

TABLE 1
PDC ENERGY, INC (69175)
FORMER BUNN M. 1-34 WELLHEAD
SOIL ANALYTICAL RESULTS SUMMARY TABLE
CONTAMINANTS OF CONCERN

Sample ID	Date Sampled	Depth	Benzene (mg/kg)	Toluene (mg/kg)	Ethylbenzene (mg/kg)	Total Xylenes (mg/kg)	1, 2, 4-TMB (mg/kg)	1, 3, 5-TMB (mg/kg)	Naphthalene (mg/kg)	TPH ⁽⁴⁾ (mg/kg)	Acenaphthene (mg/kg)	Anthracene (mg/kg)	Benz(a) (mg/kg)	Chrysene (mg/kg)	Fluoranthene (mg/kg)	Fluorene (mg/kg)	Pyrene (mg/kg)	1-M (mg/kg)	2-M (mg/kg)	Arsenic (mg/kg)	Barium (mg/kg)	Selenium (mg/kg)		
Residential SSL ^(1,2)			1.2	490	5.8	58	30	27	2	500	360	1,800	1.1	110	240	240	180	18	24	0.68	15,000	390		
Protection of Groundwater SSL ^(1,2,3)			0.0026	0.69	0.78	9.9	0.0081	0.0087	0.0038	500	0.55	5.8	0.011	9	8.9	0.54	1.3	0.006	0.019	0.29	82	0.26		
WC01 @ 4'	3/7/2024	4 ft. bgs	0.45	<0.050	1.2	14	9.3 ⁽⁵⁾	5.8	1.8	2,290 ⁽⁵⁾	0.0456	0.00588	0.0158	0.00979	0.00914	0.109	0.0138	0.776 ⁽⁵⁾	1.16 ⁽⁵⁾	2.93	131	0.494		
WH01-B @ 6'	3/7/2024	6 ft. bgs	<0.0020	<0.0050	0.023	0.68	0.34	0.42	<0.0038	5,600	<0.00500	<0.00500	0.0540	0.0233	0.0298	0.0624	<0.00500	0.110	0.0846	1.28	34.8	0.728		
WH01-N @ 4'	3/7/2024	4 ft. bgs	<0.0020	<0.0050	<0.0050	<0.010	<0.0050	<0.0050	<0.0038	0.65	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	3.57	94.2	0.292		
FL01-01 @ 4'	3/8/2024	4 ft. bgs	<0.0020	<0.0050	<0.0050	<0.010	<0.0050	<0.0050	<0.0038	149	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	2.26	55.5	<0.260		
FL01-02 @ 4'	3/8/2024	4 ft. bgs	<0.0020	<0.0050	<0.0050	<0.010	<0.0050	<0.0050	<0.0038	<50	<0.00500	<0.00500	0.00657	0.00522	0.00814	<0.00500	0.0159	<0.00500	<0.00500	2.55	55.8	<0.260		
FL01-03 @ 4'	3/8/2024	4 ft. bgs	<0.0020	<0.0050	<0.0050	<0.010	<0.0050	<0.0050	<0.0038	<50	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	1.85	34.7	<0.260		
FL01-04 @ 5'	3/8/2024	5 ft. bgs	<0.0020	<0.0050	<0.0050	<0.010	<0.0050	<0.0050	<0.0038	<50	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	3.45	105	<0.260		
FL01-05 @ 4'	3/8/2024	4 ft. bgs	<0.0020	<0.0050	<0.0050	<0.010	<0.0050	<0.0050	<0.0038	<50	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	1.60	23.0	<0.260		
																				Mean Background Concentration ⁽⁶⁾		1.56	35.7	0.261
																				1.25x Mean Background Concentration		1.95	44.6	0.326

Notes:

- Compounds referenced from the ECOM 2 CCR 404-1, Table 915-1, effective January 15, 2021.
 - Soil Screening Levels (SSL) referenced from EPA Regional Screening Levels (EPA RSLs) for Chemical Contaminants at Superfund Sites, effective November 2020.
 - SSLs are applicable if a pathway for communication with groundwater is present.
 - Value calculated by adding TPH-GRO, TPH-DRO, and TPH-ORO concentrations.
 - The concentration indicated for this analyte is an estimated value above the calibration range of the instrument.
 - See Table 6 for background concentration calculations.
- ECMC = Energy & Carbon Management Commission
 (-) = Analytical result is less than the indicated laboratory reporting limit.
 TPH-GRO = Total petroleum hydrocarbons - gasoline range organics
 TPH-DRO = Total petroleum hydrocarbons - diesel range organics
 TPH-ORO = Total petroleum hydrocarbons - oil range organics
 mg/kg = Milligrams per kilogram
 TMB = Trimethylbenzene
 Benz(a) = Benzanthracene
 M = Methylanthracene
 = Source material characterization sample material, excavated and transported off-site for disposal
 ft. = Feet
 bgs = Below ground surface
BOLD = Analytical result is in exceedance of applicable standard.
BOLD = Metals analytical result is in exceedance of applicable standard, but within 1.25x background concentration.

TABLE 2
PDC ENERGY, INC (69175)
FORMER BUNN 1-34 M WELLHEAD
SOIL ANALYTICAL RESULTS SUMMARY TABLE
INORGANIC COMPOUNDS

Sample ID	Date Sampled	Depth	pH (units)	EC (mmhos/cm)	SAR (units)	Boron (mg/L)
Soil Suitability for Reclamation Standard ⁽¹⁾			6-8.3	<4	<6	2
WC01 @ 4'	3/7/2024	4 ft. bgs	7.41	0.633	0.762	<2.00
WH01-B @ 6'	3/7/2024	6 ft. bgs	7.16	0.611	0.322	<2.00
WH01-N @ 4'	3/7/2024	4 ft. bgs	8.42	0.550	0.833	<2.00
FL01-01 @ 4'	3/8/2024	4 ft. bgs	7.90	0.337	0.315	<2.00
FL01-02 @ 4'	3/8/2024	4 ft. bgs	8.17	0.473	1.61	<2.00
FL01-03 @ 4'	3/8/2024	4 ft. bgs	7.75	0.521	4.67	<2.00
FL01-04 @ 5'	3/8/2024	5 ft. bgs	8.24	0.444	1.63	<2.00
FL01-05 @ 4'	3/8/2024	4 ft. bgs	8.08	0.127	0.412	<2.00

Notes:

1. Compounds referenced from the ECMC 2 CCR 404-1, Table 915-1, effective January 15, 2021.

ECMC = Colorado Energy & Carbon Management Commission

EC = Electrical conductivity

SAR = Sodium adsorption ratio

mmhos/cm = millimhos per centimeter

mg/L = milligram per liter

(<) = Analytical result is less than the indicated laboratory reporting limit.

ft. = Feet

bgs = Below ground surface

BOLD = Analytical result is in exceedance of applicable standard.

 = Source material characterization sample material, excavated and transported off-site for disposal

TABLE 3
PDC ENERGY, INC (69175)
FORMER BUNN 1-34 M WELLHEAD
SOIL ANALYTICAL RESULTS SUMMARY TABLE
ORGANIC COMPOUNDS - PAHs

Sample ID	Date Sampled	Depth	Acenaphthene (mg/kg)	Anthracene (mg/kg)	Benz(a) (mg/kg)	Benzo(a) (mg/kg)	Benzo(b) (mg/kg)	Benzo(k) (mg/kg)	Chrysene (mg/kg)	A,H (mg/kg)	Fluoranthene (mg/kg)	Fluorene (mg/kg)	1,2,3-CD (mg/kg)	Pyrene (mg/kg)	1-M (mg/kg)	2-M (mg/kg)
Residential SSL^(1,2)			360	1,800	1.1	0.11	1.1	11	110	0.11	240	240	1.1	180	18	24
Protection of Groundwater SSL^(1,2,3)			0.55	5.8	0.011	0.24	0.3	2.9	9	0.096	8.9	0.54	0.98	1.3	0.006	0.019
WC01 @ 4'	3/7/2024	4 ft. bgs	0.0456	0.00588	0.0158	<0.00500	<0.00500	<0.00500	0.00979	<0.00500	0.00914	0.109	<0.00500	0.0138	0.776⁽⁴⁾	1.16⁽⁴⁾
WH01-B @ 6'	3/7/2024	6 ft. bgs	<0.00500	<0.00500	0.0540	<0.00500	<0.00500	<0.00500	0.0233	<0.00500	0.0298	0.0624	<0.00500	<0.00500	0.110	0.0846
WH01-N @ 4'	3/7/2024	4 ft. bgs	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500
FL01-01 @ 4'	3/8/2024	4 ft. bgs	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500
FL01-02 @ 4'	3/8/2024	4 ft. bgs	<0.00500	<0.00500	0.00657	<0.00500	0.00538	<0.00500	0.00522	<0.00500	0.00814	<0.00500	<0.00500	0.0159	<0.00500	<0.00500
FL01-03 @ 4'	3/8/2024	4 ft. bgs	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500
FL01-04 @ 5'	3/8/2024	5 ft. bgs	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500
FL01-05 @ 4'	3/8/2024	4 ft. bgs	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500

Notes:

1. Compounds referenced from the ECMC 2 CCR 404-1, Table 915-1, effective January 15, 2021.
2. Soil Screening Levels (SSL) referenced from EPA Regional Screening Levels (EPA RSLs) for Chemical Contaminants at Superfund Sites, effective November 2020.
3. SSLs are applicable if a pathway for communication with groundwater is present.
4. The concentration indicated for this analyte is an estimated value above the calibration range of the instrument.

ECMC = Colorado Energy & Carbon Management Commission

(<) = Analytical result is less than the indicated laboratory reporting limit.

PAHs = Polycyclic aromatic hydrocarbons

Benz(a) = Benzanthracene

Benzo(a) = Benzopyrene

Benzo(b) = Benzofluoranthene

Benzo(k) = Benzofluoranthene

A,H = Dibenzoanthracene

1,2,3-CD = Indenopyrene

M = Methylnaphthalene

mg/kg = Milligrams per kilogram

ft. = Feet

bgs = Below ground surface

 = Source material characterization sample material, excavated and transported off-site for disposal

BOLD = Analytical result is in exceedance of applicable standard.

TABLE 4
PDC ENERGY, INC (69175)
FORMER BUNN 1-34 M WELLHEAD
SOIL ANALYTICAL RESULTS SUMMARY TABLE
METALS

Sample ID	Date Sampled	Depth	Arsenic (mg/kg)	Barium (mg/kg)	Cadmium (mg/kg)	Chromium (VI) (mg/kg)	Copper (mg/kg)	Lead (mg/kg)	Nickel (mg/kg)	Selenium (mg/kg)	Silver (mg/kg)	Zinc (mg/kg)
Residential SSL^(1,2)			0.68	15,000	71	0.3	3,100	400	1,500	390	390	23,000
Protection of Groundwater SSL^(1,2,3)			0.29	82	0.38	0.00067	46	14	26	0.26	0.8	370
WC01 @ 4'	3/7/2024	4 ft. bgs	2.93	131	0.334	<0.30 ⁽⁴⁾	8.02	12.9	7.13	0.494	0.0534	29.7
WH01-B @ 6'	3/7/2024	6 ft. bgs	1.28	34.8	<0.200	<0.30 ⁽⁴⁾	2.91	4.74	3.11	0.728	<0.0200	13.4
WH01-N @ 4'	3/7/2024	4 ft. bgs	3.57	94.2	0.261	<0.30 ⁽⁴⁾	6.43	10.3	6.98	0.292	0.0460	33.5
FL01-01 @ 4'	3/8/2024	4 ft. bgs	2.26	55.5	<0.200	<0.30 ⁽⁴⁾	6.35	18.2	4.69	<0.260	<0.0200	27.3
FL01-02 @ 4'	3/8/2024	4 ft. bgs	2.55	55.8	<0.200	<0.30 ⁽⁴⁾	4.51	6.07	4.57	<0.260	<0.0200	19.1
FL01-03 @ 4'	3/8/2024	4 ft. bgs	1.85	34.7	<0.200	<0.30 ⁽⁴⁾	2.76	2.73	3.83	<0.260	<0.0200	13.0
FL01-04 @ 5'	3/8/2024	5 ft. bgs	3.45	105	0.203	<0.30 ⁽⁴⁾	5.31	6.27	6.12	<0.260	0.0342	22.4
FL01-05 @ 4'	3/8/2024	4 ft. bgs	1.60	23.0	<0.200	<0.30 ⁽⁴⁾	2.38	2.32	3.28	<0.260	<0.0200	12.0
BKG01 @ 0.5'	3/8/2024	0.5 ft. bgs	3.50	94.1	0.225	<0.30 ⁽⁴⁾	5.82	8.91	6.53	0.265	0.0372	26.5
BKG01 @ 4'	3/8/2024	4 ft. bgs	0.845	22.1	<0.200	<0.30 ⁽⁴⁾	1.46	1.24	1.83	<0.260	<0.0200	5.87
BKG01 @ 5'	3/8/2024	5 ft. bgs	0.748	17.5	<0.200	<0.30 ⁽⁴⁾	1.27	1.33	1.80	<0.260	<0.0200	5.99
BKG01 @ 6'	3/8/2024	6 ft. bgs	0.694	11.5	<0.200	<0.30 ⁽⁴⁾	1.23	1.06	1.81	<0.260	<0.0200	5.41
BKG02 @ 0.5'	3/8/2024	0.5 ft. bgs	3.09	73.4	<0.200	<0.30 ⁽⁴⁾	4.92	6.09	5.65	<0.260	0.0292	19.4
BKG02 @ 4'	3/8/2024	4 ft. bgs	1.26	23.7	<0.200	<0.30 ⁽⁴⁾	2.25	2.19	2.82	<0.260	<0.0200	9.77
BKG02 @ 5'	3/8/2024	5 ft. bgs	1.16	21.4	<0.200	<0.30 ⁽⁴⁾	2.04	2.17	2.97	<0.260	<0.0200	9.16
BKG02 @ 6'	3/8/2024	6 ft. bgs	1.19	21.9	<0.200	<0.30 ⁽⁴⁾	2.15	1.92	2.92	<0.260	<0.0200	8.69
Mean Background Concentration⁽⁵⁾			1.56	35.7	0.203	0.30	2.64	3.11	3.29	0.261	0.0233	11.3
1.25x Mean Background Concentration			1.95	44.6	0.254	0.38	3.30	3.89	4.11	0.326	0.0291	14.2

Notes:

- Compounds referenced from the ECMC 2 CCR 404-1, Table 915-1, effective January 15, 2021.
- Soil Screening Levels (SSL) referenced from EPA Regional Screening Levels (EPA RSLs) for Chemical Contaminants at Superfund Sites, effective November 2020.
- SSLs are applicable if a pathway for communication with groundwater is present.
- Compound falls within ECMC Table 915-1 Footnote 9.
- Non-detect background results accounted for in the mean background concentration by using the reporting limit.

ECMC = Energy & Carbon Management Commission

(<) = Analytical result is less than the indicated laboratory reporting limit.

mg/kg = Milligrams per kilogram

 = Source material characterization sample material, excavated and transported off-site for disposal

ft. = Feet

bgs = Below ground surface

BOLD = Analytical result is in exceedance of applicable standard.

BOLD = Analytical result is in exceedance of applicable standard, but within 1.25x background concentration.

TABLE 5
PDC ENERGY, INC (69175)
FORMER BUNN M 1-34 WELLHEAD
FIELD DATA SUMMARY TABLE

Sample ID	Date Sampled	Depth	GPS Data ⁽¹⁾		PDOP Value	VOC Concentration ⁽²⁾ (ppm)
			Latitude	Longitude		
WH01-B @ 6'	3/7/2024	6 ft. bgs	40.442777	-104.757545	0.8	197
WH01-N @ 4'	3/7/2024	4 ft. bgs	40.442783	-104.757553	0.9	14.5
WH01-W @ 4'	3/7/2024	4 ft. bgs	40.442767	-104.757566	0.8	7.3
WH01-S @ 4'	3/7/2024	4 ft. bgs	40.442748	-104.757550	0.8	0.1
WH01-E @ 4'	3/7/2024	4 ft. bgs	40.442770	-104.757539	0.8	0.2
WHS01-N @ 0-6"	3/7/2024	0-6 in. bgs	40.442808	-104.757554	0.8	0.1
WHS01-W @ 0-6"	3/7/2024	0-6 in. bgs	40.442766	-104.757600	0.8	0.1
WHS01-S @ 0-6"	3/7/2024	0-6 in. bgs	40.442712	-104.757527	0.9	0.0
WHS01-E @ 0-6"	3/7/2024	0-6 in. bgs	40.442773	-104.757481	0.9	0.0
WC01 @ 4'	3/7/2024	4 ft. bgs	NC	NC	NC	398
FL01-01 @ 4'	3/8/2024	4 ft. bgs	40.442777	-104.757550	1.0	2.0
FL01-02 @ 4'	3/8/2024	4 ft. bgs	40.442647	-104.757491	NC	0.8
FL01-03 @ 4'	3/8/2024	4 ft. bgs	40.442324	-104.757503	1.4	0.9
FL01-04 @ 5'	3/8/2024	5 ft. bgs	40.442073	-104.757516	0.9	0.5
FL01-05 @ 4'	3/8/2024	4 ft. bgs	40.442052	-104.757320	1.0	0.2
BKG01 @ 0.5'	3/8/2024	0.5 ft. bgs	40.442817	-104.757666	1.1	0.3
BKG01 @ 4'	3/8/2024	4 ft. bgs	40.442817	-104.757666	1.1	0.5
BKG01 @ 5'	3/8/2024	5 ft. bgs	40.442817	-104.757666	1.1	0.9
BKG01 @ 6'	3/8/2024	6 ft. bgs	40.442817	-104.757666	1.1	0.7
BKG02 @ 0.5'	3/8/2024	0.5 ft. bgs	40.441612	-104.757251	0.8	0.3
BKG02 @ 4'	3/8/2024	4 ft. bgs	40.441612	-104.757251	0.8	0.5
BKG02 @ 5'	3/8/2024	5 ft. bgs	40.441612	-104.757251	0.8	0.8
BKG02 @ 6'	3/8/2024	6 ft. bgs	40.441612	-104.757251	0.8	0.1

Notes:

1. Global Positioning System (GPS) data is provided in decimal degrees using North American Datum 1983 (NAD83) UTM Zone 13 North.

2. Volatile organic compound (VOC) concentrations are measured in the field using a photoionization detector (PID).

PDOP = Position Dilution of Precision

ppm = Parts per million

ft. = Feet

in. = Inches

bgs = Below ground surface

NC = Data not collected

= Source material characterization sample material, excavated and transported off-site for disposal

Attachment A

Summit Scientific

4653 Table Mountain Drive, Golden, Colorado 80403

303.277.9310

April 09, 2024

Karen Olson

Tasman Geosciences

6855 W. 119th Ave.

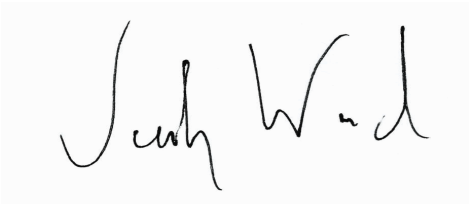
Broomfield, CO 80020

RE: PDC - Bunn M 1-34 Wellhead

Work Order #2403124

Enclosed are the results of analyses for samples received by Summit Scientific on 03/07/24 17:42. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

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

Jacob Wood For Paul Shrewsbury

President



Tasman Geosciences
6855 W. 119th Ave.
Broomfield CO, 80020

Project: PDC - Bunn M 1-34 Wellhead

Project Number: [none]
Project Manager: Karen Olson

Reported:
04/09/24 13:40

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
WH01-B@6'	2403124-01	Soil	03/07/24 12:00	03/07/24 17:42
WH01-N@4'	2403124-02	Soil	03/07/24 12:05	03/07/24 17:42
WC01@4'	2403124-06	Soil	03/07/24 11:00	03/07/24 17:42

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.



