		"	"	"	"	
Surrogate: Fluoranthene-d10	0.0134	40.3 %	40-150		"	"	"	"	

**Total Metals by EPA 6020B Hot Water Soluble Extraction**

Date Sampled: **05/25/23 11:45**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
<b>Boron</b>	<b>0.363</b>	0.0100	mg/L	1	BGF0228	06/07/23	06/15/23	EPA 6020B	

**Total Metals by EPA 6020B**

Date Sampled: **05/25/23 11:45**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
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410 17th St Suite 1400  
Denver CO, 80202

Project: Badger Wash  
Project Number: 203723052  
Project Manager: Chris Roy

**Reported:**  
07/03/23 14:10

**SS25**  
**2305620-58 (Soil)**

**Summit Scientific**

**Total Metals by EPA 6020B**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Arsenic	1.53	0.222	mg/kg dry	1	BGF0203	06/06/23	06/11/23	EPA 6020B	
Barium	210	0.444	"	"	"	"	"	"	
Cadmium	ND	0.222	"	"	"	"	"	"	
Copper	1.97	0.444	"	"	"	"	"	"	
Lead	7.79	0.222	"	"	"	"	"	"	
Nickel	2.65	0.444	"	"	"	"	"	"	
Selenium	0.224	0.288	"	"	"	"	"	"	
Silver	0.0417	0.0222	"	"	"	"	"	"	
Zinc	9.56	0.444	"	"	"	"	"	"	
Selenium	ND	0.288	"	"	"	"	"	"	

**Hexavalent Chromium by EPA Method 7196**

Date Sampled: **05/25/23 11:45**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Chromium, Hexavalent	ND	0.30	mg/kg dry	1	BGF0430	06/12/23	06/12/23	EPA 7196A	

**Soluble Nutrients by EPA 6020/USDA60 6(2) - Saturated Paste Extraction**

Date Sampled: **05/25/23 11:45**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Calcium	423	0.0555	mg/L dry	1	BGF0276	06/08/23	06/12/23	EPA 6020B	
Magnesium	86.8	0.0555	"	"	"	"	"	"	
Sodium	152	0.0555	"	"	"	"	"	"	

**Calculated Analysis**

Date Sampled: **05/25/23 11:45**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	1.76	0.00100	units	1	BGF0565	06/15/23	06/15/23	Calculation	

**Physical Parameters by APHA/ASTM/EPA Methods**

Summit Scientific

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Denver CO, 80202

Project: Badger Wash  
Project Number: 203723052  
Project Manager: Chris Roy

**Reported:**  
07/03/23 14:10

**SS25**  
**2305620-58 (Soil)**

**Summit Scientific**

**Physical Parameters by APHA/ASTM/EPA Methods**

Date Sampled: **05/25/23 11:45**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
% Solids	90.2		%	1	BGF0235	06/07/23	06/07/23	Calculation	

**Specific Conductance by EPA Method 120.1, Saturated Paste Extraction**

Date Sampled: **05/25/23 11:45**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Specific Conductance (EC)	4.43	0.0100	mmhos/cm	1	BGF0377	06/09/23	06/09/23	EPA 120.1	

**Physical Parameters by APHA/ASTM/EPA Methods, Saturated Paste Extraction**

Date Sampled: **05/25/23 11:45**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
pH	7.78		pH Units	1	BGF0378	06/09/23	06/09/23	EPA 9045D	

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Denver CO, 80202

Project: Badger Wash  
Project Number: 203723052  
Project Manager: Chris Roy

**Reported:**  
07/03/23 14:10

**SS26**  
**2305620-59 (Soil)**

**Summit Scientific**

**Volatile Organic Compounds by EPA Method 8260B**

Date Sampled: **05/25/23 12:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Benzene	ND	0.0020	mg/kg	1	BGF0182	06/06/23	06/07/23	EPA 8260B	
Toluene	ND	0.0050	"	"	"	"	"	"	
Ethylbenzene	ND	0.0050	"	"	"	"	"	"	
Xylenes (total)	ND	0.010	"	"	"	"	"	"	
1,2,4-Trimethylbenzene	ND	0.0050	"	"	"	"	"	"	
1,3,5-Trimethylbenzene	ND	0.0050	"	"	"	"	"	"	
Naphthalene	ND	0.0038	"	"	"	"	"	"	
Gasoline Range Hydrocarbons	ND	0.50	"	"	"	"	"	"	

Date Sampled: **05/25/23 12:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 1,2-Dichloroethane-d4	0.0385	96.2 %	50-150		"	"	"	"	
Surrogate: Toluene-d8	0.0385	96.2 %	50-150		"	"	"	"	
Surrogate: 4-Bromofluorobenzene	0.0382	95.6 %	50-150		"	"	"	"	

**Extractable Petroleum Hydrocarbons by 8015**

Date Sampled: **05/25/23 12:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
C10-C28 (DRO)	ND	50	mg/kg	1	BGF0188	06/06/23	06/07/23	EPA 8015M	
C28-C36 (ORO)	ND	50	"	"	"	"	"	"	

Date Sampled: **05/25/23 12:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: o-Terphenyl	11.7	93.3 %	30-150		"	"	"	"	

**PAH by EPA Method 8270D SIM**

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Project: Badger Wash  
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Project Manager: Chris Roy

**Reported:**  
07/03/23 14:10

**SS26**  
**2305620-59 (Soil)**

**Summit Scientific**

**PAH by EPA Method 8270D SIM**

Date Sampled: **05/25/23 12:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Acenaphthene	ND	0.00500	mg/kg	1	BGF0168	06/06/23	06/06/23	EPA 8270D SIM	
Anthracene	ND	0.00500	"	"	"	"	"	"	
Benzo (a) anthracene	ND	0.00500	"	"	"	"	"	"	
Benzo (a) pyrene	ND	0.00500	"	"	"	"	"	"	
Benzo (b) fluoranthene	ND	0.00500	"	"	"	"	"	"	
Benzo (k) fluoranthene	ND	0.00500	"	"	"	"	"	"	
Chrysene	ND	0.00500	"	"	"	"	"	"	
Dibenz (a,h) anthracene	ND	0.00500	"	"	"	"	"	"	
Fluoranthene	ND	0.00500	"	"	"	"	"	"	
Fluorene	ND	0.00500	"	"	"	"	"	"	
Indeno (1,2,3-cd) pyrene	ND	0.00500	"	"	"	"	"	"	
Pyrene	ND	0.00500	"	"	"	"	"	"	
1-Methylnaphthalene	ND	0.00500	"	"	"	"	"	"	
2-Methylnaphthalene	ND	0.00500	"	"	"	"	"	"	

Date Sampled: **05/25/23 12:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 2-Methylnaphthalene-d10	0.0181	54.4 %	40-150		"	"	"	"	
Surrogate: Fluoranthene-d10	0.0200	60.1 %	40-150		"	"	"	"	

**Total Metals by EPA 6020B Hot Water Soluble Extraction**

Date Sampled: **05/25/23 12:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
<b>Boron</b>	<b>0.243</b>	0.0100	mg/L	1	BGF0228	06/07/23	06/15/23	EPA 6020B	

**Total Metals by EPA 6020B**

Date Sampled: **05/25/23 12:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
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Project: Badger Wash  
Project Number: 203723052  
Project Manager: Chris Roy

**Reported:**  
07/03/23 14:10

**SS26**  
**2305620-59 (Soil)**

**Summit Scientific**

**Total Metals by EPA 6020B**

Analyte	Result	Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Arsenic	1.51	0.227	mg/kg dry	1	BGF0203	06/06/23	06/11/23	EPA 6020B	
Barium	119	0.454	"	"	"	"	"	"	
Cadmium	0.230	0.227	"	"	"	"	"	"	
Copper	2.25	0.454	"	"	"	"	"	"	
Lead	9.90	0.227	"	"	"	"	"	"	
Nickel	2.84	0.454	"	"	"	"	"	"	
Selenium	0.319	0.295	"	"	"	"	"	"	
Silver	0.0495	0.0227	"	"	"	"	"	"	
Zinc	10.7	0.454	"	"	"	"	"	"	
Selenium	0.319	0.295	"	"	"	"	"	"	

**Hexavalent Chromium by EPA Method 7196**

Date Sampled: **05/25/23 12:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Chromium, Hexavalent	ND	0.30	mg/kg dry	1	BGF0430	06/12/23	06/12/23	EPA 7196A	

**Soluble Nutrients by EPA 6020/USDA60 6(2) - Saturated Paste Extraction**

Date Sampled: **05/25/23 12:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Calcium	437	0.0567	mg/L dry	1	BGF0276	06/08/23	06/12/23	EPA 6020B	
Magnesium	130	0.0567	"	"	"	"	"	"	
Sodium	116	0.0567	"	"	"	"	"	"	

**Calculated Analysis**

Date Sampled: **05/25/23 12:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	1.25	0.00100	units	1	BGF0565	06/15/23	06/15/23	Calculation	

**Physical Parameters by APHA/ASTM/EPA Methods**

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Project Manager: Chris Roy

**Reported:**  
07/03/23 14:10

**SS26**  
**2305620-59 (Soil)**

**Summit Scientific**

**Physical Parameters by APHA/ASTM/EPA Methods**

Date Sampled: **05/25/23 12:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
% Solids	<b>88.2</b>		%	1	BGF0235	06/07/23	06/07/23	Calculation	

**Specific Conductance by EPA Method 120.1, Saturated Paste Extraction**

Date Sampled: **05/25/23 12:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Specific Conductance (EC)	<b>3.95</b>	0.0100	mmhos/cm	1	BGF0377	06/09/23	06/09/23	EPA 120.1	

**Physical Parameters by APHA/ASTM/EPA Methods, Saturated Paste Extraction**

Date Sampled: **05/25/23 12:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
pH	<b>7.84</b>		pH Units	1	BGF0378	06/09/23	06/09/23	EPA 9045D	

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Project: Badger Wash  
Project Number: 203723052  
Project Manager: Chris Roy

**Reported:**  
07/03/23 14:10

**SS27**  
**2305620-60 (Soil)**

**Summit Scientific**

**Volatile Organic Compounds by EPA Method 8260B**

Date Sampled: **05/25/23 12:10**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Benzene	ND	0.0020	mg/kg	1	BGF0182	06/06/23	06/07/23	EPA 8260B	
Toluene	ND	0.0050	"	"	"	"	"	"	
Ethylbenzene	ND	0.0050	"	"	"	"	"	"	
Xylenes (total)	ND	0.010	"	"	"	"	"	"	
1,2,4-Trimethylbenzene	ND	0.0050	"	"	"	"	"	"	
1,3,5-Trimethylbenzene	ND	0.0050	"	"	"	"	"	"	
Naphthalene	ND	0.0038	"	"	"	"	"	"	
Gasoline Range Hydrocarbons	ND	0.50	"	"	"	"	"	"	

