

Summit Scientific

4653 Table Mountain Drive, Golden, Colorado 80401

303.277.9310

June 22, 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 black ink, appearing to read "Mikayla Axtell". The signature is fluid and cursive, with the first name "Mikayla" and the last name "Axtell" clearly distinguishable.

Mikayla Axtell For Paul Shrewsbury

President



Stantec
410 17th St Suite 1400
Denver CO, 80202

Project: Badger Wash

Project Number: 203723052

Project Manager: Chris Roy

Reported:
06/22/23 09:10

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
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
SS15@6'	2305620-31	Soil	05/25/23 10:05	05/26/23 16:39
SS16@6'	2305620-36	Soil	05/25/23 10:45	05/26/23 16:39
SS21@1'	2305620-47	Soil	05/24/23 14:30	05/26/23 16:39
SS22@1'	2305620-52	Soil	05/24/23 15:05	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
SS33	2305620-66	Soil	05/25/23 12:55	05/26/23 16:39

Case Narrative

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Stantec
410 17th St Suite 1400
Denver CO, 80202

Project: Badger Wash

Project Number: 203723052
Project Manager: Chris Roy

Reported:
06/22/23 09:10

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.

This report includes those results.

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Page 1 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: 303-825-5673 Project Name: Budger Vest
Sampler Name: Kevin Elersholt Project Number: ~~202723052~~ 202723052

					Preservative				Matrix				Analysis Requested								Special Instructions	
ID	Sample Description	Date Sampled	Time Sampled	# of containers	HCl	HNO3	None	Other	Water	Soil	Air-Canister #	Other	CASC 916									
1	SS10@6'	5/24/23	1030	2			X			X			X									HOLD
2	SS10@7'	↓	1035	2			X			X			X									↓
3	SS10@8'		1040	2			X			X			X									
4	SS10@9'		1045	2			X			X			X									
5	SS40@10'		1050	2			X			X			X									
6	SS23@1'	5/25/23	1405	2			X			X			X									↓
7	SS23@2'	↓	1410	2			X			X			X									
8	SS23@3'	↓	1420	2			X			X			X									
9	SS23@4'	↓	1430	2			X			X			X									
10	SS23@5'	↓	1435	2			X			X			X									
Relinquished by:		Date/Time:		Received by:		Date/Time:		Turn Around Time (Check)											Notes:			
Kevin Eberhardt		5/26/23 16:36		Vah Wad		5/26/23 16:39		Same Day _____ 72 hours _____														
								24 hours _____ Standard <input checked="" type="checkbox"/>														
Relinquished by:		Date/Time:		Received by:		Date/Time:		48 hours _____											Sample Integrity:			
Relinquished by:		Date/Time:		Received by:		Date/Time:		Temperature Upon Receipt: 12.3														
								Samples Intact: <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No														

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Page 2 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: 303-829-5673 Project Name: Bodger Wash
Sampler Name: Kevin Eberhardt Project Number: 203723052

					Preservative				Matrix				Analysis Requested								Special Instructions		
ID	Sample Description	Date Sampled	Time Sampled	# of containers	HCl	HNO3	None	Other	Water	Soil	Air-Canister #	Other	CAGE										
1	SS11 @ 2'	5/24/23	1105	2			X			X			X									HOLD	
2	SS11 @ 3'	↓	1110	2			X			X			X									↓	
3	SS11 @ 4'		1120	2			X			X			X										
4	SS11 @ 5'		1125	2			X			X			X										
5	SS11 @ 6'		1130	2			X			X			X										
6	SS12 @ 2'		1145	2			X			X			X										
7	SS12 @ 3'		1146	2			X			X			X										
8	SS12 @ 4'		1200	2			X			X			X										
9	SS12 @ 5'		1205	2			X			X			X										
10	SS12 @ 6'		1210	2			X			X			X										
Relinquished by:			Date/Time:		Received by:		Date/Time:		Turn Around Time				(Check)				Notes:						
Kevin Eberhardt		5/26/23 16:36		[Signature]		5/26/23 16:39		Same Day				72 hours											
								24 hours				Standard X											
Relinquished by:		Date/Time:		Received by:		Date/Time:		48 hours				Sample Integrity:											
Relinquished by:		Date/Time:		Received by:		Date/Time:		Temperature Upon Receipt:				12.3											
								Samples Intact:				Yes No											

2305620.3

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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: Badger Wash
 Sampler Name: Kevin Eberhult Project Number: 203723052