4653 Table Mountain Drive
Golden, CO 80403
303-277-9310

Lab ID	Page 1 of
2403124	

Client: PDC PDC / Tasman		Project Manager: Karen Olson		Company: PDC Energy	
Address: 6855 W 119th Ave		E-Mail: karen.olson@chevron.com		Project Name/Location:	
City/State/Zip: Broomfield / CO / 80220				AFE#:	
Phone: 303-487-1228		Project Name: ^{JH} Bunn M 1-34 Tank Battery Wellhead		PO/Billing Codes:	
Sampler Name: Jordan Hestmark		Project Number:		Contact: Karen Olson	

ID	Sample Description	Date Sampled	Time Sampled	# of containers	Preservative				Matrix		Air-Canister #	Analysis Requested								Special Instructions	
					HCl	HNO3	None	Other	Water	Soil		Other	BTEXN - 8260B	TPH - (C6 - C36)	1,2,4 & 1,3,5 - TMB	Boron - HWS	pH, EC, SAR	PAHs - 915	Metals - 915		TDS, SO4, CI
1	WH01-B @ 6'	3/7/24	1200	2			X			X		X	X	X	X	X	X	X			
2	WH01-N @ 4'		1205									X	X	X	X	X	X	X			
3	WH01-W @ 4'		1210																		X
4	WH01-S @ 4'		1215																		
5	WH01-E @ 4'		1220																		
6	WC01 @ 4'		1100																		
7																					
8																					
9																					
10																					
11																					
12																					
13																					
14																					
15																					

Relinquished by: Jordan Hestmark 3/7/24 1641	Received by: Tasman Lockbox 3/7/24 1641	TAT Business Days	Field DO	Notes: Base organics on same day, all other constituents on 48 hr turn
		Same Day <input checked="" type="checkbox"/>	Field EC	
Relinquished by: Tasman Lockbox 3/7/24 1742	Received by: [Signature] 3/7/24 1742	1 Day	Field ORP	
		2 Days	Field pH	
Relinquished by:	Received by:	3 Days	Field Temp.	
Temperature Upon Receipt: 9.9	Corrected Temperature: 8	Standard	Field Turb.	
		IR gun #: 1	HNO3 lot #:	

S₂

Sample Receipt Checklist

S2 Work Order# 2403124

Client: Proctorman Client Project ID: Bunn m 134 *Well head*

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

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

Temp (°C) 9.9 Thermometer # 1

	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 checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<i>and</i>
Are samples due within 48 hours present?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<i>Same day</i>
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 checked="" type="checkbox"/>	<input 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.

AS
Custodian Printed Name

3/7/24
Date/Time



Tasman Geosciences
6855 W. 119th Ave.
Broomfield CO, 80020

Project: PDC - Bunn M 1-34 Wellhead

Project Number: [none]
Project Manager: Karen Olson

Reported:
04/09/24 13:40

WH01-B@6'
2403124-01 (Soil)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **03/07/24 12:00**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Benzene	ND	0.0020		mg/kg	1	BHC0203	03/07/24	03/08/24	EPA 8260B	
Toluene	ND	0.0050		"	"	"	"	"	"	
Ethylbenzene	0.023	0.0050		"	"	"	"	"	"	
Xylenes (total)	0.68	0.010		"	"	"	"	"	"	
1,2,4-Trimethylbenzene	0.34	0.0050		"	"	"	"	"	"	
1,3,5-Trimethylbenzene	0.42	0.0050		"	"	"	"	"	"	
Naphthalene	ND	0.0038		"	"	"	"	"	"	
Gasoline Range Hydrocarbons	1100	5.0		"	10	"	"	"	"	

Date Sampled: **03/07/24 12:00**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Surrogate: 1,2-Dichloroethane-d4	0.0616	154 %		50-150		"	"	"	"	S-02
Surrogate: Toluene-d8	0.0394	98.6 %		50-150		"	"	"	"	
Surrogate: 4-Bromofluorobenzene	0.111	277 %		50-150		"	"	"	"	S-02

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **03/07/24 12:00**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
C10-C28 (DRO)	3400	50		mg/kg	1	BHC0201	03/07/24	03/08/24	EPA 8015M	
C28-C36 (ORO)	1100	50		"	"	"	"	"	"	

Date Sampled: **03/07/24 12:00**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Surrogate: o-Terphenyl	16.0	128 %		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.



Tasman Geosciences
6855 W. 119th Ave.
Broomfield CO, 80020

Project: PDC - Bunn M 1-34 Wellhead

Project Number: [none]
Project Manager: Karen Olson

Reported:
04/09/24 13:40

WH01-B@6'
2403124-01 (Soil)

Summit Scientific

PAH by EPA Method 8270D SIM

Date Sampled: **03/07/24 12:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Acenaphthene	ND	0.00500	mg/kg	1	BHC0212	03/08/24	03/09/24	EPA 8270D SIM	
Anthracene	ND	0.00500	"	"	"	"	"	"	
Benzo (a) anthracene	0.0540	0.00500	"	"	"	"	"	"	
Benzo (a) pyrene	ND	0.00500	"	"	"	"	"	"	
Benzo (b) fluoranthene	ND	0.00500	"	"	"	"	"	"	
Benzo (k) fluoranthene	ND	0.00500	"	"	"	"	"	"	
Chrysene	0.0233	0.00500	"	"	"	"	"	"	
Dibenz (a,h) anthracene	ND	0.00500	"	"	"	"	"	"	
Fluoranthene	0.0298	0.00500	"	"	"	"	"	"	
Fluorene	0.0624	0.00500	"	"	"	"	"	"	
Indeno (1,2,3-cd) pyrene	ND	0.00500	"	"	"	"	"	"	
Pyrene	ND	0.00500	"	"	"	"	"	"	
1-Methylnaphthalene	0.110	0.00500	"	"	"	"	"	"	
2-Methylnaphthalene	0.0846	0.00500	"	"	"	"	"	"	

Date Sampled: **03/07/24 12:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 2-Methylnaphthalene-d10	0.0184	55.2 %	40-150		"	"	"	"	
Surrogate: Fluoranthene-d10	0.0232	69.5 %	40-150		"	"	"	"	

Total Metals by EPA 6020B Hot Water Soluble Extraction

Date Sampled: **03/07/24 12:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Boron	ND	2.00	mg/L	1	BHC0452	03/15/24	03/22/24	EPA 6020B	

Total Metals by EPA 6020B

Date Sampled: **03/07/24 12:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
---------	--------	-----------------	-------	----------	-------	----------	----------	--------	-------

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.



Tasman Geosciences
6855 W. 119th Ave.
Broomfield CO, 80020

Project: PDC - Bunn M 1-34 Wellhead

Project Number: [none]
Project Manager: Karen Olson

Reported:
04/09/24 13:40

WH01-B@6'
2403124-01 (Soil)

Summit Scientific

Total Metals by EPA 6020B

Analyte	Result	Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Arsenic	1.28	0.200	mg/kg dry	1	BHC0576	03/16/24	03/22/24	EPA 6020B	
Barium	34.8	0.400	"	"	"	"	"	"	
Cadmium	ND	0.200	"	"	"	"	"	"	
Copper	2.91	0.400	"	"	"	"	"	"	
Lead	4.74	0.200	"	"	"	"	"	"	
Nickel	3.11	0.400	"	"	"	"	"	"	
Silver	ND	0.0200	"	"	"	"	"	"	
Zinc	13.4	0.400	"	"	"	"	"	"	
Selenium	0.728	0.260	"	"	"	"	"	"	

Hexavalent Chromium by EPA Method 7196

Date Sampled: **03/07/24 12:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Chromium, Hexavalent	ND	0.30	mg/kg dry	1	BHC0564	03/16/24	03/19/24	EPA 7196A	

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

Date Sampled: **03/07/24 12:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Calcium	59.7	0.0500	mg/L dry	1	BHC0590	03/17/24	03/22/24	EPA 6020B	
Magnesium	18.4	0.0500	"	"	"	"	"	"	
Sodium	11.1	0.0500	"	"	"	"	"	"	

Calculated Analysis

Date Sampled: **03/07/24 12:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	0.322	0.00100	units	1	BHC0875	03/22/24	03/22/24	Calculation	

Physical Parameters by APHA/ASTM/EPA Methods

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.



Tasman Geosciences
6855 W. 119th Ave.
Broomfield CO, 80020

Project: PDC - Bunn M 1-34 Wellhead

Project Number: [none]
Project Manager: Karen Olson

Reported:
04/09/24 13:40

WH01-B@6'
2403124-01 (Soil)

Summit Scientific

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **03/07/24 12:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
% Solids	91.3		%	1	BHC0418	03/14/24	03/16/24	Calculation	

Specific Conductance by EPA Method 120.1, Saturated Paste Extraction

Date Sampled: **03/07/24 12:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Specific Conductance (EC)	0.611	0.0100	mmhos/cm	1	BHC0591	03/17/24	03/20/24	EPA 120.1	

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

Date Sampled: **03/07/24 12:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
pH	7.16		pH Units	1	BHC0592	03/17/24	03/20/24	EPA 9045D	

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.



Tasman Geosciences
6855 W. 119th Ave.
Broomfield CO, 80020

Project: PDC - Bunn M 1-34 Wellhead

Project Number: [none]
Project Manager: Karen Olson

Reported:
04/09/24 13:40

WH01-N@4'
2403124-02 (Soil)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **03/07/24 12:05**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Benzene	ND	0.0020	mg/kg	1	BHC0203	03/07/24	03/08/24	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	"	"	"	"	03/08/24	"	
Naphthalene	ND	0.0038	"	"	"	"	03/08/24	"	
Gasoline Range Hydrocarbons	0.65	0.50	"	"	"	"	03/08/24	"	

Date Sampled: **03/07/24 12:05**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 1,2-Dichloroethane-d4	0.0352	88.1 %	50-150		"	"	03/08/24	"	
Surrogate: Toluene-d8	0.0453	113 %	50-150		"	"	"	"	
Surrogate: 4-Bromofluorobenzene	0.0470	118 %	50-150		"	"	"	"	

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **03/07/24 12:05**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
C10-C28 (DRO)	ND	50	mg/kg	1	BHC0201	03/07/24	03/08/24	EPA 8015M	
C28-C36 (ORO)	ND	50	"	"	"	"	"	"	

Date Sampled: **03/07/24 12:05**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: o-Terphenyl	11.5	91.7 %	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.



Tasman Geosciences
6855 W. 119th Ave.
Broomfield CO, 80020

Project: PDC - Bunn M 1-34 Wellhead

Project Number: [none]
Project Manager: Karen Olson

Reported:
04/09/24 13:40

WH01-N@4'
2403124-02 (Soil)

Summit Scientific

PAH by EPA Method 8270D SIM

Date Sampled: **03/07/24 12:05**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Acenaphthene	ND	0.00500	mg/kg	1	BHC0212	03/08/24	03/09/24	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: **03/07/24 12:05**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 2-Methylnaphthalene-d10	0.0143	42.9 %	40-150		"	"	"	"	
Surrogate: Fluoranthene-d10	0.0156	46.8 %	40-150		"	"	"	"	

Total Metals by EPA 6020B Hot Water Soluble Extraction

Date Sampled: **03/07/24 12:05**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Boron	ND	2.00	mg/L	1	BHC0452	03/15/24	03/22/24	EPA 6020B	

Total Metals by EPA 6020B

Date Sampled: **03/07/24 12:05**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
---------	--------	-----------------	-------	----------	-------	----------	----------	--------	-------

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.



Tasman Geosciences
6855 W. 119th Ave.
Broomfield CO, 80020

Project: PDC - Bunn M 1-34 Wellhead

Project Number: [none]
Project Manager: Karen Olson

Reported:
04/09/24 13:40

WH01-N@4'
2403124-02 (Soil)

Summit Scientific

Total Metals by EPA 6020B

Analyte	Result	Limit	Units	Dilution	Batch	Prepared	Analyzed	Method
Arsenic	3.57	0.200	mg/kg dry	1	BHC0576	03/16/24	03/22/24	EPA 6020B
Barium	94.2	0.400	"	"	"	"	"	"
Cadmium	0.261	0.200	"	"	"	"	"	"
Copper	6.43	0.400	"	"	"	"	"	"
Lead	10.3	0.200	"	"	"	"	"	"
Nickel	6.98	0.400	"	"	"	"	"	"
Silver	0.0460	0.0200	"	"	"	"	"	"
Zinc	33.5	0.400	"	"	"	"	"	"
Selenium	0.292	0.260	"	"	"	"	"	"

Hexavalent Chromium by EPA Method 7196

Date Sampled: **03/07/24 12:05**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Chromium, Hexavalent	ND	0.30	mg/kg dry	1	BHC0564	03/16/24	03/19/24	EPA 7196A	

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

Date Sampled: **03/07/24 12:05**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Calcium	22.2	0.0500	mg/L dry	1	BHC0590	03/17/24	03/22/24	EPA 6020B	
Magnesium	20.1	0.0500	"	"	"	"	"	"	
Sodium	22.5	0.0500	"	"	"	"	"	"	

Calculated Analysis

Date Sampled: **03/07/24 12:05**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	0.833	0.00100	units	1	BHC0875	03/22/24	03/22/24	Calculation	

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **03/07/24 12:05**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
---------	--------	-----------------	-------	----------	-------	----------	----------	--------	-------

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.



Tasman Geosciences
6855 W. 119th Ave.
Broomfield CO, 80020

Project: PDC - Bunn M 1-34 Wellhead

Project Number: [none]
Project Manager: Karen Olson

Reported:
04/09/24 13:40

WH01-N@4'
2403124-02 (Soil)

Summit Scientific

Physical Parameters by APHA/ASTM/EPA Methods

% Solids	81.7	%	1	BHC0418	03/14/24	03/16/24	Calculation
----------	------	---	---	---------	----------	----------	-------------

Specific Conductance by EPA Method 120.1, Saturated Paste Extraction

Date Sampled: **03/07/24 12:05**


Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Specific Conductance (EC)	0.550	0.0100	mmhos/cm	1	BHC0591	03/17/24	03/20/24	EPA 120.1	

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

Date Sampled: **03/07/24 12:05**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
pH	8.42		pH Units	1	BHC0592	03/17/24	03/20/24	EPA 9045D	

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.



Tasman Geosciences
6855 W. 119th Ave.
Broomfield CO, 80020

Project: PDC - Bunn M 1-34 Wellhead

Project Number: [none]
Project Manager: Karen Olson

Reported:
04/09/24 13:40

WC01@4'
2403124-06 (Soil)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **03/07/24 11:00**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Benzene	0.45	0.020		mg/kg	10	BHC0279	03/11/24	03/11/24	EPA 8260B	
Toluene	ND	0.050		"	"	"	"	"	"	R-05
Ethylbenzene	1.2	0.050		"	"	"	"	"	"	
Xylenes (total)	14	0.10		"	"	"	"	"	"	
1,2,4-Trimethylbenzene	9.3	0.050		"	"	"	"	"	"	E
1,3,5-Trimethylbenzene	5.8	0.050		"	"	"	"	"	"	
Naphthalene	1.8	0.038		"	"	"	"	"	"	
Gasoline Range Hydrocarbons	820	5.0		"	"	"	"	"	"	E

Date Sampled: **03/07/24 11:00**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
<i>Surrogate: 1,2-Dichloroethane-d4</i>	0.0381	95.3 %		50-150		"	"	"	"	
<i>Surrogate: Toluene-d8</i>	0.0926	231 %		50-150		"	"	"	"	S-02
<i>Surrogate: 4-Bromofluorobenzene</i>	0.118	296 %		50-150		"	"	"	"	S-02

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **03/07/24 11:00**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
C10-C28 (DRO)	1200	50		mg/kg	1	BHC0282	03/11/24	03/12/24	EPA 8015M	
C28-C36 (ORO)	270	50		"	"	"	"	"	"	

Date Sampled: **03/07/24 11:00**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
<i>Surrogate: o-Terphenyl</i>	6.25	50.0 %		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.



Tasman Geosciences
6855 W. 119th Ave.
Broomfield CO, 80020

Project: PDC - Bunn M 1-34 Wellhead

Project Number: [none]
Project Manager: Karen Olson

Reported:
04/09/24 13:40

WC01@4'
2403124-06 (Soil)

Summit Scientific

PAH by EPA Method 8270D SIM

Date Sampled: **03/07/24 11:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Acenaphthene	0.0456	0.00500	mg/kg	1	BHC0324	03/12/24	03/13/24	EPA 8270D SIM	
Anthracene	0.00588	0.00500	"	"	"	"	"	"	
Benzo (a) anthracene	0.0158	0.00500	"	"	"	"	"	"	
Benzo (a) pyrene	ND	0.00500	"	"	"	"	"	"	
Benzo (b) fluoranthene	ND	0.00500	"	"	"	"	"	"	
Benzo (k) fluoranthene	ND	0.00500	"	"	"	"	"	"	
Chrysene	0.00979	0.00500	"	"	"	"	"	"	
Dibenz (a,h) anthracene	ND	0.00500	"	"	"	"	"	"	
Fluoranthene	0.00914	0.00500	"	"	"	"	"	"	
Fluorene	0.109	0.00500	"	"	"	"	"	"	
Indeno (1,2,3-cd) pyrene	ND	0.00500	"	"	"	"	"	"	
Pyrene	0.0138	0.00500	"	"	"	"	"	"	
1-Methylnaphthalene	0.776	0.00500	"	"	"	"	"	"	E
2-Methylnaphthalene	1.16	0.00500	"	"	"	"	"	"	E

Date Sampled: **03/07/24 11:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 2-Methylnaphthalene-d10	0.00744	22.3 %	40-150		"	"	"	"	S-04
Surrogate: Fluoranthene-d10	0.00875	26.2 %	40-150		"	"	"	"	S-04

Total Metals by EPA 6020B Hot Water Soluble Extraction

Date Sampled: **03/07/24 11:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Boron	ND	2.00	mg/L	1	BHC0510	03/15/24	04/04/24	EPA 6020B	

Total Metals by EPA 6020B

Date Sampled: **03/07/24 11:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
---------	--------	-----------------	-------	----------	-------	----------	----------	--------	-------

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.



Tasman Geosciences
6855 W. 119th Ave.
Broomfield CO, 80020

Project: PDC - Bunn M 1-34 Wellhead

Project Number: [none]
Project Manager: Karen Olson

Reported:
04/09/24 13:40

WC01@4'
2403124-06 (Soil)

Summit Scientific

Total Metals by EPA 6020B

Analyte	Result	Limit	Units	Dilution	Batch	Prepared	Analyzed	Method
Arsenic	2.93	0.200	mg/kg dry	1	BHC0679	03/19/24	04/03/24	EPA 6020B
Barium	131	0.400	"	"	"	"	"	"
Cadmium	0.334	0.200	"	"	"	"	"	"
Copper	8.02	0.400	"	"	"	"	"	"
Lead	12.9	0.200	"	"	"	"	"	"
Nickel	7.13	0.400	"	"	"	"	"	"
Silver	0.0534	0.0200	"	"	"	"	"	"
Zinc	29.7	0.400	"	"	"	"	"	"
Selenium	0.494	0.260	"	"	"	"	"	"

Hexavalent Chromium by EPA Method 7196

Date Sampled: **03/07/24 11:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Chromium, Hexavalent	ND	0.30	mg/kg dry	1	BHC0610	03/18/24	03/20/24	EPA 7196A	

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

Date Sampled: **03/07/24 11:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Calcium	47.2	0.0500	mg/L dry	1	BHC0889	03/24/24	04/06/24	EPA 6020B	
Magnesium	18.9	0.0500	"	"	"	"	"	"	
Sodium	24.5	0.0500	"	"	"	"	"	"	

Calculated Analysis

Date Sampled: **03/07/24 11:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	0.762	0.00100	units	1	BHD0231	04/08/24	04/08/24	Calculation	

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **03/07/24 11:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
---------	--------	-----------------	-------	----------	-------	----------	----------	--------	-------

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.



