

# Summit Scientific

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4653 Table Mountain Drive, Golden, Colorado 80403

303.277.9310

October 02, 2024

Karen Olson

Tasman Geosciences

6855 W. 119th Ave.

Broomfield, CO 80020

RE: PDC - Moss 14-16H Tank Battery

Work Order #2409387

Enclosed are the results of analyses for samples received by Summit Scientific on 09/24/24 17:48. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

A handwritten signature in black ink, appearing to read "Jacob Wood". The signature is written in a cursive, flowing style with a large initial "J" and "W".

Jacob Wood For Paul Shrewsbury

President



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

Project: PDC - Moss 14-16H Tank Battery

Project Number: 36910  
Project Manager: Karen Olson

**Reported:**  
10/02/24 09:53

### ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
AST01@0-6"	2409387-01	Soil	09/24/24 09:16	09/24/24 17:48
AST02@0-6"	2409387-02	Soil	09/24/24 09:17	09/24/24 17:48
PWV01-B@4'	2409387-03	Soil	09/24/24 09:24	09/24/24 17:48
PWV01-N@2.5'	2409387-04	Soil	09/24/24 09:26	09/24/24 17:48
SEP01-DL@6'	2409387-08	Soil	09/24/24 11:00	09/24/24 17:48
DL01-01@5'	2409387-09	Soil	09/24/24 11:28	09/24/24 17:48
BKG01@0-6"	2409387-10	Soil	09/24/24 14:00	09/24/24 17:48
BKG01@2.5'	2409387-11	Soil	09/24/24 14:02	09/24/24 17:48
BKG01@4'	2409387-12	Soil	09/24/24 14:04	09/24/24 17:48
BKG01@5'	2409387-13	Soil	09/24/24 14:06	09/24/24 17:48
BKG01@6'	2409387-14	Soil	09/24/24 14:08	09/24/24 17:48

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.*

Send Data To:		Send Invoice To:	
Client: PDC / Tasman	Project Manager: Karen Olson	Company: PDC Energy	
Address: 6855 W 119th Ave	E-Mail: karen.olson@PDCE.com	Project Name/Location: Moss 14-16H Tank Battery	
City/State/Zip: Broomfield / CO / 80020		AFE#: PX-900347	
Phone: 303-487-1228	Project Name: Moss 14-16H Tank Battery	PO/Billing Codes:	
Sampler Name: Sylvie Bousquet	Project Number: 36910	Contact: Karen Olson <sup>88</sup> Delbert Pace	

ID	Sample Description	Date Sampled	Time Sampled	# of containers	Preservative				Matrix		Analysis Requested										Special Instructions
					HCl	HNO3	None	Other	Water	Soil	Air-Canister #	Other	BTEXN - 8260B	TPH (C6-C36)	1,2,4 & 1,3,5-TMB	Boron - HWS	pH, EC, SAR	PAHs	Metals	On Hold	
1	AST01 00-6"	9-24-24	9:16	3			X			X			X	X	X	X	X	X	X	X	
2	AST02 00-6"		9:17																		
3	PWV01-B@4'		9:24																		
4	PWV01-N@2.5'		9:26																		
5	PWV01-E@2.5'		9:28																	X	
6	PWV01-S@2.5'		9:30																	X	
7	PWV01-W@2.5'		9:32																	X	
8	SEPO1-DL@6'		11:00																		
9	DI01-01@5'		11:28																		
10	BKGO1 00-6"		14:00	2																	
11	BKGO1@2.5'		14:02																		
12	BKGO1@4'		14:04																		
13	BKGO1@5'		14:06																		
14	BKGO1@6'		14:08																		
15																					

Relinquished by: <i>Sylvie Bousquet</i>	Date/Time: 9-24-24 14:35	Received by: <i>Tasman Lockbox</i>	Date/Time: 9-24-24 14:35	TAT Business Days	Field DO	Notes:
				Same Day	Field EC	
Relinquished by: <i>Tasman Lockbox</i>	Date/Time: 9-24-24 1748	Received by: <i>[Signature]</i>	Date/Time: 9-24-24 1748	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: 9.1	Corrected Temperature: 8	IR gun #: 1	HNO3 lot #:			

S<sub>2</sub>

## Sample Receipt Checklist

S2 Work Order# 2409381Client: ReismanClient Project ID: MOSS 14-16 H Tank BatteryShipped Via: H.D./P.U./FedEx/UPS/USPS/Other ☐ Airbill #:

<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
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Matrix (Check all that apply)

Air

☐

Soil/Solid

☐

Water

☐

Other

☐

Temp (°C)

9.1

Thermometer #

1

	Yes	No	N/A	Comments (if any)
If samples require cooling, is the temperature < 6°C? <sup>(1)</sup> 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"/>	ON ICE
If custody seals are present, are they intact? <sup>(1)</sup>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Are samples due within 48 hours present?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
Are water samples with short hold times present? Note the short hold analysis in the comments column - pH, Nitrate/Nitrite, Ferrous Iron (Fe <sup>2+</sup> ), Hexavalent Chromium (Cr <sup>6+</sup> , 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? <sup>(1)</sup>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Is the COC properly relinquished by the client w/ date and time recorded? <sup>(1)</sup>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Were all samples received intact? <sup>(1)</sup>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Was adequate sample volume provided? <sup>(1)</sup>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Does the COC agree with the number and type of sample bottles received? <sup>(1)</sup>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Do the sample IDs on the bottle labels match the COC? <sup>(1)</sup>	<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)? <sup>(1)</sup> Note the type of preservative in the comments column – HCl, H <sub>2</sub> SO <sub>4</sub> , NaOH, HNO <sub>3</sub> , etc.	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
If samples are acid preserved for metals, is the pH ≤ 2? <sup>(1)</sup> 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):				
<sup>(1)</sup> If NO, then contact the client before proceeding with analysis and note in case narrative.				

AS  
Custodian Printed Name

9/24/24  
Date/Time



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

Project: PDC - Moss 14-16H Tank Battery

Project Number: 36910  
Project Manager: Karen Olson

**Reported:**  
10/02/24 09:53

**AST01@0-6"**  
**2409387-01 (Soil)**

**Summit Scientific**

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

Date Sampled: **09/24/24 09:16**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Benzene	ND	0.0020		mg/kg	1	BHI0892	09/25/24	09/28/24	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: **09/24/24 09:16**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Surrogate: 1,2-Dichloroethane-d4	0.0214	53.4 %		50-150		"	"	"	"	
Surrogate: Toluene-d8	0.0393	98.3 %		50-150		"	"	"	"	
Surrogate: 4-Bromofluorobenzene	0.0384	95.9 %		50-150		"	"	"	"	

**Extractable Petroleum Hydrocarbons by 8015**

Date Sampled: **09/24/24 09:16**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
C10-C28 (DRO)	ND	50		mg/kg	1	BHI0894	09/25/24	09/28/24	EPA 8015M	
C28-C36 (ORO)	ND	50		"	"	"	"	"	"	

Date Sampled: **09/24/24 09:16**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Surrogate: o-Terphenyl	6.88	55.1 %		30-150		"	"	"	"	

**PAH by EPA Method 8270D SIM**

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**Reported:**  
10/02/24 09:53

**AST01@0-6"**  
**2409387-01 (Soil)**

**Summit Scientific**

**PAH by EPA Method 8270D SIM**

Date Sampled: **09/24/24 09:16**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Acenaphthene	ND	0.00500	mg/kg	1	BHI0857	09/25/24	09/26/24	EPA 8270D SIM	
<b>Anthracene</b>	<b>0.00847</b>	0.00500	"	"	"	"	"	"	
<b>Benzo (a) anthracene</b>	<b>0.0256</b>	0.00500	"	"	"	"	"	"	
<b>Benzo (a) pyrene</b>	<b>0.0227</b>	0.00500	"	"	"	"	"	"	
<b>Benzo (b) fluoranthene</b>	<b>0.0294</b>	0.00500	"	"	"	"	"	"	
<b>Benzo (k) fluoranthene</b>	<b>0.0120</b>	0.00500	"	"	"	"	"	"	
<b>Chrysene</b>	<b>0.0253</b>	0.00500	"	"	"	"	"	"	
Dibenz (a,h) anthracene	ND	0.00500	"	"	"	"	"	"	
<b>Fluoranthene</b>	<b>0.0451</b>	0.00500	"	"	"	"	"	"	
Fluorene	ND	0.00500	"	"	"	"	"	"	
<b>Indeno (1,2,3-cd) pyrene</b>	<b>0.0150</b>	0.00500	"	"	"	"	"	"	
<b>Pyrene</b>	<b>0.0450</b>	0.00500	"	"	"	"	"	"	
1-Methylnaphthalene	ND	0.00500	"	"	"	"	"	"	
2-Methylnaphthalene	ND	0.00500	"	"	"	"	"	"	

Date Sampled: **09/24/24 09:16**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 2-Methylnaphthalene-d10	0.0172	51.5 %	40-150		"	"	"	"	
Surrogate: Fluoranthene-d10	0.0231	69.3 %	40-150		"	"	"	"	