ID	Sample Description	Date Sampled	Time Sampled	# of containers	Preservative				Matrix				Analysis Requested								Special Instructions
					HCl	HNO ₃	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)												Notes:	
Relinquished by:		Date/Time:		Received by:		Date/Time:		Same Day <u> </u> 72 hours <u> </u>													
Relinquished by:		Date/Time:		Received by:		Date/Time:		24 hours <u> </u> Standard <u>X</u>													
Relinquished by:		Date/Time:		Received by:		Date/Time:		48 hours <u> </u>													
Relinquished by:		Date/Time:		Received by:		Date/Time:		Sample Integrity:													
Relinquished by:		Date/Time:		Received by:		Date/Time:		Temperature Upon Receipt: <u>12.3</u>													
Relinquished by:		Date/Time:		Received by:		Date/Time:		Samples Intact: <u>Yes</u> No													

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				Preservative				Matrix				Analysis Requested								Special Instructions		
ID	Sample Description	Date Sampled	Time Sampled	# of containers	HCl	HNO ₃	None	Other	Water	Soil	Air-Canister #	Other	CASE 9/5									
1	SS15@6'	5/25/23	1005	2			X			X			X									HOLD ↓
2	SS15@7'		1010	2			X			X			X									
3	SS15@8'		1020	2			X			X			X									
4	SS15@9'		1025	2			X			X			X									
5	SS15@10'		1035	2			X			X			X									
6	SS16@6'		1045	2			X			X			X									
7	SS16@7'		1100	2			X			X			X									
8	SS16@8'		1105	2			X			X			X									
9	SS16@9'		1110	2			X			X			X									
10	SS16@10'	✓	1120	2			X			X			X									
Relinquished by:		Date/Time:		Received by:		Date/Time:		Turn Around Time				(Check)				Notes:						
Kenia Eberhardt		5/26/23 16:37		Jeh V. d.		5/26/23 16:39		Same Day _____				72 hours _____										
Relinquished by:		Date/Time:		Received by:		Date/Time:		24 hours _____				Standard X										
Relinquished by:		Date/Time:		Received by:		Date/Time:		48 hours _____				Sample Integrity:										
Relinquished by:		Date/Time:		Received by:		Date/Time:		Temperature Upon Receipt: 12.3				Samples Intact: Yes No										

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303-277-9310 ♦ 303-374-5933 (f)

Client: Stantec Project Manager: Chris Roy
Address: 416 17th St. Suite 1400 E-Mail: Chris.Roy@stantec.com
City/State/Zip: Denver, CO 80202
Phone: 303-824-5673 Project Name: Bulger Wash
Sampler Name: Kevin E. Schmitt Project Number: 203723052

www.s2scientific.com

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303-277-9310 ♦ 303-374-5933 (f)

Client: Stantec
Address: 416 17th St. Suite 1400
City/State/Zip: Dover, Co 80202
Phone: 303-829-5673
Sampler Name: Kevin Eberhardt

Project Manager: Chris Roy
E-Mail: Chris.Roy@Skater.com

www.s2scientific.com

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303-277-9310 ♦ 303-374-5933 (f)

Client: *Stantec*

Project Manager: *Chris Ray*

Address: 410 17th St. Suite 1400

E-Mail: Chris.Roy@stentec.com

City/State/Zip: Denver, CO 80202

Phone: 303-829-5673

Project Name: Reder Wash

Sampler Name: Kevin Eberhart

Project Number: 203723057

				Preservative				Matrix				Analysis Requested								Special Instructions											
ID	Sample Description	Date Sampled	Time Sampled	# of containers	HCl	HNO3	None	Other	Water	Soil	Air-Canister #	Other	CAS																		
1	SS24	5/25/23	1140	2			X			X			X									HOLD									
2	SS25		1145	2			X			X			X																		
3	SS26		1200	2			X			X			X																		
4	SS27		1210	2			X			X			X																		
5	SS28		1226	2			X			X			V																		
6	SS29		1225	2			X			X			X																		
7	SS30		1230	2			X			X			X																		
8	SS31		1235	2			X			X			X																		
9	SS32		1245	2			X			X			X																		
10	SS33		1255	2			X			X			X																		
Relinquished by:		Date/Time:		Received by:		Date/Time:		Turn Around Time		(Check)		Notes:																			
Kerri Elbert		5/26/23 16:39		V. H. Wood		5/26/23 16:39		Same Day		72 hours																					
Relinquished by:		Date/Time:		Received by:		Date/Time:		24 hours		Standard												X									
Relinquished by:		Date/Time:		Received by:		Date/Time:		48 hours		Sample Integrity:																					
Relinquished by:		Date/Time:		Received by:		Date/Time:		Temperature Upon Receipt:		12.3																					
								Samples Intact:		Yes		No																			