Tasman Geosciences
6855 W. 119th Ave.
Broomfield CO, 80020

Project: PDC - Bunn M 1-34 Wellhead

Project Number: [none]
Project Manager: Karen Olson

Reported:
04/09/24 13:40

WC01@4'
2403124-06 (Soil)

Summit Scientific

Physical Parameters by APHA/ASTM/EPA Methods

% Solids	75.6	%	1	BHC0432	03/15/24	03/16/24	Calculation
----------	------	---	---	---------	----------	----------	-------------

Specific Conductance by EPA Method 120.1, Saturated Paste Extraction

Date Sampled: **03/07/24 11:00**


Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Specific Conductance (EC)	0.633	0.0100	mmhos/cm	1	BHC0890	03/24/24	03/26/24	EPA 120.1	

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

Date Sampled: **03/07/24 11:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
pH	7.41		pH Units	1	BHC0891	03/24/24	03/26/24	EPA 9045D	

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.



Tasman Geosciences
6855 W. 119th Ave.
Broomfield CO, 80020

Project: PDC - Bunn M 1-34 Wellhead

Project Number: [none]
Project Manager: Karen Olson

Reported:
04/09/24 13:40

Volatile Organic Compounds by EPA Method 8260B - Quality Control

Summit Scientific

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

Batch BHC0203 - EPA 5030 Soil MS

Blank (BHC0203-BLK1)

Prepared: 03/07/24 Analyzed: 03/08/24

Benzene	ND	0.0020	mg/kg							
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	"							
<i>Surrogate: 1,2-Dichloroethane-d4</i>	0.0342		"	0.0400		85.6	50-150			
<i>Surrogate: Toluene-d8</i>	0.0429		"	0.0400		107	50-150			
<i>Surrogate: 4-Bromofluorobenzene</i>	0.0436		"	0.0400		109	50-150			

LCS (BHC0203-BS1)

Prepared: 03/07/24 Analyzed: 03/08/24

Benzene	0.137	0.0020	mg/kg	0.100		137	70-130			QLCS-01
Toluene	0.126	0.0050	"	0.100		126	70-130			
Ethylbenzene	0.0969	0.0050	"	0.100		96.9	70-130			
m,p-Xylene	0.195	0.010	"	0.200		97.4	70-130			
o-Xylene	0.0970	0.0050	"	0.100		97.0	70-130			
1,2,4-Trimethylbenzene	0.102	0.0050	"	0.100		102	70-130			
1,3,5-Trimethylbenzene	0.0995	0.0050	"	0.100		99.5	70-130			
Naphthalene	0.113	0.0038	"	0.100		113	70-130			
<i>Surrogate: 1,2-Dichloroethane-d4</i>	0.0337		"	0.0400		84.2	50-150			
<i>Surrogate: Toluene-d8</i>	0.0446		"	0.0400		111	50-150			
<i>Surrogate: 4-Bromofluorobenzene</i>	0.0441		"	0.0400		110	50-150			

Matrix Spike (BHC0203-MS1)

Source: 2403119-01

Prepared: 03/07/24 Analyzed: 03/08/24

Benzene	0.123	0.0020	mg/kg	0.100	ND	123	70-130			
Toluene	0.113	0.0050	"	0.100	ND	113	70-130			
Ethylbenzene	0.0854	0.0050	"	0.100	ND	85.4	70-130			
m,p-Xylene	0.169	0.010	"	0.200	ND	84.7	70-130			
o-Xylene	0.0841	0.0050	"	0.100	ND	84.1	70-130			
1,2,4-Trimethylbenzene	0.0893	0.0050	"	0.100	ND	89.3	70-130			
1,3,5-Trimethylbenzene	0.0873	0.0050	"	0.100	ND	87.3	70-130			
Naphthalene	0.106	0.0038	"	0.100	ND	106	70-130			
<i>Surrogate: 1,2-Dichloroethane-d4</i>	0.0376		"	0.0400		94.1	50-150			
<i>Surrogate: Toluene-d8</i>	0.0454		"	0.0400		113	50-150			
<i>Surrogate: 4-Bromofluorobenzene</i>	0.0450		"	0.0400		112	50-150			

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.



Tasman Geosciences
6855 W. 119th Ave.
Broomfield CO, 80020

Project: PDC - Bunn M 1-34 Wellhead

Project Number: [none]
Project Manager: Karen Olson

Reported:
04/09/24 13:40

Volatile Organic Compounds by EPA Method 8260B - Quality Control

Summit Scientific

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

Batch BHC0203 - EPA 5030 Soil MS

Matrix Spike Dup (BHC0203-MSD1)	Source: 2403119-01			Prepared: 03/07/24 Analyzed: 03/08/24						
Benzene	0.129	0.0020	mg/kg	0.100	ND	129	70-130	4.77	30	
Toluene	0.120	0.0050	"	0.100	ND	120	70-130	5.50	30	
Ethylbenzene	0.0886	0.0050	"	0.100	ND	88.6	70-130	3.76	30	
m,p-Xylene	0.180	0.010	"	0.200	ND	89.8	70-130	5.81	30	
o-Xylene	0.0863	0.0050	"	0.100	ND	86.3	70-130	2.54	30	
1,2,4-Trimethylbenzene	0.0911	0.0050	"	0.100	ND	91.1	70-130	1.96	30	
1,3,5-Trimethylbenzene	0.0909	0.0050	"	0.100	ND	90.9	70-130	4.04	30	
Naphthalene	0.101	0.0038	"	0.100	ND	101	70-130	4.29	30	
<i>Surrogate: 1,2-Dichloroethane-d4</i>	<i>0.0385</i>		<i>"</i>	<i>0.0400</i>		<i>96.2</i>	<i>50-150</i>			
<i>Surrogate: Toluene-d8</i>	<i>0.0443</i>		<i>"</i>	<i>0.0400</i>		<i>111</i>	<i>50-150</i>			
<i>Surrogate: 4-Bromofluorobenzene</i>	<i>0.0426</i>		<i>"</i>	<i>0.0400</i>		<i>106</i>	<i>50-150</i>			

Batch BHC0279 - EPA 5030 Soil MS

Blank (BHC0279-BLK1)	Prepared & Analyzed: 03/11/24									
Benzene	ND	0.0020	mg/kg							
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	"							
<i>Surrogate: 1,2-Dichloroethane-d4</i>	<i>0.0393</i>		<i>"</i>	<i>0.0400</i>		<i>98.2</i>	<i>50-150</i>			
<i>Surrogate: Toluene-d8</i>	<i>0.0392</i>		<i>"</i>	<i>0.0400</i>		<i>97.9</i>	<i>50-150</i>			
<i>Surrogate: 4-Bromofluorobenzene</i>	<i>0.0400</i>		<i>"</i>	<i>0.0400</i>		<i>100</i>	<i>50-150</i>			

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.



Tasman Geosciences
6855 W. 119th Ave.
Broomfield CO, 80020

Project: PDC - Bunn M 1-34 Wellhead

Project Number: [none]
Project Manager: Karen Olson

Reported:
04/09/24 13:40

Volatile Organic Compounds by EPA Method 8260B - Quality Control

Summit Scientific

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

Batch BHC0279 - EPA 5030 Soil MS

LCS (BHC0279-BS1)

Prepared & Analyzed: 03/11/24

Benzene	0.110	0.0020	mg/kg	0.100		110	70-130			
Toluene	0.125	0.0050	"	0.100		125	70-130			
Ethylbenzene	0.127	0.0050	"	0.100		127	70-130			
m,p-Xylene	0.254	0.010	"	0.200		127	70-130			
o-Xylene	0.122	0.0050	"	0.100		122	70-130			
1,2,4-Trimethylbenzene	0.119	0.0050	"	0.100		119	70-130			
1,3,5-Trimethylbenzene	0.120	0.0050	"	0.100		120	70-130			
Naphthalene	0.119	0.0038	"	0.100		119	70-130			
Surrogate: 1,2-Dichloroethane-d4	0.0373		"	0.0400		93.2	50-150			
Surrogate: Toluene-d8	0.0392		"	0.0400		98.1	50-150			
Surrogate: 4-Bromofluorobenzene	0.0402		"	0.0400		100	50-150			

Matrix Spike (BHC0279-MS1)

Source: 2402113-13

Prepared & Analyzed: 03/11/24

Benzene	0.103	0.0020	mg/kg	0.100	ND	103	70-130			
Toluene	0.117	0.0050	"	0.100	ND	117	70-130			
Ethylbenzene	0.117	0.0050	"	0.100	ND	117	70-130			
m,p-Xylene	0.230	0.010	"	0.200	ND	115	70-130			
o-Xylene	0.111	0.0050	"	0.100	ND	111	70-130			
1,2,4-Trimethylbenzene	0.104	0.0050	"	0.100	ND	104	70-130			
1,3,5-Trimethylbenzene	0.106	0.0050	"	0.100	ND	106	70-130			
Naphthalene	0.105	0.0038	"	0.100	ND	105	70-130			
Surrogate: 1,2-Dichloroethane-d4	0.0366		"	0.0400		91.4	50-150			
Surrogate: Toluene-d8	0.0398		"	0.0400		99.5	50-150			
Surrogate: 4-Bromofluorobenzene	0.0404		"	0.0400		101	50-150			

Matrix Spike Dup (BHC0279-MSD1)

Source: 2402113-13

Prepared & Analyzed: 03/11/24

Benzene	0.109	0.0020	mg/kg	0.100	ND	109	70-130	5.18	30	
Toluene	0.125	0.0050	"	0.100	ND	125	70-130	6.36	30	
Ethylbenzene	0.132	0.0050	"	0.100	ND	132	70-130	11.9	30	QM-07
m,p-Xylene	0.256	0.010	"	0.200	ND	128	70-130	10.6	30	
o-Xylene	0.123	0.0050	"	0.100	ND	123	70-130	9.75	30	
1,2,4-Trimethylbenzene	0.113	0.0050	"	0.100	ND	113	70-130	7.68	30	
1,3,5-Trimethylbenzene	0.116	0.0050	"	0.100	ND	116	70-130	9.60	30	
Naphthalene	0.108	0.0038	"	0.100	ND	108	70-130	3.38	30	
Surrogate: 1,2-Dichloroethane-d4	0.0372		"	0.0400		93.0	50-150			
Surrogate: Toluene-d8	0.0387		"	0.0400		96.8	50-150			
Surrogate: 4-Bromofluorobenzene	0.0408		"	0.0400		102	50-150			

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.



Tasman Geosciences
6855 W. 119th Ave.
Broomfield CO, 80020

Project: PDC - Bunn M 1-34 Wellhead

Project Number: [none]
Project Manager: Karen Olson

Reported:
04/09/24 13:40

Extractable Petroleum Hydrocarbons by 8015 - Quality Control
Summit Scientific

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

Batch BHC0201 - EPA 3550A

Blank (BHC0201-BLK1)

Prepared: 03/07/24 Analyzed: 03/08/24

C10-C28 (DRO)	ND	50	mg/kg								
C28-C36 (ORO)	ND	50	"								
Surrogate: <i>o</i> -Terphenyl	11.5		"	12.5		92.4	30-150				

LCS (BHC0201-BS1)

Prepared: 03/07/24 Analyzed: 03/08/24

C10-C28 (DRO)	411	50	mg/kg	500		82.2	70-130				
Surrogate: <i>o</i> -Terphenyl	12.7		"	12.5		101	30-150				

Matrix Spike (BHC0201-MS1)

Source: 2403119-01

Prepared: 03/07/24 Analyzed: 03/08/24

C10-C28 (DRO)	368	50	mg/kg	500	22.4	69.2	70-130				QM-07
Surrogate: <i>o</i> -Terphenyl	11.9		"	12.5		95.1	30-150				

Matrix Spike Dup (BHC0201-MSD1)

Source: 2403119-01

Prepared: 03/07/24 Analyzed: 03/08/24

C10-C28 (DRO)	404	50	mg/kg	500	22.4	76.3	70-130	9.25	20		
Surrogate: <i>o</i> -Terphenyl	11.7		"	12.5		93.3	30-150				

Batch BHC0282 - EPA 3550A

Blank (BHC0282-BLK1)

Prepared: 03/11/24 Analyzed: 03/12/24

C10-C28 (DRO)	ND	50	mg/kg								
C28-C36 (ORO)	ND	50	"								
Surrogate: <i>o</i> -Terphenyl	7.04		"	12.5		56.3	30-150				

LCS (BHC0282-BS1)

Prepared: 03/11/24 Analyzed: 03/12/24

C10-C28 (DRO)	379	50	mg/kg	500		75.9	70-130				
Surrogate: <i>o</i> -Terphenyl	7.48		"	12.5		59.8	30-150				

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.



Tasman Geosciences
6855 W. 119th Ave.
Broomfield CO, 80020

Project: PDC - Bunn M 1-34 Wellhead

Project Number: [none]
Project Manager: Karen Olson

Reported:
04/09/24 13:40

Extractable Petroleum Hydrocarbons by 8015 - Quality Control
Summit Scientific

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

Batch BHC0282 - EPA 3550A

Matrix Spike (BHC0282-MS1)

Source: 2402113-13

Prepared: 03/11/24 Analyzed: 03/12/24

C10-C28 (DRO)	367	50	mg/kg	500	9.85	71.4	70-130			
Surrogate: <i>o</i> -Terphenyl	4.74		"	12.5		37.9	30-150			

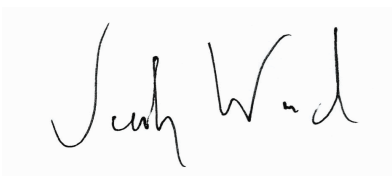
Matrix Spike Dup (BHC0282-MSD1)

Source: 2402113-13

Prepared: 03/11/24 Analyzed: 03/12/24

C10-C28 (DRO)	383	50	mg/kg	500	9.85	74.5	70-130	4.23	20	
Surrogate: <i>o</i> -Terphenyl	4.93		"	12.5		39.4	30-150			

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.



Tasman Geosciences
6855 W. 119th Ave.
Broomfield CO, 80020

Project: PDC - Bunn M 1-34 Wellhead

Project Number: [none]
Project Manager: Karen Olson

Reported:
04/09/24 13:40

PAH by EPA Method 8270D SIM - Quality Control

Summit Scientific

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

Batch BHC0212 - EPA 5030 Soil MS

Blank (BHC0212-BLK1)

Prepared: 03/08/24 Analyzed: 03/09/24

Acenaphthene	ND	0.00500	mg/kg							
Anthracene	ND	0.00500	"							
Benzo (a) anthracene	ND	0.00500	"							
Benzo (a) pyrene	ND	0.00500	"							
Benzo (b) fluoranthene	ND	0.00500	"							
Benzo (k) fluoranthene	ND	0.00500	"							
Chrysene	ND	0.00500	"							
Dibenz (a,h) anthracene	ND	0.00500	"							
Fluoranthene	ND	0.00500	"							
Fluorene	ND	0.00500	"							
Indeno (1,2,3-cd) pyrene	ND	0.00500	"							
Pyrene	ND	0.00500	"							
1-Methylnaphthalene	ND	0.00500	"							
2-Methylnaphthalene	ND	0.00500	"							
<i>Surrogate: 2-Methylnaphthalene-d10</i>	<i>0.0387</i>		"	<i>0.0333</i>		<i>116</i>		<i>40-150</i>		
<i>Surrogate: Fluoranthene-d10</i>	<i>0.0361</i>		"	<i>0.0333</i>		<i>108</i>		<i>40-150</i>		

LCS (BHC0212-BS1)

Prepared: 03/08/24 Analyzed: 03/09/24

Acenaphthene	0.0347	0.00500	mg/kg	0.0333	104	31-137
Anthracene	0.0344	0.00500	"	0.0333	103	30-120
Benzo (a) anthracene	0.0329	0.00500	"	0.0333	98.6	30-120
Benzo (a) pyrene	0.0294	0.00500	"	0.0333	88.2	30-120
Benzo (b) fluoranthene	0.0288	0.00500	"	0.0333	86.3	30-120
Benzo (k) fluoranthene	0.0349	0.00500	"	0.0333	105	30-120
Chrysene	0.0361	0.00500	"	0.0333	108	30-120
Dibenz (a,h) anthracene	0.0298	0.00500	"	0.0333	89.4	30-120
Fluoranthene	0.0331	0.00500	"	0.0333	99.3	30-120
Fluorene	0.0351	0.00500	"	0.0333	105	30-120
Indeno (1,2,3-cd) pyrene	0.0301	0.00500	"	0.0333	90.2	30-120
Pyrene	0.0406	0.00500	"	0.0333	122	35-142
1-Methylnaphthalene	0.0316	0.00500	"	0.0333	94.7	35-142
2-Methylnaphthalene	0.0160	0.00500	"	0.0333	47.9	35-142
<i>Surrogate: 2-Methylnaphthalene-d10</i>	<i>0.0317</i>		"	<i>0.0333</i>	<i>95.1</i>	<i>40-150</i>
<i>Surrogate: Fluoranthene-d10</i>	<i>0.0339</i>		"	<i>0.0333</i>	<i>102</i>	<i>40-150</i>

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.



Tasman Geosciences
6855 W. 119th Ave.
Broomfield CO, 80020

Project: PDC - Bunn M 1-34 Wellhead

Project Number: [none]
Project Manager: Karen Olson

Reported:
04/09/24 13:40

PAH by EPA Method 8270D SIM - Quality Control

Summit Scientific

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

Batch BHC0212 - EPA 5030 Soil MS

Matrix Spike (BHC0212-MS1)	Source: 2403113-01			Prepared: 03/08/24 Analyzed: 03/09/24						
Acenaphthene	0.0249	0.00500	mg/kg	0.0333	ND	74.7	31-137			
Anthracene	0.0189	0.00500	"	0.0333	ND	56.6	30-120			
Benzo (a) anthracene	0.0213	0.00500	"	0.0333	ND	64.0	30-120			
Benzo (a) pyrene	0.0184	0.00500	"	0.0333	ND	55.1	30-120			
Benzo (b) fluoranthene	0.0149	0.00500	"	0.0333	ND	44.6	30-120			
Benzo (k) fluoranthene	0.0156	0.00500	"	0.0333	ND	46.7	30-120			
Chrysene	0.0246	0.00500	"	0.0333	ND	73.8	30-120			
Dibenz (a,h) anthracene	0.0293	0.00500	"	0.0333	ND	88.0	30-120			
Fluoranthene	0.0217	0.00500	"	0.0333	ND	65.0	30-120			
Fluorene	0.0250	0.00500	"	0.0333	ND	75.1	30-120			
Indeno (1,2,3-cd) pyrene	0.0283	0.00500	"	0.0333	ND	85.0	30-120			
Pyrene	0.0227	0.00500	"	0.0333	ND	68.1	35-142			
1-Methylnaphthalene	0.0208	0.00500	"	0.0333	ND	62.4	15-130			
2-Methylnaphthalene	0.0317	0.00500	"	0.0333	ND	95.0	15-130			
<i>Surrogate: 2-Methylnaphthalene-d10</i>	<i>0.0164</i>		<i>"</i>	<i>0.0333</i>		<i>49.3</i>	<i>40-150</i>			
<i>Surrogate: Fluoranthene-d10</i>	<i>0.0228</i>		<i>"</i>	<i>0.0333</i>		<i>68.4</i>	<i>40-150</i>			

Matrix Spike Dup (BHC0212-MSD1)	Source: 2403113-01			Prepared: 03/08/24 Analyzed: 03/09/24						
Acenaphthene	0.0148	0.00500	mg/kg	0.0333	ND	44.4	31-137	51.0	30	QR-02
Anthracene	0.0159	0.00500	"	0.0333	ND	47.8	30-120	16.8	30	
Benzo (a) anthracene	0.0170	0.00500	"	0.0333	ND	51.1	30-120	22.4	30	
Benzo (a) pyrene	0.0157	0.00500	"	0.0333	ND	47.0	30-120	15.8	30	
Benzo (b) fluoranthene	0.0133	0.00500	"	0.0333	ND	40.0	30-120	10.9	30	
Benzo (k) fluoranthene	0.0160	0.00500	"	0.0333	ND	48.0	30-120	2.75	30	
Chrysene	0.0142	0.00500	"	0.0333	ND	42.7	30-120	53.5	30	QR-02
Dibenz (a,h) anthracene	0.0231	0.00500	"	0.0333	ND	69.2	30-120	24.0	30	
Fluoranthene	0.0142	0.00500	"	0.0333	ND	42.6	30-120	41.7	30	QR-02
Fluorene	0.0147	0.00500	"	0.0333	ND	44.2	30-120	51.8	30	QR-02
Indeno (1,2,3-cd) pyrene	0.0231	0.00500	"	0.0333	ND	69.3	30-120	20.3	30	
Pyrene	0.0144	0.00500	"	0.0333	ND	43.2	35-142	44.8	30	QR-02
1-Methylnaphthalene	0.0164	0.00500	"	0.0333	ND	49.1	15-130	23.7	50	
2-Methylnaphthalene	0.0233	0.00500	"	0.0333	ND	70.0	15-130	30.2	50	
<i>Surrogate: 2-Methylnaphthalene-d10</i>	<i>0.0136</i>		<i>"</i>	<i>0.0333</i>		<i>40.7</i>	<i>40-150</i>			
<i>Surrogate: Fluoranthene-d10</i>	<i>0.0145</i>		<i>"</i>	<i>0.0333</i>		<i>43.6</i>	<i>40-150</i>			

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.



