

Summit Scientific

4653 Table Mountain Drive, Golden, Colorado 80403

303.277.9310

June 16, 2025

Andy Sagen

Tasman Geosciences

4725 Independence St.

Wheat Ridge, CO 80033

RE: PDC - MDM 33-14 Flowline

Work Order #2504070

Enclosed are the results of analyses for samples received by Summit Scientific on 04/03/25 16:30. If you have any questions concerning this report, please feel free to contact me.

Sincerely,



Natalie Tessier For Paul Shrewsbury

President

Please Note - Out-of-Hold Results Included:

The 8260B GBTEXN 915 analyses were analyzed outside of allotted holding times due to delays at Summit Scientific.



Tasman Geosciences
4725 Independence St.
Wheat Ridge CO, 80033

Project: PDC - MDM 33-14 Flowline

Project Number: 32449
Project Manager: Andy Sagen

Reported:
06/16/25 09:43

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
BH01@3-4'	2504070-01	Soil	04/03/25 10:00	04/03/25 16:30
BH01@5-6'	2504070-02	Soil	04/03/25 10:02	04/03/25 16:30
BH01@7-8'	2504070-03	Soil	04/03/25 10:04	04/03/25 16:30
BH02@3-4'	2504070-04	Soil	04/03/25 11:00	04/03/25 16:30
BH02@5-6'	2504070-05	Soil	04/03/25 11:02	04/03/25 16:30
BH02@7-8'	2504070-06	Soil	04/03/25 11:04	04/03/25 16:30
BH03@3-4'	2504070-07	Soil	04/03/25 10:10	04/03/25 16:30
BH03@5-6'	2504070-08	Soil	04/03/25 10:12	04/03/25 16:30
BH03@7-8'	2504070-09	Soil	04/03/25 10:14	04/03/25 16:30
BH04@3-4'	2504070-10	Soil	04/03/25 10:30	04/03/25 16:30
BH04@5-6'	2504070-11	Soil	04/03/25 10:32	04/03/25 16:30
BH04@7-8'	2504070-12	Soil	04/03/25 10:34	04/03/25 16:30
BH05@3-4'	2504070-13	Soil	04/03/25 10:45	04/03/25 16:30
BH05@5-6'	2504070-14	Soil	04/03/25 10:47	04/03/25 16:30
BH05@7-8'	2504070-15	Soil	04/03/25 10:49	04/03/25 16:30
BKG02@3-4'	2504070-16	Soil	04/03/25 11:30	04/03/25 16:30
BKG02@5-6'	2504070-17	Soil	04/03/25 11:32	04/03/25 16:30
BKG02@7-8'	2504070-18	Soil	04/03/25 11:34	04/03/25 16:30
BKG03@3-4'	2504070-19	Soil	04/03/25 12:00	04/03/25 16:30
BKG03@5-6'	2504070-20	Soil	04/03/25 12:02	04/03/25 16:30
BKG03@7-8'	2504070-21	Soil	04/03/25 12:04	04/03/25 16:30
BKG04@3-4'	2504070-22	Soil	04/03/25 13:44	04/03/25 16:30
BKG04@5-6'	2504070-23	Soil	04/03/25 13:46	04/03/25 16:30
BKG04@7-8'	2504070-24	Soil	04/03/25 13:48	04/03/25 16:30
BKG05@3-4'	2504070-25	Soil	04/03/25 14:00	04/03/25 16:30
BKG05@5-6'	2504070-26	Soil	04/03/25 14:02	04/03/25 16:30
BKG05@7-8'	2504070-27	Soil	04/03/25 14:04	04/03/25 16:30

Summit Scientific

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Tasman Geosciences
4725 Independence St.
Wheat Ridge CO, 80033

Project: PDC - MDM 33-14 Flowline
Project Number: 32449
Project Manager: Andy Sagen

Reported:
06/16/25 09:43

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
BKG06@3-4'	2504070-28	Soil	04/03/25 11:15	04/03/25 16:30
BKG06@5-6'	2504070-29	Soil	04/03/25 11:17	04/03/25 16:30
BKG06@7-8'	2504070-30	Soil	04/03/25 11:19	04/03/25 16:30

Case Narrative

The 8260B GBTEXN 915 analyses were completed outside of allotted holding times due to delays at Summit Scientific.

Summit Scientific

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Client: PDC / Tasman		Send Data To: Project Manager: <i>Andy Sagen</i>		Send Invoice To: Company: PDC Energy	
Address: 4725 6855 W 119th Ave <i>Independence St</i>		E-Mail: tas-chevron-1@tasman-geo.com		Project Name/Location: <i>MDM 33-14 Flowline</i>	
City/State/Zip: Broomfield / CO / 80020 <i>80637</i>		<i>Karen.Ober@Chevron.com / KBOEFZ7@Chevron.com</i>		AFE#:	
Phone: 303-487-1228		Project Name: <i>MDM 33-14 Flowline</i>		PO/Billing Codes:	
Sampler Name: <i>Billy Morrow</i>		Project Number:		Contact: <i>Karen Ober</i>	

ID	Sample Description	Date Sampled	Time Sampled	# of containers	Preservative				Matrix			Analysis Requested							Special Instructions	
					HCl	HNO3	None	Other	Water	Soil	Air-Canister #	Other	Metals - 915	VOC - 915	TPH - 915	PAH - 915	SAR, EC, pH	Boron - HWS		HOLD
1	BH01 @ 3-4'	4-3-25	1000	2			X			X			X	X	X	X	X	X		
2	BH01 @ 5-6'		1002				X			X			X	X	X	X	X	X		
3	BH01 @ 7-8'		1004				X			X			X	X	X	X	X	X		
4	BH02 @ 3-4'		1100				X			X			X	X	X	X	X	X		
5	BH02 @ 5-6'		1102				X			X			X	X	X	X	X	X		
6	BH02 @ 7-8'		1104				X			X			X	X	X	X	X	X		
7	BH03 @ 3-4'		1010				X			X			X	X	X	X	X	X		
8	BH03 @ 5-6'		1012				X			X			X	X	X	X	X	X		
9	BH03 @ 7-8'		1014				X			X			X	X	X	X	X	X		
10	BH04 @ 3-4'		1030				X			X			X	X	X	X	X	X		
11	BH04 @ 5-6'		1032				X			X			X	X	X	X	X	X		
12	BH04 @ 7-8'		1034				X			X			X	X	X	X	X	X		
13	BH05 @ 3-4'		1045				X			X			X	X	X	X	X	X		
14	BH05 @ 5-6'		1047				X			X			X	X	X	X	X	X		
15	BH05 @ 7-8'		1049				X			X			X	X	X	X	X	X		