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Sample Receipt Checklist

S2 Work Order# 2305620Client: Stantec Client Project ID: Badger WashShipped Via: H.D./P.U./FedEx/UPS/USPS/Other ☐ Airbill #: _____
☒ ☐ ☐ ☐ ☐
Matrix (Check all that apply) Air ☐ Soil/Solid ☒ Water ☐ Other ☐Temp (°C) 12.3Thermometer # 2

	Yes	No	N/A	Comments (if any)
If samples require cooling, is the temperature < 6°C? ⁽¹⁾ NOTE: If samples are delivered the same day of sampling, this requirement is met if there is evidence that cooling has begun.	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
If custody seals are present, are they intact? ⁽¹⁾	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
Are samples due within 48 hours present?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
Are water samples with short hold times present? Note the short hold analysis in the comments column - pH, Nitrate/Nitrite, Ferrous Iron (Fe ²⁺), Hexavalent Chromium (Cr ⁶⁺ , Cr VI), COD/BOD, Total Coliform, E. Coli, Total Residual Chlorine (TRC), Dissolved Oxygen	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
Is a chain-of-custody (COC) form present and filled out Completely? ⁽¹⁾	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Is the COC properly relinquished by the client w/ date and time recorded? ⁽¹⁾	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Were all samples received intact? ⁽¹⁾	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Was adequate sample volume provided? ⁽¹⁾	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Does the COC agree with the number and type of sample bottles received? ⁽¹⁾	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Do the sample IDs on the bottle labels match the COC? ⁽¹⁾	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
For volatiles in water – is there headspace present? If yes, contact client and note in narrative.	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
Are samples preserved that require preservation (excluding cooling)? ⁽¹⁾ Note the type of preservative in the comments column – HCl, H ₂ SO ₄ , NaOH, HNO ₃ , etc.	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
If samples are acid preserved for metals, is the pH ≤ 2? ⁽¹⁾ Record the pH in Comments.	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
If dissolved metals are requested, were samples field filtered?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
Additional Comments (if any):				
⁽¹⁾ 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:
06/22/23 09:10

SS10@6'
2305620-01 (Soil)

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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	MDL							
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	MDL							
Surrogate: 1,2-Dichloroethane-d4		97.4 %		50-150		"	"	"	"	
Surrogate: Toluene-d8		96.8 %		50-150		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		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	MDL							
C10-C28 (DRO)	60	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	MDL							
Surrogate: o-Terphenyl		86.1 %		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:
06/22/23 09:10

SS10@6'
2305620-01 (Soil)

Summit Scientific

PAH by EPA Method 8270D SIM

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

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

Total Metals by EPA 6020B

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

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	MDL							
Selenium	0.399	0.299	0.201	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		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	MDL							

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Stantec
410 17th St Suite 1400
Denver CO, 80202

Project: Badger Wash

Project Number: 203723052

Project Manager: Chris Roy

Reported:
06/22/23 09:10

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 Limit	MDL	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Specific Conductance (EC)	4.94	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:
06/22/23 09:10

SS23@1'
2305620-06 (Soil)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

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

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

Extractable Petroleum Hydrocarbons by 8015

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

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	MDL							
C10-C28 (DRO)	99	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		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	MDL							
Surrogate: o-Terphenyl		96.1 %		30-150		"	"	"	"	

PAH by EPA Method 8270D SIM

Summit Scientific

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.



Stantec
410 17th St Suite 1400
Denver CO, 80202

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

Reported:
06/22/23 09:10

SS23@1'
2305620-06 (Soil)

Summit Scientific

PAH by EPA Method 8270D SIM

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

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	MDL							
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	0.0208	0.00500		"	"	"	"	"	"	
2-Methylnaphthalene	0.0418	0.00500		"	"	"	"	"	"	

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

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

Total Metals by EPA 6020B

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

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	MDL							
Selenium	ND	0.287	0.193	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		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	MDL							

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:
06/22/23 09:10

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

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:
06/22/23 09:10

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	MDL							
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	MDL							
Surrogate: 1,2-Dichloroethane-d4		95.8 %		50-150		"	"	"	"	
Surrogate: Toluene-d8		99.8 %		50-150		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		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	MDL							
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	MDL							
Surrogate: o-Terphenyl		94.6 %		30-150		"	"	"	"	

PAH by EPA Method 8270D SIM

Summit Scientific

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.