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

Date Sampled: **09/24/24 09:16**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Boron	ND	2.00	mg/L	1	BHI0881	09/25/24	09/28/24	EPA 6020B	

**Total Metals by EPA 6020B**

Date Sampled: **09/24/24 09:16**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
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**Reported:**  
10/02/24 09:53

**AST01@0-6"**  
**2409387-01 (Soil)**

**Summit Scientific**

**Total Metals by EPA 6020B**

Arsenic	2.69	0.200	mg/kg dry	1	BHI0900	09/25/24	09/27/24	EPA 6020B
Barium	91.7	0.400	"	"	"	"	"	"
Cadmium	0.246	0.200	"	"	"	"	"	"
Copper	7.81	0.400	"	"	"	"	"	"
Lead	11.3	0.200	"	"	"	"	"	"
Nickel	4.77	0.400	"	"	"	"	"	"
Silver	0.0348	0.0200	"	"	"	"	"	"
Zinc	26.2	0.400	"	"	"	"	"	"
Selenium	ND	0.260	"	"	"	"	"	"

**Hexavalent Chromium by EPA Method 7196**

Date Sampled: **09/24/24 09:16**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Chromium, Hexavalent	ND	0.30	mg/kg dry	1	BHI1042	09/27/24	09/30/24	EPA 7196A	

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

Date Sampled: **09/24/24 09:16**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Calcium	263	0.0500	mg/L dry	1	BHI0907	09/25/24	09/27/24	EPA 6020B	
Magnesium	14.3	0.0500	"	"	"	"	"	"	
Sodium	0.807	0.0500	"	"	"	"	"	"	

**Calculated Analysis**

Date Sampled: **09/24/24 09:16**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	0.0131	0.00100	units	1	BHI1071	09/28/24	09/28/24	Calculation	

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

Date Sampled: **09/24/24 09:16**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
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10/02/24 09:53

**AST01@0-6"**  
**2409387-01 (Soil)**

**Summit Scientific**

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

% Solids	90.3	%	1	BHI0887	09/25/24	09/26/24	Calculation
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**Specific Conductance by EPA Method 120.1, Saturated Paste Extraction**

Date Sampled: **09/24/24 09:16**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Specific Conductance (EC)	0.179	0.0100	mmhos/cm	1	BHI0908	09/25/24	09/26/24	EPA 120.1	

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

Date Sampled: **09/24/24 09:16**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
pH	8.68		pH Units	1	BHI0909	09/25/24	09/26/24	EPA 9045D	

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Project: PDC - Moss 14-16H Tank Battery  
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**Reported:**  
10/02/24 09:53

**AST02@0-6"**  
**2409387-02 (Soil)**

**Summit Scientific**

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

Date Sampled: **09/24/24 09:17**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Benzene	ND	0.0020	mg/kg	1	BHI0892	09/25/24	09/28/24	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: **09/24/24 09:17**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: 1,2-Dichloroethane-d4	0.0220	55.1 %	50-150		"	"	"	"	
Surrogate: Toluene-d8	0.0392	98.0 %	50-150		"	"	"	"	
Surrogate: 4-Bromofluorobenzene	0.0376	94.1 %	50-150		"	"	"	"	

**Extractable Petroleum Hydrocarbons by 8015**

Date Sampled: **09/24/24 09:17**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
C10-C28 (DRO)	ND	50	mg/kg	1	BHI0894	09/25/24	09/28/24	EPA 8015M	
C28-C36 (ORO)	ND	50	"	"	"	"	"	"	

Date Sampled: **09/24/24 09:17**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: o-Terphenyl	6.80	54.4 %	30-150		"	"	"	"	

**PAH by EPA Method 8270D SIM**

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Project Number: 36910  
Project Manager: Karen Olson

**Reported:**  
10/02/24 09:53

**AST02@0-6"**  
**2409387-02 (Soil)**

**Summit Scientific**

**PAH by EPA Method 8270D SIM**

Date Sampled: **09/24/24 09:17**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Acenaphthene	ND	0.00500	mg/kg	1	BHI0857	09/25/24	09/26/24	EPA 8270D SIM	
Anthracene	ND	0.00500	"	"	"	"	"	"	
<b>Benzo (a) anthracene</b>	<b>0.0128</b>	0.00500	"	"	"	"	"	"	
<b>Benzo (a) pyrene</b>	<b>0.0136</b>	0.00500	"	"	"	"	"	"	
<b>Benzo (b) fluoranthene</b>	<b>0.0185</b>	0.00500	"	"	"	"	"	"	
<b>Benzo (k) fluoranthene</b>	<b>0.00836</b>	0.00500	"	"	"	"	"	"	
<b>Chrysene</b>	<b>0.0136</b>	0.00500	"	"	"	"	"	"	
Dibenz (a,h) anthracene	ND	0.00500	"	"	"	"	"	"	
<b>Fluoranthene</b>	<b>0.0226</b>	0.00500	"	"	"	"	"	"	
Fluorene	ND	0.00500	"	"	"	"	"	"	
<b>Indeno (1,2,3-cd) pyrene</b>	<b>0.0104</b>	0.00500	"	"	"	"	"	"	
<b>Pyrene</b>	<b>0.0213</b>	0.00500	"	"	"	"	"	"	
1-Methylnaphthalene	ND	0.00500	"	"	"	"	"	"	
2-Methylnaphthalene	ND	0.00500	"	"	"	"	"	"	

Date Sampled: **09/24/24 09:17**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 2-Methylnaphthalene-d10	0.0170	51.1 %	40-150		"	"	"	"	
Surrogate: Fluoranthene-d10	0.0222	66.6 %	40-150		"	"	"	"	

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

Date Sampled: **09/24/24 09:17**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Boron	ND	2.00	mg/L	1	BHI0881	09/25/24	09/28/24	EPA 6020B	

**Total Metals by EPA 6020B**

Date Sampled: **09/24/24 09:17**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
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6855 W. 119th Ave.  
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Project: PDC - Moss 14-16H Tank Battery

Project Number: 36910  
Project Manager: Karen Olson

**Reported:**  
10/02/24 09:53

**AST02@0-6"**  
**2409387-02 (Soil)**

**Summit Scientific**

**Total Metals by EPA 6020B**

Arsenic	2.88	0.200	mg/kg dry	1	BHI0900	09/25/24	09/27/24	EPA 6020B
Barium	89.2	0.400	"	"	"	"	"	"
Cadmium	0.213	0.200	"	"	"	"	"	"
Copper	6.24	0.400	"	"	"	"	"	"
Lead	13.4	0.200	"	"	"	"	"	"
Nickel	5.06	0.400	"	"	"	"	"	"
Silver	0.0309	0.0200	"	"	"	"	"	"
Zinc	26.3	0.400	"	"	"	"	"	"
Selenium	ND	0.260	"	"	"	"	"	"

**Hexavalent Chromium by EPA Method 7196**

Date Sampled: **09/24/24 09:17**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Chromium, Hexavalent	ND	0.30	mg/kg dry	1	BHI1042	09/27/24	09/30/24	EPA 7196A	

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

Date Sampled: **09/24/24 09:17**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Calcium	308	0.0500	mg/L dry	1	BHI0907	09/25/24	09/27/24	EPA 6020B	
Magnesium	17.8	0.0500	"	"	"	"	"	"	
Sodium	1.74	0.0500	"	"	"	"	"	"	

**Calculated Analysis**

Date Sampled: **09/24/24 09:17**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	0.0261	0.00100	units	1	BHI1071	09/28/24	09/28/24	Calculation	

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

Date Sampled: **09/24/24 09:17**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
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Tasman Geosciences  
6855 W. 119th Ave.  
Broomfield CO, 80020

Project: PDC - Moss 14-16H Tank Battery  
Project Number: 36910  
Project Manager: Karen Olson

**Reported:**  
10/02/24 09:53

**AST02@0-6"**  
**2409387-02 (Soil)**

**Summit Scientific**

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

% Solids	93.4	%	1	BHI0887	09/25/24	09/26/24	Calculation
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**Specific Conductance by EPA Method 120.1, Saturated Paste Extraction**

Date Sampled: **09/24/24 09:17**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Specific Conductance (EC)	0.176	0.0100	mmhos/cm	1	BHI0908	09/25/24	09/26/24	EPA 120.1	

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

Date Sampled: **09/24/24 09:17**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
pH	8.73		pH Units	1	BHI0909	09/25/24	09/26/24	EPA 9045D	

Summit Scientific

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

Project: PDC - Moss 14-16H Tank Battery  
Project Number: 36910  
Project Manager: Karen Olson

**Reported:**  
10/02/24 09:53

**PWV01-B@4'**  
**2409387-03 (Soil)**

**Summit Scientific**

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

Date Sampled: **09/24/24 09:24**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Benzene	ND	0.0020	mg/kg	1	BHI0892	09/25/24	09/28/24	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: **09/24/24 09:24**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: 1,2-Dichloroethane-d4	0.0214	53.6 %	50-150		"	"	"	"	
Surrogate: Toluene-d8	0.0398	99.4 %	50-150		"	"	"	"	
Surrogate: 4-Bromofluorobenzene	0.0385	96.2 %	50-150		"	"	"	"	