Date Sampled: **05/25/23 12:10**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 1,2-Dichloroethane-d4	0.0401	100 %	50-150		"	"	"	"	
Surrogate: Toluene-d8	0.0399	99.7 %	50-150		"	"	"	"	
Surrogate: 4-Bromofluorobenzene	0.0382	95.6 %	50-150		"	"	"	"	

**Extractable Petroleum Hydrocarbons by 8015**

Date Sampled: **05/25/23 12:10**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
C10-C28 (DRO)	ND	50	mg/kg	1	BGF0188	06/06/23	06/07/23	EPA 8015M	
C28-C36 (ORO)	ND	50	"	"	"	"	"	"	

Date Sampled: **05/25/23 12:10**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: o-Terphenyl	11.6	93.0 %	30-150		"	"	"	"	

**PAH by EPA Method 8270D SIM**

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**SS27**  
**2305620-60 (Soil)**

**Summit Scientific**

**PAH by EPA Method 8270D SIM**

Date Sampled: **05/25/23 12:10**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Acenaphthene	ND	0.00500	mg/kg	1	BGF0168	06/06/23	06/07/23	EPA 8270D SIM	
Anthracene	ND	0.00500	"	"	"	"	"	"	
Benzo (a) anthracene	ND	0.00500	"	"	"	"	"	"	
<b>Benzo (a) pyrene</b>	<b>0.0251</b>	0.00500	"	"	"	"	"	"	
Benzo (b) fluoranthene	ND	0.00500	"	"	"	"	"	"	
Benzo (k) fluoranthene	ND	0.00500	"	"	"	"	"	"	
Chrysene	ND	0.00500	"	"	"	"	"	"	
Dibenz (a,h) anthracene	ND	0.00500	"	"	"	"	"	"	
Fluoranthene	ND	0.00500	"	"	"	"	"	"	
Fluorene	ND	0.00500	"	"	"	"	"	"	
<b>Indeno (1,2,3-cd) pyrene</b>	<b>0.0186</b>	0.00500	"	"	"	"	"	"	
Pyrene	ND	0.00500	"	"	"	"	"	"	
1-Methylnaphthalene	ND	0.00500	"	"	"	"	"	"	
2-Methylnaphthalene	ND	0.00500	"	"	"	"	"	"	

Date Sampled: **05/25/23 12:10**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 2-Methylnaphthalene-d10	0.0371	111 %	40-150		"	"	"	"	
Surrogate: Fluoranthene-d10	0.0171	51.3 %	40-150		"	"	"	"	

**Total Metals by EPA 6020B Hot Water Soluble Extraction**

Date Sampled: **05/25/23 12:10**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
<b>Boron</b>	<b>0.204</b>	0.0100	mg/L	1	BGF0228	06/07/23	06/15/23	EPA 6020B	

**Total Metals by EPA 6020B**

Date Sampled: **05/25/23 12:10**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
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Project: Badger Wash  
Project Number: 203723052  
Project Manager: Chris Roy

**Reported:**  
07/03/23 14:10

**SS27**  
**2305620-60 (Soil)**

**Summit Scientific**

**Total Metals by EPA 6020B**

Analyte	Result	Limit	Units	Dilution	Batch	Prepared	Analyzed	Method
Arsenic	1.39	0.225	mg/kg dry	1	BGF0203	06/06/23	06/11/23	EPA 6020B
Barium	190	0.450	"	"	"	"	"	"
Cadmium	0.230	0.225	"	"	"	"	"	"
Copper	1.92	0.450	"	"	"	"	"	"
Lead	8.27	0.225	"	"	"	"	"	"
Nickel	2.74	0.450	"	"	"	"	"	"
Selenium	0.217	0.293	"	"	"	"	"	"
Silver	0.0419	0.0225	"	"	"	"	"	"
Zinc	9.44	0.450	"	"	"	"	"	"
Selenium	ND	0.293	"	"	"	"	"	"

**Hexavalent Chromium by EPA Method 7196**

Date Sampled: **05/25/23 12:10**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Chromium, Hexavalent	ND	0.30	mg/kg dry	1	BGF0430	06/12/23	06/12/23	EPA 7196A	

**Soluble Nutrients by EPA 6020/USDA60 6(2) - Saturated Paste Extraction**

Date Sampled: **05/25/23 12:10**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Calcium	497	0.0563	mg/L dry	1	BGF0276	06/08/23	06/12/23	EPA 6020B	
Magnesium	102	0.0563	"	"	"	"	"	"	
Sodium	70.4	0.0563	"	"	"	"	"	"	

**Calculated Analysis**

Date Sampled: **05/25/23 12:10**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	0.752	0.00100	units	1	BGF0565	06/15/23	06/15/23	Calculation	

**Physical Parameters by APHA/ASTM/EPA Methods**

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**SS27**  
**2305620-60 (Soil)**

**Summit Scientific**

**Physical Parameters by APHA/ASTM/EPA Methods**

Date Sampled: **05/25/23 12:10**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
% Solids	88.8		%	1	BGF0235	06/07/23	06/07/23	Calculation	

**Specific Conductance by EPA Method 120.1, Saturated Paste Extraction**

Date Sampled: **05/25/23 12:10**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Specific Conductance (EC)	3.41	0.0100	mmhos/cm	1	BGF0377	06/09/23	06/09/23	EPA 120.1	

**Physical Parameters by APHA/ASTM/EPA Methods, Saturated Paste Extraction**

Date Sampled: **05/25/23 12:10**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
pH	7.80		pH Units	1	BGF0378	06/09/23	06/09/23	EPA 9045D	

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Project: Badger Wash  
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Project Manager: Chris Roy

**Reported:**  
07/03/23 14:10

**SS28**  
**2305620-61 (Soil)**

**Summit Scientific**

**Volatile Organic Compounds by EPA Method 8260B**

Date Sampled: **05/25/23 12:20**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Benzene	ND	0.0020	mg/kg	1	BGF0182	06/06/23	06/07/23	EPA 8260B	
Toluene	ND	0.0050	"	"	"	"	"	"	
Ethylbenzene	ND	0.0050	"	"	"	"	"	"	
Xylenes (total)	ND	0.010	"	"	"	"	"	"	
1,2,4-Trimethylbenzene	ND	0.0050	"	"	"	"	"	"	
1,3,5-Trimethylbenzene	ND	0.0050	"	"	"	"	"	"	
Naphthalene	ND	0.0038	"	"	"	"	"	"	
Gasoline Range Hydrocarbons	ND	0.50	"	"	"	"	"	"	

Date Sampled: **05/25/23 12:20**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 1,2-Dichloroethane-d4	0.0373	93.2 %	50-150		"	"	"	"	
Surrogate: Toluene-d8	0.0388	96.9 %	50-150		"	"	"	"	
Surrogate: 4-Bromofluorobenzene	0.0379	94.8 %	50-150		"	"	"	"	

**Extractable Petroleum Hydrocarbons by 8015**

Date Sampled: **05/25/23 12:20**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
C10-C28 (DRO)	ND	50	mg/kg	1	BGF0188	06/06/23	06/07/23	EPA 8015M	
C28-C36 (ORO)	ND	50	"	"	"	"	"	"	

Date Sampled: **05/25/23 12:20**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: o-Terphenyl	11.9	95.1 %	30-150		"	"	"	"	

**PAH by EPA Method 8270D SIM**

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Project Manager: Chris Roy

**Reported:**  
07/03/23 14:10

**SS28**  
**2305620-61 (Soil)**

**Summit Scientific**

**PAH by EPA Method 8270D SIM**

Date Sampled: **05/25/23 12:20**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Acenaphthene	ND	0.00500	mg/kg	1	BGF0168	06/06/23	06/07/23	EPA 8270D SIM	
Anthracene	ND	0.00500	"	"	"	"	"	"	
Benzo (a) anthracene	ND	0.00500	"	"	"	"	"	"	
Benzo (a) pyrene	ND	0.00500	"	"	"	"	"	"	
Benzo (b) fluoranthene	ND	0.00500	"	"	"	"	"	"	
Benzo (k) fluoranthene	ND	0.00500	"	"	"	"	"	"	
Chrysene	ND	0.00500	"	"	"	"	"	"	
Dibenz (a,h) anthracene	ND	0.00500	"	"	"	"	"	"	
Fluoranthene	ND	0.00500	"	"	"	"	"	"	
Fluorene	ND	0.00500	"	"	"	"	"	"	
Indeno (1,2,3-cd) pyrene	ND	0.00500	"	"	"	"	"	"	
Pyrene	ND	0.00500	"	"	"	"	"	"	
1-Methylnaphthalene	ND	0.00500	"	"	"	"	"	"	
2-Methylnaphthalene	ND	0.00500	"	"	"	"	"	"	

Date Sampled: **05/25/23 12:20**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 2-Methylnaphthalene-d10	0.0227	68.2 %	40-150		"	"	"	"	
Surrogate: Fluoranthene-d10	0.0240	72.0 %	40-150		"	"	"	"	

**Total Metals by EPA 6020B Hot Water Soluble Extraction**

Date Sampled: **05/25/23 12:20**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
<b>Boron</b>	<b>0.243</b>	0.0100	mg/L	1	BGF0228	06/07/23	06/15/23	EPA 6020B	

**Total Metals by EPA 6020B**

Date Sampled: **05/25/23 12:20**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
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410 17th St Suite 1400  
Denver CO, 80202

Project: Badger Wash  
Project Number: 203723052  
Project Manager: Chris Roy

**Reported:**  
07/03/23 14:10

**SS28**  
**2305620-61 (Soil)**

**Summit Scientific**

**Total Metals by EPA 6020B**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Arsenic	1.46	0.227	mg/kg dry	1	BGF0203	06/06/23	06/11/23	EPA 6020B	
Barium	196	0.453	"	"	"	"	"	"	
Cadmium	0.244	0.227	"	"	"	"	"	"	
Copper	2.10	0.453	"	"	"	"	"	"	
Lead	9.24	0.227	"	"	"	"	"	"	
Nickel	2.86	0.453	"	"	"	"	"	"	
Selenium	0.272	0.295	"	"	"	"	"	"	
Silver	0.0426	0.0227	"	"	"	"	"	"	
Zinc	10.1	0.453	"	"	"	"	"	"	
Selenium	ND	0.295	"	"	"	"	"	"	

**Hexavalent Chromium by EPA Method 7196**

Date Sampled: **05/25/23 12:20**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Chromium, Hexavalent	ND	0.30	mg/kg dry	1	BGF0430	06/12/23	06/12/23	EPA 7196A	