Tasman Geosciences
6855 W. 119th Ave.
Broomfield CO, 80020

Project: PDC - Bunn M 1-34 Wellhead

Project Number: [none]
Project Manager: Karen Olson

Reported:
04/09/24 13:40

PAH by EPA Method 8270D SIM - Quality Control

Summit Scientific

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

Batch BHC0324 - EPA 5030 Soil MS

Blank (BHC0324-BLK1)

Prepared: 03/12/24 Analyzed: 03/13/24

Acenaphthene	ND	0.00500	mg/kg							
Anthracene	ND	0.00500	"							
Benzo (a) anthracene	ND	0.00500	"							
Benzo (a) pyrene	ND	0.00500	"							
Benzo (b) fluoranthene	ND	0.00500	"							
Benzo (k) fluoranthene	ND	0.00500	"							
Chrysene	ND	0.00500	"							
Dibenz (a,h) anthracene	ND	0.00500	"							
Fluoranthene	ND	0.00500	"							
Fluorene	ND	0.00500	"							
Indeno (1,2,3-cd) pyrene	ND	0.00500	"							
Pyrene	ND	0.00500	"							
1-Methylnaphthalene	ND	0.00500	"							
2-Methylnaphthalene	ND	0.00500	"							
<i>Surrogate: 2-Methylnaphthalene-d10</i>	<i>0.0415</i>		"	<i>0.0333</i>		<i>125</i>		<i>40-150</i>		
<i>Surrogate: Fluoranthene-d10</i>	<i>0.0211</i>		"	<i>0.0333</i>		<i>63.3</i>		<i>40-150</i>		

LCS (BHC0324-BS1)

Prepared: 03/12/24 Analyzed: 03/13/24

Acenaphthene	0.0277	0.00500	mg/kg	0.0333		83.1		31-137		
Anthracene	0.0284	0.00500	"	0.0333		85.2		30-120		
Benzo (a) anthracene	0.0264	0.00500	"	0.0333		79.1		30-120		
Benzo (a) pyrene	0.0255	0.00500	"	0.0333		76.4		30-120		
Benzo (b) fluoranthene	0.0209	0.00500	"	0.0333		62.8		30-120		
Benzo (k) fluoranthene	0.0227	0.00500	"	0.0333		68.1		30-120		
Chrysene	0.0294	0.00500	"	0.0333		88.3		30-120		
Dibenz (a,h) anthracene	0.0383	0.00500	"	0.0333		115		30-120		
Fluoranthene	0.0240	0.00500	"	0.0333		72.0		30-120		
Fluorene	0.0271	0.00500	"	0.0333		81.4		30-120		
Indeno (1,2,3-cd) pyrene	0.0338	0.00500	"	0.0333		102		30-120		
Pyrene	0.0378	0.00500	"	0.0333		113		35-142		
1-Methylnaphthalene	0.0414	0.00500	"	0.0333		124		35-142		
2-Methylnaphthalene	0.0175	0.00500	"	0.0333		52.4		35-142		
<i>Surrogate: 2-Methylnaphthalene-d10</i>	<i>0.0362</i>		"	<i>0.0333</i>		<i>109</i>		<i>40-150</i>		
<i>Surrogate: Fluoranthene-d10</i>	<i>0.0243</i>		"	<i>0.0333</i>		<i>73.0</i>		<i>40-150</i>		

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.



Tasman Geosciences
6855 W. 119th Ave.
Broomfield CO, 80020

Project: PDC - Bunn M 1-34 Wellhead

Project Number: [none]
Project Manager: Karen Olson

Reported:
04/09/24 13:40

PAH by EPA Method 8270D SIM - Quality Control

Summit Scientific

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

Batch BHC0324 - EPA 5030 Soil MS

Matrix Spike (BHC0324-MS1)

Source: 2403132-01

Prepared: 03/12/24 Analyzed: 03/13/24

Acenaphthene	0.0155	0.00500	mg/kg	0.0333	ND	46.4	31-137			
Anthracene	0.0150	0.00500	"	0.0333	ND	45.0	30-120			
Benzo (a) anthracene	0.0147	0.00500	"	0.0333	ND	44.0	30-120			
Benzo (a) pyrene	0.0224	0.00500	"	0.0333	ND	67.2	30-120			
Benzo (b) fluoranthene	0.0178	0.00500	"	0.0333	ND	53.4	30-120			
Benzo (k) fluoranthene	0.0167	0.00500	"	0.0333	ND	50.1	30-120			
Chrysene	0.0159	0.00500	"	0.0333	ND	47.6	30-120			
Dibenz (a,h) anthracene	0.0342	0.00500	"	0.0333	ND	103	30-120			
Fluoranthene	0.0137	0.00500	"	0.0333	ND	41.0	30-120			
Fluorene	0.0154	0.00500	"	0.0333	ND	46.3	30-120			
Indeno (1,2,3-cd) pyrene	0.0382	0.00500	"	0.0333	ND	114	30-120			
Pyrene	0.0271	0.00500	"	0.0333	ND	81.2	35-142			
1-Methylnaphthalene	0.0276	0.00500	"	0.0333	ND	82.9	15-130			
2-Methylnaphthalene	0.0306	0.00500	"	0.0333	ND	91.8	15-130			
Surrogate: 2-Methylnaphthalene-d10	0.0212		"	0.0333		63.6	40-150			
Surrogate: Fluoranthene-d10	0.0140		"	0.0333		42.1	40-150			

Matrix Spike Dup (BHC0324-MSD1)

Source: 2403132-01

Prepared: 03/12/24 Analyzed: 03/13/24

Acenaphthene	0.0171	0.00500	mg/kg	0.0333	ND	51.3	31-137	10.1	30
Anthracene	0.0157	0.00500	"	0.0333	ND	47.0	30-120	4.22	30
Benzo (a) anthracene	0.0185	0.00500	"	0.0333	ND	55.4	30-120	22.9	30
Benzo (a) pyrene	0.0246	0.00500	"	0.0333	ND	73.9	30-120	9.53	30
Benzo (b) fluoranthene	0.0208	0.00500	"	0.0333	ND	62.5	30-120	15.7	30
Benzo (k) fluoranthene	0.0141	0.00500	"	0.0333	ND	42.3	30-120	16.8	30
Chrysene	0.0143	0.00500	"	0.0333	ND	42.9	30-120	10.3	30
Dibenz (a,h) anthracene	0.0357	0.00500	"	0.0333	ND	107	30-120	4.07	30
Fluoranthene	0.0165	0.00500	"	0.0333	ND	49.6	30-120	19.0	30
Fluorene	0.0134	0.00500	"	0.0333	ND	40.2	30-120	14.2	30
Indeno (1,2,3-cd) pyrene	0.0334	0.00500	"	0.0333	ND	100	30-120	13.3	30
Pyrene	0.0243	0.00500	"	0.0333	ND	73.0	35-142	10.6	30
1-Methylnaphthalene	0.0250	0.00500	"	0.0333	ND	75.0	15-130	9.99	50
2-Methylnaphthalene	0.0249	0.00500	"	0.0333	ND	74.7	15-130	20.6	50
Surrogate: 2-Methylnaphthalene-d10	0.0189		"	0.0333		56.8	40-150		
Surrogate: Fluoranthene-d10	0.0133		"	0.0333		40.0	40-150		

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.



Tasman Geosciences
6855 W. 119th Ave.
Broomfield CO, 80020

Project: PDC - Bunn M 1-34 Wellhead

Project Number: [none]
Project Manager: Karen Olson

Reported:
04/09/24 13:40

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

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

Batch BHC0452 - EPA 3050B

Blank (BHC0452-BLK1)		Prepared: 03/15/24 Analyzed: 03/22/24								
Boron	ND	2.00	mg/L							
LCS (BHC0452-BS1)		Prepared: 03/15/24 Analyzed: 03/22/24								
Boron	4.37	2.00	mg/L	5.00		87.4	80-120			
Duplicate (BHC0452-DUP1)		Source: 2403061-01		Prepared: 03/15/24 Analyzed: 03/22/24						
Boron	0.151	2.00	mg/L		0.170			11.7	20	
Matrix Spike (BHC0452-MS1)		Source: 2403061-01		Prepared: 03/15/24 Analyzed: 03/22/24						
Boron	4.40	2.00	mg/L	5.00	0.170	84.6	75-125			
Matrix Spike Dup (BHC0452-MSD1)		Source: 2403061-01		Prepared: 03/15/24 Analyzed: 03/22/24						
Boron	4.37	2.00	mg/L	5.00	0.170	84.1	75-125	0.591	25	

Batch BHC0510 - EPA 3050B

Blank (BHC0510-BLK1)		Prepared: 03/15/24 Analyzed: 04/04/24								
Boron	ND	2.00	mg/L							
LCS (BHC0510-BS1)		Prepared: 03/15/24 Analyzed: 04/04/24								
Boron	4.91	2.00	mg/L	5.00		98.2	80-120			
Duplicate (BHC0510-DUP1)		Source: 2403124-06		Prepared: 03/15/24 Analyzed: 04/04/24						
Boron	1.71	2.00	mg/L		1.69			1.39	20	
Matrix Spike (BHC0510-MS1)		Source: 2403124-06		Prepared: 03/15/24 Analyzed: 04/04/24						
Boron	5.96	2.00	mg/L	5.00	1.69	85.3	75-125			

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.



Tasman Geosciences
6855 W. 119th Ave.
Broomfield CO, 80020

Project: PDC - Bunn M 1-34 Wellhead

Project Number: [none]
Project Manager: Karen Olson

Reported:
04/09/24 13:40

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

Summit Scientific

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

Batch BHC0510 - EPA 3050B


Matrix Spike Dup (BHC0510-MSD1)

Source: 2403124-06

Prepared: 03/15/24 Analyzed: 04/04/24

Boron	6.07	2.00	mg/L	5.00	1.69	87.6	75-125	1.96	25	
-------	------	------	------	------	------	------	--------	------	----	--

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.



Tasman Geosciences
6855 W. 119th Ave.
Broomfield CO, 80020

Project: PDC - Bunn M 1-34 Wellhead

Project Number: [none]
Project Manager: Karen Olson

Reported:
04/09/24 13:40

Total Metals by EPA 6020B - Quality Control
Summit Scientific

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

Batch BHC0576 - EPA 3050B

Blank (BHC0576-BLK1)

Prepared: 03/16/24 Analyzed: 03/22/24

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	"						
Silver	ND	0.0200	"						
Zinc	ND	0.400	"						
Selenium	ND	0.260	"						

LCS (BHC0576-BS1)

Prepared: 03/16/24 Analyzed: 03/22/24

Arsenic	40.4	0.200	mg/kg wet	40.0	101	80-120
Barium	40.7	0.400	"	40.0	102	80-120
Cadmium	2.00	0.200	"	2.00	100	80-120
Copper	41.1	0.400	"	40.0	103	80-120
Lead	20.0	0.200	"	20.0	100	80-120
Nickel	40.7	0.400	"	40.0	102	80-120
Silver	2.02	0.0200	"	2.00	101	80-120
Zinc	41.3	0.400	"	40.0	103	80-120
Selenium	4.49	0.260	"	4.00	112	80-120

Duplicate (BHC0576-DUP1)

Source: 2403057-01

Prepared: 03/16/24 Analyzed: 03/22/24

Arsenic	5.33	0.200	mg/kg dry	5.29	0.830	20
Barium	153	0.400	"	162	5.48	20
Cadmium	0.300	0.200	"	0.306	1.99	20
Copper	6.00	0.400	"	5.89	1.93	20
Lead	9.59	0.200	"	9.30	3.08	20
Nickel	7.57	0.400	"	7.34	3.09	20
Silver	0.0488	0.0200	"	0.0463	5.45	20
Zinc	24.0	0.400	"	22.9	4.84	20
Selenium	ND	0.260	"	ND		20

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.



Tasman Geosciences
6855 W. 119th Ave.
Broomfield CO, 80020

Project: PDC - Bunn M 1-34 Wellhead

Project Number: [none]
Project Manager: Karen Olson

Reported:
04/09/24 13:40

Total Metals by EPA 6020B - Quality Control
Summit Scientific

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

Batch BHC0576 - EPA 3050B

Matrix Spike (BHC0576-MS1)

Source: 2403057-01

Prepared: 03/16/24 Analyzed: 03/22/24

Arsenic	47.9	0.200	mg/kg dry	43.2	5.29	98.5	75-125			
Barium	199	0.400	"	43.2	162	86.6	75-125			
Cadmium	2.55	0.200	"	2.16	0.306	104	75-125			
Copper	26.7	0.400	"	43.2	5.89	48.2	75-125			QM-07
Lead	30.6	0.200	"	21.6	9.30	98.4	75-125			
Nickel	28.8	0.400	"	43.2	7.34	49.6	75-125			QM-07
Silver	2.21	0.0200	"	2.16	0.0463	100	75-125			
Zinc	45.3	0.400	"	43.2	22.9	51.8	75-125			QM-07
Selenium	4.27	0.260	"	4.32	ND	98.8	75-125			

Matrix Spike Dup (BHC0576-MSD1)

Source: 2403057-01

Prepared: 03/16/24 Analyzed: 03/22/24

Arsenic	46.7	0.200	mg/kg dry	43.2	5.29	95.8	75-125	2.52	25	
Barium	196	0.400	"	43.2	162	78.8	75-125	1.70	25	
Cadmium	2.45	0.200	"	2.16	0.306	99.3	75-125	3.68	25	
Copper	25.9	0.400	"	43.2	5.89	46.2	75-125	3.20	25	QM-07
Lead	29.9	0.200	"	21.6	9.30	95.5	75-125	2.05	25	
Nickel	27.7	0.400	"	43.2	7.34	47.1	75-125	3.78	25	QM-07
Silver	2.17	0.0200	"	2.16	0.0463	98.4	75-125	1.83	25	
Zinc	45.1	0.400	"	43.2	22.9	51.3	75-125	0.437	25	QM-07
Selenium	4.30	0.260	"	4.32	ND	99.4	75-125	0.565	25	

Batch BHC0679 - EPA 3050B

Blank (BHC0679-BLK1)

Prepared: 03/19/24 Analyzed: 04/03/24

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	"							
Silver	ND	0.0200	"							
Zinc	ND	0.400	"							
Selenium	ND	0.260	"							

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.



Tasman Geosciences
6855 W. 119th Ave.
Broomfield CO, 80020

Project: PDC - Bunn M 1-34 Wellhead

Project Number: [none]
Project Manager: Karen Olson

Reported:
04/09/24 13:40

Total Metals by EPA 6020B - Quality Control
Summit Scientific

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

Batch BHC0679 - EPA 3050B

LCS (BHC0679-BS1)

Prepared: 03/19/24 Analyzed: 04/03/24

Arsenic	37.4	0.200	mg/kg wet	40.0		93.5	80-120			
Barium	39.0	0.400	"	40.0		97.4	80-120			
Cadmium	1.92	0.200	"	2.00		96.1	80-120			
Copper	41.2	0.400	"	40.0		103	80-120			
Lead	19.2	0.200	"	20.0		95.9	80-120			
Nickel	40.9	0.400	"	40.0		102	80-120			
Silver	1.92	0.0200	"	2.00		96.1	80-120			
Zinc	41.1	0.400	"	40.0		103	80-120			
Selenium	3.94	0.260	"	4.00		98.4	80-120			

Duplicate (BHC0679-DUP1)

Source: 2402113-13

Prepared: 03/19/24 Analyzed: 04/03/24

Arsenic	1.45	0.200	mg/kg dry		1.58			8.53	20
Barium	32.7	0.400	"		33.1			1.26	20
Cadmium	0.113	0.200	"		0.113			0.744	20
Copper	2.56	0.400	"		2.66			3.88	20
Lead	3.69	0.200	"		3.92			6.00	20
Nickel	2.35	0.400	"		2.47			5.09	20
Silver	0.0130	0.0200	"		0.0139			6.25	20
Zinc	10.5	0.400	"		10.8			3.40	20
Selenium	ND	0.260	"		ND				20

Matrix Spike (BHC0679-MS1)

Source: 2402113-13

Prepared: 03/19/24 Analyzed: 04/03/24

Arsenic	41.2	0.200	mg/kg dry	42.0	1.58	94.3	75-125		
Barium	82.3	0.400	"	42.0	33.1	117	75-125		
Cadmium	2.18	0.200	"	2.10	0.113	98.6	75-125		
Copper	34.6	0.400	"	42.0	2.66	76.1	75-125		
Lead	24.0	0.200	"	21.0	3.92	95.7	75-125		
Nickel	34.4	0.400	"	42.0	2.47	76.0	75-125		
Silver	2.00	0.0200	"	2.10	0.0139	94.4	75-125		
Zinc	44.1	0.400	"	42.0	10.8	79.2	75-125		
Selenium	3.65	0.260	"	4.20	ND	86.9	75-125		

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.



Tasman Geosciences
6855 W. 119th Ave.
Broomfield CO, 80020

Project: PDC - Bunn M 1-34 Wellhead

Project Number: [none]
Project Manager: Karen Olson

Reported:
04/09/24 13:40


Total Metals by EPA 6020B - Quality Control
Summit Scientific

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

Batch BHC0679 - EPA 3050B

Matrix Spike Dup (BHC0679-MSD1)	Source: 2402113-13			Prepared: 03/19/24 Analyzed: 04/03/24						
Arsenic	40.9	0.200	mg/kg dry	42.0	1.58	93.6	75-125	0.752	25	
Barium	82.4	0.400	"	42.0	33.1	117	75-125	0.207	25	
Cadmium	2.19	0.200	"	2.10	0.113	98.9	75-125	0.269	25	
Copper	34.9	0.400	"	42.0	2.66	76.8	75-125	0.800	25	
Lead	24.3	0.200	"	21.0	3.92	96.8	75-125	0.985	25	
Nickel	34.9	0.400	"	42.0	2.47	77.1	75-125	1.41	25	
Silver	2.00	0.0200	"	2.10	0.0139	94.4	75-125	0.00	25	
Zinc	44.5	0.400	"	42.0	10.8	80.2	75-125	0.947	25	
Selenium	3.63	0.260	"	4.20	ND	86.3	75-125	0.681	25	

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.