**Extractable Petroleum Hydrocarbons by 8015**

Date Sampled: **09/24/24 09:24**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
C10-C28 (DRO)	ND	50	mg/kg	1	BHI0894	09/25/24	09/28/24	EPA 8015M	
C28-C36 (ORO)	ND	50	"	"	"	"	"	"	

Date Sampled: **09/24/24 09:24**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: o-Terphenyl	6.67	53.4 %	30-150		"	"	"	"	

**PAH by EPA Method 8270D SIM**

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

Project: PDC - Moss 14-16H Tank Battery  
Project Number: 36910  
Project Manager: Karen Olson

**Reported:**  
10/02/24 09:53

**PWV01-B@4'**  
**2409387-03 (Soil)**

**Summit Scientific**

**PAH by EPA Method 8270D SIM**

Date Sampled: **09/24/24 09:24**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Acenaphthene	ND	0.00500	mg/kg	1	BH10857	09/25/24	09/26/24	EPA 8270D SIM	
<b>Anthracene</b>	<b>0.00638</b>	0.00500	"	"	"	"	"	"	
<b>Benzo (a) anthracene</b>	<b>0.0236</b>	0.00500	"	"	"	"	"	"	
<b>Benzo (a) pyrene</b>	<b>0.0288</b>	0.00500	"	"	"	"	"	"	
<b>Benzo (b) fluoranthene</b>	<b>0.0230</b>	0.00500	"	"	"	"	"	"	
<b>Benzo (k) fluoranthene</b>	<b>0.0192</b>	0.00500	"	"	"	"	"	"	
<b>Chrysene</b>	<b>0.0287</b>	0.00500	"	"	"	"	"	"	
Dibenz (a,h) anthracene	ND	0.00500	"	"	"	"	"	"	
<b>Fluoranthene</b>	<b>0.0379</b>	0.00500	"	"	"	"	"	"	
Fluorene	ND	0.00500	"	"	"	"	"	"	
<b>Indeno (1,2,3-cd) pyrene</b>	<b>0.0294</b>	0.00500	"	"	"	"	"	"	
<b>Pyrene</b>	<b>0.0428</b>	0.00500	"	"	"	"	"	"	
1-Methylnaphthalene	ND	0.00500	"	"	"	"	"	"	
2-Methylnaphthalene	ND	0.00500	"	"	"	"	"	"	

Date Sampled: **09/24/24 09:24**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: 2-Methylnaphthalene-d10	0.0199	59.8 %	40-150		"	"	"	"	
Surrogate: Fluoranthene-d10	0.0268	80.5 %	40-150		"	"	"	"	

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

Date Sampled: **09/24/24 09:24**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Boron	ND	2.00	mg/L	1	BH10881	09/25/24	09/28/24	EPA 6020B	

**Total Metals by EPA 6020B**

Date Sampled: **09/24/24 09:24**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							

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

Project: PDC - Moss 14-16H Tank Battery  
Project Number: 36910  
Project Manager: Karen Olson

**Reported:**  
10/02/24 09:53

**PWV01-B@4'**  
**2409387-03 (Soil)**

**Summit Scientific**

**Total Metals by EPA 6020B**

Arsenic	4.04	0.200	mg/kg dry	1	BHI0900	09/25/24	09/27/24	EPA 6020B
Barium	92.6	0.400	"	"	"	"	"	"
Cadmium	0.304	0.200	"	"	"	"	"	"
Copper	6.71	0.400	"	"	"	"	"	"
Lead	18.5	0.200	"	"	"	"	"	"
Nickel	5.22	0.400	"	"	"	"	"	"
Silver	0.0437	0.0200	"	"	"	"	"	"
Zinc	45.7	0.400	"	"	"	"	"	"
Selenium	ND	0.260	"	"	"	"	"	"

**Hexavalent Chromium by EPA Method 7196**

Date Sampled: **09/24/24 09:24**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Chromium, Hexavalent	ND	0.30	mg/kg dry	1	BHI1042	09/27/24	09/30/24	EPA 7196A	

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

Date Sampled: **09/24/24 09:24**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Calcium	381	0.0500	mg/L dry	1	BHI0907	09/25/24	09/27/24	EPA 6020B	
Magnesium	23.2	0.0500	"	"	"	"	"	"	
Sodium	10.7	0.0500	"	"	"	"	"	"	

**Calculated Analysis**

Date Sampled: **09/24/24 09:24**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	0.144	0.00100	units	1	BHI1071	09/28/24	09/28/24	Calculation	

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

Date Sampled: **09/24/24 09:24**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
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Tasman Geosciences  
6855 W. 119th Ave.  
Broomfield CO, 80020

Project: PDC - Moss 14-16H Tank Battery

Project Number: 36910  
Project Manager: Karen Olson

**Reported:**  
10/02/24 09:53

**PWV01-B@4'**  
**2409387-03 (Soil)**

**Summit Scientific**

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

% Solids	85.7	%	1	BHI0887	09/25/24	09/26/24	Calculation
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**Specific Conductance by EPA Method 120.1, Saturated Paste Extraction**

Date Sampled: **09/24/24 09:24**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Specific Conductance (EC)	0.317	0.0100	mmhos/cm	1	BHI0908	09/25/24	09/26/24	EPA 120.1	

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

Date Sampled: **09/24/24 09:24**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
pH	8.24		pH Units	1	BHI0909	09/25/24	09/26/24	EPA 9045D	

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

Project: PDC - Moss 14-16H Tank Battery  
Project Number: 36910  
Project Manager: Karen Olson

**Reported:**  
10/02/24 09:53

**PWV01-N@2.5'**  
**2409387-04 (Soil)**

**Summit Scientific**

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

Date Sampled: **09/24/24 09:26**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Benzene	ND	0.0020	mg/kg	1	BHI0892	09/25/24	09/28/24	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: **09/24/24 09:26**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: 1,2-Dichloroethane-d4	0.0217	54.3 %	50-150		"	"	"	"	
Surrogate: Toluene-d8	0.0395	98.8 %	50-150		"	"	"	"	
Surrogate: 4-Bromofluorobenzene	0.0398	99.4 %	50-150		"	"	"	"	

**Extractable Petroleum Hydrocarbons by 8015**

Date Sampled: **09/24/24 09:26**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
C10-C28 (DRO)	ND	50	mg/kg	1	BHI0894	09/25/24	09/28/24	EPA 8015M	
C28-C36 (ORO)	ND	50	"	"	"	"	"	"	

Date Sampled: **09/24/24 09:26**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: o-Terphenyl	8.94	71.6 %	30-150		"	"	"	"	

**PAH by EPA Method 8270D SIM**

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

Project: PDC - Moss 14-16H Tank Battery  
Project Number: 36910  
Project Manager: Karen Olson

**Reported:**  
10/02/24 09:53

**PWV01-N@2.5'**  
**2409387-04 (Soil)**

**Summit Scientific**

**PAH by EPA Method 8270D SIM**

Date Sampled: **09/24/24 09:26**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Acenaphthene	ND	0.00500	mg/kg	1	BHI0857	09/25/24	09/26/24	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: **09/24/24 09:26**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: 2-Methylnaphthalene-d10	0.0151	45.4 %	40-150		"	"	"	"	
Surrogate: Fluoranthene-d10	0.0185	55.5 %	40-150		"	"	"	"	

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

Date Sampled: **09/24/24 09:26**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Boron	ND	2.00	mg/L	1	BHI0881	09/25/24	09/28/24	EPA 6020B	

**Total Metals by EPA 6020B**

Date Sampled: **09/24/24 09:26**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							

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

Project: PDC - Moss 14-16H Tank Battery

Project Number: 36910  
Project Manager: Karen Olson

**Reported:**  
10/02/24 09:53

**PWV01-N@2.5'**  
**2409387-04 (Soil)**

**Summit Scientific**

**Total Metals by EPA 6020B**

Arsenic	2.80	0.200	mg/kg dry	1	BHI0900	09/25/24	09/27/24	EPA 6020B
Barium	60.4	0.400	"	"	"	"	"	"
Cadmium	0.323	0.200	"	"	"	"	"	"
Copper	3.38	0.400	"	"	"	"	"	"
Lead	4.21	0.200	"	"	"	"	"	"
Nickel	5.69	0.400	"	"	"	"	"	"
Silver	0.0269	0.0200	"	"	"	"	"	"
Zinc	14.6	0.400	"	"	"	"	"	"
Selenium	ND	0.260	"	"	"	"	"	"

**Hexavalent Chromium by EPA Method 7196**

Date Sampled: **09/24/24 09:26**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Chromium, Hexavalent	ND	0.30	mg/kg dry	1	BHI1042	09/27/24	09/30/24	EPA 7196A	

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

Date Sampled: **09/24/24 09:26**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Calcium	40.6	0.0500	mg/L dry	1	BHI0907	09/25/24	09/27/24	EPA 6020B	
Magnesium	14.1	0.0500	"	"	"	"	"	"	
Sodium	13.6	0.0500	"	"	"	"	"	"	