**Soluble Nutrients by EPA 6020/USDA60 6(2) - Saturated Paste Extraction**

Date Sampled: **05/25/23 12:20**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Calcium	2630	0.0567	mg/L dry	1	BGF0276	06/08/23	06/12/23	EPA 6020B	
Magnesium	126	0.0567	"	"	"	"	"	"	
Sodium	66.6	0.0567	"	"	"	"	"	"	

**Calculated Analysis**

Date Sampled: **05/25/23 12:20**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	0.344	0.00100	units	1	BGF0565	06/15/23	06/15/23	Calculation	

**Physical Parameters by APHA/ASTM/EPA Methods**

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Project: Badger Wash  
Project Number: 203723052  
Project Manager: Chris Roy

**Reported:**  
07/03/23 14:10

**SS28**  
**2305620-61 (Soil)**

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**Physical Parameters by APHA/ASTM/EPA Methods**

Date Sampled: **05/25/23 12:20**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
% Solids	<b>88.2</b>		%	1	BGF0235	06/07/23	06/07/23	Calculation	

**Specific Conductance by EPA Method 120.1, Saturated Paste Extraction**

Date Sampled: **05/25/23 12:20**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Specific Conductance (EC)	<b>0.411</b>	0.0100	mmhos/cm	1	BGF0377	06/09/23	06/09/23	EPA 120.1	

**Physical Parameters by APHA/ASTM/EPA Methods, Saturated Paste Extraction**

Date Sampled: **05/25/23 12:20**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
pH	<b>8.83</b>		pH Units	1	BGF0378	06/09/23	06/09/23	EPA 9045D	

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Project: Badger Wash  
Project Number: 203723052  
Project Manager: Chris Roy

**Reported:**  
07/03/23 14:10

**SS29**  
**2305620-62 (Soil)**

**Summit Scientific**

**Volatile Organic Compounds by EPA Method 8260B**

Date Sampled: **05/25/23 12:25**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Benzene	ND	0.0020	mg/kg	1	BGF0182	06/06/23	06/07/23	EPA 8260B	
Toluene	ND	0.0050	"	"	"	"	"	"	
Ethylbenzene	ND	0.0050	"	"	"	"	"	"	
Xylenes (total)	ND	0.010	"	"	"	"	"	"	
1,2,4-Trimethylbenzene	ND	0.0050	"	"	"	"	"	"	
1,3,5-Trimethylbenzene	ND	0.0050	"	"	"	"	"	"	
Naphthalene	ND	0.0038	"	"	"	"	"	"	
Gasoline Range Hydrocarbons	ND	0.50	"	"	"	"	"	"	

Date Sampled: **05/25/23 12:25**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 1,2-Dichloroethane-d4	0.0356	89.0 %	50-150		"	"	"	"	
Surrogate: Toluene-d8	0.0398	99.4 %	50-150		"	"	"	"	
Surrogate: 4-Bromofluorobenzene	0.0375	93.7 %	50-150		"	"	"	"	

**Extractable Petroleum Hydrocarbons by 8015**

Date Sampled: **05/25/23 12:25**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
C10-C28 (DRO)	ND	50	mg/kg	1	BGF0188	06/06/23	06/07/23	EPA 8015M	
C28-C36 (ORO)	ND	50	"	"	"	"	"	"	

Date Sampled: **05/25/23 12:25**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: o-Terphenyl	12.0	95.9 %	30-150		"	"	"	"	

**PAH by EPA Method 8270D SIM**

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Project Manager: Chris Roy

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**SS29**  
**2305620-62 (Soil)**

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**PAH by EPA Method 8270D SIM**

Date Sampled: **05/25/23 12:25**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Acenaphthene	ND	0.00500	mg/kg	1	BGF0168	06/06/23	06/07/23	EPA 8270D SIM	
Anthracene	ND	0.00500	"	"	"	"	"	"	
Benzo (a) anthracene	ND	0.00500	"	"	"	"	"	"	
Benzo (a) pyrene	ND	0.00500	"	"	"	"	"	"	
Benzo (b) fluoranthene	ND	0.00500	"	"	"	"	"	"	
Benzo (k) fluoranthene	ND	0.00500	"	"	"	"	"	"	
Chrysene	ND	0.00500	"	"	"	"	"	"	
Dibenz (a,h) anthracene	ND	0.00500	"	"	"	"	"	"	
Fluoranthene	ND	0.00500	"	"	"	"	"	"	
Fluorene	ND	0.00500	"	"	"	"	"	"	
Indeno (1,2,3-cd) pyrene	ND	0.00500	"	"	"	"	"	"	
Pyrene	ND	0.00500	"	"	"	"	"	"	
1-Methylnaphthalene	ND	0.00500	"	"	"	"	"	"	
2-Methylnaphthalene	ND	0.00500	"	"	"	"	"	"	

Date Sampled: **05/25/23 12:25**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 2-Methylnaphthalene-d10	0.0195	58.4 %	40-150		"	"	"	"	
Surrogate: Fluoranthene-d10	0.0188	56.5 %	40-150		"	"	"	"	

**Total Metals by EPA 6020B Hot Water Soluble Extraction**

Date Sampled: **05/25/23 12:25**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
<b>Boron</b>	<b>0.211</b>	0.0100	mg/L	1	BGF0228	06/07/23	06/15/23	EPA 6020B	

**Total Metals by EPA 6020B**

Date Sampled: **05/25/23 12:25**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
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Project: Badger Wash  
Project Number: 203723052  
Project Manager: Chris Roy

**Reported:**  
07/03/23 14:10

**SS29**  
**2305620-62 (Soil)**

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**Total Metals by EPA 6020B**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Arsenic	1.65	0.227	mg/kg dry	1	BGF0203	06/06/23	06/11/23	EPA 6020B	
Barium	198	0.454	"	"	"	"	"	"	
Cadmium	0.247	0.227	"	"	"	"	"	"	
Copper	2.24	0.454	"	"	"	"	"	"	
Lead	8.90	0.227	"	"	"	"	"	"	
Nickel	2.86	0.454	"	"	"	"	"	"	
Selenium	ND	0.295	"	"	"	"	"	"	
Silver	0.0522	0.0227	"	"	"	"	"	"	
Zinc	9.64	0.454	"	"	"	"	"	"	
Selenium	ND	0.295	"	"	"	"	"	"	

**Hexavalent Chromium by EPA Method 7196**

Date Sampled: **05/25/23 12:25**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Chromium, Hexavalent	ND	0.30	mg/kg dry	1	BGF0430	06/12/23	06/12/23	EPA 7196A	

**Soluble Nutrients by EPA 6020/USDA60 6(2) - Saturated Paste Extraction**

Date Sampled: **05/25/23 12:25**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Calcium	167	0.0567	mg/L dry	1	BGF0276	06/08/23	06/12/23	EPA 6020B	
Magnesium	13.6	0.0567	"	"	"	"	"	"	
Sodium	41.8	0.0567	"	"	"	"	"	"	

**Calculated Analysis**

Date Sampled: **05/25/23 12:25**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	0.836	0.00100	units	1	BGF0565	06/15/23	06/15/23	Calculation	

**Physical Parameters by APHA/ASTM/EPA Methods**

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Project Number: 203723052  
Project Manager: Chris Roy

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**SS29**  
**2305620-62 (Soil)**

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**Physical Parameters by APHA/ASTM/EPA Methods**

Date Sampled: **05/25/23 12:25**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
% Solids	<b>88.2</b>		%	1	BGF0235	06/07/23	06/07/23	Calculation	

**Specific Conductance by EPA Method 120.1, Saturated Paste Extraction**

Date Sampled: **05/25/23 12:25**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Specific Conductance (EC)	<b>0.371</b>	0.0100	mmhos/cm	1	BGF0377	06/09/23	06/09/23	EPA 120.1	

**Physical Parameters by APHA/ASTM/EPA Methods, Saturated Paste Extraction**

Date Sampled: **05/25/23 12:25**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
pH	<b>8.35</b>		pH Units	1	BGF0378	06/09/23	06/09/23	EPA 9045D	

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Project: Badger Wash  
Project Number: 203723052  
Project Manager: Chris Roy

**Reported:**  
07/03/23 14:10

**SS30**  
**2305620-63 (Soil)**

**Summit Scientific**

**Volatile Organic Compounds by EPA Method 8260B**

Date Sampled: **05/25/23 12:30**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Benzene	ND	0.0020	mg/kg	1	BGF0182	06/06/23	06/07/23	EPA 8260B	
Toluene	ND	0.0050	"	"	"	"	"	"	
Ethylbenzene	ND	0.0050	"	"	"	"	"	"	
Xylenes (total)	ND	0.010	"	"	"	"	"	"	
1,2,4-Trimethylbenzene	ND	0.0050	"	"	"	"	"	"	
1,3,5-Trimethylbenzene	ND	0.0050	"	"	"	"	"	"	
Naphthalene	ND	0.0038	"	"	"	"	"	"	
Gasoline Range Hydrocarbons	ND	0.50	"	"	"	"	"	"	

Date Sampled: **05/25/23 12:30**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 1,2-Dichloroethane-d4	0.0383	95.7 %	50-150		"	"	"	"	
Surrogate: Toluene-d8	0.0390	97.4 %	50-150		"	"	"	"	
Surrogate: 4-Bromofluorobenzene	0.0374	93.6 %	50-150		"	"	"	"	

**Extractable Petroleum Hydrocarbons by 8015**

Date Sampled: **05/25/23 12:30**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
C10-C28 (DRO)	ND	50	mg/kg	1	BGF0188	06/06/23	06/07/23	EPA 8015M	
C28-C36 (ORO)	ND	50	"	"	"	"	"	"	

Date Sampled: **05/25/23 12:30**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: o-Terphenyl	11.9	95.2 %	30-150		"	"	"	"	

**PAH by EPA Method 8270D SIM**

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Project: Badger Wash  
Project Number: 203723052  
Project Manager: Chris Roy