Tasman Geosciences
6855 W. 119th Ave.
Broomfield CO, 80020

Project: PDC - Bunn M 1-34 Wellhead

Project Number: [none]
Project Manager: Karen Olson

Reported:
04/09/24 13:40

Hexavalent Chromium by EPA Method 7196 - Quality Control
Summit Scientific

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

Batch BHC0564 - 3060A Mod

Blank (BHC0564-BLK1)											
Prepared: 03/16/24 Analyzed: 03/19/24											
Chromium, Hexavalent	ND	0.30	mg/kg wet								
LCS (BHC0564-BS1)											
Prepared: 03/16/24 Analyzed: 03/19/24											
Chromium, Hexavalent	25.0	0.30	mg/kg wet	25.0		100	80-120				
Duplicate (BHC0564-DUP1)											
Source: 2403063-01 Prepared: 03/16/24 Analyzed: 03/19/24											
Chromium, Hexavalent	ND	0.30	mg/kg dry		ND					20	
Matrix Spike (BHC0564-MS1)											
Source: 2403063-01 Prepared: 03/16/24 Analyzed: 03/19/24											
Chromium, Hexavalent	26.7	0.30	mg/kg dry	26.2	ND	102	75-125				
Matrix Spike Dup (BHC0564-MSD1)											
Source: 2403063-01 Prepared: 03/16/24 Analyzed: 03/19/24											
Chromium, Hexavalent	26.7	0.30	mg/kg dry	26.2	ND	102	75-125	0.00		20	

Batch BHC0610 - 3060A Mod

Blank (BHC0610-BLK1)											
Prepared: 03/18/24 Analyzed: 03/20/24											
Chromium, Hexavalent	ND	0.30	mg/kg wet								
LCS (BHC0610-BS1)											
Prepared: 03/18/24 Analyzed: 03/20/24											
Chromium, Hexavalent	25.1	0.30	mg/kg wet	25.0		100	80-120				
Duplicate (BHC0610-DUP1)											
Source: 2403124-06 Prepared: 03/18/24 Analyzed: 03/20/24											
Chromium, Hexavalent	ND	0.30	mg/kg dry		ND					20	
Matrix Spike (BHC0610-MS1)											
Source: 2403124-06 Prepared: 03/18/24 Analyzed: 03/20/24											
Chromium, Hexavalent	33.1	0.30	mg/kg dry	33.1	ND	100	75-125				

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.



Tasman Geosciences
 6855 W. 119th Ave.
 Broomfield CO, 80020

Project: PDC - Bunn M 1-34 Wellhead

Project Number: [none]
 Project Manager: Karen Olson

Reported:
 04/09/24 13:40

Hexavalent Chromium by EPA Method 7196 - Quality Control

Summit Scientific

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

Batch BHC0610 - 3060A Mod


Matrix Spike Dup (BHC0610-MSD1)

Source: 2403124-06

Prepared: 03/18/24 Analyzed: 03/20/24

Chromium, Hexavalent	33.1	0.30	mg/kg dry	33.1	ND	100	75-125	0.00	20	
----------------------	------	------	-----------	------	----	-----	--------	------	----	--

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.



Tasman Geosciences
6855 W. 119th Ave.
Broomfield CO, 80020

Project: PDC - Bunn M 1-34 Wellhead

Project Number: [none]
Project Manager: Karen Olson

Reported:
04/09/24 13:40

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

Summit Scientific

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

Batch BHC0590 - General Preparation

Blank (BHC0590-BLK1)

Prepared: 03/17/24 Analyzed: 03/21/24

Calcium	ND	0.0500	mg/L wet						
Magnesium	ND	0.0500	"						
Sodium	ND	0.0500	"						

LCS (BHC0590-BS1)

Prepared: 03/17/24 Analyzed: 03/21/24

Calcium	5.00	0.0500	mg/L wet	5.00	100	70-130
Magnesium	4.73	0.0500	"	5.00	94.6	70-130
Sodium	4.93	0.0500	"	5.00	98.7	70-130

Batch BHC0889 - General Preparation

Blank (BHC0889-BLK1)

Prepared: 03/24/24 Analyzed: 04/06/24

Calcium	ND	0.0500	mg/L wet			
Magnesium	ND	0.0500	"			
Sodium	ND	0.0500	"			

LCS (BHC0889-BS1)

Prepared: 03/24/24 Analyzed: 04/06/24

Calcium	4.91	0.0500	mg/L wet	5.00	98.2	70-130
Magnesium	5.05	0.0500	"	5.00	101	70-130
Sodium	5.13	0.0500	"	5.00	103	70-130

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.



Tasman Geosciences
6855 W. 119th Ave.
Broomfield CO, 80020

Project: PDC - Bunn M 1-34 Wellhead

Project Number: [none]
Project Manager: Karen Olson

Reported:
04/09/24 13:40

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

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


Batch BHC0418 - General Preparation

Duplicate (BHC0418-DUP2)		Source: 2403056-02		Prepared: 03/14/24 Analyzed: 03/16/24	
% Solids	91.7		%	89.5	2.40 20

Batch BHC0432 - General Preparation

Duplicate (BHC0432-DUP1)		Source: 2403124-06		Prepared: 03/15/24 Analyzed: 03/16/24	
% Solids	77.7		%	75.6	2.74 20

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.



Tasman Geosciences
6855 W. 119th Ave.
Broomfield CO, 80020

Project: PDC - Bunn M 1-34 Wellhead

Project Number: [none]
Project Manager: Karen Olson

Reported:
04/09/24 13:40

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

Summit Scientific

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

Batch BHC0591 - General Preparation

Blank (BHC0591-BLK1)

Prepared: 03/17/24 Analyzed: 03/20/24

Specific Conductance (EC) ND 0.0100 mmhos/cm

LCS (BHC0591-BS1)

Prepared: 03/17/24 Analyzed: 03/20/24

Specific Conductance (EC) 0.157 0.0100 mmhos/cm 0.150 104 95-105

Duplicate (BHC0591-DUP1)

Source: 2403053-01

Prepared: 03/17/24 Analyzed: 03/20/24

Specific Conductance (EC) 0.187 0.0100 mmhos/cm 0.189 1.23 20

Batch BHC0890 - General Preparation

Blank (BHC0890-BLK1)

Prepared: 03/24/24 Analyzed: 03/26/24

Specific Conductance (EC) ND 0.0100 mmhos/cm

LCS (BHC0890-BS1)

Prepared: 03/24/24 Analyzed: 03/26/24

Specific Conductance (EC) 0.144 0.0100 mmhos/cm 0.150 96.2 95-105

Duplicate (BHC0890-DUP1)

Source: 2403124-06

Prepared: 03/24/24 Analyzed: 03/26/24

Specific Conductance (EC) 0.618 0.0100 mmhos/cm 0.633 2.45 20

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.



Tasman Geosciences
6855 W. 119th Ave.
Broomfield CO, 80020

Project: PDC - Bunn M 1-34 Wellhead

Project Number: [none]
Project Manager: Karen Olson

Reported:
04/09/24 13:40

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

Summit Scientific

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

Batch BHC0592 - General Preparation

LCS (BHC0592-BS1)										
					Prepared: 03/17/24 Analyzed: 03/20/24					
pH	9.05		pH Units	9.18	98.6	95-105				
Duplicate (BHC0592-DUP1)										
					Source: 2403053-01 Prepared: 03/17/24 Analyzed: 03/20/24					
pH	9.48		pH Units	9.59	1.15	20				

Batch BHC0891 - General Preparation

LCS (BHC0891-BS1)										
					Prepared: 03/24/24 Analyzed: 03/26/24					
pH	9.09		pH Units	9.18	99.0	95-105				
Duplicate (BHC0891-DUP1)										
					Source: 2403124-06 Prepared: 03/24/24 Analyzed: 03/26/24					
pH	7.45		pH Units	7.41	0.538	20				

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.



Tasman Geosciences
6855 W. 119th Ave.
Broomfield CO, 80020

Project: PDC - Bunn M 1-34 Wellhead

Project Number: [none]
Project Manager: Karen Olson

Reported:
04/09/24 13:40

Notes and Definitions

- S-04 A sample matrix effect prevented complete surrogate recovery.
- S-02 The surrogate recovery for this sample cannot be accurately quantified due to interference from coeluting organic compounds present in the sample extract.
- R-05 The sample was diluted due to the presence of high levels of non-target analytes resulting in elevated reporting limits.
- QR-02 The RPD result exceeded the QC control limits; however, both percent recoveries were acceptable. Sample results for the QC batch were accepted based on percent recoveries and completeness of QC data.
- 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.
- QLCS-01 The spike recovery was outside acceptance limits for this analyte indicating a potential high bias. The corresponding samples did not exhibit concentrations above reporting level for this analyte. Data quality is not affected.
- E The concentration indicated for this analyte is an estimated value above the calibration range of the instrument.
- 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

Summit Scientific

4653 Table Mountain Drive, Golden, Colorado 80403

303.277.9310

May 14, 2024

Karen Olson

Tasman Geosciences

6855 W. 119th Ave.

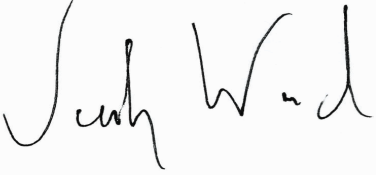
Broomfield, CO 80020

RE: PDC - Bunn M 1-34 Wellhead

Work Order #2403146

Enclosed are the results of analyses for samples received by Summit Scientific on 03/08/24 17:50. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

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

Jacob Wood For Paul Shrewsbury

President



Tasman Geosciences
 6855 W. 119th Ave.
 Broomfield CO, 80020

Project: PDC - Bunn M 1-34 Wellhead


Project Number: [none]
 Project Manager: Karen Olson

Reported:
 05/14/24 12:29

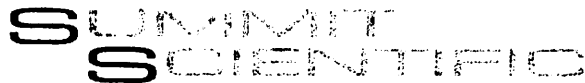
ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
FL01-01@4'	2403146-01	Soil	03/08/24 12:49	03/08/24 17:50
FL01-02@4'	2403146-02	Soil	03/08/24 14:40	03/08/24 17:50
FL01-03@4'	2403146-03	Soil	03/08/24 14:30	03/08/24 17:50
FL01-04@5'	2403146-04	Soil	03/08/24 11:58	03/08/24 17:50
FL01-05@4'	2403146-05	Soil	03/08/24 14:04	03/08/24 17:50
DL01-01@4'	2403146-06	Soil	03/08/24 09:38	03/08/24 17:50
BKG01@0.5'	2403146-07	Soil	03/08/24 14:44	03/08/24 17:50
BKG01@4'	2403146-08	Soil	03/08/24 14:48	03/08/24 17:50
BKG01@5'	2403146-09	Soil	03/08/24 14:50	03/08/24 17:50
BKG01@6'	2403146-10	Soil	03/08/24 14:57	03/08/24 17:50
BKG02@0.5'	2403146-11	Soil	03/08/24 15:03	03/08/24 17:50
BKG02@4'	2403146-12	Soil	03/08/24 15:10	03/08/24 17:50
BKG02@5'	2403146-13	Soil	03/08/24 15:14	03/08/24 17:50
BKG02@6'	2403146-14	Soil	03/08/24 15:17	03/08/24 17:50

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.



4653 Table Mountain Drive
Golden, CO 80403
303-277-9310

Lab ID 2403146 Page 1 of 1

<u>PDC mp</u>	Send Data To:	Send Invoice To:
Client: <u>Noble Tasman</u>	Project Manager: <u>Jake Whritenour</u>	Company: <u>PDC Energy</u>
Address: <u>6855 W. 119th Ave.</u>	E-Mail: <u>Jwhritenour@tasman-geo.com-mp</u>	Project Name/Location:
City/State/Zip: <u>Broomfield/CO/ 80020</u>	E-mail: <u>Karen.Olson@PDC.E.COM</u>	AFE#:
Phone: <u>937-554-5108</u>	Project Name: <u>Bunn m 1-34 ^{wellhead} float temp</u>	PO/Billing Codes:
Sampler Name: <u>Molly Parks</u>	Project Number: <u>32673</u>	Contact: <u>Karen Olson</u>

ID	Sample Description	Date Sampled	Time Sampled	# of containers	Preservative				Matrix		Analysis Requested							Special Instruction		
					HCl	HNO3	None	Other	Water	Soil	Air-Canister #	Other	Metals - 915	VOC - 915	TPH - 915	PAH - 915	SAR, EC, pH		Boron - HWS	HOLD
1	FL01-01@4'	3-8-24	1249	2			X			X			X	X	X	X	X	X		
2	FL01-02@4'	3-8-24	1440	2			X			X			X	X	X	X	X	X		
3	FL01-03@4'	3-8-24	1430	2			X			X			X	X	X	X	X	X		
4	FL01-04@5'	3-8-24	1158	2			X			X			X	X	X	X	X	X		
5	FL01-05@4'	3-8-24	1404	2			X			X			X	X	X	X	X	X		
6	FL01-01@4'	3-8-24	938	2			X			X			X	X	X	X	X	X		
7	BHG01 @0.5'	3-8-24	1444	1			X			X			X							
8	BHG01 @ 4'	3-8-24	1448	1			X			X			X							
9	BHG01 @ 5'	3-8-24	1450	1			X			X			X							
10	BHG01 @ 6'	3-8-24	1457	1			X			X			X							
11	BHG02 @0.5'	3-8-24	1503	1			X			X			X							
12	BHG02 @ 4'	3-8-24	1510	1			X			X			X							
13	BHG02 @ 5'	3-8-24	1514	1			X			X			X							
14	BHG02 @ 6'	3-8-24	1517	1			X			X			X							
15																				

Relinquished by: <u>mp</u>	Date/Time: <u>3-8-24 / 1650</u>	Received by: <u>Tasman Lock Box</u>	Date/Time: <u>3-8-24 / 1650</u>	TAT Business Days	Field DO	Notes:
				Same Day	Field EC	
Relinquished by: <u>Tasman Lock Box</u>	Date/Time: <u>3-8-24 / 1730</u>	Received by: <u>[Signature]</u>	Date/Time: <u>3-8-24 / 1730</u>	1 Day	Field ORP	
				2 Days	Field pH	
Relinquished by:	Date/Time:	Received by:	Date/Time:	3 Days	Field Temp.	
				Standard	X Field Turb.	
Temperature Upon Receipt: <u>8.0</u>	Corrected Temperature: <u>6</u>	IR gun #: <u>1</u>	HNO3 lot #: _____			

S₂

Sample Receipt Checklist

S2 Work Order# 2403146

Client: Posttorman Client Project ID: Burn m 1-34 wellhead

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

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

Temp (°C)

Thermometer #

	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 checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	OK 200
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 checked="" type="checkbox"/>	<input 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.

AS

Custodian Printed Name

3/8/24
Date/Time



Tasman Geosciences
6855 W. 119th Ave.
Broomfield CO, 80020

Project: PDC - Bunn M 1-34 Wellhead

Project Number: [none]
Project Manager: Karen Olson

Reported:
05/14/24 12:29

FL01-01@4'
2403146-01 (Soil)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **03/08/24 12:49**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Benzene	ND	0.0020		mg/kg	1	BHC0325	03/12/24	03/13/24	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: **03/08/24 12:49**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Surrogate: 1,2-Dichloroethane-d4	0.0412	103 %		50-150		"	"	"	"	
Surrogate: Toluene-d8	0.0377	94.2 %		50-150		"	"	"	"	
Surrogate: 4-Bromofluorobenzene	0.0407	102 %		50-150		"	"	"	"	

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **03/08/24 12:49**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
C10-C28 (DRO)	84	50		mg/kg	1	BHC0328	03/12/24	03/13/24	EPA 8015M	
C28-C36 (ORO)	65	50		"	"	"	"	"	"	

Date Sampled: **03/08/24 12:49**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Surrogate: o-Terphenyl	11.4	90.9 %		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.



Tasman Geosciences
6855 W. 119th Ave.
Broomfield CO, 80020

Project: PDC - Bunn M 1-34 Wellhead

Project Number: [none]
Project Manager: Karen Olson

Reported:
05/14/24 12:29

FL01-01@4'
2403146-01 (Soil)

Summit Scientific

PAH by EPA Method 8270D SIM

Date Sampled: **03/08/24 12:49**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Acenaphthene	ND	0.00500	mg/kg	1	BHC0324	03/12/24	03/13/24	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: **03/08/24 12:49**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 2-Methylnaphthalene-d10	0.0196	58.9 %	40-150		"	"	"	"	
Surrogate: Fluoranthene-d10	0.0150	44.9 %	40-150		"	"	"	"	

Total Metals by EPA 6020B Hot Water Soluble Extraction

Date Sampled: **03/08/24 12:49**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Boron	ND	2.00	mg/L	1	BHC0514	03/15/24	05/14/24	EPA 6020B	

Total Metals by EPA 6020B

Date Sampled: **03/08/24 12:49**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
---------	--------	-----------------	-------	----------	-------	----------	----------	--------	-------

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.



Tasman Geosciences
6855 W. 119th Ave.
Broomfield CO, 80020

Project: PDC - Bunn M 1-34 Wellhead

Project Number: [none]
Project Manager: Karen Olson

Reported:
05/14/24 12:29

FL01-01@4'
2403146-01 (Soil)

Summit Scientific

Total Metals by EPA 6020B

Analyte	Result	Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Arsenic	2.26	0.200	mg/kg dry	1	BHC0686	03/19/24	03/30/24	EPA 6020B	
Barium	55.5	0.400	"	"	"	"	"	"	
Cadmium	ND	0.200	"	"	"	"	"	"	
Copper	6.35	0.400	"	"	"	"	"	"	
Lead	18.2	0.200	"	"	"	"	"	"	
Nickel	4.69	0.400	"	"	"	"	"	"	
Silver	ND	0.0200	"	"	"	"	"	"	
Zinc	27.3	0.400	"	"	"	"	"	"	
Selenium	ND	0.260	"	"	"	"	"	"	

Hexavalent Chromium by EPA Method 7196

Date Sampled: **03/08/24 12:49**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Chromium, Hexavalent	ND	0.30	mg/kg dry	1	BHC0614	03/18/24	03/20/24	EPA 7196A	

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

Date Sampled: **03/08/24 12:49**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Calcium	36.9	0.0500	mg/L dry	1	BHC0886	03/24/24	04/23/24	EPA 6020B	
Magnesium	8.88	0.0500	"	"	"	"	"	"	
Sodium	8.21	0.0500	"	"	"	"	"	"	

Calculated Analysis

Date Sampled: **03/08/24 12:49**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	0.315	0.00100	units	1	BHD0879	04/24/24	04/24/24	Calculation	

Physical Parameters by APHA/ASTM/EPA Methods

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.



Tasman Geosciences
6855 W. 119th Ave.
Broomfield CO, 80020

Project: PDC - Bunn M 1-34 Wellhead

Project Number: [none]
Project Manager: Karen Olson

Reported:
05/14/24 12:29

FL01-01@4'
2403146-01 (Soil)

Summit Scientific

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **03/08/24 12:49**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
% Solids	92.3		%	1	BHC0436	03/15/24	03/16/24	Calculation	

Specific Conductance by EPA Method 120.1, Saturated Paste Extraction

Date Sampled: **03/08/24 12:49**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Specific Conductance (EC)	0.337	0.0100	mmhos/cm	1	BHC0888	03/24/24	03/26/24	EPA 120.1	

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

Date Sampled: **03/08/24 12:49**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
pH	7.90		pH Units	1	BHC0887	03/24/24	03/26/24	EPA 9045D	

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.



Tasman Geosciences
6855 W. 119th Ave.
Broomfield CO, 80020

Project: PDC - Bunn M 1-34 Wellhead

Project Number: [none]
Project Manager: Karen Olson

Reported:
05/14/24 12:29

FL01-02@4'
2403146-02 (Soil)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **03/08/24 14:40**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Benzene	ND	0.0020	mg/kg	1	BHC0325	03/12/24	03/13/24	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: **03/08/24 14:40**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 1,2-Dichloroethane-d4	0.0445	111 %	50-150		"	"	"	"	
Surrogate: Toluene-d8	0.0388	97.0 %	50-150		"	"	"	"	
Surrogate: 4-Bromofluorobenzene	0.0414	103 %	50-150		"	"	"	"	

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **03/08/24 14:40**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
C10-C28 (DRO)	ND	50	mg/kg	1	BHC0328	03/12/24	03/13/24	EPA 8015M	
C28-C36 (ORO)	ND	50	"	"	"	"	"	"	

Date Sampled: **03/08/24 14:40**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: o-Terphenyl	10.9	87.1 %	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.