**Calculated Analysis**

Date Sampled: **09/24/24 09:26**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	0.469	0.00100	units	1	BHI1071	09/28/24	09/28/24	Calculation	

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

Date Sampled: **09/24/24 09:26**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
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Tasman Geosciences  
6855 W. 119th Ave.  
Broomfield CO, 80020

Project: PDC - Moss 14-16H Tank Battery

Project Number: 36910  
Project Manager: Karen Olson

**Reported:**  
10/02/24 09:53

**PWV01-N@2.5'**  
**2409387-04 (Soil)**

**Summit Scientific**

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

% Solids	97.7	%	1	BHI0887	09/25/24	09/26/24	Calculation
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**Specific Conductance by EPA Method 120.1, Saturated Paste Extraction**

Date Sampled: **09/24/24 09:26**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Specific Conductance (EC)	<b>0.548</b>	0.0100	mmhos/cm	1	BHI0908	09/25/24	09/26/24	EPA 120.1	

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

Date Sampled: **09/24/24 09:26**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
pH	<b>7.54</b>		pH Units	1	BHI0909	09/25/24	09/26/24	EPA 9045D	

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

Project: PDC - Moss 14-16H Tank Battery  
Project Number: 36910  
Project Manager: Karen Olson

**Reported:**  
10/02/24 09:53

**SEP01-DL@6'**  
**2409387-08 (Soil)**

**Summit Scientific**

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

Date Sampled: **09/24/24 11:00**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Benzene	ND	0.0020	mg/kg	1	BHI0892	09/25/24	09/28/24	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: **09/24/24 11:00**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: 1,2-Dichloroethane-d4	0.0220	55.1 %	50-150		"	"	"	"	
Surrogate: Toluene-d8	0.0399	99.7 %	50-150		"	"	"	"	
Surrogate: 4-Bromofluorobenzene	0.0388	97.0 %	50-150		"	"	"	"	

**Extractable Petroleum Hydrocarbons by 8015**

Date Sampled: **09/24/24 11:00**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
C10-C28 (DRO)	ND	50	mg/kg	1	BHI0894	09/25/24	09/28/24	EPA 8015M	
C28-C36 (ORO)	ND	50	"	"	"	"	"	"	

Date Sampled: **09/24/24 11:00**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: o-Terphenyl	7.62	61.0 %	30-150		"	"	"	"	

**PAH by EPA Method 8270D SIM**

Summit Scientific

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

Project: PDC - Moss 14-16H Tank Battery  
Project Number: 36910  
Project Manager: Karen Olson

**Reported:**  
10/02/24 09:53

**SEP01-DL@6'**  
**2409387-08 (Soil)**

**Summit Scientific**

**PAH by EPA Method 8270D SIM**

Date Sampled: **09/24/24 11:00**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Acenaphthene	ND	0.00500	mg/kg	1	BHI0857	09/25/24	09/26/24	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: **09/24/24 11:00**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: 2-Methylnaphthalene-d10	0.0173	52.0 %	40-150		"	"	"	"	
Surrogate: Fluoranthene-d10	0.0231	69.3 %	40-150		"	"	"	"	

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

Date Sampled: **09/24/24 11:00**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Boron	ND	2.00	mg/L	1	BHI0881	09/25/24	09/28/24	EPA 6020B	

**Total Metals by EPA 6020B**

Date Sampled: **09/24/24 11:00**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							

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

Project: PDC - Moss 14-16H Tank Battery  
Project Number: 36910  
Project Manager: Karen Olson

**Reported:**  
10/02/24 09:53

**SEP01-DL@6'**  
**2409387-08 (Soil)**

**Summit Scientific**

**Total Metals by EPA 6020B**

Arsenic	2.60	0.179	mg/kg dry	1	BHI0900	09/25/24	09/27/24	EPA 6020B
Barium	38.2	0.357	"	"	"	"	"	"
Cadmium	ND	0.179	"	"	"	"	"	"
Copper	4.01	0.357	"	"	"	"	"	"
Lead	4.25	0.179	"	"	"	"	"	"
Nickel	2.72	0.357	"	"	"	"	"	"
Silver	0.0196	0.0179	"	"	"	"	"	"
Zinc	32.1	0.357	"	"	"	"	"	"
Selenium	ND	0.232	"	"	"	"	"	"

**Hexavalent Chromium by EPA Method 7196**

Date Sampled: **09/24/24 11:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Chromium, Hexavalent	ND	0.30	mg/kg dry	1	BHI1042	09/27/24	09/30/24	EPA 7196A	

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

Date Sampled: **09/24/24 11:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Calcium	274	0.0500	mg/L dry	1	BHI0907	09/25/24	09/27/24	EPA 6020B	
Magnesium	14.6	0.0500	"	"	"	"	"	"	
Sodium	6.65	0.0500	"	"	"	"	"	"	

**Calculated Analysis**

Date Sampled: **09/24/24 11:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	0.106	0.00100	units	1	BHI1071	09/28/24	09/28/24	Calculation	

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

Summit Scientific

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

Project: PDC - Moss 14-16H Tank Battery  
Project Number: 36910  
Project Manager: Karen Olson

**Reported:**  
10/02/24 09:53

**SEP01-DL@6'**  
**2409387-08 (Soil)**

**Summit Scientific**

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

Date Sampled: **09/24/24 11:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
% Solids	89.3		%	1	BHI0887	09/25/24	09/26/24	Calculation	

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

Date Sampled: **09/24/24 11:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Specific Conductance (EC)	0.259	0.0100	mmhos/cm	1	BHI0908	09/25/24	09/26/24	EPA 120.1	

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

Date Sampled: **09/24/24 11:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
pH	8.44		pH Units	1	BHI0909	09/25/24	09/26/24	EPA 9045D	

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

Project: PDC - Moss 14-16H Tank Battery

Project Number: 36910  
Project Manager: Karen Olson

**Reported:**  
10/02/24 09:53

**DL01-01@5'**  
**2409387-09 (Soil)**

**Summit Scientific**

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

Date Sampled: **09/24/24 11:28**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Benzene	ND	0.0020	mg/kg	1	BHI0892	09/25/24	09/28/24	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: **09/24/24 11:28**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: 1,2-Dichloroethane-d4	0.0247	61.8 %	50-150		"	"	"	"	
Surrogate: Toluene-d8	0.0399	99.8 %	50-150		"	"	"	"	
Surrogate: 4-Bromofluorobenzene	0.0393	98.3 %	50-150		"	"	"	"	

**Extractable Petroleum Hydrocarbons by 8015**

Date Sampled: **09/24/24 11:28**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
C10-C28 (DRO)	ND	50	mg/kg	1	BHI0894	09/25/24	09/30/24	EPA 8015M	
C28-C36 (ORO)	ND	50	"	"	"	"	"	"	

Date Sampled: **09/24/24 11:28**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: o-Terphenyl	12.1	96.9 %	30-150		"	"	"	"	

**PAH by EPA Method 8270D SIM**

Summit Scientific

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

Project: PDC - Moss 14-16H Tank Battery

Project Number: 36910  
Project Manager: Karen Olson

**Reported:**  
10/02/24 09:53

**DL01-01@5'**  
**2409387-09 (Soil)**

**Summit Scientific**

**PAH by EPA Method 8270D SIM**

Date Sampled: **09/24/24 11:28**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Acenaphthene	ND	0.00500	mg/kg	1	BHI0857	09/25/24	09/26/24	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: **09/24/24 11:28**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: 2-Methylnaphthalene-d10	0.0146	43.7 %	40-150		"	"	"	"	
Surrogate: Fluoranthene-d10	0.0198	59.4 %	40-150		"	"	"	"	

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

Date Sampled: **09/24/24 11:28**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Boron	ND	2.00	mg/L	1	BHI0881	09/25/24	09/28/24	EPA 6020B	

**Total Metals by EPA 6020B**

Date Sampled: **09/24/24 11:28**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							

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

Project: PDC - Moss 14-16H Tank Battery  
Project Number: 36910  
Project Manager: Karen Olson

**Reported:**  
10/02/24 09:53

**DL01-01@5'**  
**2409387-09 (Soil)**

**Summit Scientific**

**Total Metals by EPA 6020B**

Arsenic	1.16	0.180	mg/kg dry	1	BHI0900	09/25/24	09/27/24	EPA 6020B
Barium	22.8	0.360	"	"	"	"	"	"
Cadmium	ND	0.180	"	"	"	"	"	"
Copper	1.29	0.360	"	"	"	"	"	"
Lead	1.49	0.180	"	"	"	"	"	"
Nickel	1.14	0.360	"	"	"	"	"	"
Silver	ND	0.0180	"	"	"	"	"	"
Zinc	5.39	0.360	"	"	"	"	"	"
Selenium	ND	0.234	"	"	"	"	"	"

**Hexavalent Chromium by EPA Method 7196**

Date Sampled: **09/24/24 11:28**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Chromium, Hexavalent	ND	0.30	mg/kg dry	1	BHI1042	09/27/24	09/30/24	EPA 7196A	