Relinquished by: <i>Billy Morrow</i>	Date/Time: <i>4-3-25 1500</i>	Received by: <i>S 2 North</i>	Date/Time: <i>4-3-25 1500</i>	TAT Business Days	Field DO	Notes:
				Same Day	Field EC	
Relinquished by: <i>SC</i>	Date/Time: <i>4/3/25 1630</i>	Received by: <i>[Signature]</i>	Date/Time: <i>4/3/25 1630</i>	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: <i>3.7</i>	Corrected Temperature: <i>0</i>	IR gun #: <i>1</i>	HNO3 lot #:			

Client: PDC / Tasman		Send Data To: Project Manager: <u>Andy Sager</u>		Send Invoice To: Company: PDC Energy	
Address: <u>4725 6855 W 119th Ave</u> Independence St		E-Mail: <u>tas-chevron-1@tasman-geo.com / RBUEFZ@chevron.com</u>		Project Name/Location: <u>MDM 33-14 Flowline</u>	
City/State/Zip: <u>Broomfield / CO / 80020</u> 80020		Contact: <u>Karen.Olson@chevron.com</u>		AFE#:	
Phone: 303-487-1228		Project Name: <u>MDM 33-14 Flowline</u>		PO/Billing Codes:	
Sampler Name: <u>Billy Morrow</u>		Project Number:		Contact: <u>Karen Olson</u>	

ID	Sample Description	Date Sampled	Time Sampled	# of containers	Preservative				Matrix			Analysis Requested						Special Instructions	
					HCl	HNO3	None	Other	Water	Soil	Air-Canister #	Other	Metals - 915	VOC - 915	TPH - 915	PAH - 915	SAR, EC, pH		Boron - HWS
1	BK602 @ 3-4'	4-3-25	1130	1			X			X						X	X		
2	BK602 @ 5-6'		1132																
3	BK602 @ 7-8'		1134																
4	BK603 @ 3-4'		1200																
5	BK603 @ 5-6'		1202																
6	BK603 @ 7-8'		1204																
7	BK604 @ 3-4'		1344																
8	BK604 @ 5-6'		1346																
9	BK604 @ 7-8'		1348																
10	BK605 @ 3-4'		1400																
11	BK605 @ 5-6'		1402																
12	BK605 @ 7-8'		1404																
13	BK606 @ 3-4'		1115																
14	BK606 @ 5-6'		1117																
15	BK606 @ 7-8'		1119																

Relinquished by: <u>Billy Morrow</u>	Date/Time: <u>4-3-25 1500</u>	Received by: <u>S Z North</u>	Date/Time: <u>4-3-25 1500</u>	TAT Business Days	Field DO	Notes:
				Same Day	Field EC	
Relinquished by: <u>SL</u>	Date/Time: <u>4325 1630</u>	Received by: <u>[Signature]</u>	Date/Time: <u>4325 1630</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>3.7</u>	Corrected Temperature: <u>0</u>	IR gun #: <u>1</u>	HNO3 lot #:			

S₂

2/2

S2 Work Order# 2504070

Sample Receipt Checklist

Client: Pocoman Client Project ID: MDM 33-14 Flow/MD

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

Matrix (Circle all that apply) Air Soil Water Other Temp (°C) 3.7 Thermometer # 1

Bottle ware (Circle all that apply) Glass Jar/Voa/Amber/Poly/Other

	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.	-			none
If custody seals are present, are they intact? ⁽¹⁾	-			
Are samples due within 48 hours?		-		
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, Total Residual Chlorine (TRC)		-		
Is a chain-of-custody (COC) form present and filled out Completely? ⁽¹⁾	-			
Is the COC properly relinquished by the client w/ date and time recorded? ⁽¹⁾	-			
Were all samples received intact? ⁽¹⁾	✓			
Was adequate sample volume provided? ⁽¹⁾	✓			
Were samples provided in appropriate bottle ware?	✓			
Does the COC agree with the number and type of sample bottles received? ⁽¹⁾	✓			
Do the sample IDs on the bottle labels match the COC? ⁽¹⁾	✓			
For volatiles in water – is there headspace present? If yes, contact client and note in narrative.			✓	
Are any samples/bottles preserved (excluding cooling)? ⁽¹⁾ Note the type of preservative in the comments column – HCl, H ₂ SO ₄ , NaOH, HNO ₃ , etc.			✓	
If samples are acid preserved for metals, is the pH ≤ 2? ⁽¹⁾ Record the pH in Comments.			✓	
If dissolved metals are requested, were samples field filtered?			✓	
Are there requested analysis that cannot be performed by S2? Note analysis in the comments column		✓		
Additional Comments (if any):				

⁽¹⁾ If NO, then contact the client before proceeding with analysis and note in case narrative.

Control Form #: SRC-001

AS
Custodian Printed Name

4/3/25
Date/Time



Tasman Geosciences
4725 Independence St.
Wheat Ridge CO, 80033

Project: PDC - MDM 33-14 Flowline

Project Number: 32449
Project Manager: Andy Sagen

Reported:
06/16/25 09:43

BH01@3-4'
2504070-01 (Soil)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **04/03/25 10:00**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Benzene	ND	0.0020		mg/kg	1	BID0678	04/11/25	05/06/25	EPA 8260B	I-02
Toluene	ND	0.0050		"	"	"	"	"	"	I-02
Ethylbenzene	ND	0.0050		"	"	"	"	"	"	I-02
Xylenes (total)	ND	0.010		"	"	"	"	"	"	I-02
1,2,4-Trimethylbenzene	ND	0.0050		"	"	"	"	"	"	I-02
1,3,5-Trimethylbenzene	ND	0.0050		"	"	"	"	"	"	I-02
Naphthalene	ND	0.0038		"	"	"	"	"	"	I-02
Gasoline Range Hydrocarbons	ND	0.50		"	"	"	"	"	"	I-02

Date Sampled: **04/03/25 10:00**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Surrogate: 1,2-Dichloroethane-d4	0.0340	84.9 %		50-150		"	"	"	"	I-02
Surrogate: Toluene-d8	0.0400	99.9 %		50-150		"	"	"	"	I-02
Surrogate: 4-Bromofluorobenzene	0.0386	96.5 %		50-150		"	"	"	"	I-02

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **04/03/25 10:00**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
C10-C28 (DRO)	ND	50		mg/kg	1	BID0680	04/11/25	05/16/25	EPA 8015M	
C28-C36 (ORO)	ND	50		"	"	"	"	"	"	

Date Sampled: **04/03/25 10:00**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Surrogate: o-Terphenyl	7.88	63.1 %		50-140		"	"	"	"	

PAH by EPA Method 8270E SIM

Summit Scientific

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Reported:
06/16/25 09:43

BH01@3-4'
2504070-01 (Soil)

Summit Scientific

PAH by EPA Method 8270E SIM

Date Sampled: **04/03/25 10:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Acenaphthene	ND	0.00500	mg/kg	1	BID0576	04/10/25	05/10/25	EPA 8270E 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: **04/03/25 10:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 2-Methylnaphthalene-d10	0.0257	77.0 %	40-140		"	"	"	"	
Surrogate: Fluoranthene-d10	0.0271	81.3 %	40-140		"	"	"	"	