**Reported:**  
07/03/23 14:10

**SS30**  
**2305620-63 (Soil)**

**Summit Scientific**

**PAH by EPA Method 8270D SIM**

Date Sampled: **05/25/23 12:30**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Acenaphthene	ND	0.00500	mg/kg	1	BGF0168	06/06/23	06/07/23	EPA 8270D SIM	
Anthracene	ND	0.00500	"	"	"	"	"	"	
Benzo (a) anthracene	ND	0.00500	"	"	"	"	"	"	
Benzo (a) pyrene	ND	0.00500	"	"	"	"	"	"	
Benzo (b) fluoranthene	ND	0.00500	"	"	"	"	"	"	
Benzo (k) fluoranthene	ND	0.00500	"	"	"	"	"	"	
Chrysene	ND	0.00500	"	"	"	"	"	"	
Dibenz (a,h) anthracene	ND	0.00500	"	"	"	"	"	"	
Fluoranthene	ND	0.00500	"	"	"	"	"	"	
Fluorene	ND	0.00500	"	"	"	"	"	"	
Indeno (1,2,3-cd) pyrene	ND	0.00500	"	"	"	"	"	"	
Pyrene	ND	0.00500	"	"	"	"	"	"	
1-Methylnaphthalene	ND	0.00500	"	"	"	"	"	"	
2-Methylnaphthalene	ND	0.00500	"	"	"	"	"	"	

Date Sampled: **05/25/23 12:30**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 2-Methylnaphthalene-d10	0.0182	54.7 %	40-150		"	"	"	"	
Surrogate: Fluoranthene-d10	0.0209	62.6 %	40-150		"	"	"	"	

**Total Metals by EPA 6020B Hot Water Soluble Extraction**

Date Sampled: **05/25/23 12:30**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
<b>Boron</b>	<b>0.191</b>	0.0100	mg/L	1	BGF0228	06/07/23	06/15/23	EPA 6020B	

**Total Metals by EPA 6020B**

Date Sampled: **05/25/23 12:30**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
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Project: Badger Wash  
Project Number: 203723052  
Project Manager: Chris Roy

**Reported:**  
07/03/23 14:10

**SS30**  
**2305620-63 (Soil)**

**Summit Scientific**

**Total Metals by EPA 6020B**

Analyte	Result	Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Arsenic	1.48	0.242	mg/kg dry	1	BGF0203	06/06/23	06/11/23	EPA 6020B	
Barium	202	0.484	"	"	"	"	"	"	
Cadmium	0.255	0.242	"	"	"	"	"	"	
Copper	2.25	0.484	"	"	"	"	"	"	
Lead	10.2	0.242	"	"	"	"	"	"	
Nickel	2.80	0.484	"	"	"	"	"	"	
Selenium	ND	0.314	"	"	"	"	"	"	
Silver	0.0513	0.0242	"	"	"	"	"	"	
Zinc	9.94	0.484	"	"	"	"	"	"	
Selenium	ND	0.314	"	"	"	"	"	"	

**Hexavalent Chromium by EPA Method 7196**

Date Sampled: **05/25/23 12:30**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Chromium, Hexavalent	ND	0.30	mg/kg dry	1	BGF0430	06/12/23	06/12/23	EPA 7196A	

**Soluble Nutrients by EPA 6020/USDA60 6(2) - Saturated Paste Extraction**

Date Sampled: **05/25/23 12:30**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Calcium	122	0.0605	mg/L dry	1	BGF0276	06/08/23	06/12/23	EPA 6020B	
Magnesium	19.1	0.0605	"	"	"	"	"	"	
Sodium	22.1	0.0605	"	"	"	"	"	"	

**Calculated Analysis**

Date Sampled: **05/25/23 12:30**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	0.491	0.00100	units	1	BGF0565	06/15/23	06/15/23	Calculation	

**Physical Parameters by APHA/ASTM/EPA Methods**

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Project Number: 203723052  
Project Manager: Chris Roy

**Reported:**  
07/03/23 14:10

**SS30**  
**2305620-63 (Soil)**

**Summit Scientific**

**Physical Parameters by APHA/ASTM/EPA Methods**

Date Sampled: **05/25/23 12:30**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
% Solids	82.7		%	1	BGF0235	06/07/23	06/07/23	Calculation	

**Specific Conductance by EPA Method 120.1, Saturated Paste Extraction**

Date Sampled: **05/25/23 12:30**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Specific Conductance (EC)	0.931	0.0100	mmhos/cm	1	BGF0377	06/09/23	06/09/23	EPA 120.1	

**Physical Parameters by APHA/ASTM/EPA Methods, Saturated Paste Extraction**

Date Sampled: **05/25/23 12:30**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
pH	7.97		pH Units	1	BGF0378	06/09/23	06/09/23	EPA 9045D	

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Project: Badger Wash  
Project Number: 203723052  
Project Manager: Chris Roy

**Reported:**  
07/03/23 14:10

**SS31**  
**2305620-64 (Soil)**

**Summit Scientific**

**Volatile Organic Compounds by EPA Method 8260B**

Date Sampled: **05/25/23 12:35**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Benzene	ND	0.0020	mg/kg	1	BGF0182	06/06/23	06/07/23	EPA 8260B	
Toluene	ND	0.0050	"	"	"	"	"	"	
Ethylbenzene	ND	0.0050	"	"	"	"	"	"	
Xylenes (total)	ND	0.010	"	"	"	"	"	"	
1,2,4-Trimethylbenzene	ND	0.0050	"	"	"	"	"	"	
1,3,5-Trimethylbenzene	ND	0.0050	"	"	"	"	"	"	
Naphthalene	ND	0.0038	"	"	"	"	"	"	
Gasoline Range Hydrocarbons	ND	0.50	"	"	"	"	"	"	

Date Sampled: **05/25/23 12:35**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 1,2-Dichloroethane-d4	0.0393	98.3 %	50-150		"	"	"	"	
Surrogate: Toluene-d8	0.0398	99.4 %	50-150		"	"	"	"	
Surrogate: 4-Bromofluorobenzene	0.0386	96.5 %	50-150		"	"	"	"	

**Extractable Petroleum Hydrocarbons by 8015**

Date Sampled: **05/25/23 12:35**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
C10-C28 (DRO)	ND	50	mg/kg	1	BGF0188	06/06/23	06/07/23	EPA 8015M	
C28-C36 (ORO)	ND	50	"	"	"	"	"	"	

Date Sampled: **05/25/23 12:35**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: o-Terphenyl	12.6	101 %	30-150		"	"	"	"	

**PAH by EPA Method 8270D SIM**

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Stantec  
410 17th St Suite 1400  
Denver CO, 80202

Project: Badger Wash  
Project Number: 203723052  
Project Manager: Chris Roy

**Reported:**  
07/03/23 14:10

**SS31**  
**2305620-64 (Soil)**

**Summit Scientific**

**PAH by EPA Method 8270D SIM**

Date Sampled: **05/25/23 12:35**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Acenaphthene	ND	0.00500	mg/kg	1	BGF0168	06/06/23	06/07/23	EPA 8270D SIM	
Anthracene	ND	0.00500	"	"	"	"	"	"	
Benzo (a) anthracene	ND	0.00500	"	"	"	"	"	"	
Benzo (a) pyrene	ND	0.00500	"	"	"	"	"	"	
Benzo (b) fluoranthene	ND	0.00500	"	"	"	"	"	"	
Benzo (k) fluoranthene	ND	0.00500	"	"	"	"	"	"	
Chrysene	ND	0.00500	"	"	"	"	"	"	
Dibenz (a,h) anthracene	ND	0.00500	"	"	"	"	"	"	
Fluoranthene	ND	0.00500	"	"	"	"	"	"	
Fluorene	ND	0.00500	"	"	"	"	"	"	
Indeno (1,2,3-cd) pyrene	ND	0.00500	"	"	"	"	"	"	
Pyrene	ND	0.00500	"	"	"	"	"	"	
1-Methylnaphthalene	ND	0.00500	"	"	"	"	"	"	
2-Methylnaphthalene	ND	0.00500	"	"	"	"	"	"	

Date Sampled: **05/25/23 12:35**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 2-Methylnaphthalene-d10	0.0175	52.5 %	40-150		"	"	"	"	
Surrogate: Fluoranthene-d10	0.0184	55.3 %	40-150		"	"	"	"	

**Total Metals by EPA 6020B Hot Water Soluble Extraction**

Date Sampled: **05/25/23 12:35**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
<b>Boron</b>	<b>0.406</b>	0.0100	mg/L	1	BGF0228	06/07/23	06/15/23	EPA 6020B	

**Total Metals by EPA 6020B**

Date Sampled: **05/25/23 12:35**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
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Denver CO, 80202

Project: Badger Wash  
Project Number: 203723052  
Project Manager: Chris Roy

**Reported:**  
07/03/23 14:10

**SS31**  
**2305620-64 (Soil)**

**Summit Scientific**

**Total Metals by EPA 6020B**

Analyte	Result	Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Arsenic	1.52	0.226	mg/kg dry	1	BGF0203	06/06/23	06/11/23	EPA 6020B	
Barium	175	0.453	"	"	"	"	"	"	
Cadmium	ND	0.226	"	"	"	"	"	"	
Copper	2.03	0.453	"	"	"	"	"	"	
Lead	7.30	0.226	"	"	"	"	"	"	
Nickel	2.84	0.453	"	"	"	"	"	"	
Selenium	ND	0.294	"	"	"	"	"	"	
Silver	0.0426	0.0226	"	"	"	"	"	"	
Zinc	9.52	0.453	"	"	"	"	"	"	
Selenium	ND	0.294	"	"	"	"	"	"	

**Hexavalent Chromium by EPA Method 7196**

Date Sampled: 05/25/23 12:35

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Chromium, Hexavalent	ND	0.30	mg/kg dry	1	BGF0430	06/12/23	06/12/23	EPA 7196A	

**Soluble Nutrients by EPA 6020/USDA60 6(2) - Saturated Paste Extraction**

Date Sampled: 05/25/23 12:35

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Calcium	311	0.0566	mg/L dry	1	BGF0276	06/08/23	06/12/23	EPA 6020B	
Magnesium	90.4	0.0566	"	"	"	"	"	"	
Sodium	16.6	0.0566	"	"	"	"	"	"	

**Calculated Analysis**

Date Sampled: 05/25/23 12:35

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	0.213	0.00100	units	1	BGF0565	06/15/23	06/15/23	Calculation	

**Physical Parameters by APHA/ASTM/EPA Methods**

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Project Number: 203723052  
Project Manager: Chris Roy

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07/03/23 14:10

**SS31**  
**2305620-64 (Soil)**

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**Physical Parameters by APHA/ASTM/EPA Methods**

Date Sampled: **05/25/23 12:35**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
% Solids	88.4		%	1	BGF0235	06/07/23	06/07/23	Calculation	

**Specific Conductance by EPA Method 120.1, Saturated Paste Extraction**

Date Sampled: **05/25/23 12:35**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Specific Conductance (EC)	2.79	0.0100	mmhos/cm	1	BGF0377	06/09/23	06/09/23	EPA 120.1	

**Physical Parameters by APHA/ASTM/EPA Methods, Saturated Paste Extraction**

Date Sampled: **05/25/23 12:35**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
pH	7.84		pH Units	1	BGF0378	06/09/23	06/09/23	EPA 9045D	