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

Date Sampled: **09/24/24 11:28**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Calcium	64.9	0.0500	mg/L dry	1	BHI0907	09/25/24	09/27/24	EPA 6020B	
Magnesium	16.2	0.0500	"	"	"	"	"	"	
Sodium	22.4	0.0500	"	"	"	"	"	"	

**Calculated Analysis**

Date Sampled: **09/24/24 11:28**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	0.644	0.00100	units	1	BHI1071	09/28/24	09/28/24	Calculation	

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

Summit Scientific

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

Project: PDC - Moss 14-16H Tank Battery  
Project Number: 36910  
Project Manager: Karen Olson

**Reported:**  
10/02/24 09:53

**DL01-01@5'**  
**2409387-09 (Soil)**

**Summit Scientific**

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

Date Sampled: **09/24/24 11:28**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
% Solids	90.0			%	1	BHI0887	09/25/24	09/26/24	Calculation	

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

Date Sampled: **09/24/24 11:28**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Specific Conductance (EC)	0.622	0.0100		mmhos/cm	1	BHI0908	09/25/24	09/26/24	EPA 120.1	

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

Date Sampled: **09/24/24 11:28**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
pH	7.91			pH Units	1	BHI0909	09/25/24	09/26/24	EPA 9045D	

Summit Scientific

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

Project: PDC - Moss 14-16H Tank Battery  
Project Number: 36910  
Project Manager: Karen Olson

**Reported:**  
10/02/24 09:53

**BKG01@0-6"**  
**2409387-10 (Soil)**

**Summit Scientific**

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

Date Sampled: **09/24/24 14:00**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Boron	ND	2.00		mg/L	1	BHI0881	09/25/24	09/28/24	EPA 6020B	

**Total Metals by EPA 6020B**

Date Sampled: **09/24/24 14:00**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Arsenic	3.29	0.200		mg/kg dry	1	BHI0900	09/25/24	09/27/24	EPA 6020B	
Barium	74.1	0.400		"	"	"	"	"	"	
Cadmium	0.285	0.200		"	"	"	"	"	"	
Copper	8.38	0.400		"	"	"	"	"	"	
Lead	8.81	0.200		"	"	"	"	"	"	
Nickel	4.84	0.400		"	"	"	"	"	"	
Silver	0.0335	0.0200		"	"	"	"	"	"	
Zinc	35.8	0.400		"	"	"	"	"	"	
Selenium	0.290	0.260		"	"	"	"	"	"	

**Hexavalent Chromium by EPA Method 7196**

Date Sampled: **09/24/24 14:00**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Chromium, Hexavalent	ND	0.30		mg/kg dry	1	BHI1042	09/27/24	09/30/24	EPA 7196A	


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

Date Sampled: **09/24/24 14:00**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Calcium	69.1	0.0500		mg/L dry	1	BHI0907	09/25/24	09/27/24	EPA 6020B	
Magnesium	25.4	0.0500		"	"	"	"	"	"	
Sodium	28.3	0.0500		"	"	"	"	"	"	

**Calculated Analysis**

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

Project: PDC - Moss 14-16H Tank Battery  
Project Number: 36910  
Project Manager: Karen Olson

**Reported:**  
10/02/24 09:53

**BKG01@0-6"**  
**2409387-10 (Soil)**

**Summit Scientific**

**Calculated Analysis**

Date Sampled: **09/24/24 14:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	0.740	0.00100	units	1	BHI1071	09/28/24	09/28/24	Calculation	

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

Date Sampled: **09/24/24 14:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
% Solids	87.8		%	1	BHI0887	09/25/24	09/26/24	Calculation	

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

Date Sampled: **09/24/24 14:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Specific Conductance (EC)	1.21	0.0100	mmhos/cm	1	BHI0908	09/25/24	09/26/24	EPA 120.1	

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

Date Sampled: **09/24/24 14:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
pH	7.11		pH Units	1	BHI0909	09/25/24	09/26/24	EPA 9045D	

Summit Scientific

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

Project: PDC - Moss 14-16H Tank Battery  
Project Number: 36910  
Project Manager: Karen Olson

**Reported:**  
10/02/24 09:53

**BKG01@2.5'**  
**2409387-11 (Soil)**

**Summit Scientific**

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

Date Sampled: **09/24/24 14:02**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Boron	ND	2.00		mg/L	1	BHI0881	09/25/24	09/28/24	EPA 6020B	

**Total Metals by EPA 6020B**

Date Sampled: **09/24/24 14:02**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Arsenic	4.41	0.200		mg/kg dry	1	BHI0900	09/25/24	09/27/24	EPA 6020B	
Barium	122	0.400		"	"	"	"	"	"	
Cadmium	0.232	0.200		"	"	"	"	"	"	
Copper	5.46	0.400		"	"	"	"	"	"	
Lead	9.38	0.200		"	"	"	"	"	"	
Nickel	6.31	0.400		"	"	"	"	"	"	
Silver	0.0444	0.0200		"	"	"	"	"	"	
Zinc	20.5	0.400		"	"	"	"	"	"	
Selenium	ND	0.260		"	"	"	"	"	"	

**Hexavalent Chromium by EPA Method 7196**

Date Sampled: **09/24/24 14:02**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Chromium, Hexavalent	ND	0.30		mg/kg dry	1	BHI1042	09/27/24	09/30/24	EPA 7196A	

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

Date Sampled: **09/24/24 14:02**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Calcium	49.5	0.0500		mg/L dry	1	BHI0907	09/25/24	09/27/24	EPA 6020B	
Magnesium	16.1	0.0500		"	"	"	"	"	"	
Sodium	11.9	0.0500		"	"	"	"	"	"	

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

Project: PDC - Moss 14-16H Tank Battery  
Project Number: 36910  
Project Manager: Karen Olson

**Reported:**  
10/02/24 09:53

**BKG01@2.5'**  
**2409387-11 (Soil)**

**Summit Scientific**

**Calculated Analysis**

Date Sampled: **09/24/24 14:02**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	0.376	0.00100	units	1	BHI1071	09/28/24	09/28/24	Calculation	

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

Date Sampled: **09/24/24 14:02**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
% Solids	86.7		%	1	BHI0887	09/25/24	09/26/24	Calculation	

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

Date Sampled: **09/24/24 14:02**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Specific Conductance (EC)	0.349	0.0100	mmhos/cm	1	BHI0908	09/25/24	09/26/24	EPA 120.1	

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

Date Sampled: **09/24/24 14:02**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
pH	7.36		pH Units	1	BHI0909	09/25/24	09/26/24	EPA 9045D	

Summit Scientific

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

Project: PDC - Moss 14-16H Tank Battery  
Project Number: 36910  
Project Manager: Karen Olson

**Reported:**  
10/02/24 09:53

**BKG01@4'**  
**2409387-12 (Soil)**

**Summit Scientific**

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

Date Sampled: **09/24/24 14:04**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Boron	ND	2.00	mg/L	1	BHI0881	09/25/24	09/28/24	EPA 6020B	

**Total Metals by EPA 6020B**

Date Sampled: **09/24/24 14:04**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Arsenic	1.07	0.200	mg/kg dry	1	BHI0900	09/25/24	09/27/24	EPA 6020B	
Barium	10.5	0.400	"	"	"	"	"	"	
Cadmium	ND	0.200	"	"	"	"	"	"	
Copper	1.25	0.400	"	"	"	"	"	"	
Lead	1.49	0.200	"	"	"	"	"	"	
Nickel	1.60	0.400	"	"	"	"	"	"	
Silver	ND	0.0200	"	"	"	"	"	"	
Zinc	5.72	0.400	"	"	"	"	"	"	
Selenium	ND	0.260	"	"	"	"	"	"	

**Hexavalent Chromium by EPA Method 7196**

Date Sampled: **09/24/24 14:04**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Chromium, Hexavalent	ND	0.30	mg/kg dry	1	BHI1042	09/27/24	09/30/24	EPA 7196A	

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

Date Sampled: **09/24/24 14:04**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Calcium	72.7	0.0500	mg/L dry	1	BHI0907	09/25/24	09/27/24	EPA 6020B	
Magnesium	13.3	0.0500	"	"	"	"	"	"	
Sodium	5.43	0.0500	"	"	"	"	"	"	

Summit Scientific

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

Project: PDC - Moss 14-16H Tank Battery  
Project Number: 36910  
Project Manager: Karen Olson

**Reported:**  
10/02/24 09:53

**BKG01@4'**  
**2409387-12 (Soil)**

**Summit Scientific**

**Calculated Analysis**

Date Sampled: **09/24/24 14:04**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	0.154	0.00100	units	1	BHI1071	09/28/24	09/28/24	Calculation	

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

Date Sampled: **09/24/24 14:04**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
% Solids	97.4		%	1	BHI0887	09/25/24	09/26/24	Calculation	

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

Date Sampled: **09/24/24 14:04**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Specific Conductance (EC)	0.292	0.0100	mmhos/cm	1	BHI0908	09/25/24	09/26/24	EPA 120.1	

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

Date Sampled: **09/24/24 14:04**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
pH	8.25		pH Units	1	BHI0909	09/25/24	09/26/24	EPA 9045D	