Stantec
410 17th St Suite 1400
Denver CO, 80202

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

Reported:
06/22/23 09:10

SS11@2'
2305620-11 (Soil)

Summit Scientific

PAH by EPA Method 8270D SIM

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

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

Total Metals by EPA 6020B

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

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	MDL							
Selenium	ND	0.294	0.198	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		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	MDL							

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:
06/22/23 09:10

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 Limit	MDL	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Specific Conductance (EC)	0.183	0.0100		mmhos/cm	1	BGF0377	06/09/23	06/09/23	EPA 120.1	

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:
06/22/23 09:10

SS12@2'
2305620-16 (Soil)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

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

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

Extractable Petroleum Hydrocarbons by 8015

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

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	MDL							
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		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	MDL							
Surrogate: o-Terphenyl		94.3 %		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:
06/22/23 09:10

SS12@2'
2305620-16 (Soil)

Summit Scientific

PAH by EPA Method 8270D SIM

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

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

Total Metals by EPA 6020B

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

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	MDL							
Selenium	ND	0.293	0.197	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		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	MDL							

Summit Scientific

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.



Stantec
410 17th St Suite 1400
Denver CO, 80202

Project: Badger Wash

Project Number: 203723052

Project Manager: Chris Roy

Reported:
06/22/23 09:10

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

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:
06/22/23 09:10

SS13@2'
2305620-21 (Soil)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

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

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

Extractable Petroleum Hydrocarbons by 8015

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

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	MDL							
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		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	MDL							
Surrogate: o-Terphenyl		94.9 %		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:
06/22/23 09:10

SS13@2'
2305620-21 (Soil)

Summit Scientific

PAH by EPA Method 8270D SIM

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

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

Total Metals by EPA 6020B

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

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	MDL							
Selenium	0.207	0.278	0.187	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		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	MDL							

Summit Scientific

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.



Stantec
410 17th St Suite 1400
Denver CO, 80202

Project: Badger Wash

Project Number: 203723052

Project Manager: Chris Roy

Reported:
06/22/23 09:10

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

Summit Scientific

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.



Stantec
410 17th St Suite 1400
Denver CO, 80202

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

Reported:
06/22/23 09:10

SS14@6'
2305620-26 (Soil)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

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

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

Extractable Petroleum Hydrocarbons by 8015

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

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	MDL							
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		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	MDL							
Surrogate: o-Terphenyl		96.4 %		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:
06/22/23 09:10

SS14@6'
2305620-26 (Soil)

Summit Scientific

PAH by EPA Method 8270D SIM

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

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

Total Metals by EPA 6020B

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

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	MDL							
Selenium	0.431	0.313	0.211	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		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	MDL							

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:
06/22/23 09:10

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

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:
06/22/23 09:10

SS15@6'
2305620-31 (Soil)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

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

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

Extractable Petroleum Hydrocarbons by 8015

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

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	MDL							
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		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	MDL							
Surrogate: o-Terphenyl		94.7 %		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:
06/22/23 09:10

SS15@6'
2305620-31 (Soil)

Summit Scientific

PAH by EPA Method 8270D SIM

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

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

Total Metals by EPA 6020B

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

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	MDL							
Selenium	0.369	0.294	0.198	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		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	MDL							

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:
06/22/23 09:10

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

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:
06/22/23 09:10

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	MDL							
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	MDL							
Surrogate: 1,2-Dichloroethane-d4		99.1 %		50-150		"	"	"	"	
Surrogate: Toluene-d8		96.8 %		50-150		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		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	MDL							
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	MDL							
Surrogate: o-Terphenyl		97.4 %		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:
06/22/23 09:10

SS16@6'
2305620-36 (Soil)

Summit Scientific

PAH by EPA Method 8270D SIM

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

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

Total Metals by EPA 6020B

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

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	MDL							
Selenium	1.11	0.299	0.201	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		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	MDL							

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:
06/22/23 09:10

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

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:
06/22/23 09:10

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	MDL							
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	MDL							
Surrogate: 1,2-Dichloroethane-d4		103 %		50-150		"	"	"	"	
Surrogate: Toluene-d8		99.1 %		50-150		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		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	MDL							
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	MDL							
Surrogate: o-Terphenyl		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:
06/22/23 09:10

SS21@1'
2305620-47 (Soil)

Summit Scientific

PAH by EPA Method 8270D SIM

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

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

Total Metals by EPA 6020B

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

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	MDL							
Selenium	1.34	0.279	0.188	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		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	MDL							

Summit Scientific

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.