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Project: Badger Wash  
Project Number: 203723052  
Project Manager: Chris Roy

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**SS32**  
**2305620-65 (Soil)**

**Summit Scientific**

**Volatile Organic Compounds by EPA Method 8260B**

Date Sampled: **05/25/23 12:45**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Benzene	ND	0.0020	mg/kg	1	BGF0182	06/06/23	06/07/23	EPA 8260B	
Toluene	ND	0.0050	"	"	"	"	"	"	
Ethylbenzene	ND	0.0050	"	"	"	"	"	"	
Xylenes (total)	ND	0.010	"	"	"	"	"	"	
1,2,4-Trimethylbenzene	ND	0.0050	"	"	"	"	"	"	
1,3,5-Trimethylbenzene	ND	0.0050	"	"	"	"	"	"	
Naphthalene	ND	0.0038	"	"	"	"	"	"	
Gasoline Range Hydrocarbons	ND	0.50	"	"	"	"	"	"	

Date Sampled: **05/25/23 12:45**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 1,2-Dichloroethane-d4	0.0398	99.4 %	50-150		"	"	"	"	
Surrogate: Toluene-d8	0.0393	98.3 %	50-150		"	"	"	"	
Surrogate: 4-Bromofluorobenzene	0.0388	97.1 %	50-150		"	"	"	"	

**Extractable Petroleum Hydrocarbons by 8015**

Date Sampled: **05/25/23 12:45**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
C10-C28 (DRO)	ND	50	mg/kg	1	BGF0188	06/06/23	06/07/23	EPA 8015M	
C28-C36 (ORO)	ND	50	"	"	"	"	"	"	

Date Sampled: **05/25/23 12:45**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: o-Terphenyl	11.9	95.1 %	30-150		"	"	"	"	

**PAH by EPA Method 8270D SIM**

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Project: Badger Wash  
Project Number: 203723052  
Project Manager: Chris Roy

**Reported:**  
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**SS32**  
**2305620-65 (Soil)**

**Summit Scientific**

**PAH by EPA Method 8270D SIM**

Date Sampled: **05/25/23 12:45**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Acenaphthene	ND	0.00500	mg/kg	1	BGF0168	06/06/23	06/07/23	EPA 8270D SIM	
Anthracene	ND	0.00500	"	"	"	"	"	"	
Benzo (a) anthracene	ND	0.00500	"	"	"	"	"	"	
Benzo (a) pyrene	ND	0.00500	"	"	"	"	"	"	
Benzo (b) fluoranthene	ND	0.00500	"	"	"	"	"	"	
Benzo (k) fluoranthene	ND	0.00500	"	"	"	"	"	"	
Chrysene	ND	0.00500	"	"	"	"	"	"	
Dibenz (a,h) anthracene	ND	0.00500	"	"	"	"	"	"	
Fluoranthene	ND	0.00500	"	"	"	"	"	"	
Fluorene	ND	0.00500	"	"	"	"	"	"	
Indeno (1,2,3-cd) pyrene	ND	0.00500	"	"	"	"	"	"	
Pyrene	ND	0.00500	"	"	"	"	"	"	
1-Methylnaphthalene	ND	0.00500	"	"	"	"	"	"	
2-Methylnaphthalene	ND	0.00500	"	"	"	"	"	"	

Date Sampled: **05/25/23 12:45**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 2-Methylnaphthalene-d10	0.0147	44.0 %	40-150		"	"	"	"	
Surrogate: Fluoranthene-d10	0.0154	46.2 %	40-150		"	"	"	"	

**Total Metals by EPA 6020B Hot Water Soluble Extraction**

Date Sampled: **05/25/23 12:45**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
<b>Boron</b>	<b>0.318</b>	0.0100	mg/L	1	BGF0228	06/07/23	06/15/23	EPA 6020B	

**Total Metals by EPA 6020B**

Date Sampled: **05/25/23 12:45**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
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Denver CO, 80202

Project: Badger Wash  
Project Number: 203723052  
Project Manager: Chris Roy

**Reported:**  
07/03/23 14:10

**SS32**  
**2305620-65 (Soil)**

**Summit Scientific**

**Total Metals by EPA 6020B**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Arsenic	1.74	0.224	mg/kg dry	1	BGF0203	06/06/23	06/11/23	EPA 6020B	
Barium	198	0.448	"	"	"	"	"	"	
Cadmium	ND	0.224	"	"	"	"	"	"	
Copper	2.13	0.448	"	"	"	"	"	"	
Lead	7.59	0.224	"	"	"	"	"	"	
Nickel	2.80	0.448	"	"	"	"	"	"	
Selenium	ND	0.291	"	"	"	"	"	"	
Silver	0.0448	0.0224	"	"	"	"	"	"	
Zinc	9.32	0.448	"	"	"	"	"	"	
Selenium	ND	0.291	"	"	"	"	"	"	

**Hexavalent Chromium by EPA Method 7196**

Date Sampled: 05/25/23 12:45

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Chromium, Hexavalent	ND	0.30	mg/kg dry	1	BGF0430	06/12/23	06/12/23	EPA 7196A	

**Soluble Nutrients by EPA 6020/USDA60 6(2) - Saturated Paste Extraction**

Date Sampled: 05/25/23 12:45

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Calcium	292	0.0560	mg/L dry	1	BGF0276	06/08/23	06/12/23	EPA 6020B	
Magnesium	83.4	0.0560	"	"	"	"	"	"	
Sodium	13.9	0.0560	"	"	"	"	"	"	

**Calculated Analysis**

Date Sampled: 05/25/23 12:45

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	0.185	0.00100	units	1	BGF0565	06/15/23	06/15/23	Calculation	

**Physical Parameters by APHA/ASTM/EPA Methods**

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Denver CO, 80202

Project: Badger Wash  
Project Number: 203723052  
Project Manager: Chris Roy

**Reported:**  
07/03/23 14:10

**SS32**  
**2305620-65 (Soil)**

**Summit Scientific**

**Physical Parameters by APHA/ASTM/EPA Methods**

Date Sampled: **05/25/23 12:45**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
% Solids	89.3		%	1	BGF0235	06/07/23	06/07/23	Calculation	

**Specific Conductance by EPA Method 120.1, Saturated Paste Extraction**

Date Sampled: **05/25/23 12:45**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Specific Conductance (EC)	2.59	0.0100	mmhos/cm	1	BGF0377	06/09/23	06/09/23	EPA 120.1	

**Physical Parameters by APHA/ASTM/EPA Methods, Saturated Paste Extraction**

Date Sampled: **05/25/23 12:45**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
pH	7.87		pH Units	1	BGF0378	06/09/23	06/09/23	EPA 9045D	

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Denver CO, 80202

Project: Badger Wash  
Project Number: 203723052  
Project Manager: Chris Roy

**Reported:**  
07/03/23 14:10

**SS33**  
**2305620-66 (Soil)**

**Summit Scientific**

**Volatile Organic Compounds by EPA Method 8260B**

Date Sampled: **05/25/23 12:55**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Benzene	ND	0.0020	mg/kg	1	BGF0182	06/06/23	06/07/23	EPA 8260B	
Toluene	ND	0.0050	"	"	"	"	"	"	
Ethylbenzene	ND	0.0050	"	"	"	"	"	"	
Xylenes (total)	ND	0.010	"	"	"	"	"	"	
1,2,4-Trimethylbenzene	ND	0.0050	"	"	"	"	"	"	
1,3,5-Trimethylbenzene	ND	0.0050	"	"	"	"	"	"	
Naphthalene	ND	0.0038	"	"	"	"	"	"	
Gasoline Range Hydrocarbons	ND	0.50	"	"	"	"	"	"	

Date Sampled: **05/25/23 12:55**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 1,2-Dichloroethane-d4	0.0382	95.5 %	50-150		"	"	"	"	
Surrogate: Toluene-d8	0.0384	96.1 %	50-150		"	"	"	"	
Surrogate: 4-Bromofluorobenzene	0.0384	95.9 %	50-150		"	"	"	"	

**Extractable Petroleum Hydrocarbons by 8015**

Date Sampled: **05/25/23 12:55**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
C10-C28 (DRO)	ND	50	mg/kg	1	BGF0188	06/06/23	06/07/23	EPA 8015M	
C28-C36 (ORO)	ND	50	"	"	"	"	"	"	

Date Sampled: **05/25/23 12:55**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: o-Terphenyl	11.8	94.3 %	30-150		"	"	"	"	

**PAH by EPA Method 8270D SIM**

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Project: Badger Wash  
Project Number: 203723052  
Project Manager: Chris Roy

**Reported:**  
07/03/23 14:10

**SS33**  
**2305620-66 (Soil)**

**Summit Scientific**

**PAH by EPA Method 8270D SIM**

Date Sampled: **05/25/23 12:55**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Acenaphthene	ND	0.00500	mg/kg	1	BGF0168	06/06/23	06/07/23	EPA 8270D SIM	
Anthracene	ND	0.00500	"	"	"	"	"	"	
Benzo (a) anthracene	ND	0.00500	"	"	"	"	"	"	
Benzo (a) pyrene	ND	0.00500	"	"	"	"	"	"	
Benzo (b) fluoranthene	ND	0.00500	"	"	"	"	"	"	
Benzo (k) fluoranthene	ND	0.00500	"	"	"	"	"	"	
<b>Chrysene</b>	<b>0.00555</b>	0.00500	"	"	"	"	"	"	
Dibenz (a,h) anthracene	ND	0.00500	"	"	"	"	"	"	
Fluoranthene	ND	0.00500	"	"	"	"	"	"	
Fluorene	ND	0.00500	"	"	"	"	"	"	
Indeno (1,2,3-cd) pyrene	ND	0.00500	"	"	"	"	"	"	
Pyrene	ND	0.00500	"	"	"	"	"	"	
1-Methylnaphthalene	ND	0.00500	"	"	"	"	"	"	
2-Methylnaphthalene	ND	0.00500	"	"	"	"	"	"	

Date Sampled: **05/25/23 12:55**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 2-Methylnaphthalene-d10	0.0182	54.7 %	40-150		"	"	"	"	
Surrogate: Fluoranthene-d10	0.0161	48.4 %	40-150		"	"	"	"	

**Total Metals by EPA 6020B Hot Water Soluble Extraction**

Date Sampled: **05/25/23 12:55**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
<b>Boron</b>	<b>0.237</b>	0.0100	mg/L	1	BGF0228	06/07/23	06/15/23	EPA 6020B	

**Total Metals by EPA 6020B**

Date Sampled: **05/25/23 12:55**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
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Denver CO, 80202