Tasman Geosciences
6855 W. 119th Ave.
Broomfield CO, 80020

Project: PDC - Bunn M 1-34 Wellhead

Project Number: [none]
Project Manager: Karen Olson

Reported:
05/14/24 12:29

FL01-02@4'
2403146-02 (Soil)

Summit Scientific

PAH by EPA Method 8270D SIM

Date Sampled: **03/08/24 14:40**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Acenaphthene	ND	0.00500	mg/kg	1	BHC0324	03/12/24	03/13/24	EPA 8270D SIM	
Anthracene	ND	0.00500	"	"	"	"	"	"	
Benzo (a) anthracene	0.00657	0.00500	"	"	"	"	"	"	
Benzo (a) pyrene	ND	0.00500	"	"	"	"	"	"	
Benzo (b) fluoranthene	0.00538	0.00500	"	"	"	"	"	"	
Benzo (k) fluoranthene	ND	0.00500	"	"	"	"	"	"	
Chrysene	0.00522	0.00500	"	"	"	"	"	"	
Dibenz (a,h) anthracene	ND	0.00500	"	"	"	"	"	"	
Fluoranthene	0.00814	0.00500	"	"	"	"	"	"	
Fluorene	ND	0.00500	"	"	"	"	"	"	
Indeno (1,2,3-cd) pyrene	ND	0.00500	"	"	"	"	"	"	
Pyrene	0.0159	0.00500	"	"	"	"	"	"	
1-Methylnaphthalene	ND	0.00500	"	"	"	"	"	"	
2-Methylnaphthalene	ND	0.00500	"	"	"	"	"	"	

Date Sampled: **03/08/24 14:40**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 2-Methylnaphthalene-d10	0.0208	62.4 %	40-150		"	"	"	"	
Surrogate: Fluoranthene-d10	0.0150	44.9 %	40-150		"	"	"	"	

Total Metals by EPA 6020B Hot Water Soluble Extraction

Date Sampled: **03/08/24 14:40**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Boron	ND	2.00	mg/L	1	BHC0514	03/15/24	05/14/24	EPA 6020B	

Total Metals by EPA 6020B

Date Sampled: **03/08/24 14:40**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
---------	--------	-----------------	-------	----------	-------	----------	----------	--------	-------

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.



Tasman Geosciences
6855 W. 119th Ave.
Broomfield CO, 80020

Project: PDC - Bunn M 1-34 Wellhead

Project Number: [none]
Project Manager: Karen Olson

Reported:
05/14/24 12:29

FL01-02@4'
2403146-02 (Soil)

Summit Scientific

Total Metals by EPA 6020B

Analyte	Result	Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Arsenic	2.55	0.200	mg/kg dry	1	BHC0686	03/19/24	03/30/24	EPA 6020B	
Barium	55.8	0.400	"	"	"	"	"	"	
Cadmium	ND	0.200	"	"	"	"	"	"	
Copper	4.51	0.400	"	"	"	"	"	"	
Lead	6.07	0.200	"	"	"	"	"	"	
Nickel	4.57	0.400	"	"	"	"	"	"	
Silver	ND	0.0200	"	"	"	"	"	"	
Zinc	19.1	0.400	"	"	"	"	"	"	
Selenium	ND	0.260	"	"	"	"	"	"	

Hexavalent Chromium by EPA Method 7196

Date Sampled: **03/08/24 14:40**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Chromium, Hexavalent	ND	0.30	mg/kg dry	1	BHC0614	03/18/24	03/20/24	EPA 7196A	

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

Date Sampled: **03/08/24 14:40**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Calcium	32.0	0.0500	mg/L dry	1	BHC0886	03/24/24	04/23/24	EPA 6020B	
Magnesium	15.2	0.0500	"	"	"	"	"	"	
Sodium	44.2	0.0500	"	"	"	"	"	"	

Calculated Analysis

Date Sampled: **03/08/24 14:40**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	1.61	0.00100	units	1	BHD0879	04/24/24	04/24/24	Calculation	

Physical Parameters by APHA/ASTM/EPA Methods

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.



Tasman Geosciences
6855 W. 119th Ave.
Broomfield CO, 80020

Project: PDC - Bunn M 1-34 Wellhead

Project Number: [none]
Project Manager: Karen Olson

Reported:
05/14/24 12:29

FL01-02@4'
2403146-02 (Soil)

Summit Scientific

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **03/08/24 14:40**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
% Solids	91.4		%	1	BHC0436	03/15/24	03/16/24	Calculation	

Specific Conductance by EPA Method 120.1, Saturated Paste Extraction

Date Sampled: **03/08/24 14:40**

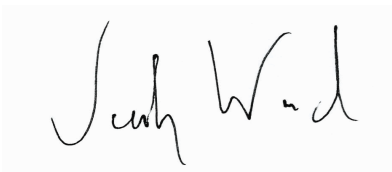
Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Specific Conductance (EC)	0.473	0.0100	mmhos/cm	1	BHC0888	03/24/24	03/26/24	EPA 120.1	

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

Date Sampled: **03/08/24 14:40**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
pH	8.17		pH Units	1	BHC0887	03/24/24	03/26/24	EPA 9045D	

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.



Tasman Geosciences
6855 W. 119th Ave.
Broomfield CO, 80020

Project: PDC - Bunn M 1-34 Wellhead

Project Number: [none]
Project Manager: Karen Olson

Reported:
05/14/24 12:29

FL01-03@4'
2403146-03 (Soil)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **03/08/24 14:30**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Benzene	ND	0.0020	mg/kg	1	BHC0325	03/12/24	03/13/24	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: **03/08/24 14:30**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 1,2-Dichloroethane-d4	0.0425	106 %	50-150		"	"	"	"	
Surrogate: Toluene-d8	0.0381	95.2 %	50-150		"	"	"	"	
Surrogate: 4-Bromofluorobenzene	0.0412	103 %	50-150		"	"	"	"	

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **03/08/24 14:30**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
C10-C28 (DRO)	ND	50	mg/kg	1	BHC0328	03/12/24	03/13/24	EPA 8015M	
C28-C36 (ORO)	ND	50	"	"	"	"	"	"	

Date Sampled: **03/08/24 14:30**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: o-Terphenyl	11.5	92.0 %	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.



Tasman Geosciences
6855 W. 119th Ave.
Broomfield CO, 80020

Project: PDC - Bunn M 1-34 Wellhead

Project Number: [none]
Project Manager: Karen Olson

Reported:
05/14/24 12:29

FL01-03@4'
2403146-03 (Soil)

Summit Scientific

PAH by EPA Method 8270D SIM

Date Sampled: **03/08/24 14:30**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Acenaphthene	ND	0.00500	mg/kg	1	BHC0324	03/12/24	03/13/24	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: **03/08/24 14:30**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 2-Methylnaphthalene-d10	0.0153	45.8 %	40-150		"	"	"	"	
Surrogate: Fluoranthene-d10	0.0146	43.9 %	40-150		"	"	"	"	

Total Metals by EPA 6020B Hot Water Soluble Extraction

Date Sampled: **03/08/24 14:30**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Boron	ND	2.00	mg/L	1	BHC0514	03/15/24	05/14/24	EPA 6020B	

Total Metals by EPA 6020B

Date Sampled: **03/08/24 14:30**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
---------	--------	-----------------	-------	----------	-------	----------	----------	--------	-------

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.



Tasman Geosciences
6855 W. 119th Ave.
Broomfield CO, 80020

Project: PDC - Bunn M 1-34 Wellhead

Project Number: [none]
Project Manager: Karen Olson

Reported:
05/14/24 12:29

FL01-03@4'
2403146-03 (Soil)

Summit Scientific

Total Metals by EPA 6020B

Analyte	Result	Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Arsenic	1.85	0.200	mg/kg dry	1	BHC0686	03/19/24	03/30/24	EPA 6020B	
Barium	37.4	0.400	"	"	"	"	"	"	
Cadmium	ND	0.200	"	"	"	"	"	"	
Copper	2.76	0.400	"	"	"	"	"	"	
Lead	2.73	0.200	"	"	"	"	"	"	
Nickel	3.83	0.400	"	"	"	"	"	"	
Silver	ND	0.0200	"	"	"	"	"	"	
Zinc	13.0	0.400	"	"	"	"	"	"	
Selenium	ND	0.260	"	"	"	"	"	"	

Hexavalent Chromium by EPA Method 7196

Date Sampled: **03/08/24 14:30**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Chromium, Hexavalent	ND	0.30	mg/kg dry	1	BHC0614	03/18/24	03/20/24	EPA 7196A	

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

Date Sampled: **03/08/24 14:30**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Calcium	10.3	0.0500	mg/L dry	1	BHC0886	03/24/24	04/23/24	EPA 6020B	
Magnesium	8.84	0.0500	"	"	"	"	"	"	
Sodium	84.6	0.0500	"	"	"	"	"	"	

Calculated Analysis

Date Sampled: **03/08/24 14:30**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	4.67	0.00100	units	1	BHD0879	04/24/24	04/24/24	Calculation	

Physical Parameters by APHA/ASTM/EPA Methods

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.



Tasman Geosciences
6855 W. 119th Ave.
Broomfield CO, 80020

Project: PDC - Bunn M 1-34 Wellhead

Project Number: [none]
Project Manager: Karen Olson

Reported:
05/14/24 12:29

FL01-03@4'
2403146-03 (Soil)

Summit Scientific

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **03/08/24 14:30**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
% Solids	90.9		%	1	BHC0436	03/15/24	03/16/24	Calculation	

Specific Conductance by EPA Method 120.1, Saturated Paste Extraction

Date Sampled: **03/08/24 14:30**

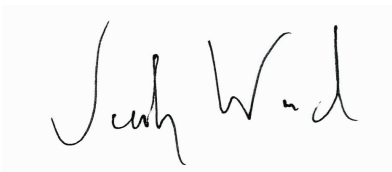
Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Specific Conductance (EC)	0.521	0.0100	mmhos/cm	1	BHC0888	03/24/24	03/26/24	EPA 120.1	

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

Date Sampled: **03/08/24 14:30**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
pH	7.75		pH Units	1	BHC0887	03/24/24	03/26/24	EPA 9045D	

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.



Tasman Geosciences
6855 W. 119th Ave.
Broomfield CO, 80020

Project: PDC - Bunn M 1-34 Wellhead

Project Number: [none]
Project Manager: Karen Olson

Reported:
05/14/24 12:29

FL01-04@5'
2403146-04 (Soil)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **03/08/24 11:58**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Benzene	ND	0.0020	mg/kg	1	BHC0325	03/12/24	03/13/24	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: **03/08/24 11:58**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 1,2-Dichloroethane-d4	0.0418	105 %	50-150		"	"	"	"	
Surrogate: Toluene-d8	0.0388	97.0 %	50-150		"	"	"	"	
Surrogate: 4-Bromofluorobenzene	0.0403	101 %	50-150		"	"	"	"	

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **03/08/24 11:58**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
C10-C28 (DRO)	ND	50	mg/kg	1	BHC0328	03/12/24	03/13/24	EPA 8015M	
C28-C36 (ORO)	ND	50	"	"	"	"	"	"	

Date Sampled: **03/08/24 11:58**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: o-Terphenyl	11.7	93.9 %	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.



Tasman Geosciences
6855 W. 119th Ave.
Broomfield CO, 80020

Project: PDC - Bunn M 1-34 Wellhead

Project Number: [none]
Project Manager: Karen Olson

Reported:
05/14/24 12:29

FL01-04@5'
2403146-04 (Soil)

Summit Scientific

PAH by EPA Method 8270D SIM

Date Sampled: **03/08/24 11:58**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Acenaphthene	ND	0.00500	mg/kg	1	BHC0324	03/12/24	03/13/24	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: **03/08/24 11:58**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 2-Methylnaphthalene-d10	0.0142	42.5 %	40-150		"	"	"	"	
Surrogate: Fluoranthene-d10	0.0142	42.5 %	40-150		"	"	"	"	

Total Metals by EPA 6020B Hot Water Soluble Extraction

Date Sampled: **03/08/24 11:58**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Boron	ND	2.00	mg/L	1	BHC0514	03/15/24	05/14/24	EPA 6020B	

Total Metals by EPA 6020B

Date Sampled: **03/08/24 11:58**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
---------	--------	-----------------	-------	----------	-------	----------	----------	--------	-------

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.



Tasman Geosciences
6855 W. 119th Ave.
Broomfield CO, 80020

Project: PDC - Bunn M 1-34 Wellhead

Project Number: [none]
Project Manager: Karen Olson

Reported:
05/14/24 12:29

FL01-04@5'
2403146-04 (Soil)

Summit Scientific

Total Metals by EPA 6020B

Analyte	Result	Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Arsenic	3.45	0.200	mg/kg dry	1	BHC0686	03/19/24	03/30/24	EPA 6020B	
Barium	105	0.400	"	"	"	"	"	"	
Cadmium	0.203	0.200	"	"	"	"	"	"	
Copper	5.31	0.400	"	"	"	"	"	"	
Lead	6.27	0.200	"	"	"	"	"	"	
Nickel	6.12	0.400	"	"	"	"	"	"	
Silver	0.0342	0.0200	"	"	"	"	"	"	
Zinc	22.4	0.400	"	"	"	"	"	"	
Selenium	ND	0.260	"	"	"	"	"	"	

Hexavalent Chromium by EPA Method 7196

Date Sampled: **03/08/24 11:58**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Chromium, Hexavalent	ND	0.30	mg/kg dry	1	BHC0614	03/18/24	03/20/24	EPA 7196A	

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

Date Sampled: **03/08/24 11:58**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Calcium	41.4	0.0500	mg/L dry	1	BHC0886	03/24/24	04/23/24	EPA 6020B	
Magnesium	15.1	0.0500	"	"	"	"	"	"	
Sodium	48.2	0.0500	"	"	"	"	"	"	

Calculated Analysis

Date Sampled: **03/08/24 11:58**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	1.63	0.00100	units	1	BHD0879	04/24/24	04/24/24	Calculation	

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **03/08/24 11:58**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
---------	--------	-----------------	-------	----------	-------	----------	----------	--------	-------

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.



Tasman Geosciences
6855 W. 119th Ave.
Broomfield CO, 80020

Project: PDC - Bunn M 1-34 Wellhead

Project Number: [none]
Project Manager: Karen Olson

Reported:
05/14/24 12:29

FL01-04@5'
2403146-04 (Soil)

Summit Scientific

Physical Parameters by APHA/ASTM/EPA Methods

% Solids	81.9	%	1	BHC0436	03/15/24	03/16/24	Calculation
----------	------	---	---	---------	----------	----------	-------------

Specific Conductance by EPA Method 120.1, Saturated Paste Extraction

Date Sampled: **03/08/24 11:58**


Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Specific Conductance (EC)	0.444	0.0100	mmhos/cm	1	BHC0888	03/24/24	03/26/24	EPA 120.1	

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

Date Sampled: **03/08/24 11:58**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
pH	8.24		pH Units	1	BHC0887	03/24/24	03/26/24	EPA 9045D	

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.



Tasman Geosciences
6855 W. 119th Ave.
Broomfield CO, 80020

Project: PDC - Bunn M 1-34 Wellhead

Project Number: [none]
Project Manager: Karen Olson

Reported:
05/14/24 12:29

FL01-05@4'
2403146-05 (Soil)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **03/08/24 14:04**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Benzene	ND	0.0020	mg/kg	1	BHC0325	03/12/24	03/13/24	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: **03/08/24 14:04**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 1,2-Dichloroethane-d4	0.0432	108 %	50-150		"	"	"	"	
Surrogate: Toluene-d8	0.0383	95.7 %	50-150		"	"	"	"	
Surrogate: 4-Bromofluorobenzene	0.0418	105 %	50-150		"	"	"	"	

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **03/08/24 14:04**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
C10-C28 (DRO)	ND	50	mg/kg	1	BHC0328	03/12/24	03/13/24	EPA 8015M	
C28-C36 (ORO)	ND	50	"	"	"	"	"	"	

Date Sampled: **03/08/24 14:04**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: o-Terphenyl	14.0	112 %	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.



Tasman Geosciences
6855 W. 119th Ave.
Broomfield CO, 80020

Project: PDC - Bunn M 1-34 Wellhead

Project Number: [none]
Project Manager: Karen Olson

Reported:
05/14/24 12:29

FL01-05@4'
2403146-05 (Soil)

Summit Scientific

PAH by EPA Method 8270D SIM

Date Sampled: **03/08/24 14:04**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Acenaphthene	ND	0.00500	mg/kg	1	BHC0324	03/12/24	03/13/24	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: **03/08/24 14:04**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 2-Methylnaphthalene-d10	0.0259	77.6 %	40-150		"	"	"	"	
Surrogate: Fluoranthene-d10	0.0144	43.2 %	40-150		"	"	"	"	

Total Metals by EPA 6020B Hot Water Soluble Extraction

Date Sampled: **03/08/24 14:04**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Boron	ND	2.00	mg/L	1	BHC0514	03/15/24	05/14/24	EPA 6020B	

Total Metals by EPA 6020B

Date Sampled: **03/08/24 14:04**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
---------	--------	-----------------	-------	----------	-------	----------	----------	--------	-------

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.



Tasman Geosciences
6855 W. 119th Ave.
Broomfield CO, 80020

Project: PDC - Bunn M 1-34 Wellhead

Project Number: [none]
Project Manager: Karen Olson

Reported:
05/14/24 12:29

FL01-05@4'
2403146-05 (Soil)

Summit Scientific

Total Metals by EPA 6020B

Analyte	Result	Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Arsenic	1.60	0.200	mg/kg dry	1	BHC0686	03/19/24	03/30/24	EPA 6020B	
Barium	23.0	0.400	"	"	"	"	"	"	
Cadmium	ND	0.200	"	"	"	"	"	"	
Copper	2.38	0.400	"	"	"	"	"	"	
Lead	2.32	0.200	"	"	"	"	"	"	
Nickel	3.28	0.400	"	"	"	"	"	"	
Silver	ND	0.0200	"	"	"	"	"	"	
Zinc	12.0	0.400	"	"	"	"	"	"	
Selenium	ND	0.260	"	"	"	"	"	"	

Hexavalent Chromium by EPA Method 7196

Date Sampled: **03/08/24 14:04**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Chromium, Hexavalent	ND	0.30	mg/kg dry	1	BHC0614	03/18/24	03/20/24	EPA 7196A	

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

Date Sampled: **03/08/24 14:04**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Calcium	20.7	0.0500	mg/L dry	1	BHC0886	03/24/24	04/23/24	EPA 6020B	
Magnesium	8.19	0.0500	"	"	"	"	"	"	
Sodium	8.74	0.0500	"	"	"	"	"	"	

Calculated Analysis

Date Sampled: **03/08/24 14:04**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	0.412	0.00100	units	1	BHD0879	04/24/24	04/24/24	Calculation	

Physical Parameters by APHA/ASTM/EPA Methods

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.



Tasman Geosciences
6855 W. 119th Ave.
Broomfield CO, 80020

Project: PDC - Bunn M 1-34 Wellhead

Project Number: [none]
Project Manager: Karen Olson

Reported:
05/14/24 12:29

FL01-05@4'
2403146-05 (Soil)

Summit Scientific

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **03/08/24 14:04**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
% Solids	94.4		%	1	BHC0436	03/15/24	03/16/24	Calculation	

Specific Conductance by EPA Method 120.1, Saturated Paste Extraction

Date Sampled: **03/08/24 14:04**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Specific Conductance (EC)	0.127	0.0100	mmhos/cm	1	BHC0888	03/24/24	03/26/24	EPA 120.1	

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

Date Sampled: **03/08/24 14:04**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
pH	8.08		pH Units	1	BHC0887	03/24/24	03/26/24	EPA 9045D	

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.



Tasman Geosciences
6855 W. 119th Ave.
Broomfield CO, 80020

Project: PDC - Bunn M 1-34 Wellhead

Project Number: [none]
Project Manager: Karen Olson

Reported:
05/14/24 12:29

DL01-01@4'
2403146-06 (Soil)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **03/08/24 09:38**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Benzene	ND	0.0020	mg/kg	1	BHC0325	03/12/24	03/13/24	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: **03/08/24 09:38**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 1,2-Dichloroethane-d4	0.0423	106 %	50-150		"	"	"	"	
Surrogate: Toluene-d8	0.0394	98.5 %	50-150		"	"	"	"	
Surrogate: 4-Bromofluorobenzene	0.0410	102 %	50-150		"	"	"	"	

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **03/08/24 09:38**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
C10-C28 (DRO)	ND	50	mg/kg	1	BHC0328	03/12/24	03/13/24	EPA 8015M	
C28-C36 (ORO)	ND	50	"	"	"	"	"	"	

Date Sampled: **03/08/24 09:38**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: o-Terphenyl	9.17	73.4 %	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.