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

Project: PDC - Moss 14-16H Tank Battery  
Project Number: 36910  
Project Manager: Karen Olson

**Reported:**  
10/02/24 09:53

**BKG01@5'**  
**2409387-13 (Soil)**

**Summit Scientific**

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

Date Sampled: **09/24/24 14:06**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Boron	ND	2.00	mg/L	1	BHI0881	09/25/24	09/28/24	EPA 6020B	

**Total Metals by EPA 6020B**

Date Sampled: **09/24/24 14:06**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Arsenic	<b>1.46</b>	0.200	mg/kg dry	1	BHI0900	09/25/24	09/27/24	EPA 6020B	
Barium	<b>18.7</b>	0.400	"	"	"	"	"	"	
Cadmium	ND	0.200	"	"	"	"	"	"	
Copper	<b>1.36</b>	0.400	"	"	"	"	"	"	
Lead	<b>1.97</b>	0.200	"	"	"	"	"	"	
Nickel	<b>1.32</b>	0.400	"	"	"	"	"	"	
Silver	ND	0.0200	"	"	"	"	"	"	
Zinc	<b>6.10</b>	0.400	"	"	"	"	"	"	
Selenium	ND	0.260	"	"	"	"	"	"	

**Hexavalent Chromium by EPA Method 7196**

Date Sampled: **09/24/24 14:06**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Chromium, Hexavalent	ND	0.30	mg/kg dry	1	BHI1042	09/27/24	09/30/24	EPA 7196A	

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

Date Sampled: **09/24/24 14:06**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Calcium	<b>139</b>	0.0500	mg/L dry	1	BHI0907	09/25/24	09/27/24	EPA 6020B	
Magnesium	<b>17.0</b>	0.0500	"	"	"	"	"	"	
Sodium	<b>6.75</b>	0.0500	"	"	"	"	"	"	

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

Project: PDC - Moss 14-16H Tank Battery  
Project Number: 36910  
Project Manager: Karen Olson

**Reported:**  
10/02/24 09:53

**BKG01@5'**  
**2409387-13 (Soil)**

**Summit Scientific**

**Calculated Analysis**

Date Sampled: **09/24/24 14:06**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	0.144	0.00100	units	1	BHI1071	09/28/24	09/28/24	Calculation	

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

Date Sampled: **09/24/24 14:06**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
% Solids	95.7		%	1	BHI0887	09/25/24	09/26/24	Calculation	

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

Date Sampled: **09/24/24 14:06**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Specific Conductance (EC)	0.270	0.0100	mmhos/cm	1	BHI0908	09/25/24	09/26/24	EPA 120.1	

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

Date Sampled: **09/24/24 14:06**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
pH	8.44		pH Units	1	BHI0909	09/25/24	09/26/24	EPA 9045D	

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

Project: PDC - Moss 14-16H Tank Battery  
Project Number: 36910  
Project Manager: Karen Olson

**Reported:**  
10/02/24 09:53

**BKG01@6'**  
**2409387-14 (Soil)**

**Summit Scientific**

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

Date Sampled: **09/24/24 14:08**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Boron	ND	2.00		mg/L	1	BHI0881	09/25/24	09/28/24	EPA 6020B	

**Total Metals by EPA 6020B**

Date Sampled: **09/24/24 14:08**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Arsenic	1.61	0.200		mg/kg dry	1	BHI0900	09/25/24	09/27/24	EPA 6020B	
Barium	17.7	0.400		"	"	"	"	"	"	
Cadmium	ND	0.200		"	"	"	"	"	"	
Copper	1.73	0.400		"	"	"	"	"	"	
Lead	1.87	0.200		"	"	"	"	"	"	
Nickel	1.45	0.400		"	"	"	"	"	"	
Silver	ND	0.0200		"	"	"	"	"	"	
Zinc	6.17	0.400		"	"	"	"	"	"	
Selenium	ND	0.260		"	"	"	"	"	"	

**Hexavalent Chromium by EPA Method 7196**

Date Sampled: **09/24/24 14:08**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Chromium, Hexavalent	ND	0.30		mg/kg dry	1	BHI1042	09/27/24	09/30/24	EPA 7196A	

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

Date Sampled: **09/24/24 14:08**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Calcium	95.6	0.0500		mg/L dry	1	BHI0907	09/25/24	09/27/24	EPA 6020B	
Magnesium	14.0	0.0500		"	"	"	"	"	"	
Sodium	8.71	0.0500		"	"	"	"	"	"	

Summit Scientific

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

Project: PDC - Moss 14-16H Tank Battery  
Project Number: 36910  
Project Manager: Karen Olson

**Reported:**  
10/02/24 09:53

**BKG01@6'**  
**2409387-14 (Soil)**

**Summit Scientific**

**Calculated Analysis**

Date Sampled: **09/24/24 14:08**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	0.220	0.00100	units	1	BHI1071	09/28/24	09/28/24	Calculation	

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

Date Sampled: **09/24/24 14:08**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
% Solids	94.1		%	1	BHI0887	09/25/24	09/26/24	Calculation	

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

Date Sampled: **09/24/24 14:08**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Specific Conductance (EC)	0.295	0.0100	mmhos/cm	1	BHI0908	09/25/24	09/26/24	EPA 120.1	

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

Date Sampled: **09/24/24 14:08**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
pH	8.40		pH Units	1	BHI0909	09/25/24	09/26/24	EPA 9045D	

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

Project: PDC - Moss 14-16H Tank Battery  
Project Number: 36910  
Project Manager: Karen Olson

**Reported:**  
10/02/24 09:53

## Volatile Organic Compounds by EPA Method 8260B - Quality Control

### Summit Scientific

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

#### Batch BHI0892 - EPA 5030 Soil MS

##### Blank (BHI0892-BLK1)

Prepared: 09/25/24 Analyzed: 09/28/24

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	"							
Surrogate: 1,2-Dichloroethane-d4	0.0391		"	0.0400		97.6	50-150			
Surrogate: Toluene-d8	0.0398		"	0.0400		99.5	50-150			
Surrogate: 4-Bromofluorobenzene	0.0387		"	0.0400		96.7	50-150			

##### LCS (BHI0892-BS1)

Prepared: 09/25/24 Analyzed: 09/28/24

Benzene	0.145	0.0020	mg/kg	0.150		96.9	70-130			
Toluene	0.156	0.0050	"	0.150		104	70-130			
Ethylbenzene	0.142	0.0050	"	0.150		95.0	70-130			
m,p-Xylene	0.283	0.010	"	0.300		94.3	70-130			
o-Xylene	0.150	0.0050	"	0.150		100	70-130			
1,2,4-Trimethylbenzene	0.131	0.0050	"	0.150		87.6	70-130			
1,3,5-Trimethylbenzene	0.135	0.0050	"	0.150		90.1	70-130			
Naphthalene	0.134	0.0038	"	0.150		89.6	70-130			
Surrogate: 1,2-Dichloroethane-d4	0.0348		"	0.0400		87.0	50-150			
Surrogate: Toluene-d8	0.0397		"	0.0400		99.2	50-150			
Surrogate: 4-Bromofluorobenzene	0.0389		"	0.0400		97.4	50-150			

##### Matrix Spike (BHI0892-MS1)

Source: 2409347-01

Prepared: 09/25/24 Analyzed: 09/28/24

Benzene	0.134	0.0020	mg/kg	0.150	ND	89.1	70-130			
Toluene	0.144	0.0050	"	0.150	ND	95.8	70-130			
Ethylbenzene	0.142	0.0050	"	0.150	0.0167	83.8	70-130			
m,p-Xylene	0.311	0.010	"	0.300	0.0615	83.3	70-130			
o-Xylene	0.151	0.0050	"	0.150	0.0205	87.3	70-130			
1,2,4-Trimethylbenzene	0.107	0.0050	"	0.150	ND	71.3	70-130			
1,3,5-Trimethylbenzene	0.111	0.0050	"	0.150	ND	73.7	70-130			
Naphthalene	0.100	0.0038	"	0.150	ND	66.7	70-130			QM-05
Surrogate: 1,2-Dichloroethane-d4	0.0242		"	0.0400		60.4	50-150			
Surrogate: Toluene-d8	0.0400		"	0.0400		100	50-150			
Surrogate: 4-Bromofluorobenzene	0.0398		"	0.0400		99.4	50-150			

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

Project: PDC - Moss 14-16H Tank Battery  
Project Number: 36910  
Project Manager: Karen Olson