Stantec
410 17th St Suite 1400
Denver CO, 80202

Project: Badger Wash

Project Number: 203723052

Project Manager: Chris Roy

Reported:
06/22/23 09:10

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

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:
06/22/23 09:10

SS22@1'
2305620-52 (Soil)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

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

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

Extractable Petroleum Hydrocarbons by 8015

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

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	MDL							
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		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	MDL							
Surrogate: o-Terphenyl		95.9 %		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:
06/22/23 09:10

SS22@1'
2305620-52 (Soil)

Summit Scientific

PAH by EPA Method 8270D SIM

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

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

Total Metals by EPA 6020B

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

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	MDL							
Selenium	0.262	0.279	0.188	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		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	MDL							

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Stantec
410 17th St Suite 1400
Denver CO, 80202

Project: Badger Wash

Project Number: 203723052

Project Manager: Chris Roy

Reported:
06/22/23 09:10

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 Limit	MDL	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Specific Conductance (EC)	0.367	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
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Project: Badger Wash
Project Number: 203723052
Project Manager: Chris Roy

Reported:
06/22/23 09:10

SS24
2305620-57 (Soil)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

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

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

Extractable Petroleum Hydrocarbons by 8015

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

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	MDL							
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		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	MDL							
Surrogate: o-Terphenyl		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:
06/22/23 09:10

SS24
2305620-57 (Soil)

Summit Scientific

PAH by EPA Method 8270D SIM

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

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

Total Metals by EPA 6020B Hot Water Soluble Extraction

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

Analyte	Result	Reporting Limit	MDL	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Boron	0.263	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	MDL	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:
06/22/23 09:10

SS24
2305620-57 (Soil)

Summit Scientific

Total Metals by EPA 6020B

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	0.189	"	"	"	"	"
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	MDL	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	MDL	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	MDL	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

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:
06/22/23 09:10

SS24
2305620-57 (Soil)

Summit Scientific

Physical Parameters by APHA/ASTM/EPA Methods

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

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

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Stantec
410 17th St Suite 1400
Denver CO, 80202

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

Reported:
06/22/23 09:10

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	MDL							
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	MDL							
Surrogate: 1,2-Dichloroethane-d4		98.8 %		50-150		"	"	"	"	
Surrogate: Toluene-d8		97.2 %		50-150		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		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	MDL							
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	MDL							
Surrogate: o-Terphenyl		96.4 %		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:
06/22/23 09:10

SS25
2305620-58 (Soil)

Summit Scientific

PAH by EPA Method 8270D SIM

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

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

Total Metals by EPA 6020B Hot Water Soluble Extraction

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

Analyte	Result	Reporting Limit	MDL	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Boron	0.363	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	MDL	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:
06/22/23 09:10

SS25
2305620-58 (Soil)

Summit Scientific

Total Metals by EPA 6020B

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	0.194	"	"	"	"	"
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	MDL	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	MDL	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	MDL	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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Stantec
410 17th St Suite 1400
Denver CO, 80202

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

Reported:
06/22/23 09:10

SS25
2305620-58 (Soil)

Summit Scientific

Physical Parameters by APHA/ASTM/EPA Methods

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

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

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:
06/22/23 09:10

SS26
2305620-59 (Soil)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

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

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

Extractable Petroleum Hydrocarbons by 8015

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

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	MDL							
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		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	MDL							
Surrogate: o-Terphenyl		93.3 %		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:
06/22/23 09:10

SS26
2305620-59 (Soil)

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PAH by EPA Method 8270D SIM

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

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

Total Metals by EPA 6020B Hot Water Soluble Extraction

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

Analyte	Result	Reporting Limit	MDL	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Boron	0.243	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	MDL	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
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Stantec
410 17th St Suite 1400
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Project: Badger Wash

Project Number: 203723052

Project Manager: Chris Roy

Reported:
06/22/23 09:10

SS26
2305620-59 (Soil)

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Total Metals by EPA 6020B

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	0.198	"	"	"	"	"
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	MDL	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	MDL	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	MDL	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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Stantec
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Project: Badger Wash
Project Number: 203723052
Project Manager: Chris Roy

Reported:
06/22/23 09:10

SS26
2305620-59 (Soil)

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Physical Parameters by APHA/ASTM/EPA Methods

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

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

Specific Conductance by EPA Method 120.1, Saturated Paste Extraction

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

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	MDL							
Specific Conductance (EC)	3.95	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		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	MDL							
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

Reported:
06/22/23 09:10

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2305620-60 (Soil)

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Volatile Organic Compounds by EPA Method 8260B

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

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

Extractable Petroleum Hydrocarbons by 8015

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

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	MDL							
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		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	MDL							
Surrogate: o-Terphenyl		93.0 %		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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SS27
2305620-60 (Soil)

Summit Scientific

PAH by EPA Method 8270D SIM

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

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	MDL							
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	0.0251	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	0.0186	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		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	MDL							
Surrogate: 2-Methylnaphthalene-d10		111 %		40-150		"	"	"	"	
Surrogate: Fluoranthene-d10		51.3 %		40-150		"	"	"	"	