Tasman Geosciences
6855 W. 119th Ave.
Broomfield CO, 80020

Project: PDC - Bunn M 1-34 Wellhead

Project Number: [none]
Project Manager: Karen Olson

Reported:
05/14/24 12:29

DL01-01@4'
2403146-06 (Soil)

Summit Scientific

PAH by EPA Method 8270D SIM

Date Sampled: **03/08/24 09:38**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Acenaphthene	ND	0.00500	mg/kg	1	BHC0324	03/12/24	03/13/24	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: **03/08/24 09:38**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 2-Methylnaphthalene-d10	0.0321	96.2 %	40-150		"	"	"	"	
Surrogate: Fluoranthene-d10	0.0169	50.8 %	40-150		"	"	"	"	

Total Metals by EPA 6020B Hot Water Soluble Extraction

Date Sampled: **03/08/24 09:38**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Boron	ND	2.00	mg/L	1	BHC0514	03/15/24	05/14/24	EPA 6020B	

Total Metals by EPA 6020B

Date Sampled: **03/08/24 09:38**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
---------	--------	-----------------	-------	----------	-------	----------	----------	--------	-------

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.



Tasman Geosciences
6855 W. 119th Ave.
Broomfield CO, 80020

Project: PDC - Bunn M 1-34 Wellhead

Project Number: [none]
Project Manager: Karen Olson

Reported:
05/14/24 12:29

DL01-01@4'
2403146-06 (Soil)

Summit Scientific

Total Metals by EPA 6020B

Analyte	Result	Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Arsenic	2.58	0.200	mg/kg dry	1	BHC0686	03/19/24	03/30/24	EPA 6020B	
Barium	83.0	0.400	"	"	"	"	"	"	
Cadmium	ND	0.200	"	"	"	"	"	"	
Copper	4.56	0.400	"	"	"	"	"	"	
Lead	5.39	0.200	"	"	"	"	"	"	
Nickel	6.20	0.400	"	"	"	"	"	"	
Silver	0.0246	0.0200	"	"	"	"	"	"	
Zinc	21.0	0.400	"	"	"	"	"	"	
Selenium	ND	0.260	"	"	"	"	"	"	

Hexavalent Chromium by EPA Method 7196

Date Sampled: **03/08/24 09:38**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Chromium, Hexavalent	ND	0.30	mg/kg dry	1	BHC0614	03/18/24	03/20/24	EPA 7196A	

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

Date Sampled: **03/08/24 09:38**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Calcium	72.0	0.0500	mg/L dry	1	BHC0886	03/24/24	04/23/24	EPA 6020B	
Magnesium	36.0	0.0500	"	"	"	"	"	"	
Sodium	50.1	0.0500	"	"	"	"	"	"	

Calculated Analysis

Date Sampled: **03/08/24 09:38**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	1.20	0.00100	units	1	BHD0879	04/24/24	04/24/24	Calculation	

Physical Parameters by APHA/ASTM/EPA Methods

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.



Tasman Geosciences
6855 W. 119th Ave.
Broomfield CO, 80020

Project: PDC - Bunn M 1-34 Wellhead

Project Number: [none]
Project Manager: Karen Olson

Reported:
05/14/24 12:29

DL01-01@4'
2403146-06 (Soil)

Summit Scientific

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **03/08/24 09:38**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
% Solids	82.8			%	1	BHC0436	03/15/24	03/16/24	Calculation	

Specific Conductance by EPA Method 120.1, Saturated Paste Extraction

Date Sampled: **03/08/24 09:38**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Specific Conductance (EC)	0.757	0.0100		mmhos/cm	1	BHC0888	03/24/24	03/26/24	EPA 120.1	

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

Date Sampled: **03/08/24 09:38**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
pH	7.99			pH Units	1	BHC0887	03/24/24	03/26/24	EPA 9045D	

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.



Tasman Geosciences
6855 W. 119th Ave.
Broomfield CO, 80020

Project: PDC - Bunn M 1-34 Wellhead

Project Number: [none]
Project Manager: Karen Olson

Reported:
05/14/24 12:29

BKG01@0.5'
2403146-07 (Soil)

Summit Scientific

Total Metals by EPA 6020B

Date Sampled: **03/08/24 14:44**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Arsenic	3.50	0.200	mg/kg dry	1	BHC0686	03/19/24	03/30/24	EPA 6020B	
Barium	94.1	0.400	"	"	"	"	"	"	
Cadmium	0.225	0.200	"	"	"	"	"	"	
Copper	5.82	0.400	"	"	"	"	"	"	
Lead	8.91	0.200	"	"	"	"	"	"	
Nickel	6.53	0.400	"	"	"	"	"	"	
Silver	0.0372	0.0200	"	"	"	"	"	"	
Zinc	26.5	0.400	"	"	"	"	"	"	
Selenium	0.265	0.260	"	"	"	"	"	"	

Hexavalent Chromium by EPA Method 7196

Date Sampled: **03/08/24 14:44**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Chromium, Hexavalent	ND	0.30	mg/kg dry	1	BHC0614	03/18/24	03/20/24	EPA 7196A	

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **03/08/24 14:44**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
% Solids	85.0		%	1	BHC0436	03/15/24	03/16/24	Calculation	

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.



Tasman Geosciences
6855 W. 119th Ave.
Broomfield CO, 80020

Project: PDC - Bunn M 1-34 Wellhead

Project Number: [none]
Project Manager: Karen Olson

Reported:
05/14/24 12:29

BKG01@4'
2403146-08 (Soil)

Summit Scientific

Total Metals by EPA 6020B

Date Sampled: **03/08/24 14:48**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Arsenic	0.845	0.200	mg/kg dry	1	BHC0686	03/19/24	03/30/24	EPA 6020B	
Barium	22.1	0.400	"	"	"	"	"	"	"
Cadmium	ND	0.200	"	"	"	"	"	"	"
Copper	1.46	0.400	"	"	"	"	"	"	"
Lead	1.24	0.200	"	"	"	"	"	"	"
Nickel	1.83	0.400	"	"	"	"	"	"	"
Silver	ND	0.0200	"	"	"	"	"	"	"
Zinc	5.87	0.400	"	"	"	"	"	"	"
Selenium	ND	0.260	"	"	"	"	"	"	"

Hexavalent Chromium by EPA Method 7196

Date Sampled: **03/08/24 14:48**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Chromium, Hexavalent	ND	0.30	mg/kg dry	1	BHC0614	03/18/24	03/20/24	EPA 7196A	

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **03/08/24 14:48**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
% Solids	97.8		%	1	BHC0436	03/15/24	03/16/24	Calculation	

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.



Tasman Geosciences
6855 W. 119th Ave.
Broomfield CO, 80020

Project: PDC - Bunn M 1-34 Wellhead

Project Number: [none]
Project Manager: Karen Olson

Reported:
05/14/24 12:29

BKG01@5'
2403146-09 (Soil)

Summit Scientific

Total Metals by EPA 6020B

Date Sampled: **03/08/24 14:50**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Arsenic	0.748	0.200	mg/kg dry	1	BHC0686	03/19/24	03/30/24	EPA 6020B	
Barium	17.5	0.400	"	"	"	"	"	"	
Cadmium	ND	0.200	"	"	"	"	"	"	
Copper	1.27	0.400	"	"	"	"	"	"	
Lead	1.33	0.200	"	"	"	"	"	"	
Nickel	1.80	0.400	"	"	"	"	"	"	
Silver	ND	0.0200	"	"	"	"	"	"	
Zinc	5.99	0.400	"	"	"	"	"	"	
Selenium	ND	0.260	"	"	"	"	"	"	

Hexavalent Chromium by EPA Method 7196

Date Sampled: **03/08/24 14:50**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Chromium, Hexavalent	ND	0.30	mg/kg dry	1	BHC0614	03/18/24	03/20/24	EPA 7196A	

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **03/08/24 14:50**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
% Solids	97.8		%	1	BHC0436	03/15/24	03/16/24	Calculation	

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.



Tasman Geosciences
6855 W. 119th Ave.
Broomfield CO, 80020

Project: PDC - Bunn M 1-34 Wellhead

Project Number: [none]
Project Manager: Karen Olson

Reported:
05/14/24 12:29

BKG01@6'
2403146-10 (Soil)

Summit Scientific

Total Metals by EPA 6020B

Date Sampled: **03/08/24 14:57**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Arsenic	0.694	0.200	mg/kg dry	1	BHC0686	03/19/24	03/30/24	EPA 6020B	
Barium	11.5	0.400	"	"	"	"	"	"	
Cadmium	ND	0.200	"	"	"	"	"	"	
Copper	1.23	0.400	"	"	"	"	"	"	
Lead	1.06	0.200	"	"	"	"	"	"	
Nickel	1.81	0.400	"	"	"	"	"	"	
Silver	ND	0.0200	"	"	"	"	"	"	
Zinc	5.41	0.400	"	"	"	"	"	"	
Selenium	ND	0.260	"	"	"	"	"	"	

Hexavalent Chromium by EPA Method 7196

Date Sampled: **03/08/24 14:57**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Chromium, Hexavalent	ND	0.30	mg/kg dry	1	BHC0614	03/18/24	03/20/24	EPA 7196A	

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **03/08/24 14:57**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
% Solids	97.8		%	1	BHC0436	03/15/24	03/16/24	Calculation	

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.



Tasman Geosciences
6855 W. 119th Ave.
Broomfield CO, 80020

Project: PDC - Bunn M 1-34 Wellhead

Project Number: [none]
Project Manager: Karen Olson

Reported:
05/14/24 12:29

BKG02@0.5'
2403146-11 (Soil)

Summit Scientific

Total Metals by EPA 6020B

Date Sampled: **03/08/24 15:03**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Arsenic	3.09	0.200	mg/kg dry	1	BHC0686	03/19/24	03/30/24	EPA 6020B	
Barium	73.4	0.400	"	"	"	"	"	"	
Cadmium	ND	0.200	"	"	"	"	"	"	
Copper	4.92	0.400	"	"	"	"	"	"	
Lead	6.09	0.200	"	"	"	"	"	"	
Nickel	5.65	0.400	"	"	"	"	"	"	
Silver	0.0292	0.0200	"	"	"	"	"	"	
Zinc	19.4	0.400	"	"	"	"	"	"	
Selenium	ND	0.260	"	"	"	"	"	"	

Hexavalent Chromium by EPA Method 7196

Date Sampled: **03/08/24 15:03**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Chromium, Hexavalent	ND	0.30	mg/kg dry	1	BHC0614	03/18/24	03/20/24	EPA 7196A	

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **03/08/24 15:03**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
% Solids	87.7		%	1	BHC0436	03/15/24	03/16/24	Calculation	

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.



Tasman Geosciences
6855 W. 119th Ave.
Broomfield CO, 80020

Project: PDC - Bunn M 1-34 Wellhead

Project Number: [none]
Project Manager: Karen Olson

Reported:
05/14/24 12:29

BKG02@4'
2403146-12 (Soil)

Summit Scientific

Total Metals by EPA 6020B

Date Sampled: **03/08/24 15:10**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Arsenic	1.26	0.200	mg/kg dry	1	BHC0686	03/19/24	03/30/24	EPA 6020B	
Barium	23.7	0.400	"	"	"	"	"	"	
Cadmium	ND	0.200	"	"	"	"	"	"	
Copper	2.25	0.400	"	"	"	"	"	"	
Lead	2.19	0.200	"	"	"	"	"	"	
Nickel	2.82	0.400	"	"	"	"	"	"	
Silver	ND	0.0200	"	"	"	"	"	"	
Zinc	9.77	0.400	"	"	"	"	"	"	
Selenium	ND	0.260	"	"	"	"	"	"	

Hexavalent Chromium by EPA Method 7196

Date Sampled: **03/08/24 15:10**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Chromium, Hexavalent	ND	0.30	mg/kg dry	1	BHC0614	03/18/24	03/20/24	EPA 7196A	

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **03/08/24 15:10**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
% Solids	96.6		%	1	BHC0436	03/15/24	03/16/24	Calculation	

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.



Tasman Geosciences
6855 W. 119th Ave.
Broomfield CO, 80020

Project: PDC - Bunn M 1-34 Wellhead

Project Number: [none]
Project Manager: Karen Olson

Reported:
05/14/24 12:29

BKG02@5'
2403146-13 (Soil)

Summit Scientific

Total Metals by EPA 6020B

Date Sampled: **03/08/24 15:14**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Arsenic	1.16	0.200	mg/kg dry	1	BHC0686	03/19/24	03/30/24	EPA 6020B	
Barium	21.4	0.400	"	"	"	"	"	"	
Cadmium	ND	0.200	"	"	"	"	"	"	
Copper	2.04	0.400	"	"	"	"	"	"	
Lead	2.17	0.200	"	"	"	"	"	"	
Nickel	2.97	0.400	"	"	"	"	"	"	
Silver	ND	0.0200	"	"	"	"	"	"	
Zinc	9.16	0.400	"	"	"	"	"	"	
Selenium	ND	0.260	"	"	"	"	"	"	

Hexavalent Chromium by EPA Method 7196

Date Sampled: **03/08/24 15:14**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Chromium, Hexavalent	ND	0.30	mg/kg dry	1	BHC0614	03/18/24	03/20/24	EPA 7196A	

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **03/08/24 15:14**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
% Solids	96.5		%	1	BHC0436	03/15/24	03/16/24	Calculation	

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.



Tasman Geosciences
6855 W. 119th Ave.
Broomfield CO, 80020

Project: PDC - Bunn M 1-34 Wellhead

Project Number: [none]
Project Manager: Karen Olson

Reported:
05/14/24 12:29

BKG02@6'
2403146-14 (Soil)

Summit Scientific

Total Metals by EPA 6020B

Date Sampled: **03/08/24 15:17**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Arsenic	1.19	0.200	mg/kg dry	1	BHC0686	03/19/24	03/30/24	EPA 6020B	
Barium	21.9	0.400	"	"	"	"	"	"	
Cadmium	ND	0.200	"	"	"	"	"	"	
Copper	2.15	0.400	"	"	"	"	"	"	
Lead	1.92	0.200	"	"	"	"	"	"	
Nickel	2.92	0.400	"	"	"	"	"	"	
Silver	ND	0.0200	"	"	"	"	"	"	
Zinc	8.69	0.400	"	"	"	"	"	"	
Selenium	ND	0.260	"	"	"	"	"	"	

Hexavalent Chromium by EPA Method 7196

Date Sampled: **03/08/24 15:17**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Chromium, Hexavalent	ND	0.30	mg/kg dry	1	BHC0614	03/18/24	03/20/24	EPA 7196A	

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **03/08/24 15:17**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
% Solids	96.4		%	1	BHC0436	03/15/24	03/16/24	Calculation	

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.



Tasman Geosciences
6855 W. 119th Ave.
Broomfield CO, 80020

Project: PDC - Bunn M 1-34 Wellhead

Project Number: [none]
Project Manager: Karen Olson

Reported:
05/14/24 12:29

Volatile Organic Compounds by EPA Method 8260B - Quality Control

Summit Scientific

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

Batch BHC0325 - EPA 5030 Soil MS

Blank (BHC0325-BLK1)

Prepared: 03/12/24 Analyzed: 03/13/24

Benzene	ND	0.0020	mg/kg							
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	"							
<i>Surrogate: 1,2-Dichloroethane-d4</i>	0.0429		"	0.0400		107	50-150			
<i>Surrogate: Toluene-d8</i>	0.0387		"	0.0400		96.7	50-150			
<i>Surrogate: 4-Bromofluorobenzene</i>	0.0398		"	0.0400		99.5	50-150			

LCS (BHC0325-BS1)

Prepared: 03/12/24 Analyzed: 03/13/24

Benzene	0.0926	0.0020	mg/kg	0.100		92.6	70-130			
Toluene	0.100	0.0050	"	0.100		100	70-130			
Ethylbenzene	0.102	0.0050	"	0.100		102	70-130			
m,p-Xylene	0.197	0.010	"	0.200		98.6	70-130			
o-Xylene	0.101	0.0050	"	0.100		101	70-130			
1,2,4-Trimethylbenzene	0.0940	0.0050	"	0.100		94.0	70-130			
1,3,5-Trimethylbenzene	0.0930	0.0050	"	0.100		93.0	70-130			
Naphthalene	0.100	0.0038	"	0.100		100	70-130			
<i>Surrogate: 1,2-Dichloroethane-d4</i>	0.0387		"	0.0400		96.7	50-150			
<i>Surrogate: Toluene-d8</i>	0.0392		"	0.0400		97.9	50-150			
<i>Surrogate: 4-Bromofluorobenzene</i>	0.0400		"	0.0400		100	50-150			

Matrix Spike (BHC0325-MS1)

Source: 2403143-01

Prepared: 03/12/24 Analyzed: 03/13/24

Benzene	0.0682	0.0020	mg/kg	0.100	ND	68.2	70-130			QM-07
Toluene	0.0738	0.0050	"	0.100	ND	73.8	70-130			
Ethylbenzene	0.0832	0.0050	"	0.100	ND	83.2	70-130			
m,p-Xylene	0.155	0.010	"	0.200	ND	77.4	70-130			
o-Xylene	0.0790	0.0050	"	0.100	ND	79.0	70-130			
1,2,4-Trimethylbenzene	0.0607	0.0050	"	0.100	ND	60.7	70-130			QM-07
1,3,5-Trimethylbenzene	0.0684	0.0050	"	0.100	ND	68.4	70-130			QM-07
Naphthalene	0.0525	0.0038	"	0.100	ND	52.5	70-130			QM-07
<i>Surrogate: 1,2-Dichloroethane-d4</i>	0.0432		"	0.0400		108	50-150			
<i>Surrogate: Toluene-d8</i>	0.0396		"	0.0400		99.1	50-150			
<i>Surrogate: 4-Bromofluorobenzene</i>	0.0406		"	0.0400		101	50-150			

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.



Tasman Geosciences
6855 W. 119th Ave.
Broomfield CO, 80020

Project: PDC - Bunn M 1-34 Wellhead

Project Number: [none]
Project Manager: Karen Olson

Reported:
05/14/24 12:29

Volatile Organic Compounds by EPA Method 8260B - Quality Control

Summit Scientific

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

Batch BHC0325 - EPA 5030 Soil MS

Matrix Spike Dup (BHC0325-MSD1)	Source: 2403143-01			Prepared: 03/12/24 Analyzed: 03/13/24						
Benzene	0.0700	0.0020	mg/kg	0.100	ND	70.0	70-130	2.56	30	
Toluene	0.0755	0.0050	"	0.100	ND	75.5	70-130	2.21	30	
Ethylbenzene	0.0857	0.0050	"	0.100	ND	85.7	70-130	3.02	30	
m,p-Xylene	0.160	0.010	"	0.200	ND	80.1	70-130	3.41	30	
o-Xylene	0.0828	0.0050	"	0.100	ND	82.8	70-130	4.78	30	
1,2,4-Trimethylbenzene	0.0645	0.0050	"	0.100	ND	64.5	70-130	6.18	30	QM-07
1,3,5-Trimethylbenzene	0.0715	0.0050	"	0.100	ND	71.5	70-130	4.50	30	
Naphthalene	0.0518	0.0038	"	0.100	ND	51.8	70-130	1.32	30	QM-07
Surrogate: 1,2-Dichloroethane-d4	0.0399		"	0.0400		99.7	50-150			
Surrogate: Toluene-d8	0.0381		"	0.0400		95.2	50-150			
Surrogate: 4-Bromofluorobenzene	0.0405		"	0.0400		101	50-150			

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.