Total Metals by EPA 6020B Hot Water Soluble Extraction

Date Sampled: **04/03/25 10:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Boron	ND	2.00	mg/L dry	1	BID0319	04/07/25	04/15/25	EPA 6020B	

Total Metals by EPA 6020B

Date Sampled: **04/03/25 10:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
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BH01@3-4'
2504070-01 (Soil)

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Total Metals by EPA 6020B

Analyte	Result	Limit	Units	Dilution	Batch	Prepared	Analyzed	Method
Arsenic	1.60	0.200	mg/kg dry	1	BID0426	04/08/25	05/22/25	EPA 6020B
Barium	55.6	0.400	"	"	"	"	"	"
Cadmium	0.388	0.200	"	"	"	"	"	"
Copper	6.08	0.400	"	"	"	"	"	"
Lead	7.37	0.200	"	"	"	"	"	"
Nickel	4.17	0.400	"	"	"	"	"	"
Silver	0.0222	0.0200	"	"	"	"	"	"
Zinc	27.5	0.400	"	"	"	"	"	"
Selenium	ND	0.260	"	"	"	"	"	"

Hexavalent Chromium by EPA Method 7196

Date Sampled: **04/03/25 10:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Chromium, Hexavalent	ND	0.30	mg/kg dry	1	BID0515	04/09/25	04/11/25	EPA 7196A	

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

Date Sampled: **04/03/25 10:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Calcium	26.7	0.0500	mg/L dry	1	BID1434	04/28/25	05/11/25	EPA 6020B	
Magnesium	11.4	0.0500	"	"	"	"	"	"	
Sodium	25.5	0.0500	"	"	"	"	"	"	

Calculated Analysis

Date Sampled: **04/03/25 10:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	1.04	0.00100	units	1	BIE0522	05/14/25	05/14/25	Calculation	

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **04/03/25 10:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
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2504070-01 (Soil)

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Physical Parameters by APHA/ASTM/EPA Methods

% Solids	83.8	%	1	BID0320	04/07/25	04/07/25	Calculation
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Specific Conductance by EPA Method 120.1, Saturated Paste Extraction

Date Sampled: **04/03/25 10:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Specific Conductance (EC)	0.413	0.0100	mmhos/cm	1	BID1439	04/28/25	05/01/25	EPA 120.1	

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

Date Sampled: **04/03/25 10:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
pH	8.11		pH Units	1	BID1437	04/28/25	05/01/25	EPA 9045D	

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Project: PDC - MDM 33-14 Flowline

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Project Manager: Andy Sagen

Reported:
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BH01@5-6'
2504070-02 (Soil)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **04/03/25 10:02**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Benzene	ND	0.0020	mg/kg	1	BID0678	04/11/25	05/06/25	EPA 8260B	I-02
Toluene	ND	0.0050	"	"	"	"	"	"	I-02
Ethylbenzene	ND	0.0050	"	"	"	"	"	"	I-02
Xylenes (total)	ND	0.010	"	"	"	"	"	"	I-02
1,2,4-Trimethylbenzene	ND	0.0050	"	"	"	"	"	"	I-02
1,3,5-Trimethylbenzene	ND	0.0050	"	"	"	"	"	"	I-02
Naphthalene	ND	0.0038	"	"	"	"	"	"	I-02
Gasoline Range Hydrocarbons	ND	0.50	"	"	"	"	"	"	I-02

Date Sampled: **04/03/25 10:02**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 1,2-Dichloroethane-d4	0.0356	89.0 %	50-150	"	"	"	"	"	I-02
Surrogate: Toluene-d8	0.0407	102 %	50-150	"	"	"	"	"	I-02
Surrogate: 4-Bromofluorobenzene	0.0390	97.4 %	50-150	"	"	"	"	"	I-02

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **04/03/25 10:02**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
C10-C28 (DRO)	ND	50	mg/kg	1	BID0680	04/11/25	05/16/25	EPA 8015M	
C28-C36 (ORO)	ND	50	"	"	"	"	"	"	

Date Sampled: **04/03/25 10:02**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: o-Terphenyl	9.50	76.0 %	50-140	"	"	"	"	"	

PAH by EPA Method 8270E SIM

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BH01@5-6'
2504070-02 (Soil)

Summit Scientific

PAH by EPA Method 8270E SIM

Date Sampled: **04/03/25 10:02**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Acenaphthene	ND	0.00500	mg/kg	1	BID0576	04/10/25	05/10/25	EPA 8270E 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: **04/03/25 10:02**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 2-Methylnaphthalene-d10	0.0296	88.7 %	40-140		"	"	"	"	
Surrogate: Fluoranthene-d10	0.0289	86.6 %	40-140		"	"	"	"	

Total Metals by EPA 6020B Hot Water Soluble Extraction

Date Sampled: **04/03/25 10:02**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Boron	ND	2.00	mg/L dry	1	BID0319	04/07/25	04/15/25	EPA 6020B	

Total Metals by EPA 6020B

Date Sampled: **04/03/25 10:02**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
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Tasman Geosciences
4725 Independence St.
Wheat Ridge CO, 80033

Project: PDC - MDM 33-14 Flowline

Project Number: 32449
Project Manager: Andy Sagen

Reported:
06/16/25 09:43

BH01@5-6'
2504070-02 (Soil)

Summit Scientific

Total Metals by EPA 6020B

Analyte	Result	Limit	Units	Dilution	Batch	Prepared	Analyzed	Method
Arsenic	4.21	0.200	mg/kg dry	1	BID0426	04/08/25	05/22/25	EPA 6020B
Barium	125	0.400	"	"	"	"	"	"
Cadmium	0.235	0.200	"	"	"	"	"	"
Copper	10.6	0.400	"	"	"	"	"	"
Lead	10.9	0.200	"	"	"	"	"	"
Nickel	10.7	0.400	"	"	"	"	"	"
Silver	0.0568	0.0200	"	"	"	"	"	"
Zinc	39.6	0.400	"	"	"	"	"	"
Selenium	ND	0.260	"	"	"	"	"	"

Hexavalent Chromium by EPA Method 7196

Date Sampled: **04/03/25 10:02**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Chromium, Hexavalent	ND	0.30	mg/kg dry	1	BID0515	04/09/25	04/11/25	EPA 7196A	

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

Date Sampled: **04/03/25 10:02**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Calcium	42.2	0.0500	mg/L dry	1	BID1434	04/28/25	05/11/25	EPA 6020B	
Magnesium	15.2	0.0500	"	"	"	"	"	"	
Sodium	56.2	0.0500	"	"	"	"	"	"	

Calculated Analysis

Date Sampled: **04/03/25 10:02**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	1.89	0.00100	units	1	BIE0522	05/14/25	05/14/25	Calculation	

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **04/03/25 10:02**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
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Summit Scientific

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Tasman Geosciences
 4725 Independence St.
 Wheat Ridge CO, 80033