Total Metals by EPA 6020B Hot Water Soluble Extraction

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

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	MDL							
Boron	0.204	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		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	MDL							

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Project: Badger Wash

Project Number: 203723052

Project Manager: Chris Roy

Reported:
06/22/23 09:10

SS27
2305620-60 (Soil)

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Total Metals by EPA 6020B

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	0.197	"	"	"	"	"
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	MDL	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	MDL	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	MDL	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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Project: Badger Wash
Project Number: 203723052
Project Manager: Chris Roy

Reported:
06/22/23 09:10

SS27
2305620-60 (Soil)

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Physical Parameters by APHA/ASTM/EPA Methods

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

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	MDL							
% 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		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	MDL							
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		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	MDL							
pH	7.80			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:
06/22/23 09:10

SS28
2305620-61 (Soil)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

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

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

Extractable Petroleum Hydrocarbons by 8015

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

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	MDL							
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		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	MDL							
Surrogate: o-Terphenyl		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:
06/22/23 09:10

SS28
2305620-61 (Soil)

Summit Scientific

PAH by EPA Method 8270D SIM

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

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

Total Metals by EPA 6020B Hot Water Soluble Extraction

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

Analyte	Result	Reporting Limit	MDL	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Boron	0.243	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	MDL	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
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Stantec
410 17th St Suite 1400
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Project: Badger Wash

Project Number: 203723052

Project Manager: Chris Roy

Reported:
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SS28
2305620-61 (Soil)

Summit Scientific

Total Metals by EPA 6020B

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	0.198	"	"	"	"	"
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		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	MDL							
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		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	MDL							
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		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	MDL							
Sodium Adsorption Ratio	0.344	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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Stantec
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Project: Badger Wash
Project Number: 203723052
Project Manager: Chris Roy

Reported:
06/22/23 09:10

SS28
2305620-61 (Soil)

Summit Scientific

Physical Parameters by APHA/ASTM/EPA Methods

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

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

Specific Conductance by EPA Method 120.1, Saturated Paste Extraction

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

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	MDL							
Specific Conductance (EC)	0.411	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		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	MDL							
pH	8.83			pH Units	1	BGF0378	06/09/23	06/09/23	EPA 9045D	

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:
06/22/23 09:10

SS29
2305620-62 (Soil)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

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

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

Extractable Petroleum Hydrocarbons by 8015

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

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

PAH by EPA Method 8270D SIM

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

Reported:
06/22/23 09:10

SS29
2305620-62 (Soil)

Summit Scientific

PAH by EPA Method 8270D SIM

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

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

Total Metals by EPA 6020B Hot Water Soluble Extraction

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

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	MDL							
Boron	0.211	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		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	MDL							

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Project: Badger Wash

Project Number: 203723052

Project Manager: Chris Roy

Reported:
06/22/23 09:10

SS29
2305620-62 (Soil)

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Total Metals by EPA 6020B

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	0.198	"	"	"	"	"
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	MDL	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	MDL	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	MDL	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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Stantec
410 17th St Suite 1400
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Project: Badger Wash
Project Number: 203723052
Project Manager: Chris Roy

Reported:
06/22/23 09:10

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		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	MDL							
% Solids	88.2			%	1	BGF0235	06/07/23	06/07/23	Calculation	

Specific Conductance by EPA Method 120.1, Saturated Paste Extraction

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

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	MDL							
Specific Conductance (EC)	0.371	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		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	MDL							
pH	8.35			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:
06/22/23 09:10

SS30
2305620-63 (Soil)

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Volatile Organic Compounds by EPA Method 8260B

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

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

Extractable Petroleum Hydrocarbons by 8015

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

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

PAH by EPA Method 8270D SIM

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

Reported:
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2305620-63 (Soil)

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PAH by EPA Method 8270D SIM

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

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

Total Metals by EPA 6020B Hot Water Soluble Extraction

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

Analyte	Result	Reporting Limit	MDL	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Boron	0.191	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	MDL	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:
06/22/23 09:10

SS30
2305620-63 (Soil)

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Total Metals by EPA 6020B

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	0.212	"	"	"	"	"
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	MDL	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	MDL	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	MDL	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: Badger Wash
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Project Manager: Chris Roy

Reported:
06/22/23 09:10

SS30
2305620-63 (Soil)

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Physical Parameters by APHA/ASTM/EPA Methods

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

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

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Stantec
410 17th St Suite 1400
Denver CO, 80202

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

Reported:
06/22/23 09:10

SS31
2305620-64 (Soil)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

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

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

Extractable Petroleum Hydrocarbons by 8015

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

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

PAH by EPA Method 8270D SIM

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SS31
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Summit Scientific