Tasman Geosciences
6855 W. 119th Ave.
Broomfield CO, 80020

Project: PDC - Bunn M 1-34 Wellhead

Project Number: [none]
Project Manager: Karen Olson

Reported:
05/14/24 12:29

Extractable Petroleum Hydrocarbons by 8015 - Quality Control
Summit Scientific

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

Batch BHC0328 - EPA 3550A

Blank (BHC0328-BLK1)

Prepared: 03/12/24 Analyzed: 03/13/24

C10-C28 (DRO)	ND	50	mg/kg								
C28-C36 (ORO)	ND	50	"								
Surrogate: <i>o</i> -Terphenyl	17.4		"	12.5		139		30-150			

LCS (BHC0328-BS1)

Prepared: 03/12/24 Analyzed: 03/13/24

C10-C28 (DRO)	625	50	mg/kg	500		125		70-130			
Surrogate: <i>o</i> -Terphenyl	16.4		"	12.5		131		30-150			

Matrix Spike (BHC0328-MS1)

Source: 2403143-01

Prepared: 03/12/24 Analyzed: 03/13/24

C10-C28 (DRO)	579	50	mg/kg	500	9.64	114		70-130			
Surrogate: <i>o</i> -Terphenyl	13.3		"	12.5		107		30-150			

Matrix Spike Dup (BHC0328-MSD1)

Source: 2403143-01

Prepared: 03/12/24 Analyzed: 03/13/24

C10-C28 (DRO)	590	50	mg/kg	500	9.64	116		70-130	1.78	20	
Surrogate: <i>o</i> -Terphenyl	13.1		"	12.5		105		30-150			

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.



Tasman Geosciences
6855 W. 119th Ave.
Broomfield CO, 80020

Project: PDC - Bunn M 1-34 Wellhead

Project Number: [none]
Project Manager: Karen Olson

Reported:
05/14/24 12:29

PAH by EPA Method 8270D SIM - Quality Control

Summit Scientific

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

Batch BHC0324 - EPA 5030 Soil MS

Blank (BHC0324-BLK1)

Prepared: 03/12/24 Analyzed: 03/13/24

Acenaphthene	ND	0.00500	mg/kg							
Anthracene	ND	0.00500	"							
Benzo (a) anthracene	ND	0.00500	"							
Benzo (a) pyrene	ND	0.00500	"							
Benzo (b) fluoranthene	ND	0.00500	"							
Benzo (k) fluoranthene	ND	0.00500	"							
Chrysene	ND	0.00500	"							
Dibenz (a,h) anthracene	ND	0.00500	"							
Fluoranthene	ND	0.00500	"							
Fluorene	ND	0.00500	"							
Indeno (1,2,3-cd) pyrene	ND	0.00500	"							
Pyrene	ND	0.00500	"							
1-Methylnaphthalene	ND	0.00500	"							
2-Methylnaphthalene	ND	0.00500	"							
<i>Surrogate: 2-Methylnaphthalene-d10</i>	<i>0.0415</i>		"	<i>0.0333</i>		<i>125</i>		<i>40-150</i>		
<i>Surrogate: Fluoranthene-d10</i>	<i>0.0211</i>		"	<i>0.0333</i>		<i>63.3</i>		<i>40-150</i>		

LCS (BHC0324-BS1)

Prepared: 03/12/24 Analyzed: 03/13/24

Acenaphthene	0.0277	0.00500	mg/kg	0.0333		83.1		31-137		
Anthracene	0.0284	0.00500	"	0.0333		85.2		30-120		
Benzo (a) anthracene	0.0264	0.00500	"	0.0333		79.1		30-120		
Benzo (a) pyrene	0.0255	0.00500	"	0.0333		76.4		30-120		
Benzo (b) fluoranthene	0.0209	0.00500	"	0.0333		62.8		30-120		
Benzo (k) fluoranthene	0.0227	0.00500	"	0.0333		68.1		30-120		
Chrysene	0.0294	0.00500	"	0.0333		88.3		30-120		
Dibenz (a,h) anthracene	0.0383	0.00500	"	0.0333		115		30-120		
Fluoranthene	0.0240	0.00500	"	0.0333		72.0		30-120		
Fluorene	0.0271	0.00500	"	0.0333		81.4		30-120		
Indeno (1,2,3-cd) pyrene	0.0338	0.00500	"	0.0333		102		30-120		
Pyrene	0.0378	0.00500	"	0.0333		113		35-142		
1-Methylnaphthalene	0.0414	0.00500	"	0.0333		124		35-142		
2-Methylnaphthalene	0.0175	0.00500	"	0.0333		52.4		35-142		
<i>Surrogate: 2-Methylnaphthalene-d10</i>	<i>0.0362</i>		"	<i>0.0333</i>		<i>109</i>		<i>40-150</i>		
<i>Surrogate: Fluoranthene-d10</i>	<i>0.0243</i>		"	<i>0.0333</i>		<i>73.0</i>		<i>40-150</i>		

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.



Tasman Geosciences
6855 W. 119th Ave.
Broomfield CO, 80020

Project: PDC - Bunn M 1-34 Wellhead

Project Number: [none]
Project Manager: Karen Olson

Reported:
05/14/24 12:29

PAH by EPA Method 8270D SIM - Quality Control

Summit Scientific

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

Batch BHC0324 - EPA 5030 Soil MS

Matrix Spike (BHC0324-MS1)	Source: 2403132-01			Prepared: 03/12/24 Analyzed: 03/13/24						
Acenaphthene	0.0155	0.00500	mg/kg	0.0333	ND	46.4	31-137			
Anthracene	0.0150	0.00500	"	0.0333	ND	45.0	30-120			
Benzo (a) anthracene	0.0147	0.00500	"	0.0333	ND	44.0	30-120			
Benzo (a) pyrene	0.0224	0.00500	"	0.0333	ND	67.2	30-120			
Benzo (b) fluoranthene	0.0178	0.00500	"	0.0333	ND	53.4	30-120			
Benzo (k) fluoranthene	0.0167	0.00500	"	0.0333	ND	50.1	30-120			
Chrysene	0.0159	0.00500	"	0.0333	ND	47.6	30-120			
Dibenz (a,h) anthracene	0.0342	0.00500	"	0.0333	ND	103	30-120			
Fluoranthene	0.0137	0.00500	"	0.0333	ND	41.0	30-120			
Fluorene	0.0154	0.00500	"	0.0333	ND	46.3	30-120			
Indeno (1,2,3-cd) pyrene	0.0382	0.00500	"	0.0333	ND	114	30-120			
Pyrene	0.0271	0.00500	"	0.0333	ND	81.2	35-142			
1-Methylnaphthalene	0.0276	0.00500	"	0.0333	ND	82.9	15-130			
2-Methylnaphthalene	0.0306	0.00500	"	0.0333	ND	91.8	15-130			
<i>Surrogate: 2-Methylnaphthalene-d10</i>	<i>0.0212</i>		<i>"</i>	<i>0.0333</i>		<i>63.6</i>	<i>40-150</i>			
<i>Surrogate: Fluoranthene-d10</i>	<i>0.0140</i>		<i>"</i>	<i>0.0333</i>		<i>42.1</i>	<i>40-150</i>			

Matrix Spike Dup (BHC0324-MSD1)	Source: 2403132-01			Prepared: 03/12/24 Analyzed: 03/13/24						
Acenaphthene	0.0171	0.00500	mg/kg	0.0333	ND	51.3	31-137	10.1	30	
Anthracene	0.0157	0.00500	"	0.0333	ND	47.0	30-120	4.22	30	
Benzo (a) anthracene	0.0185	0.00500	"	0.0333	ND	55.4	30-120	22.9	30	
Benzo (a) pyrene	0.0246	0.00500	"	0.0333	ND	73.9	30-120	9.53	30	
Benzo (b) fluoranthene	0.0208	0.00500	"	0.0333	ND	62.5	30-120	15.7	30	
Benzo (k) fluoranthene	0.0141	0.00500	"	0.0333	ND	42.3	30-120	16.8	30	
Chrysene	0.0143	0.00500	"	0.0333	ND	42.9	30-120	10.3	30	
Dibenz (a,h) anthracene	0.0357	0.00500	"	0.0333	ND	107	30-120	4.07	30	
Fluoranthene	0.0165	0.00500	"	0.0333	ND	49.6	30-120	19.0	30	
Fluorene	0.0134	0.00500	"	0.0333	ND	40.2	30-120	14.2	30	
Indeno (1,2,3-cd) pyrene	0.0334	0.00500	"	0.0333	ND	100	30-120	13.3	30	
Pyrene	0.0243	0.00500	"	0.0333	ND	73.0	35-142	10.6	30	
1-Methylnaphthalene	0.0250	0.00500	"	0.0333	ND	75.0	15-130	9.99	50	
2-Methylnaphthalene	0.0249	0.00500	"	0.0333	ND	74.7	15-130	20.6	50	
<i>Surrogate: 2-Methylnaphthalene-d10</i>	<i>0.0189</i>		<i>"</i>	<i>0.0333</i>		<i>56.8</i>	<i>40-150</i>			
<i>Surrogate: Fluoranthene-d10</i>	<i>0.0133</i>		<i>"</i>	<i>0.0333</i>		<i>40.0</i>	<i>40-150</i>			

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.



Tasman Geosciences
6855 W. 119th Ave.
Broomfield CO, 80020

Project: PDC - Bunn M 1-34 Wellhead

Project Number: [none]
Project Manager: Karen Olson

Reported:
05/14/24 12:29

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

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

Batch BHC0514 - EPA 3050B

Blank (BHC0514-BLK1)

Prepared: 03/15/24 Analyzed: 05/14/24

Boron ND 2.00 mg/L

LCS (BHC0514-BS1)

Prepared: 03/15/24 Analyzed: 05/14/24

Boron 5.24 2.00 mg/L 5.00 105 80-120

Duplicate (BHC0514-DUP1)

Source: 2403146-01

Prepared: 03/15/24 Analyzed: 05/14/24

Boron 0.313 2.00 mg/L 0.384 20.5 20 QR-01

Matrix Spike (BHC0514-MS1)

Source: 2403146-01

Prepared: 03/15/24 Analyzed: 05/14/24

Boron 5.78 2.00 mg/L 5.00 0.384 108 75-125

Matrix Spike Dup (BHC0514-MSD1)

Source: 2403146-01

Prepared: 03/15/24 Analyzed: 05/14/24

Boron 5.75 2.00 mg/L 5.00 0.384 107 75-125 0.661 25

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.



Tasman Geosciences
6855 W. 119th Ave.
Broomfield CO, 80020

Project: PDC - Bunn M 1-34 Wellhead

Project Number: [none]
Project Manager: Karen Olson

Reported:
05/14/24 12:29

Total Metals by EPA 6020B - Quality Control
Summit Scientific

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

Batch BHC0686 - EPA 3050B

Blank (BHC0686-BLK1)

Prepared: 03/19/24 Analyzed: 03/30/24

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	"							
Silver	ND	0.0200	"							
Zinc	ND	0.400	"							
Selenium	ND	0.260	"							

LCS (BHC0686-BS1)

Prepared: 03/19/24 Analyzed: 03/30/24

Arsenic	36.3	0.200	mg/kg wet	40.0	90.7	80-120
Barium	37.0	0.400	"	40.0	92.4	80-120
Cadmium	1.82	0.200	"	2.00	90.9	80-120
Copper	39.5	0.400	"	40.0	98.8	80-120
Lead	18.0	0.200	"	20.0	89.8	80-120
Nickel	39.1	0.400	"	40.0	97.7	80-120
Silver	1.88	0.0200	"	2.00	93.8	80-120
Zinc	39.5	0.400	"	40.0	98.9	80-120
Selenium	3.73	0.260	"	4.00	93.2	80-120

Duplicate (BHC0686-DUP1)

Source: 2403146-01

Prepared: 03/19/24 Analyzed: 03/30/24

Arsenic	2.23	0.200	mg/kg dry	2.26	1.58	20
Barium	60.0	0.400	"	55.5	7.81	20
Cadmium	0.160	0.200	"	0.166	3.72	20
Copper	6.05	0.400	"	6.35	4.72	20
Lead	15.3	0.200	"	18.2	17.5	20
Nickel	4.44	0.400	"	4.69	5.41	20
Silver	0.0191	0.0200	"	0.0173	9.52	20
Zinc	26.3	0.400	"	27.3	3.82	20
Selenium	ND	0.260	"	ND		20

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.



Tasman Geosciences
6855 W. 119th Ave.
Broomfield CO, 80020

Project: PDC - Bunn M 1-34 Wellhead

Project Number: [none]
Project Manager: Karen Olson

Reported:
05/14/24 12:29

Total Metals by EPA 6020B - Quality Control
Summit Scientific

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

Batch BHC0686 - EPA 3050B

Matrix Spike (BHC0686-MS1)

Source: 2403146-01

Prepared: 03/19/24 Analyzed: 03/30/24

Arsenic	33.1	0.200	mg/kg dry	43.3	2.26	71.2	75-125				QM-07
Barium	90.3	0.400	"	43.3	55.5	80.2	75-125				
Cadmium	1.71	0.200	"	2.17	0.166	71.3	75-125				QM-07
Copper	29.4	0.400	"	43.3	6.35	53.2	75-125				QM-07
Lead	32.5	0.200	"	21.7	18.2	65.9	75-125				QM-07
Nickel	27.4	0.400	"	43.3	4.69	52.3	75-125				QM-07
Silver	1.59	0.0200	"	2.17	0.0173	72.5	75-125				QM-07
Zinc	50.7	0.400	"	43.3	27.3	53.9	75-125				QM-07
Selenium	2.90	0.260	"	4.33	ND	67.0	75-125				QM-07

Matrix Spike Dup (BHC0686-MSD1)

Source: 2403146-01

Prepared: 03/19/24 Analyzed: 03/30/24

Arsenic	33.9	0.200	mg/kg dry	43.3	2.26	72.9	75-125	2.26	25		QM-07
Barium	92.3	0.400	"	43.3	55.5	84.9	75-125	2.26	25		
Cadmium	1.75	0.200	"	2.17	0.166	73.0	75-125	2.08	25		QM-07
Copper	29.0	0.400	"	43.3	6.35	52.2	75-125	1.53	25		QM-07
Lead	33.3	0.200	"	21.7	18.2	69.6	75-125	2.40	25		QM-07
Nickel	27.0	0.400	"	43.3	4.69	51.4	75-125	1.40	25		QM-07
Silver	1.63	0.0200	"	2.17	0.0173	74.6	75-125	2.83	25		QM-07
Zinc	50.1	0.400	"	43.3	27.3	52.5	75-125	1.21	25		QM-07
Selenium	3.10	0.260	"	4.33	ND	71.6	75-125	6.71	25		QM-07

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.



Tasman Geosciences
6855 W. 119th Ave.
Broomfield CO, 80020

Project: PDC - Bunn M 1-34 Wellhead

Project Number: [none]
Project Manager: Karen Olson

Reported:
05/14/24 12:29

Hexavalent Chromium by EPA Method 7196 - Quality Control
Summit Scientific

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

Batch BHC0614 - 3060A Mod

Blank (BHC0614-BLK1)

Prepared: 03/18/24 Analyzed: 03/20/24

Chromium, Hexavalent ND 0.30 mg/kg wet

LCS (BHC0614-BS1)

Prepared: 03/18/24 Analyzed: 03/20/24

Chromium, Hexavalent 23.2 0.30 mg/kg wet 25.0 92.8 80-120

Duplicate (BHC0614-DUP1)

Source: 2403146-01

Prepared: 03/18/24 Analyzed: 03/20/24

Chromium, Hexavalent ND 0.30 mg/kg dry ND 20

Matrix Spike (BHC0614-MS1)

Source: 2403146-01

Prepared: 03/18/24 Analyzed: 03/20/24

Chromium, Hexavalent 25.4 0.30 mg/kg dry 27.1 ND 93.6 75-125

Matrix Spike Dup (BHC0614-MSD1)

Source: 2403146-01

Prepared: 03/18/24 Analyzed: 03/20/24

Chromium, Hexavalent 25.1 0.30 mg/kg dry 27.1 ND 92.8 75-125 0.858 20

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.



Tasman Geosciences
6855 W. 119th Ave.
Broomfield CO, 80020

Project: PDC - Bunn M 1-34 Wellhead

Project Number: [none]
Project Manager: Karen Olson

Reported:
05/14/24 12:29

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

Summit Scientific

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

Batch BHC0886 - General Preparation

Blank (BHC0886-BLK1)

Prepared: 03/24/24 Analyzed: 04/23/24

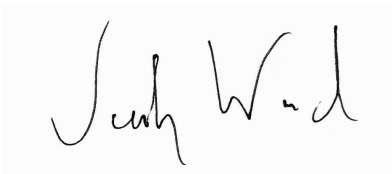
Calcium	ND	0.0500	mg/L wet							
Magnesium	ND	0.0500	"							
Sodium	ND	0.0500	"							

LCS (BHC0886-BS1)

Prepared: 03/24/24 Analyzed: 04/23/24

Calcium	5.48	0.0500	mg/L wet	5.00		110	70-130			
Magnesium	4.98	0.0500	"	5.00		99.6	70-130			
Sodium	5.04	0.0500	"	5.00		101	70-130			

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.



Tasman Geosciences
 6855 W. 119th Ave.
 Broomfield CO, 80020

Project: PDC - Bunn M 1-34 Wellhead

Project Number: [none]
 Project Manager: Karen Olson

Reported:
 05/14/24 12:29

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

Summit Scientific

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

Batch BHC0436 - General Preparation

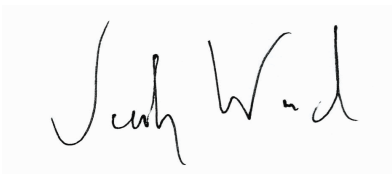
Duplicate (BHC0436-DUP1)

Source: 2403145-27

Prepared: 03/15/24 Analyzed: 03/16/24

% Solids	80.4		%		77.1			4.23		20	
----------	------	--	---	--	------	--	--	------	--	----	--

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.



Tasman Geosciences
6855 W. 119th Ave.
Broomfield CO, 80020

Project: PDC - Bunn M 1-34 Wellhead

Project Number: [none]
Project Manager: Karen Olson

Reported:
05/14/24 12:29

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

Summit Scientific

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

Batch BHC0888 - General Preparation

Blank (BHC0888-BLK1)

Prepared: 03/24/24 Analyzed: 03/26/24

Specific Conductance (EC) ND 0.0100 mmhos/cm

LCS (BHC0888-BS1)

Prepared: 03/24/24 Analyzed: 03/26/24

Specific Conductance (EC) 0.144 0.0100 mmhos/cm 0.150 96.2 95-105

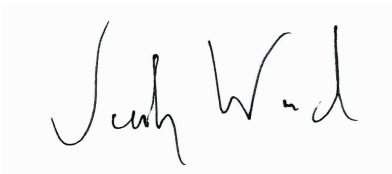
Duplicate (BHC0888-DUP1)

Source: 2403146-01

Prepared: 03/24/24 Analyzed: 03/26/24

Specific Conductance (EC) 0.331 0.0100 mmhos/cm 0.337 1.92 20

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.



Tasman Geosciences
6855 W. 119th Ave.
Broomfield CO, 80020

Project: PDC - Bunn M 1-34 Wellhead

Project Number: [none]
Project Manager: Karen Olson

Reported:
05/14/24 12:29

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

Summit Scientific

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

Batch BHC0887 - General Preparation

LCS (BHC0887-BS1)

Prepared: 03/24/24 Analyzed: 03/26/24

pH	9.09	pH Units	9.18	99.0	95-105
----	------	----------	------	------	--------

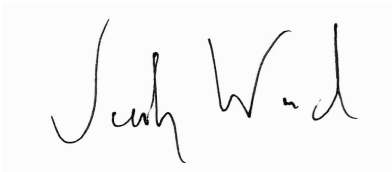
Duplicate (BHC0887-DUP1)

Source: 2403146-01

Prepared: 03/24/24 Analyzed: 03/26/24

pH	7.90	pH Units	7.90	0.00	20
----	------	----------	------	------	----

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.



Tasman Geosciences
6855 W. 119th Ave.
Broomfield CO, 80020

Project: PDC - Bunn M 1-34 Wellhead

Project Number: [none]
Project Manager: Karen Olson

Reported:
05/14/24 12:29

Notes and Definitions

- QR-01 Analyses are not controlled on RPD values from sample concentrations less than 10 times the reporting limit. QC batch accepted based on LCS and/or LCSD QC results.
- QM-07 The spike recovery was outside acceptance limits for the MS and/or MSD. The batch was accepted based on acceptable LCS/LCSD recovery.
- 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