**Reported:**  
10/02/24 09:53

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

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

**Batch BHI0892 - EPA 5030 Soil MS**

Matrix Spike Dup (BHI0892-MSD1)		Source: 2409347-01			Prepared: 09/25/24 Analyzed: 09/28/24					
Benzene	0.138	0.0020	mg/kg	0.150	ND	91.7	70-130	2.90	30	
Toluene	0.147	0.0050	"	0.150	ND	98.2	70-130	2.56	30	
Ethylbenzene	0.149	0.0050	"	0.150	0.0167	88.0	70-130	4.39	30	
m,p-Xylene	0.328	0.010	"	0.300	0.0615	88.8	70-130	5.21	30	
o-Xylene	0.156	0.0050	"	0.150	0.0205	90.4	70-130	3.02	30	
1,2,4-Trimethylbenzene	0.114	0.0050	"	0.150	ND	76.0	70-130	6.30	30	
1,3,5-Trimethylbenzene	0.117	0.0050	"	0.150	ND	78.3	70-130	6.03	30	
Naphthalene	0.110	0.0038	"	0.150	ND	73.6	70-130	9.84	30	
Surrogate: 1,2-Dichloroethane-d4		0.0258	"	0.0400		64.6	50-150			
Surrogate: Toluene-d8		0.0400	"	0.0400		99.9	50-150			
Surrogate: 4-Bromofluorobenzene		0.0391	"	0.0400		97.8	50-150			

Summit Scientific

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

Project: PDC - Moss 14-16H Tank Battery  
Project Number: 36910  
Project Manager: Karen Olson

**Reported:**  
10/02/24 09:53

**Extractable Petroleum Hydrocarbons by 8015 - Quality Control**  
**Summit Scientific**

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

**Batch BHI0894 - EPA 3550A**

**Blank (BHI0894-BLK1)**

Prepared: 09/25/24 Analyzed: 09/28/24

C10-C28 (DRO)	ND	50	mg/kg							
C28-C36 (ORO)	ND	50	"							
Surrogate: o-Terphenyl	12.8		"	12.5	103	30-150				

**LCS (BHI0894-BS1)**

Prepared: 09/25/24 Analyzed: 09/28/24

C10-C28 (DRO)	437	50	mg/kg	500	87.4	70-130				
Surrogate: o-Terphenyl	11.9		"	12.5	95.4	30-150				

**Matrix Spike (BHI0894-MS1)**

Source: 2409364-01

Prepared: 09/25/24 Analyzed: 09/28/24

C10-C28 (DRO)	495	50	mg/kg	500	ND	98.9	70-130			
Surrogate: o-Terphenyl	9.13		"	12.5	73.0	30-150				

**Matrix Spike Dup (BHI0894-MSD1)**

Source: 2409364-01

Prepared: 09/25/24 Analyzed: 09/28/24

C10-C28 (DRO)	464	50	mg/kg	500	ND	92.8	70-130	6.42	20	
Surrogate: o-Terphenyl	9.20		"	12.5	73.6	30-150				

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

Project: PDC - Moss 14-16H Tank Battery  
Project Number: 36910  
Project Manager: Karen Olson

**Reported:**  
10/02/24 09:53

## PAH by EPA Method 8270D SIM - Quality Control

### Summit Scientific

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

#### Batch BHI0857 - EPA 5030 Soil MS

##### Blank (BHI0857-BLK1)

Prepared: 09/25/24 Analyzed: 09/26/24

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	"							
Surrogate: 2-Methylnaphthalene-d10	0.0186		"	0.0333		55.7	40-150			
Surrogate: Fluoranthene-d10	0.0222		"	0.0333		66.6	40-150			

##### LCS (BHI0857-BS1)

Prepared: 09/25/24 Analyzed: 09/26/24

Acenaphthene	0.0252	0.00500	mg/kg	0.0333		75.7	31-137			
Anthracene	0.0251	0.00500	"	0.0333		75.4	30-120			
Benzo (a) anthracene	0.0279	0.00500	"	0.0333		83.7	30-120			
Benzo (a) pyrene	0.0264	0.00500	"	0.0333		79.1	30-120			
Benzo (b) fluoranthene	0.0282	0.00500	"	0.0333		84.7	30-120			
Benzo (k) fluoranthene	0.0251	0.00500	"	0.0333		75.3	30-120			
Chrysene	0.0251	0.00500	"	0.0333		75.3	30-120			
Dibenz (a,h) anthracene	0.0352	0.00500	"	0.0333		106	30-120			
Fluoranthene	0.0239	0.00500	"	0.0333		71.7	30-120			
Fluorene	0.0273	0.00500	"	0.0333		81.8	30-120			
Indeno (1,2,3-cd) pyrene	0.0366	0.00500	"	0.0333		110	30-120			
Pyrene	0.0346	0.00500	"	0.0333		104	35-142			
1-Methylnaphthalene	0.0227	0.00500	"	0.0333		68.1	35-142			
2-Methylnaphthalene	0.0188	0.00500	"	0.0333		56.5	35-142			
Surrogate: 2-Methylnaphthalene-d10	0.0227		"	0.0333		68.0	40-150			
Surrogate: Fluoranthene-d10	0.0244		"	0.0333		73.3	40-150			

Summit Scientific

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

Project: PDC - Moss 14-16H Tank Battery

Project Number: 36910  
Project Manager: Karen Olson

**Reported:**  
10/02/24 09:53

## PAH by EPA Method 8270D SIM - Quality Control

### Summit Scientific

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

#### Batch BHI0857 - EPA 5030 Soil MS

##### Matrix Spike (BHI0857-MS1)

Source: 2409375-01

Prepared: 09/25/24 Analyzed: 09/26/24

Acenaphthene	0.0177	0.00500	mg/kg	0.0333	ND	53.0	31-137				
Anthracene	0.0183	0.00500	"	0.0333	ND	55.0	30-120				
Benzo (a) anthracene	0.0207	0.00500	"	0.0333	ND	62.0	30-120				
Benzo (a) pyrene	0.0170	0.00500	"	0.0333	ND	51.0	30-120				
Benzo (b) fluoranthene	0.0192	0.00500	"	0.0333	ND	57.7	30-120				
Benzo (k) fluoranthene	0.0153	0.00500	"	0.0333	ND	45.8	30-120				
Chrysene	0.0199	0.00500	"	0.0333	ND	59.7	30-120				
Dibenz (a,h) anthracene	0.0219	0.00500	"	0.0333	ND	65.7	30-120				
Fluoranthene	0.0173	0.00500	"	0.0333	ND	52.0	30-120				
Fluorene	0.0169	0.00500	"	0.0333	ND	50.7	30-120				
Indeno (1,2,3-cd) pyrene	0.0215	0.00500	"	0.0333	ND	64.6	30-120				
Pyrene	0.0215	0.00500	"	0.0333	ND	64.5	35-142				
1-Methylnaphthalene	0.0160	0.00500	"	0.0333	ND	47.9	15-130				
2-Methylnaphthalene	0.0141	0.00500	"	0.0333	ND	42.4	15-130				
Surrogate: 2-Methylnaphthalene-d10	0.0171		"	0.0333		51.3	40-150				
Surrogate: Fluoranthene-d10	0.0175		"	0.0333		52.4	40-150				

##### Matrix Spike Dup (BHI0857-MSD1)

Source: 2409375-01

Prepared: 09/25/24 Analyzed: 09/26/24

Acenaphthene	0.0202	0.00500	mg/kg	0.0333	ND	60.5	31-137	13.2	30		
Anthracene	0.0215	0.00500	"	0.0333	ND	64.4	30-120	15.7	30		
Benzo (a) anthracene	0.0248	0.00500	"	0.0333	ND	74.5	30-120	18.3	30		
Benzo (a) pyrene	0.0200	0.00500	"	0.0333	ND	60.0	30-120	16.3	30		
Benzo (b) fluoranthene	0.0235	0.00500	"	0.0333	ND	70.4	30-120	19.7	30		
Benzo (k) fluoranthene	0.0188	0.00500	"	0.0333	ND	56.4	30-120	20.7	30		
Chrysene	0.0241	0.00500	"	0.0333	ND	72.2	30-120	19.0	30		
Dibenz (a,h) anthracene	0.0270	0.00500	"	0.0333	ND	81.0	30-120	20.9	30		
Fluoranthene	0.0204	0.00500	"	0.0333	ND	61.3	30-120	16.4	30		
Fluorene	0.0199	0.00500	"	0.0333	ND	59.7	30-120	16.4	30		
Indeno (1,2,3-cd) pyrene	0.0290	0.00500	"	0.0333	ND	87.1	30-120	29.6	30		
Pyrene	0.0269	0.00500	"	0.0333	ND	80.7	35-142	22.3	30		
1-Methylnaphthalene	0.0199	0.00500	"	0.0333	ND	59.6	15-130	21.7	50		
2-Methylnaphthalene	0.0147	0.00500	"	0.0333	ND	44.2	15-130	4.05	50		
Surrogate: 2-Methylnaphthalene-d10	0.0193		"	0.0333		57.8	40-150				
Surrogate: Fluoranthene-d10	0.0210		"	0.0333		63.0	40-150				