Project: Badger Wash  
Project Number: 203723052  
Project Manager: Chris Roy

**Reported:**  
07/03/23 14:10

**SS33**  
**2305620-66 (Soil)**

**Summit Scientific**

**Total Metals by EPA 6020B**

Analyte	Result	Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Arsenic	1.84	0.230	mg/kg dry	1	BGF0203	06/06/23	06/11/23	EPA 6020B	
Barium	186	0.460	"	"	"	"	"	"	
Cadmium	ND	0.230	"	"	"	"	"	"	
Copper	2.05	0.460	"	"	"	"	"	"	
Lead	7.67	0.230	"	"	"	"	"	"	
Nickel	2.85	0.460	"	"	"	"	"	"	
Selenium	ND	0.299	"	"	"	"	"	"	
Silver	0.0478	0.0230	"	"	"	"	"	"	
Zinc	9.65	0.460	"	"	"	"	"	"	
Selenium	ND	0.299	"	"	"	"	"	"	

**Hexavalent Chromium by EPA Method 7196**

Date Sampled: 05/25/23 12:55

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Chromium, Hexavalent	ND	0.30	mg/kg dry	1	BGF0430	06/12/23	06/12/23	EPA 7196A	

**Soluble Nutrients by EPA 6020/USDA60 6(2) - Saturated Paste Extraction**

Date Sampled: 05/25/23 12:55

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Calcium	547	0.0574	mg/L dry	1	BGF0276	06/08/23	06/12/23	EPA 6020B	
Magnesium	82.5	0.0574	"	"	"	"	"	"	
Sodium	148	0.0574	"	"	"	"	"	"	

**Calculated Analysis**

Date Sampled: 05/25/23 12:55

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	1.56	0.00100	units	1	BGF0565	06/15/23	06/15/23	Calculation	

**Physical Parameters by APHA/ASTM/EPA Methods**

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Stantec  
410 17th St Suite 1400  
Denver CO, 80202

Project: Badger Wash  
Project Number: 203723052  
Project Manager: Chris Roy

**Reported:**  
07/03/23 14:10

**SS33**  
**2305620-66 (Soil)**

**Summit Scientific**

**Physical Parameters by APHA/ASTM/EPA Methods**

Date Sampled: **05/25/23 12:55**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
% Solids	87.0		%	1	BGF0235	06/07/23	06/07/23	Calculation	

**Specific Conductance by EPA Method 120.1, Saturated Paste Extraction**

Date Sampled: **05/25/23 12:55**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Specific Conductance (EC)	4.02	0.0100	mmhos/cm	1	BGF0377	06/09/23	06/09/23	EPA 120.1	

**Physical Parameters by APHA/ASTM/EPA Methods, Saturated Paste Extraction**

Date Sampled: **05/25/23 12:55**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
pH	7.75		pH Units	1	BGF0378	06/09/23	06/09/23	EPA 9045D	

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410 17th St Suite 1400  
Denver CO, 80202

Project: Badger Wash  
Project Number: 203723052  
Project Manager: Chris Roy

**Reported:**  
07/03/23 14:10

### Volatile Organic Compounds by EPA Method 8260B - Quality Control

#### Summit Scientific

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

#### Batch BGF0182 - EPA 5030 Soil MS

##### Blank (BGF0182-BLK1)

Prepared & Analyzed: 06/06/23

Benzene	ND	0.0020	mg/kg							
Toluene	ND	0.0050	"							
Ethylbenzene	ND	0.0050	"							
m,p-Xylene	ND	0.010	"							
o-Xylene	ND	0.0050	"							
Xylenes (total)	ND	0.010	"							
1,2,4-Trimethylbenzene	ND	0.0050	"							
1,3,5-Trimethylbenzene	ND	0.0050	"							
Naphthalene	ND	0.0038	"							
Gasoline Range Hydrocarbons	ND	0.50	"							
Surrogate: 1,2-Dichloroethane-d4	0.0366		"	0.0400		91.4	50-150			
Surrogate: Toluene-d8	0.0379		"	0.0400		94.7	50-150			
Surrogate: 4-Bromofluorobenzene	0.0376		"	0.0400		93.9	50-150			

##### LCS (BGF0182-BS1)

Prepared & Analyzed: 06/06/23

Benzene	0.113	0.0020	mg/kg	0.125		90.5	70-130			
Toluene	0.114	0.0050	"	0.125		91.5	70-130			
Ethylbenzene	0.141	0.0050	"	0.125		113	70-130			
m,p-Xylene	0.286	0.010	"	0.250		114	70-130			
o-Xylene	0.133	0.0050	"	0.125		107	70-130			
1,2,4-Trimethylbenzene	0.151	0.0050	"	0.125		121	70-130			
1,3,5-Trimethylbenzene	0.156	0.0050	"	0.125		125	70-130			
Naphthalene	0.163	0.0038	"	0.125		130	70-130			
Surrogate: 1,2-Dichloroethane-d4	0.0353		"	0.0400		88.4	50-150			
Surrogate: Toluene-d8	0.0374		"	0.0400		93.4	50-150			
Surrogate: 4-Bromofluorobenzene	0.0377		"	0.0400		94.2	50-150			

##### Matrix Spike (BGF0182-MS1)

Source: 2305620-01

Prepared & Analyzed: 06/06/23

Benzene	0.117	0.0020	mg/kg	0.125	ND	93.8	70-130			
Toluene	0.118	0.0050	"	0.125	ND	94.4	70-130			
Ethylbenzene	0.141	0.0050	"	0.125	ND	113	70-130			
m,p-Xylene	0.287	0.010	"	0.250	ND	115	70-130			
o-Xylene	0.135	0.0050	"	0.125	ND	108	70-130			
1,2,4-Trimethylbenzene	0.155	0.0050	"	0.125	ND	124	70-130			
1,3,5-Trimethylbenzene	0.159	0.0050	"	0.125	ND	127	70-130			
Naphthalene	0.181	0.0038	"	0.125	ND	145	70-130			QM-07
Surrogate: 1,2-Dichloroethane-d4	0.0388		"	0.0400		96.9	50-150			
Surrogate: Toluene-d8	0.0387		"	0.0400		96.7	50-150			

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410 17th St Suite 1400  
Denver CO, 80202

Project: Badger Wash  
Project Number: 203723052  
Project Manager: Chris Roy

**Reported:**  
07/03/23 14:10

**Volatile Organic Compounds by EPA Method 8260B - Quality Control**  
**Summit Scientific**

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

**Batch BGF0182 - EPA 5030 Soil MS**

**Matrix Spike (BGF0182-MS1)**

Source: 2305620-01

Prepared & Analyzed: 06/06/23

Surrogate: 4-Bromofluorobenzene      0.0379      mg/kg      0.0400      94.7      50-150

**Matrix Spike Dup (BGF0182-MSD1)**

Source: 2305620-01

Prepared & Analyzed: 06/06/23

Benzene	0.114	0.0020	mg/kg	0.125	ND	91.5	70-130	2.44	30	
Toluene	0.118	0.0050	"	0.125	ND	94.2	70-130	0.178	30	
Ethylbenzene	0.141	0.0050	"	0.125	ND	113	70-130	0.106	30	
m,p-Xylene	0.287	0.010	"	0.250	ND	115	70-130	0.136	30	
o-Xylene	0.135	0.0050	"	0.125	ND	108	70-130	0.534	30	
1,2,4-Trimethylbenzene	0.158	0.0050	"	0.125	ND	127	70-130	1.95	30	
1,3,5-Trimethylbenzene	0.162	0.0050	"	0.125	ND	130	70-130	2.17	30	
Naphthalene	0.190	0.0038	"	0.125	ND	152	70-130	4.66	30	QM-07
Surrogate: 1,2-Dichloroethane-d4	0.0382		"	0.0400		95.5	50-150			
Surrogate: Toluene-d8	0.0386		"	0.0400		96.4	50-150			
Surrogate: 4-Bromofluorobenzene	0.0391		"	0.0400		97.6	50-150			

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Denver CO, 80202

Project: Badger Wash  
Project Number: 203723052  
Project Manager: Chris Roy

**Reported:**  
07/03/23 14:10

**Extractable Petroleum Hydrocarbons by 8015 - Quality Control**  
**Summit Scientific**

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

**Batch BGF0188 - EPA 3550A**

**Blank (BGF0188-BLK1)**

Prepared & Analyzed: 06/06/23

C10-C28 (DRO)	ND	50	mg/kg								
C28-C36 (ORO)	ND	50	"								
Surrogate: <i>o</i> -Terphenyl	12.0		"	12.5		95.8		30-150			

**LCS (BGF0188-BS1)**

Prepared & Analyzed: 06/06/23

C10-C28 (DRO)	441	50	mg/kg	500		88.2		70-130			
Surrogate: <i>o</i> -Terphenyl	12.1		"	12.5		97.1		30-150			

**Matrix Spike (BGF0188-MS1)**

Source: 2305620-01

Prepared & Analyzed: 06/06/23

C10-C28 (DRO)	550	50	mg/kg	500	59.9	98.1		70-130			
Surrogate: <i>o</i> -Terphenyl	11.9		"	12.5		95.0		30-150			

**Matrix Spike Dup (BGF0188-MSD1)**

Source: 2305620-01

Prepared & Analyzed: 06/06/23

C10-C28 (DRO)	587	50	mg/kg	500	59.9	105		70-130	6.44	20	
Surrogate: <i>o</i> -Terphenyl	12.0		"	12.5		96.1		30-150			

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Project: Badger Wash  
Project Number: 203723052  
Project Manager: Chris Roy

**Reported:**  
07/03/23 14:10

**PAH by EPA Method 8270D SIM - Quality Control**

**Summit Scientific**

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

**Batch BGF0168 - EPA 5030 Soil MS**

**Blank (BGF0168-BLK1)**

Prepared & Analyzed: 06/06/23

Acenaphthene	ND	0.00500	mg/kg							
Anthracene	ND	0.00500	"							
Benzo (a) anthracene	ND	0.00500	"							
Benzo (a) pyrene	ND	0.00500	"							
Benzo (b) fluoranthene	ND	0.00500	"							
Benzo (k) fluoranthene	ND	0.00500	"							
Chrysene	ND	0.00500	"							
Dibenz (a,h) anthracene	ND	0.00500	"							
Fluoranthene	ND	0.00500	"							
Fluorene	ND	0.00500	"							
Indeno (1,2,3-cd) pyrene	ND	0.00500	"							
Pyrene	ND	0.00500	"							
1-Methylnaphthalene	ND	0.00500	"							
2-Methylnaphthalene	ND	0.00500	"							
<i>Surrogate: 2-Methylnaphthalene-d10</i>	<i>0.0142</i>		"	<i>0.0333</i>		<i>42.7</i>	<i>40-150</i>			
<i>Surrogate: Fluoranthene-d10</i>	<i>0.0192</i>		"	<i>0.0333</i>		<i>57.7</i>	<i>40-150</i>			