Project: PDC - MDM 33-14 Flowline
 Project Number: 32449
 Project Manager: Andy Sagen

Reported:
 06/16/25 09:43

BH01@5-6'
2504070-02 (Soil)

Summit Scientific

Physical Parameters by APHA/ASTM/EPA Methods

% Solids	83.9	%	1	BID0320	04/07/25	04/07/25	Calculation
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Specific Conductance by EPA Method 120.1, Saturated Paste Extraction

Date Sampled: **04/03/25 10:02**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Specific Conductance (EC)	0.596	0.0100	mmhos/cm	1	BID1439	04/28/25	05/01/25	EPA 120.1	

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

Date Sampled: **04/03/25 10:02**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
pH	8.31		pH Units	1	BID1437	04/28/25	05/01/25	EPA 9045D	

Summit Scientific

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Tasman Geosciences
4725 Independence St.
Wheat Ridge CO, 80033

Project: PDC - MDM 33-14 Flowline

Project Number: 32449
Project Manager: Andy Sagen

Reported:
06/16/25 09:43

BH01@7-8'
2504070-03 (Soil)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **04/03/25 10:04**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Benzene	ND	0.0020	mg/kg	1	BID0678	04/11/25	05/06/25	EPA 8260B	I-02
Toluene	ND	0.0050	"	"	"	"	"	"	I-02
Ethylbenzene	ND	0.0050	"	"	"	"	"	"	I-02
Xylenes (total)	ND	0.010	"	"	"	"	"	"	I-02
1,2,4-Trimethylbenzene	ND	0.0050	"	"	"	"	"	"	I-02
1,3,5-Trimethylbenzene	ND	0.0050	"	"	"	"	"	"	I-02
Naphthalene	ND	0.0038	"	"	"	"	"	"	I-02
Gasoline Range Hydrocarbons	ND	0.50	"	"	"	"	"	"	I-02

Date Sampled: **04/03/25 10:04**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 1,2-Dichloroethane-d4	0.0354	88.6 %	50-150	"	"	"	"	"	I-02
Surrogate: Toluene-d8	0.0409	102 %	50-150	"	"	"	"	"	I-02
Surrogate: 4-Bromofluorobenzene	0.0387	96.8 %	50-150	"	"	"	"	"	I-02

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **04/03/25 10:04**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
C10-C28 (DRO)	ND	50	mg/kg	1	BID0680	04/11/25	05/16/25	EPA 8015M	
C28-C36 (ORO)	ND	50	"	"	"	"	"	"	

Date Sampled: **04/03/25 10:04**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: o-Terphenyl	10.0	80.1 %	50-140	"	"	"	"	"	

PAH by EPA Method 8270E SIM

Summit Scientific

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Tasman Geosciences
4725 Independence St.
Wheat Ridge CO, 80033

Project: PDC - MDM 33-14 Flowline

Project Number: 32449
Project Manager: Andy Sagen

Reported:
06/16/25 09:43

BH01@7-8'
2504070-03 (Soil)

Summit Scientific

PAH by EPA Method 8270E SIM

Date Sampled: **04/03/25 10:04**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Acenaphthene	ND	0.00500	mg/kg	1	BID0576	04/10/25	05/10/25	EPA 8270E 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: **04/03/25 10:04**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 2-Methylnaphthalene-d10	0.0272	81.5 %	40-140		"	"	"	"	
Surrogate: Fluoranthene-d10	0.0257	77.0 %	40-140		"	"	"	"	

Total Metals by EPA 6020B Hot Water Soluble Extraction

Date Sampled: **04/03/25 10:04**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Boron	ND	2.00	mg/L dry	1	BID0319	04/07/25	04/15/25	EPA 6020B	

Total Metals by EPA 6020B

Date Sampled: **04/03/25 10:04**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
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Tasman Geosciences
4725 Independence St.
Wheat Ridge CO, 80033

Project: PDC - MDM 33-14 Flowline

Project Number: 32449
Project Manager: Andy Sagen

Reported:
06/16/25 09:43

BH01@7-8'
2504070-03 (Soil)

Summit Scientific

Total Metals by EPA 6020B

Analyte	Result	Limit	Units	Dilution	Batch	Prepared	Analyzed	Method
Arsenic	4.38	0.200	mg/kg dry	1	BID0426	04/08/25	05/22/25	EPA 6020B
Barium	155	0.400	"	"	"	"	"	"
Cadmium	0.265	0.200	"	"	"	"	"	"
Copper	11.3	0.400	"	"	"	"	"	"
Lead	10.3	0.200	"	"	"	"	"	"
Nickel	10.6	0.400	"	"	"	"	"	"
Silver	0.0396	0.0200	"	"	"	"	"	"
Zinc	41.2	0.400	"	"	"	"	"	"
Selenium	ND	0.260	"	"	"	"	"	"

Hexavalent Chromium by EPA Method 7196

Date Sampled: **04/03/25 10:04**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Chromium, Hexavalent	ND	0.30	mg/kg dry	1	BID0515	04/09/25	04/11/25	EPA 7196A	

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

Date Sampled: **04/03/25 10:04**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Calcium	46.2	0.0500	mg/L dry	1	BID1434	04/28/25	05/11/25	EPA 6020B	
Magnesium	22.3	0.0500	"	"	"	"	"	"	
Sodium	64.9	0.0500	"	"	"	"	"	"	

Calculated Analysis

Date Sampled: **04/03/25 10:04**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	1.96	0.00100	units	1	BIE0522	05/14/25	05/14/25	Calculation	

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **04/03/25 10:04**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
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Tasman Geosciences
 4725 Independence St.
 Wheat Ridge CO, 80033

Project: PDC - MDM 33-14 Flowline

Project Number: 32449
 Project Manager: Andy Sagen

Reported:
 06/16/25 09:43

BH01@7-8'
2504070-03 (Soil)

Summit Scientific

Physical Parameters by APHA/ASTM/EPA Methods

% Solids	75.1	%	1	BID0320	04/07/25	04/07/25	Calculation
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Specific Conductance by EPA Method 120.1, Saturated Paste Extraction

Date Sampled: **04/03/25 10:04**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Specific Conductance (EC)	0.675	0.0100	mmhos/cm	1	BID1439	04/28/25	05/01/25	EPA 120.1	

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

Date Sampled: **04/03/25 10:04**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
pH	8.09		pH Units	1	BID1437	04/28/25	05/01/25	EPA 9045D	

Summit Scientific

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Tasman Geosciences
4725 Independence St.
Wheat Ridge CO, 80033