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

Project: PDC - Moss 14-16H Tank Battery

Project Number: 36910  
Project Manager: Karen Olson

**Reported:**  
10/02/24 09:53

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

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

**Batch BHI0881 - EPA 3050B**

**Blank (BHI0881-BLK1)**

Prepared: 09/25/24 Analyzed: 09/28/24

Boron ND 2.00 mg/L

**LCS (BHI0881-BS1)**

Prepared: 09/25/24 Analyzed: 09/28/24

Boron 5.30 2.00 mg/L 5.00 106 80-120

**Duplicate (BHI0881-DUP1)**

**Source: 2409375-01**

Prepared: 09/25/24 Analyzed: 09/28/24

Boron 0.186 2.00 mg/L 0.203 9.03 20

**Matrix Spike (BHI0881-MS1)**

**Source: 2409375-01**

Prepared: 09/25/24 Analyzed: 09/28/24

Boron 5.03 2.00 mg/L 5.04 0.203 95.8 75-125

**Matrix Spike Dup (BHI0881-MSD1)**

**Source: 2409375-01**

Prepared: 09/25/24 Analyzed: 09/28/24

Boron 4.99 2.00 mg/L 5.04 0.203 95.0 75-125 0.777 25

Summit Scientific

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

Project: PDC - Moss 14-16H Tank Battery  
Project Number: 36910  
Project Manager: Karen Olson

**Reported:**  
10/02/24 09:53

**Total Metals by EPA 6020B - Quality Control**  
**Summit Scientific**

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

**Batch BHI0900 - EPA 3050B**

**Blank (BHI0900-BLK1)**

Prepared: 09/25/24 Analyzed: 09/27/24

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 (BHI0900-BS1)**

Prepared: 09/25/24 Analyzed: 09/27/24

Arsenic	36.8	0.200	mg/kg wet	37.6	97.9	80-120
Barium	36.9	0.400	"	37.6	98.3	80-120
Cadmium	1.85	0.200	"	1.88	98.6	80-120
Copper	38.4	0.400	"	37.6	102	80-120
Lead	18.4	0.200	"	18.8	97.7	80-120
Nickel	38.3	0.400	"	37.6	102	80-120
Silver	1.87	0.0200	"	1.88	99.6	80-120
Zinc	37.8	0.400	"	37.6	101	80-120
Selenium	4.04	0.260	"	3.76	108	80-120

**Duplicate (BHI0900-DUP1)**

Source: 2409363-01

Prepared: 09/25/24 Analyzed: 09/27/24

Arsenic	2.96	0.180	mg/kg dry	2.76	6.78	20
Barium	68.0	0.360	"	70.7	3.84	20
Cadmium	0.137	0.180	"	0.132	3.57	20
Copper	4.57	0.360	"	4.40	3.85	20
Lead	5.19	0.180	"	4.84	7.16	20
Nickel	5.23	0.360	"	5.23	0.0207	20
Silver	0.171	0.0180	"	0.192	11.2	20
Zinc	18.4	0.360	"	17.8	3.38	20
Selenium	ND	0.234	"	ND		20

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

Project: PDC - Moss 14-16H Tank Battery  
Project Number: 36910  
Project Manager: Karen Olson

**Reported:**  
10/02/24 09:53

**Total Metals by EPA 6020B - Quality Control**  
**Summit Scientific**

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

**Batch BHI0900 - EPA 3050B**

Matrix Spike (BHI0900-MS1)		Source: 2409363-01			Prepared: 09/25/24 Analyzed: 09/27/24					
Arsenic	40.5	0.200	mg/kg dry	41.1	2.76	91.9	75-125			
Barium	98.1	0.400	"	41.1	70.7	66.8	75-125			QM-05
Cadmium	2.00	0.200	"	2.05	0.132	90.7	75-125			
Copper	28.2	0.400	"	41.1	4.40	58.0	75-125			QM-05
Lead	23.2	0.200	"	20.5	4.84	89.3	75-125			
Nickel	29.4	0.400	"	41.1	5.23	59.0	75-125			QM-05
Silver	2.05	0.0200	"	2.05	0.192	90.3	75-125			
Zinc	42.1	0.400	"	41.1	17.8	59.3	75-125			QM-05
Selenium	3.89	0.260	"	4.11	ND	94.7	75-125			

Matrix Spike Dup (BHI0900-MSD1)		Source: 2409363-01			Prepared: 09/25/24 Analyzed: 09/27/24					
Arsenic	40.2	0.181	mg/kg dry	40.5	2.76	92.6	75-125	0.742	25	
Barium	105	0.362	"	40.5	70.7	84.5	75-125	6.67	25	
Cadmium	2.10	0.181	"	2.02	0.132	97.5	75-125	5.36	25	
Copper	27.6	0.362	"	40.5	4.40	57.4	75-125	2.05	25	QM-05
Lead	24.6	0.181	"	20.2	4.84	97.8	75-125	6.11	25	
Nickel	28.5	0.362	"	40.5	5.23	57.5	75-125	3.33	25	QM-05
Silver	2.16	0.0181	"	2.02	0.192	97.3	75-125	5.40	25	
Zinc	41.9	0.362	"	40.5	17.8	59.8	75-125	0.382	25	QM-05
Selenium	3.89	0.236	"	4.05	ND	96.2	75-125	0.101	25	

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

Project: PDC - Moss 14-16H Tank Battery  
Project Number: 36910  
Project Manager: Karen Olson

**Reported:**  
10/02/24 09:53

**Hexavalent Chromium by EPA Method 7196 - Quality Control**  
**Summit Scientific**

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

**Batch BHI1042 - 3060A Mod**

**Blank (BHI1042-BLK1)**

Prepared: 09/27/24 Analyzed: 09/30/24

Chromium, Hexavalent ND 0.30 mg/kg wet

**LCS (BHI1042-BS1)**

Prepared: 09/27/24 Analyzed: 09/30/24

Chromium, Hexavalent 26.7 0.30 mg/kg wet 25.0 107 80-120

**Duplicate (BHI1042-DUP1)**

**Source: 2409387-01**

Prepared: 09/27/24 Analyzed: 09/30/24

Chromium, Hexavalent ND 0.30 mg/kg dry ND 20

**Matrix Spike (BHI1042-MS1)**

**Source: 2409387-01**

Prepared: 09/27/24 Analyzed: 09/30/24

Chromium, Hexavalent 28.9 0.30 mg/kg dry 27.7 ND 104 75-125

**Matrix Spike Dup (BHI1042-MSD1)**

**Source: 2409387-01**

Prepared: 09/27/24 Analyzed: 09/30/24

Chromium, Hexavalent 29.3 0.30 mg/kg dry 27.7 ND 106 75-125 1.52 20

Summit Scientific

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

Project: PDC - Moss 14-16H Tank Battery

Project Number: 36910  
Project Manager: Karen Olson

**Reported:**  
10/02/24 09:53

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

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

**Batch BHI0907 - General Preparation**

**Blank (BHI0907-BLK1)**

Prepared: 09/25/24 Analyzed: 09/27/24

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

**LCS (BHI0907-BS1)**

Prepared: 09/25/24 Analyzed: 09/27/24

Calcium	4.48	0.0500	mg/L wet	5.00	89.7	70-130
Magnesium	4.97	0.0500	"	5.00	99.4	70-130
Sodium	4.89	0.0500	"	5.00	97.7	70-130

Summit Scientific

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

Project: PDC - Moss 14-16H Tank Battery

Project Number: 36910  
Project Manager: Karen Olson

**Reported:**  
10/02/24 09:53

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

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

**Batch BHI0887 - General Preparation**

Duplicate (BHI0887-DUP1)		Source: 2409375-01			Prepared: 09/25/24 Analyzed: 09/26/24					
% Solids	82.6		%		81.9			0.876	20	

Summit Scientific

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

Project: PDC - Moss 14-16H Tank Battery

Project Number: 36910  
Project Manager: Karen Olson

**Reported:**  
10/02/24 09:53

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

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

**Batch BHI0908 - General Preparation**

**Blank (BHI0908-BLK1)**

Prepared: 09/25/24 Analyzed: 09/26/24

Specific Conductance (EC) ND 0.0100 mmhos/cm

**LCS (BHI0908-BS1)**

Prepared: 09/25/24 Analyzed: 09/26/24

Specific Conductance (EC) 0.158 0.0100 mmhos/cm 0.150 105 95-105

**Duplicate (BHI0908-DUP1)**

**Source: 2409378-01**

Prepared: 09/25/24 Analyzed: 09/26/24

Specific Conductance (EC) 1.44 0.0100 mmhos/cm 1.46 1.79 20

Summit Scientific

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

Project: PDC - Moss 14-16H Tank Battery

Project Number: 36910  
Project Manager: Karen Olson

**Reported:**  
10/02/24 09:53

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

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

**Batch BHI0909 - General Preparation**

**LCS (BHI0909-BS1)**

Prepared: 09/25/24 Analyzed: 09/26/24

pH	9.19	pH Units	9.18	100	95-105
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**Duplicate (BHI0909-DUP1)**

**Source: 2409378-01**

Prepared: 09/25/24 Analyzed: 09/26/24

pH	8.62	pH Units	8.62	0.00	20
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Summit Scientific

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

Project: PDC - Moss 14-16H Tank Battery

Project Number: 36910  
Project Manager: Karen Olson

**Reported:**  
10/02/24 09:53

### Notes and Definitions

QM-05	The spike recovery was outside acceptance limits for the MS and/or MSD due to matrix interference. Sample results were accepted based on LCS and/or LCSD recoveries and/or RPD values.
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