PAH by EPA Method 8270D SIM

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

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

Total Metals by EPA 6020B Hot Water Soluble Extraction

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

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	MDL							
Boron	0.406	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		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	MDL							

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410 17th St Suite 1400
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Project: Badger Wash

Project Number: 203723052

Project Manager: Chris Roy

Reported:
06/22/23 09:10

SS31
2305620-64 (Soil)

Summit Scientific

Total Metals by EPA 6020B

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	0.198	"	"	"	"	"
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	MDL	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	MDL	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	MDL	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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Stantec
410 17th St Suite 1400
Denver CO, 80202

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

Reported:
06/22/23 09:10

SS31
2305620-64 (Soil)

Summit Scientific

Physical Parameters by APHA/ASTM/EPA Methods

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

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	MDL							
% 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		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	MDL							
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		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	MDL							
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

Reported:
06/22/23 09:10

SS32
2305620-65 (Soil)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

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

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

Extractable Petroleum Hydrocarbons by 8015

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

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

PAH by EPA Method 8270D SIM

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

Reported:
06/22/23 09:10

SS32
2305620-65 (Soil)

Summit Scientific

PAH by EPA Method 8270D SIM

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

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

Total Metals by EPA 6020B Hot Water Soluble Extraction

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

Analyte	Result	Reporting Limit	MDL	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Boron	0.318	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	MDL	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
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Stantec
410 17th St Suite 1400
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Project: Badger Wash

Project Number: 203723052

Project Manager: Chris Roy

Reported:
06/22/23 09:10

SS32
2305620-65 (Soil)

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Total Metals by EPA 6020B

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	0.196	"	"	"	"	"
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	MDL	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	MDL	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	MDL	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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Project: Badger Wash
Project Number: 203723052
Project Manager: Chris Roy

Reported:
06/22/23 09:10

SS32
2305620-65 (Soil)

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Physical Parameters by APHA/ASTM/EPA Methods

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

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	MDL							
% 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		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	MDL							
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		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	MDL							
pH	7.87			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:
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2305620-66 (Soil)

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Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **05/25/23 12:55**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	MDL							
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		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	MDL							
Surrogate: 1,2-Dichloroethane-d4		95.5 %		50-150		"	"	"	"	
Surrogate: Toluene-d8		96.1 %		50-150		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		95.9 %		50-150		"	"	"	"	

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **05/25/23 12:55**

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

PAH by EPA Method 8270D SIM

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410 17th St Suite 1400
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Project: Badger Wash
Project Number: 203723052
Project Manager: Chris Roy

Reported:
06/22/23 09:10

SS33
2305620-66 (Soil)

Summit Scientific

PAH by EPA Method 8270D SIM

Date Sampled: **05/25/23 12:55**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	MDL							
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	0.00555	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		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	MDL							
Surrogate: 2-Methylnaphthalene-d10		54.7 %		40-150		"	"	"	"	
Surrogate: Fluoranthene-d10		48.4 %		40-150		"	"	"	"	

Total Metals by EPA 6020B Hot Water Soluble Extraction

Date Sampled: **05/25/23 12:55**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	MDL							
Boron	0.237	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		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	MDL							

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

Reported:
06/22/23 09:10

SS33
2305620-66 (Soil)

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Total Metals by EPA 6020B

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	0.201	"	"	"	"	"
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	MDL	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	MDL	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	MDL	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:
06/22/23 09:10

SS33
2305620-66 (Soil)

Summit Scientific

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **05/25/23 12:55**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	MDL							
% 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		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	MDL							
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		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	MDL							
pH	7.75			pH Units	1	BGF0378	06/09/23	06/09/23	EPA 9045D	

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410 17th St Suite 1400
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Project: Badger Wash
Project Number: 203723052
Project Manager: Chris Roy

Reported:
06/22/23 09:10

Volatile Organic Compounds by EPA Method 8260B - Quality Control

Summit Scientific

Analyte	Reporting			Spike	Source		%REC		RPD	
	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	Notes

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:
06/22/23 09:10

Volatile Organic Compounds by EPA Method 8260B - Quality Control
Summit Scientific

Analyte	Reporting			Spike	Source		%REC		RPD	
	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	Notes

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
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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			

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:
06/22/23 09:10

Extractable Petroleum Hydrocarbons by 8015 - Quality Control
Summit Scientific

Analyte	Reporting			Spike	Source		%REC		RPD	
	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	Notes

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: o-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: o-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: o-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: o-Terphenyl	12.0		"	12.5		96.1	30-150			