Project: PDC - MDM 33-14 Flowline

Project Number: 32449
Project Manager: Andy Sagen

Reported:
06/16/25 09:43

BH02@3-4'
2504070-04 (Soil)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **04/03/25 11:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Benzene	ND	0.0020	mg/kg	1	BID0678	04/11/25	05/06/25	EPA 8260B	I-02
Toluene	ND	0.0050	"	"	"	"	"	"	I-02
Ethylbenzene	ND	0.0050	"	"	"	"	"	"	I-02
Xylenes (total)	ND	0.010	"	"	"	"	"	"	I-02
1,2,4-Trimethylbenzene	ND	0.0050	"	"	"	"	"	"	I-02
1,3,5-Trimethylbenzene	ND	0.0050	"	"	"	"	"	"	I-02
Naphthalene	ND	0.0038	"	"	"	"	"	"	I-02
Gasoline Range Hydrocarbons	ND	0.50	"	"	"	"	"	"	I-02

Date Sampled: **04/03/25 11:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 1,2-Dichloroethane-d4	0.0377	94.4 %	50-150	"	"	"	"	"	I-02
Surrogate: Toluene-d8	0.0413	103 %	50-150	"	"	"	"	"	I-02
Surrogate: 4-Bromofluorobenzene	0.0403	101 %	50-150	"	"	"	"	"	I-02

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **04/03/25 11:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
C10-C28 (DRO)	ND	50	mg/kg	1	BID0680	04/11/25	05/16/25	EPA 8015M	
C28-C36 (ORO)	ND	50	"	"	"	"	"	"	

Date Sampled: **04/03/25 11:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: o-Terphenyl	8.36	66.9 %	50-140	"	"	"	"	"	

PAH by EPA Method 8270E SIM

Summit Scientific

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Tasman Geosciences
4725 Independence St.
Wheat Ridge CO, 80033

Project: PDC - MDM 33-14 Flowline

Project Number: 32449
Project Manager: Andy Sagen

Reported:
06/16/25 09:43

BH02@3-4'
2504070-04 (Soil)

Summit Scientific

PAH by EPA Method 8270E SIM

Date Sampled: **04/03/25 11:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Acenaphthene	ND	0.00500	mg/kg	1	BID0576	04/10/25	05/10/25	EPA 8270E 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: **04/03/25 11:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 2-Methylnaphthalene-d10	0.0240	72.0 %	40-140		"	"	"	"	
Surrogate: Fluoranthene-d10	0.0233	69.9 %	40-140		"	"	"	"	

Total Metals by EPA 6020B Hot Water Soluble Extraction

Date Sampled: **04/03/25 11:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Boron	ND	2.00	mg/L dry	1	BID0319	04/07/25	04/15/25	EPA 6020B	

Total Metals by EPA 6020B

Date Sampled: **04/03/25 11:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
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Summit Scientific

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Tasman Geosciences
4725 Independence St.
Wheat Ridge CO, 80033

Project: PDC - MDM 33-14 Flowline

Project Number: 32449
Project Manager: Andy Sagen

Reported:
06/16/25 09:43

BH02@3-4'
2504070-04 (Soil)

Summit Scientific

Total Metals by EPA 6020B

Analyte	Result	Limit	Units	Dilution	Batch	Prepared	Analyzed	Method
Arsenic	3.58	0.200	mg/kg dry	1	BID0426	04/08/25	05/22/25	EPA 6020B
Barium	107	0.400	"	"	"	"	"	"
Cadmium	ND	0.200	"	"	"	"	"	"
Copper	9.59	0.400	"	"	"	"	"	"
Lead	8.21	0.200	"	"	"	"	"	"
Nickel	9.46	0.400	"	"	"	"	"	"
Silver	0.0362	0.0200	"	"	"	"	"	"
Zinc	37.0	0.400	"	"	"	"	"	"
Selenium	ND	0.260	"	"	"	"	"	"

Hexavalent Chromium by EPA Method 7196

Date Sampled: **04/03/25 11:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Chromium, Hexavalent	ND	0.30	mg/kg dry	1	BID0515	04/09/25	04/11/25	EPA 7196A	

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

Date Sampled: **04/03/25 11:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Calcium	16.3	0.0500	mg/L dry	1	BID1434	04/28/25	05/11/25	EPA 6020B	
Magnesium	8.74	0.0500	"	"	"	"	"	"	
Sodium	50.4	0.0500	"	"	"	"	"	"	

Calculated Analysis

Date Sampled: **04/03/25 11:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	2.50	0.00100	units	1	BIE0522	05/14/25	05/14/25	Calculation	

Physical Parameters by APHA/ASTM/EPA Methods

Summit Scientific

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Tasman Geosciences
4725 Independence St.
Wheat Ridge CO, 80033

Project: PDC - MDM 33-14 Flowline

Project Number: 32449
Project Manager: Andy Sagen

Reported:
06/16/25 09:43

BH02@3-4'
2504070-04 (Soil)

Summit Scientific

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **04/03/25 11:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
% Solids	81.7		%	1	BID0320	04/07/25	04/07/25	Calculation	

Specific Conductance by EPA Method 120.1, Saturated Paste Extraction

Date Sampled: **04/03/25 11:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Specific Conductance (EC)	0.396	0.0100	mmhos/cm	1	BID1439	04/28/25	05/01/25	EPA 120.1	

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

Date Sampled: **04/03/25 11:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
pH	8.68		pH Units	1	BID1437	04/28/25	05/01/25	EPA 9045D	

Summit Scientific

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Tasman Geosciences
4725 Independence St.
Wheat Ridge CO, 80033

Project: PDC - MDM 33-14 Flowline

Project Number: 32449
Project Manager: Andy Sagen

Reported:
06/16/25 09:43

BH02@5-6'
2504070-05 (Soil)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **04/03/25 11:02**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Benzene	ND	0.0020	mg/kg	1	BID0678	04/11/25	05/06/25	EPA 8260B	I-02
Toluene	ND	0.0050	"	"	"	"	"	"	I-02
Ethylbenzene	ND	0.0050	"	"	"	"	"	"	I-02
Xylenes (total)	ND	0.010	"	"	"	"	"	"	I-02
1,2,4-Trimethylbenzene	ND	0.0050	"	"	"	"	"	"	I-02
1,3,5-Trimethylbenzene	ND	0.0050	"	"	"	"	"	"	I-02
Naphthalene	ND	0.0038	"	"	"	"	"	"	I-02
Gasoline Range Hydrocarbons	ND	0.50	"	"	"	"	"	"	I-02

Date Sampled: **04/03/25 11:02**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 1,2-Dichloroethane-d4	0.0371	92.8 %	50-150	"	"	"	"	"	I-02
Surrogate: Toluene-d8	0.0405	101 %	50-150	"	"	"	"	"	I-02
Surrogate: 4-Bromofluorobenzene	0.0392	98.0 %	50-150	"	"	"	"	"	I-02

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **04/03/25 11:02**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
C10-C28 (DRO)	ND	50	mg/kg	1	BID0680	04/11/25	05/16/25	EPA 8015M	
C28-C36 (ORO)	ND	50	"	"	"	"	"	"	

Date Sampled: **04/03/25 11:02**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: o-Terphenyl	9.60	76.8 %	50-140	"	"	"	"	"	