**LCS (BGF0168-BS1)**

Prepared & Analyzed: 06/06/23

Acenaphthene	0.0164	0.00500	mg/kg	0.0333		49.1	31-137			
Anthracene	0.0144	0.00500	"	0.0333		43.3	30-120			
Benzo (a) anthracene	0.0150	0.00500	"	0.0333		45.0	30-120			
Benzo (a) pyrene	0.0167	0.00500	"	0.0333		50.2	30-120			
Benzo (b) fluoranthene	0.0203	0.00500	"	0.0333		60.9	30-120			
Benzo (k) fluoranthene	0.0205	0.00500	"	0.0333		61.4	30-120			
Chrysene	0.0167	0.00500	"	0.0333		50.0	30-120			
Dibenz (a,h) anthracene	0.0144	0.00500	"	0.0333		43.2	30-120			
Fluoranthene	0.0158	0.00500	"	0.0333		47.3	30-120			
Fluorene	0.0170	0.00500	"	0.0333		50.9	30-120			
Indeno (1,2,3-cd) pyrene	0.0117	0.00500	"	0.0333		35.0	30-120			
Pyrene	0.0187	0.00500	"	0.0333		56.2	35-142			
1-Methylnaphthalene	0.0147	0.00500	"	0.0333		44.1	35-142			
2-Methylnaphthalene	0.0228	0.00500	"	0.0333		68.3	35-142			
<i>Surrogate: 2-Methylnaphthalene-d10</i>	<i>0.0222</i>		"	<i>0.0333</i>		<i>66.7</i>	<i>40-150</i>			
<i>Surrogate: Fluoranthene-d10</i>	<i>0.0161</i>		"	<i>0.0333</i>		<i>48.3</i>	<i>40-150</i>			

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Denver CO, 80202

Project: Badger Wash  
Project Number: 203723052  
Project Manager: Chris Roy

**Reported:**  
07/03/23 14:10

**PAH by EPA Method 8270D SIM - Quality Control**

**Summit Scientific**

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

**Batch BGF0168 - EPA 5030 Soil MS**

<b>Matrix Spike (BGF0168-MS1)</b>	<b>Source: 2305620-01</b>			<b>Prepared &amp; Analyzed: 06/06/23</b>						
Acenaphthene	0.0166	0.00500	mg/kg	0.0333	ND	49.9	31-137			
Anthracene	0.0164	0.00500	"	0.0333	ND	49.1	30-120			
Benzo (a) anthracene	0.0144	0.00500	"	0.0333	ND	43.3	30-120			
Benzo (a) pyrene	0.0196	0.00500	"	0.0333	ND	58.7	30-120			
Benzo (b) fluoranthene	0.0118	0.00500	"	0.0333	ND	35.4	30-120			
Benzo (k) fluoranthene	0.0146	0.00500	"	0.0333	ND	43.7	30-120			
Chrysene	0.0149	0.00500	"	0.0333	0.00209	38.3	30-120			
Dibenz (a,h) anthracene	0.0190	0.00500	"	0.0333	ND	56.9	30-120			
Fluoranthene	0.0157	0.00500	"	0.0333	ND	47.2	30-120			
Fluorene	0.0108	0.00500	"	0.0333	ND	32.5	30-120			
Indeno (1,2,3-cd) pyrene	0.0141	0.00500	"	0.0333	ND	42.4	30-120			
Pyrene	0.0128	0.00500	"	0.0333	ND	38.5	35-142			
1-Methylnaphthalene	0.00960	0.00500	"	0.0333	ND	28.8	15-130			
2-Methylnaphthalene	0.0147	0.00500	"	0.0333	ND	44.2	15-130			
<i>Surrogate: 2-Methylnaphthalene-d10</i>	<i>0.0151</i>		<i>"</i>	<i>0.0333</i>		<i>45.3</i>	<i>40-150</i>			
<i>Surrogate: Fluoranthene-d10</i>	<i>0.0173</i>		<i>"</i>	<i>0.0333</i>		<i>52.0</i>	<i>40-150</i>			

<b>Matrix Spike Dup (BGF0168-MSD1)</b>	<b>Source: 2305620-01</b>			<b>Prepared &amp; Analyzed: 06/06/23</b>						
Acenaphthene	0.0164	0.00500	mg/kg	0.0333	ND	49.1	31-137	1.59	30	
Anthracene	0.0155	0.00500	"	0.0333	ND	46.6	30-120	5.15	30	
Benzo (a) anthracene	0.0162	0.00500	"	0.0333	ND	48.5	30-120	11.4	30	
Benzo (a) pyrene	0.0180	0.00500	"	0.0333	ND	54.1	30-120	8.10	30	
Benzo (b) fluoranthene	0.0140	0.00500	"	0.0333	ND	42.0	30-120	17.0	30	
Benzo (k) fluoranthene	0.0196	0.00500	"	0.0333	ND	58.7	30-120	29.2	30	
Chrysene	0.0163	0.00500	"	0.0333	0.00209	42.8	30-120	9.53	30	
Dibenz (a,h) anthracene	0.0148	0.00500	"	0.0333	ND	44.3	30-120	25.0	30	
Fluoranthene	0.0156	0.00500	"	0.0333	ND	46.9	30-120	0.729	30	
Fluorene	0.0145	0.00500	"	0.0333	ND	43.6	30-120	29.0	30	
Indeno (1,2,3-cd) pyrene	0.0114	0.00500	"	0.0333	ND	34.1	30-120	21.8	30	
Pyrene	0.0163	0.00500	"	0.0333	ND	48.9	35-142	23.8	30	
1-Methylnaphthalene	0.0136	0.00500	"	0.0333	ND	40.8	15-130	34.5	50	
2-Methylnaphthalene	0.0214	0.00500	"	0.0333	ND	64.3	15-130	37.1	50	
<i>Surrogate: 2-Methylnaphthalene-d10</i>	<i>0.0185</i>		<i>"</i>	<i>0.0333</i>		<i>55.4</i>	<i>40-150</i>			
<i>Surrogate: Fluoranthene-d10</i>	<i>0.0181</i>		<i>"</i>	<i>0.0333</i>		<i>54.3</i>	<i>40-150</i>			

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Stantec  
410 17th St Suite 1400  
Denver CO, 80202

Project: Badger Wash  
Project Number: 203723052  
Project Manager: Chris Roy

**Reported:**  
07/03/23 14:10

**Total Metals by EPA 6020B Hot Water Soluble Extraction - Quality Control**  
**Summit Scientific**

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

**Batch BGF0228 - EPA 3050B**

**Blank (BGF0228-BLK1)**

Prepared: 06/07/23 Analyzed: 06/15/23

Boron ND 0.0100 mg/L

**LCS (BGF0228-BS1)**

Prepared: 06/07/23 Analyzed: 06/15/23

Boron 5.39 0.0100 mg/L 5.00 108 80-120

**Duplicate (BGF0228-DUP1)**

**Source: 2305620-01**

Prepared: 06/07/23 Analyzed: 06/15/23

Boron 1.19 0.0100 mg/L 1.16 2.81 20

**Matrix Spike (BGF0228-MS1)**

**Source: 2305620-01**

Prepared: 06/07/23 Analyzed: 06/15/23

Boron 5.81 0.0100 mg/L 5.00 1.16 92.9 75-125

**Matrix Spike Dup (BGF0228-MSD1)**

**Source: 2305620-01**

Prepared: 06/07/23 Analyzed: 06/15/23

Boron 5.83 0.0100 mg/L 5.00 1.16 93.3 75-125 0.345 25

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410 17th St Suite 1400  
Denver CO, 80202

Project: Badger Wash  
Project Number: 203723052  
Project Manager: Chris Roy

**Reported:**  
07/03/23 14:10

**Total Metals by EPA 6020B - Quality Control**  
**Summit Scientific**

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

**Batch BGF0203 - EPA 3050B**

**Blank (BGF0203-BLK1)**

Prepared: 06/06/23 Analyzed: 06/11/23

Arsenic	ND	0.200	mg/kg wet							
Barium	ND	0.400	"							
Cadmium	ND	0.200	"							
Copper	ND	0.400	"							
Lead	ND	0.200	"							
Nickel	ND	0.400	"							
Selenium	ND	0.260	"							
Silver	ND	0.0200	"							
Zinc	ND	0.400	"							
Selenium	ND	0.260	"							

**LCS (BGF0203-BS1)**

Prepared: 06/06/23 Analyzed: 06/11/23

Arsenic	32.0	0.200	mg/kg wet	40.0	80.0	80-120				
Barium	32.4	0.400	"	40.0	81.0	80-120				
Cadmium	1.99	0.200	"	2.00	99.5	80-120				
Copper	32.0	0.400	"	40.0	80.0	80-120				
Lead	18.9	0.200	"	20.0	94.5	80-120				
Nickel	42.3	0.400	"	40.0	106	80-120				
Selenium	4.22	0.260	"	4.00	105	80-120				
Silver	1.64	0.0200	"	2.00	81.8	80-120				
Zinc	32.7	0.400	"	40.0	81.7	80-120				

**Duplicate (BGF0203-DUP1)**

Source: 2305620-01

Prepared: 06/06/23 Analyzed: 06/11/23

Arsenic	1.67	0.230	mg/kg dry	1.57	6.09	20				
Barium	73.9	0.460	"	74.9	1.30	20				
Cadmium	0.350	0.230	"	0.327	6.78	20				
Copper	4.18	0.460	"	2.74	41.8	20				QR-03
Lead	107	0.230	"	38.4	94.4	20				QR-03
Nickel	3.43	0.460	"	2.99	13.7	20				
Selenium	0.403	0.299	"	0.399	0.917	20				
Silver	0.0726	0.0230	"	0.0708	2.56	20				
Zinc	20.4	0.460	"	13.9	38.2	20				QR-03
Selenium	0.403	0.299	"	0.399	0.917	200				

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410 17th St Suite 1400  
Denver CO, 80202