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Stantec
410 17th St Suite 1400
Denver CO, 80202

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

Reported:
06/22/23 09:10

PAH by EPA Method 8270D SIM - Quality Control
Summit Scientific

Analyte	Reporting			Spike	Source		%REC		RPD	
	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	Notes

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	"

Surrogate: 2-Methylnaphthalene-d10	0.0142	"	0.0333	42.7	40-150
Surrogate: Fluoranthene-d10	0.0192	"	0.0333	57.7	40-150

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

Surrogate: 2-Methylnaphthalene-d10	0.0222	"	0.0333	66.7	40-150
Surrogate: Fluoranthene-d10	0.0161	"	0.0333	48.3	40-150

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Stantec
410 17th St Suite 1400
Denver CO, 80202

Project: Badger Wash

Project Number: 203723052

Project Manager: Chris Roy

Reported:
06/22/23 09:10

PAH by EPA Method 8270D SIM - Quality Control

Summit Scientific

Analyte	Reporting			Spike Level	Source		%REC		RPD	
	Result	Limit	Units		Result	%REC	Limits	RPD	Limit	Notes

Batch BGF0168 - EPA 5030 Soil MS

Matrix Spike (BGF0168-MS1)

Source: 2305620-01

Prepared & Analyzed: 06/06/23

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		
Surrogate: 2-Methylnaphthalene-d10	0.0151		"	0.0333		45.3	40-150		
Surrogate: Fluoranthene-d10	0.0173		"	0.0333		52.0	40-150		

Matrix Spike Dup (BGF0168-MSD1)

Source: 2305620-01

Prepared & Analyzed: 06/06/23

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
Surrogate: 2-Methylnaphthalene-d10	0.0185		"	0.0333		55.4	40-150		
Surrogate: Fluoranthene-d10	0.0181		"	0.0333		54.3	40-150		

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:
06/22/23 09:10

Total Metals by EPA 6020B Hot Water Soluble Extraction - Quality Control
Summit Scientific

Analyte	Reporting			Spike	Source		%REC		RPD	
	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	Notes

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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Stantec
410 17th St Suite 1400
Denver CO, 80202

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

Reported:
06/22/23 09:10

Total Metals by EPA 6020B - Quality Control
Summit Scientific

Analyte	Reporting			Spike	Source		%REC		RPD	
	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	Notes

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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Stantec
410 17th St Suite 1400
Denver CO, 80202

Project: Badger Wash

Project Number: 203723052

Project Manager: Chris Roy

Reported:
06/22/23 09:10

Total Metals by EPA 6020B - Quality Control

Summit Scientific

Analyte	Reporting			Spike	Source		%REC		RPD	
	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	Notes

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

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Stantec
410 17th St Suite 1400
Denver CO, 80202

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

Reported:
06/22/23 09:10

Hexavalent Chromium by EPA Method 7196 - Quality Control
Summit Scientific

Analyte	Reporting			Spike	Source		%REC		RPD	
	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	Notes

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

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:
06/22/23 09:10

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

Summit Scientific

Analyte	Result	Reporting		Spike Level	Source		%REC		RPD	
		Limit	Units		Result	%REC	Limits	RPD	Limit	Notes

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

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:
06/22/23 09:10

Physical Parameters by APHA/ASTM/EPA Methods - Quality Control
Summit Scientific

Reporting				Spike	Source		%REC		RPD	
Analyte	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	Notes

Batch BGF0235 - General Preparation

Duplicate (BGF0235-DUP1)		Source: 2305620-01			Prepared & Analyzed: 06/07/23						
% Solids	87.4		%		87.0			0.454		20	

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:
06/22/23 09:10

Specific Conductance by EPA Method 120.1, Saturated Paste Extraction - Quality Control

Summit Scientific

Analyte	Result	Reporting		Spike Level	Source		%REC		RPD	
		Limit	Units		Result	%REC	Limits	RPD	Limit	Notes

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

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:
06/22/23 09:10

Physical Parameters by APHA/ASTM/EPA Methods, Saturated Paste Extraction - Quality Control

Summit Scientific

Analyte	Result	Reporting		Spike Level	Source		%REC		RPD	
		Limit	Units		Result	%REC	Limits	RPD	Limit	Notes

Batch BGF0378 - General Preparation

LCS (BGF0378-BS1)

Prepared & Analyzed: 06/09/23

pH	9.01	pH Units	9.18	98.1	95-105
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Duplicate (BGF0378-DUP1)

Source: 2305620-01

Prepared & Analyzed: 06/09/23

pH	7.94	pH Units	7.92	0.252	20
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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:
06/22/23 09:10

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.
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.
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