PAH by EPA Method 8270E SIM

Summit Scientific

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Tasman Geosciences
4725 Independence St.
Wheat Ridge CO, 80033

Project: PDC - MDM 33-14 Flowline

Project Number: 32449
Project Manager: Andy Sagen

Reported:
06/16/25 09:43

BH02@5-6'
2504070-05 (Soil)

Summit Scientific

PAH by EPA Method 8270E SIM

Date Sampled: **04/03/25 11:02**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Acenaphthene	ND	0.00500	mg/kg	1	BID0576	04/10/25	05/10/25	EPA 8270E 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: **04/03/25 11:02**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 2-Methylnaphthalene-d10	0.0258	77.4 %	40-140		"	"	"	"	
Surrogate: Fluoranthene-d10	0.0258	77.3 %	40-140		"	"	"	"	

Total Metals by EPA 6020B Hot Water Soluble Extraction

Date Sampled: **04/03/25 11:02**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Boron	ND	2.00	mg/L dry	1	BID0319	04/07/25	04/15/25	EPA 6020B	

Total Metals by EPA 6020B

Date Sampled: **04/03/25 11:02**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
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Summit Scientific

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Tasman Geosciences
4725 Independence St.
Wheat Ridge CO, 80033

Project: PDC - MDM 33-14 Flowline

Project Number: 32449
Project Manager: Andy Sagen

Reported:
06/16/25 09:43

BH02@5-6'
2504070-05 (Soil)

Summit Scientific

Total Metals by EPA 6020B

Analyte	Result	Limit	Units	Dilution	Batch	Prepared	Analyzed	Method
Arsenic	4.52	0.200	mg/kg dry	1	BID0426	04/08/25	05/22/25	EPA 6020B
Barium	174	0.400	"	"	"	"	"	"
Cadmium	0.296	0.200	"	"	"	"	"	"
Copper	12.7	0.400	"	"	"	"	"	"
Lead	13.9	0.200	"	"	"	"	"	"
Nickel	12.5	0.400	"	"	"	"	"	"
Silver	0.0609	0.0200	"	"	"	"	"	"
Zinc	51.3	0.400	"	"	"	"	"	"
Selenium	ND	0.260	"	"	"	"	"	"

Hexavalent Chromium by EPA Method 7196

Date Sampled: **04/03/25 11:02**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Chromium, Hexavalent	ND	0.30	mg/kg dry	1	BID0515	04/09/25	04/11/25	EPA 7196A	

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

Date Sampled: **04/03/25 11:02**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Calcium	25.5	0.0500	mg/L dry	1	BID1434	04/28/25	05/11/25	EPA 6020B	
Magnesium	9.07	0.0500	"	"	"	"	"	"	
Sodium	34.6	0.0500	"	"	"	"	"	"	

Calculated Analysis

Date Sampled: **04/03/25 11:02**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	1.50	0.00100	units	1	BIE0522	05/14/25	05/14/25	Calculation	

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **04/03/25 11:02**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
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Summit Scientific

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Tasman Geosciences
 4725 Independence St.
 Wheat Ridge CO, 80033

Project: PDC - MDM 33-14 Flowline

Project Number: 32449
 Project Manager: Andy Sagen

Reported:
 06/16/25 09:43

BH02@5-6'
2504070-05 (Soil)

Summit Scientific

Physical Parameters by APHA/ASTM/EPA Methods

% Solids	72.6	%	1	BID0320	04/07/25	04/07/25	Calculation
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Specific Conductance by EPA Method 120.1, Saturated Paste Extraction

Date Sampled: **04/03/25 11:02**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Specific Conductance (EC)	0.395	0.0100	mmhos/cm	1	BID1439	04/28/25	05/01/25	EPA 120.1	

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

Date Sampled: **04/03/25 11:02**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
pH	8.63		pH Units	1	BID1437	04/28/25	05/01/25	EPA 9045D	

Summit Scientific

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Tasman Geosciences
4725 Independence St.
Wheat Ridge CO, 80033

Project: PDC - MDM 33-14 Flowline

Project Number: 32449
Project Manager: Andy Sagen

Reported:
06/16/25 09:43

BH02@7-8'
2504070-06 (Soil)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **04/03/25 11:04**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Benzene	ND	0.0020	mg/kg	1	BID0678	04/11/25	05/06/25	EPA 8260B	I-02
Toluene	ND	0.0050	"	"	"	"	"	"	I-02
Ethylbenzene	ND	0.0050	"	"	"	"	"	"	I-02
Xylenes (total)	ND	0.010	"	"	"	"	"	"	I-02
1,2,4-Trimethylbenzene	ND	0.0050	"	"	"	"	"	"	I-02
1,3,5-Trimethylbenzene	ND	0.0050	"	"	"	"	"	"	I-02
Naphthalene	ND	0.0038	"	"	"	"	"	"	I-02
Gasoline Range Hydrocarbons	ND	0.50	"	"	"	"	"	"	I-02

Date Sampled: **04/03/25 11:04**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 1,2-Dichloroethane-d4	0.0354	88.4 %	50-150	"	"	"	"	"	I-02
Surrogate: Toluene-d8	0.0404	101 %	50-150	"	"	"	"	"	I-02
Surrogate: 4-Bromofluorobenzene	0.0384	96.0 %	50-150	"	"	"	"	"	I-02

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **04/03/25 11:04**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
C10-C28 (DRO)	ND	50	mg/kg	1	BID0680	04/11/25	05/16/25	EPA 8015M	
C28-C36 (ORO)	ND	50	"	"	"	"	"	"	

Date Sampled: **04/03/25 11:04**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: o-Terphenyl	8.01	64.1 %	50-140	"	"	"	"	"	

PAH by EPA Method 8270E SIM

Summit Scientific

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Tasman Geosciences
4725 Independence St.
Wheat Ridge CO, 80033

Project: PDC - MDM 33-14 Flowline

Project Number: 32449
Project Manager: Andy Sagen

Reported:
06/16/25 09:43

BH02@7-8'
2504070-06 (Soil)

Summit Scientific

PAH by EPA Method 8270E SIM

Date Sampled: **04/03/25 11:04**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Acenaphthene	ND	0.00500	mg/kg	1	BID0576	04/10/25	05/10/25	EPA 8270E 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: **04/03/25 11:04**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 2-Methylnaphthalene-d10	0.0289	86.6 %	40-140		"	"	"	"	
Surrogate: Fluoranthene-d10	0.0274	82.3 %	40-140		"	"	"	"	

Total Metals by EPA 6020B Hot Water Soluble Extraction

Date Sampled: **04/03/25 11:04**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Boron	ND	2.00	mg/L dry	1	BID0319	04/07/25	04/15/25	EPA 6020B	

Total Metals by EPA 6020B

Date Sampled: **04/03/25 11:04**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
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Summit Scientific

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Tasman Geosciences
4725 Independence St.
Wheat Ridge CO, 80033