Project: Badger Wash  
Project Number: 203723052  
Project Manager: Chris Roy

**Reported:**  
07/03/23 14:10

**Total Metals by EPA 6020B - Quality Control**  
**Summit Scientific**

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

**Batch BGF0203 - EPA 3050B**

**Matrix Spike (BGF0203-MS1)**

Source: 2305620-01

Prepared: 06/06/23 Analyzed: 06/11/23

Arsenic	14.3	0.230	mg/kg dry	46.0	1.57	27.7	75-125				QM-07
Barium	106	0.460	"	46.0	74.9	67.8	75-125				QM-07
Cadmium	2.43	0.230	"	2.30	0.327	91.7	75-125				
Copper	14.8	0.460	"	46.0	2.74	26.3	75-125				QM-07
Lead	50.2	0.230	"	23.0	38.4	51.5	75-125				QM-07
Nickel	15.5	0.460	"	46.0	2.99	27.1	75-125				QM-07
Selenium	3.49	0.299	"	4.60	0.399	67.2	75-125				QR-03
Silver	2.12	0.0230	"	2.30	0.0708	89.3	75-125				
Zinc	27.4	0.460	"	46.0	13.9	29.4	75-125				QM-07

**Matrix Spike Dup (BGF0203-MSD1)**

Source: 2305620-01

Prepared: 06/06/23 Analyzed: 06/11/23

Arsenic	13.8	0.230	mg/kg dry	46.0	1.57	26.7	75-125	3.29	25		QM-07
Barium	123	0.460	"	46.0	74.9	104	75-125	14.5	25		
Cadmium	2.30	0.230	"	2.30	0.327	86.0	75-125	5.55	25		
Copper	14.2	0.460	"	46.0	2.74	25.0	75-125	4.08	25		QM-07
Lead	57.5	0.230	"	23.0	38.4	83.3	75-125	13.6	25		
Nickel	14.6	0.460	"	46.0	2.99	25.4	75-125	5.46	25		QM-07
Selenium	3.22	0.299	"	4.60	0.399	61.3	75-125	8.14	25		QM-07
Silver	2.07	0.0230	"	2.30	0.0708	87.1	75-125	2.37	25		
Zinc	26.8	0.460	"	46.0	13.9	28.1	75-125	2.18	25		QM-07

**Batch BGF1045 - EPA 3050B**

**Blank (BGF1045-BLK1)**

Prepared: 06/29/23 Analyzed: 07/01/23

Selenium	ND	0.260	mg/kg wet								
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**LCS (BGF1045-BS1)**

Prepared: 06/29/23 Analyzed: 07/01/23

Selenium	4.82	0.260	mg/kg wet	4.00		120	80-120				
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Stantec  
410 17th St Suite 1400  
Denver CO, 80202

Project: Badger Wash  
Project Number: 203723052  
Project Manager: Chris Roy

**Reported:**  
07/03/23 14:10

**Total Metals by EPA 6020B - Quality Control**  
**Summit Scientific**

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

**Batch BGF1045 - EPA 3050B**

<b>Duplicate (BGF1045-DUP1)</b>		<b>Source: 2305620-02</b>			Prepared: 06/29/23 Analyzed: 07/01/23						
Selenium	0.844	0.294	mg/kg dry		0.655			25.2	20		QR-01
<b>Matrix Spike (BGF1045-MS1)</b>		<b>Source: 2305620-02</b>			Prepared: 06/29/23 Analyzed: 07/01/23						
Selenium	7.73	0.294	mg/kg dry	4.53	0.655	156	75-125				QM-07
<b>Matrix Spike Dup (BGF1045-MSD1)</b>		<b>Source: 2305620-02</b>			Prepared: 06/29/23 Analyzed: 07/01/23						
Selenium	7.59	0.294	mg/kg dry	4.53	0.655	153	75-125	1.74	25		QM-07

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Project: Badger Wash  
Project Number: 203723052  
Project Manager: Chris Roy

**Reported:**  
07/03/23 14:10

**Hexavalent Chromium by EPA Method 7196 - Quality Control**  
**Summit Scientific**

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

**Batch BGF0430 - 3060A Mod**

**Blank (BGF0430-BLK1)**

Prepared & Analyzed: 06/12/23

Chromium, Hexavalent      ND      0.30    mg/kg wet

**LCS (BGF0430-BS1)**

Prepared & Analyzed: 06/12/23

Chromium, Hexavalent      22.9      0.30    mg/kg wet      25.0      91.6      80-120

**Duplicate (BGF0430-DUP1)**

**Source: 2305620-01**

Prepared & Analyzed: 06/12/23

Chromium, Hexavalent      ND      0.30    mg/kg dry      ND      20

**Matrix Spike (BGF0430-MS1)**

**Source: 2305620-01**

Prepared & Analyzed: 06/12/23

Chromium, Hexavalent      27.0      0.30    mg/kg dry      28.7      ND      94.0      75-125

**Matrix Spike Dup (BGF0430-MSD1)**

**Source: 2305620-01**

Prepared & Analyzed: 06/12/23

Chromium, Hexavalent      24.7      0.30    mg/kg dry      28.7      ND      86.0      75-125      8.89      20

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Project: Badger Wash  
Project Number: 203723052  
Project Manager: Chris Roy

**Reported:**  
07/03/23 14:10

**Soluble Nutrients by EPA 6020/USDA60 6(2) - Saturated Paste Extraction - Quality Control**

**Summit Scientific**

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

**Batch BGF0276 - General Preparation**

**Blank (BGF0276-BLK1)**

Prepared: 06/08/23 Analyzed: 06/12/23

Calcium	ND	0.0500	mg/L wet							
Magnesium	ND	0.0500	"							
Sodium	ND	0.0500	"							

**LCS (BGF0276-BS1)**

Prepared: 06/08/23 Analyzed: 06/12/23

Calcium	6.07	0.0500	mg/L wet	5.00		121	70-130			
Magnesium	5.54	0.0500	"	5.00		111	70-130			
Sodium	5.26	0.0500	"	5.00		105	70-130			

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Project: Badger Wash

Project Number: 203723052  
Project Manager: Chris Roy

**Reported:**  
07/03/23 14:10

**Physical Parameters by APHA/ASTM/EPA Methods - Quality Control**

**Summit Scientific**

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

**Batch BGF0235 - General Preparation**

<b>Duplicate (BGF0235-DUP1)</b>		<b>Source: 2305620-01</b>			<b>Prepared &amp; Analyzed: 06/07/23</b>						
% Solids	87.4		%		87.0				0.454	20	

**Batch BGF1053 - General Preparation**

<b>Duplicate (BGF1053-DUP1)</b>		<b>Source: 2305620-41</b>			<b>Prepared &amp; Analyzed: 06/29/23</b>						
% Solids	81.8		%		81.9				0.0649	20	

**Batch BGF1127 - General Preparation**

<b>Duplicate (BGF1127-DUP1)</b>		<b>Source: 2305620-02</b>			<b>Prepared &amp; Analyzed: 06/30/23</b>						
% Solids	88.2		%		88.4				0.186	20	

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Project: Badger Wash  
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Project Manager: Chris Roy

**Reported:**  
07/03/23 14:10

**Specific Conductance by EPA Method 120.1, Saturated Paste Extraction - Quality Control**  
**Summit Scientific**

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

**Batch BGF0377 - General Preparation**

**Blank (BGF0377-BLK1)**

Prepared & Analyzed: 06/09/23

Specific Conductance (EC)      ND      0.0100    mmhos/cm

**LCS (BGF0377-BS1)**

Prepared & Analyzed: 06/09/23

Specific Conductance (EC)      0.151      0.0100    mmhos/cm      0.150      101      95-105

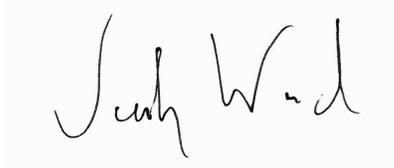
**Duplicate (BGF0377-DUP1)**

**Source: 2305620-01**

Prepared & Analyzed: 06/09/23

Specific Conductance (EC)      4.87      0.0100    mmhos/cm      4.94      1.51      20

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Project: Badger Wash  
Project Number: 203723052  
Project Manager: Chris Roy

**Reported:**  
07/03/23 14:10

**Physical Parameters by APHA/ASTM/EPA Methods, Saturated Paste Extraction - Quality Control**  
**Summit Scientific**

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

**Batch BGF0378 - General Preparation**

<b>LCS (BGF0378-BS1)</b>										
					Prepared & Analyzed: 06/09/23					
pH	9.01		pH Units	9.18	98.1	95-105				
<b>Duplicate (BGF0378-DUP1)</b>										
					Source: 2305620-01					
					Prepared & Analyzed: 06/09/23					
pH	7.94		pH Units	7.92	0.252	20				

**Batch BGF0803 - General Preparation**

<b>LCS (BGF0803-BS1)</b>										
					Prepared & Analyzed: 06/22/23					
pH	8.99		pH Units	9.18	97.9	95-105				
<b>Duplicate (BGF0803-DUP1)</b>										
					Source: 2305620-41					
					Prepared & Analyzed: 06/22/23					
pH	8.55		pH Units	8.54	0.117	20				

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Project: Badger Wash  
Project Number: 203723052  
Project Manager: Chris Roy

**Reported:**  
07/03/23 14:10

**Saturation Paste by the Western Region Soil, Plant and Water Reference Methods 2013 - Quality Control**  
**Summit Scientific**

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

**Batch BGF0915 - General Preparation**

**Blank (BGF0915-BLK1)**

Prepared & Analyzed: 06/26/23

Specific Conductance (EC)      ND      0.0100    mmhos/cm

**LCS (BGF0915-BS1)**

Prepared & Analyzed: 06/26/23

Specific Conductance (EC)      0.151      0.0100    mmhos/cm      0.150      101      95-105

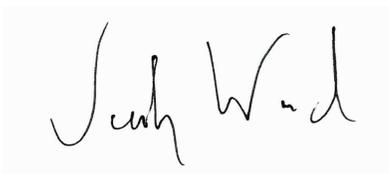
**Duplicate (BGF0915-DUP1)**

**Source: 2305620-41**

Prepared & Analyzed: 06/26/23

Specific Conductance (EC)      0.302      0.0100    mmhos/cm      0.304      0.627      20

Summit Scientific



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Project: Badger Wash  
Project Number: 203723052  
Project Manager: Chris Roy

**Reported:**  
07/03/23 14:10

### Notes and Definitions

- QR-03 The RPD value for the sample duplicate or MS/MSD was outside of QC acceptance limits due to matrix interference. QC batch accepted based on LCS and/or LCSD recovery and/or RPD values.
- QR-01 Analyses are not controlled on RPD values from sample concentrations less than 10 times the reporting limit. QC batch accepted based on LCS and/or LCSD QC results.
- QM-07 The spike recovery was outside acceptance limits for the MS and/or MSD. The batch was accepted based on acceptable LCS/LCSD recovery.
- I-02 This sample was analyzed outside of the recommended holding time.
- 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
- RPD Relative Percent Difference