Project: PDC - MDM 33-14 Flowline

Project Number: 32449
Project Manager: Andy Sagen

Reported:
06/16/25 09:43

BH02@7-8'
2504070-06 (Soil)

Summit Scientific

Total Metals by EPA 6020B

Analyte	Result	Limit	Units	Dilution	Batch	Prepared	Analyzed	Method
Arsenic	4.11	0.200	mg/kg dry	1	BID0426	04/08/25	05/22/25	EPA 6020B
Barium	132	0.400	"	"	"	"	"	"
Cadmium	ND	0.200	"	"	"	"	"	"
Copper	9.98	0.400	"	"	"	"	"	"
Lead	10.1	0.200	"	"	"	"	"	"
Nickel	9.61	0.400	"	"	"	"	"	"
Silver	0.0383	0.0200	"	"	"	"	"	"
Zinc	42.2	0.400	"	"	"	"	"	"
Selenium	ND	0.260	"	"	"	"	"	"

Hexavalent Chromium by EPA Method 7196

Date Sampled: **04/03/25 11:04**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Chromium, Hexavalent	ND	0.30	mg/kg dry	1	BID0515	04/09/25	04/11/25	EPA 7196A	

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

Date Sampled: **04/03/25 11:04**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Calcium	60.3	0.0500	mg/L dry	1	BID1434	04/28/25	05/11/25	EPA 6020B	
Magnesium	25.6	0.0500	"	"	"	"	"	"	
Sodium	82.7	0.0500	"	"	"	"	"	"	

Calculated Analysis

Date Sampled: **04/03/25 11:04**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	2.25	0.00100	units	1	BIE0522	05/14/25	05/14/25	Calculation	

Physical Parameters by APHA/ASTM/EPA Methods

Summit Scientific

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Tasman Geosciences
4725 Independence St.
Wheat Ridge CO, 80033

Project: PDC - MDM 33-14 Flowline

Project Number: 32449
Project Manager: Andy Sagen

Reported:
06/16/25 09:43

BH02@7-8'
2504070-06 (Soil)

Summit Scientific

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **04/03/25 11:04**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
% Solids	77.0			%	1	BID0320	04/07/25	04/07/25	Calculation	

Specific Conductance by EPA Method 120.1, Saturated Paste Extraction

Date Sampled: **04/03/25 11:04**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Specific Conductance (EC)	0.805	0.0100		mmhos/cm	1	BID1439	04/28/25	05/01/25	EPA 120.1	

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

Date Sampled: **04/03/25 11:04**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
pH	8.09			pH Units	1	BID1437	04/28/25	05/01/25	EPA 9045D	

Summit Scientific

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Tasman Geosciences
4725 Independence St.
Wheat Ridge CO, 80033

Project: PDC - MDM 33-14 Flowline

Project Number: 32449
Project Manager: Andy Sagen

Reported:
06/16/25 09:43

BH03@3-4'
2504070-07 (Soil)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **04/03/25 10:10**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Benzene	ND	0.0020	mg/kg	1	BID0678	04/11/25	05/06/25	EPA 8260B	I-02
Toluene	ND	0.0050	"	"	"	"	"	"	I-02
Ethylbenzene	ND	0.0050	"	"	"	"	"	"	I-02
Xylenes (total)	ND	0.010	"	"	"	"	"	"	I-02
1,2,4-Trimethylbenzene	ND	0.0050	"	"	"	"	"	"	I-02
1,3,5-Trimethylbenzene	ND	0.0050	"	"	"	"	"	"	I-02
Naphthalene	ND	0.0038	"	"	"	"	"	"	I-02
Gasoline Range Hydrocarbons	ND	0.50	"	"	"	"	"	"	I-02

Date Sampled: **04/03/25 10:10**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 1,2-Dichloroethane-d4	0.0355	88.8 %	50-150	"	"	"	"	"	I-02
Surrogate: Toluene-d8	0.0405	101 %	50-150	"	"	"	"	"	I-02
Surrogate: 4-Bromofluorobenzene	0.0394	98.6 %	50-150	"	"	"	"	"	I-02

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **04/03/25 10:10**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
C10-C28 (DRO)	ND	50	mg/kg	1	BID0680	04/11/25	05/16/25	EPA 8015M	
C28-C36 (ORO)	ND	50	"	"	"	"	"	"	

Date Sampled: **04/03/25 10:10**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: o-Terphenyl	10.0	80.3 %	50-140	"	"	"	"	"	

PAH by EPA Method 8270E SIM

Summit Scientific

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Tasman Geosciences
4725 Independence St.
Wheat Ridge CO, 80033

Project: PDC - MDM 33-14 Flowline

Project Number: 32449
Project Manager: Andy Sagen

Reported:
06/16/25 09:43

BH03@3-4'
2504070-07 (Soil)

Summit Scientific

PAH by EPA Method 8270E SIM

Date Sampled: **04/03/25 10:10**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Acenaphthene	ND	0.00500	mg/kg	1	BID0576	04/10/25	05/10/25	EPA 8270E 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: **04/03/25 10:10**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 2-Methylnaphthalene-d10	0.0266	79.9 %	40-140		"	"	"	"	
Surrogate: Fluoranthene-d10	0.0265	79.4 %	40-140		"	"	"	"	

Total Metals by EPA 6020B Hot Water Soluble Extraction

Date Sampled: **04/03/25 10:10**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Boron	ND	2.00	mg/L dry	1	BID0319	04/07/25	04/15/25	EPA 6020B	

Total Metals by EPA 6020B

Date Sampled: **04/03/25 10:10**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
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Summit Scientific

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Tasman Geosciences
4725 Independence St.
Wheat Ridge CO, 80033

Project: PDC - MDM 33-14 Flowline

Project Number: 32449
Project Manager: Andy Sagen

Reported:
06/16/25 09:43

BH03@3-4'
2504070-07 (Soil)

Summit Scientific

Total Metals by EPA 6020B

Analyte	Result	Limit	Units	Dilution	Batch	Prepared	Analyzed	Method
Arsenic	3.09	0.200	mg/kg dry	1	BID0426	04/08/25	05/22/25	EPA 6020B
Barium	96.2	0.400	"	"	"	"	"	"
Cadmium	ND	0.200	"	"	"	"	"	"
Copper	7.96	0.400	"	"	"	"	"	"
Lead	7.02	0.200	"	"	"	"	"	"
Nickel	7.02	0.400	"	"	"	"	"	"
Silver	0.0247	0.0200	"	"	"	"	"	"
Zinc	35.6	0.400	"	"	"	"	"	"
Selenium	ND	0.260	"	"	"	"	"	"

Hexavalent Chromium by EPA Method 7196

Date Sampled: **04/03/25 10:10**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Chromium, Hexavalent	ND	0.30	mg/kg dry	1	BID0515	04/09/25	04/11/25	EPA 7196A	

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

Date Sampled: **04/03/25 10:10**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Calcium	21.7	0.0500	mg/L dry	1	BID1434	04/28/25	05/13/25	EPA 6020B	
Magnesium	10.5	0.0500	"	"	"	"	"	"	
Sodium	83.2	0.0500	"	"	"	"	"	"	

Calculated Analysis

Date Sampled: **04/03/25 10:10**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	3.67	0.00100	units	1	BIE0522	05/14/25	05/14/25	Calculation	

Physical Parameters by APHA/ASTM/EPA Methods

Summit Scientific

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Tasman Geosciences
4725 Independence St.
Wheat Ridge CO, 80033

Project: PDC - MDM 33-14 Flowline

Project Number: 32449
Project Manager: Andy Sagen

Reported:
06/16/25 09:43

BH03@3-4'
2504070-07 (Soil)

Summit Scientific

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **04/03/25 10:10**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
% Solids	84.4			%	1	BID0320	04/07/25	04/07/25	Calculation	

Specific Conductance by EPA Method 120.1, Saturated Paste Extraction

Date Sampled: **04/03/25 10:10**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Specific Conductance (EC)	0.616	0.0100		mmhos/cm	1	BID1439	04/28/25	05/01/25	EPA 120.1	

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

Date Sampled: **04/03/25 10:10**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
pH	8.36			pH Units	1	BID1437	04/28/25	05/01/25	EPA 9045D	

Summit Scientific

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Tasman Geosciences
4725 Independence St.
Wheat Ridge CO, 80033

Project: PDC - MDM 33-14 Flowline

Project Number: 32449
Project Manager: Andy Sagen

Reported:
06/16/25 09:43

BH03@5-6'
2504070-08 (Soil)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **04/03/25 10:12**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Benzene	ND	0.0020	mg/kg	1	BID0678	04/11/25	05/06/25	EPA 8260B	I-02
Toluene	ND	0.0050	"	"	"	"	"	"	I-02
Ethylbenzene	ND	0.0050	"	"	"	"	"	"	I-02
Xylenes (total)	ND	0.010	"	"	"	"	"	"	I-02
1,2,4-Trimethylbenzene	ND	0.0050	"	"	"	"	"	"	I-02
1,3,5-Trimethylbenzene	ND	0.0050	"	"	"	"	"	"	I-02
Naphthalene	ND	0.0038	"	"	"	"	"	"	I-02
Gasoline Range Hydrocarbons	ND	0.50	"	"	"	"	"	"	I-02

Date Sampled: **04/03/25 10:12**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 1,2-Dichloroethane-d4	0.0387	96.8 %	50-150	"	"	"	"	"	I-02
Surrogate: Toluene-d8	0.0400	100 %	50-150	"	"	"	"	"	I-02
Surrogate: 4-Bromofluorobenzene	0.0389	97.3 %	50-150	"	"	"	"	"	I-02

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **04/03/25 10:12**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
C10-C28 (DRO)	ND	50	mg/kg	1	BID0680	04/11/25	05/16/25	EPA 8015M	
C28-C36 (ORO)	ND	50	"	"	"	"	"	"	

Date Sampled: **04/03/25 10:12**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: o-Terphenyl	7.92	63.4 %	50-140	"	"	"	"	"	

PAH by EPA Method 8270E SIM

Summit Scientific

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Tasman Geosciences
4725 Independence St.
Wheat Ridge CO, 80033

Project: PDC - MDM 33-14 Flowline

Project Number: 32449
Project Manager: Andy Sagen

Reported:
06/16/25 09:43

BH03@5-6'
2504070-08 (Soil)

Summit Scientific

PAH by EPA Method 8270E SIM

Date Sampled: **04/03/25 10:12**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Acenaphthene	ND	0.00500	mg/kg	1	BID0638	04/11/25	05/16/25	EPA 8270E 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: **04/03/25 10:12**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 2-Methylnaphthalene-d10	0.0132	39.6 %	40-140		"	"	"	"	S-09
Surrogate: Fluoranthene-d10	0.0141	42.3 %	40-140		"	"	"	"	

Total Metals by EPA 6020B Hot Water Soluble Extraction

Date Sampled: **04/03/25 10:12**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Boron	ND	2.00	mg/L dry	1	BID0319	04/07/25	04/15/25	EPA 6020B	

Total Metals by EPA 6020B

Date Sampled: **04/03/25 10:12**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
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Summit Scientific

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Tasman Geosciences
4725 Independence St.
Wheat Ridge CO, 80033

Project: PDC - MDM 33-14 Flowline

Project Number: 32449
Project Manager: Andy Sagen

Reported:
06/16/25 09:43

BH03@5-6'
2504070-08 (Soil)

Summit Scientific

Total Metals by EPA 6020B

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Arsenic	4.80	0.200	mg/kg dry	1	BID0426	04/08/25	05/22/25	EPA 6020B	
Barium	175	0.400	"	"	"	"	"	"	
Cadmium	0.221	0.200	"	"	"	"	"	"	
Copper	13.2	0.400	"	"	"	"	"	"	
Lead	12.8	0.200	"	"	"	"	"	"	
Nickel	12.5	0.400	"	"	"	"	"	"	
Silver	0.0843	0.0200	"	"	"	"	"	"	
Zinc	46.7	0.400	"	"	"	"	"	"	
Selenium	ND	0.260	"	"	"	"	"	"	

Hexavalent Chromium by EPA Method 7196

Date Sampled: **04/03/25 10:12**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Chromium, Hexavalent	ND	0.30	mg/kg dry	1	BID0515	04/09/25	04/11/25	EPA 7196A	

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

Date Sampled: **04/03/25 10:12**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Calcium	63.7	0.0500	mg/L dry	1	BID1434	04/28/25	05/13/25	EPA 6020B	
Magnesium	25.7	0.0500	"	"	"	"	"	"	
Sodium	98.7	0.0500	"	"	"	"	"	"	

Calculated Analysis

Date Sampled: **04/03/25 10:12**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	2.64	0.00100	units	1	BIE0522	05/14/25	05/14/25	Calculation	

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **04/03/25 10:12**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
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Summit Scientific

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Tasman Geosciences
4725 Independence St.
Wheat Ridge CO, 80033

Project: PDC - MDM 33-14 Flowline
Project Number: 32449
Project Manager: Andy Sagen

Reported:
06/16/25 09:43

BH03@5-6'
2504070-08 (Soil)

Summit Scientific

Physical Parameters by APHA/ASTM/EPA Methods

% Solids	75.3	%	1	BID0320	04/07/25	04/07/25	Calculation
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Specific Conductance by EPA Method 120.1, Saturated Paste Extraction

Date Sampled: **04/03/25 10:12**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Specific Conductance (EC)	0.848	0.0100	mmhos/cm	1	BID1439	04/28/25	05/01/25	EPA 120.1	

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

Date Sampled: **04/03/25 10:12**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
pH	7.95		pH Units	1	BID1437	04/28/25	05/01/25	EPA 9045D	

Summit Scientific

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Tasman Geosciences
4725 Independence St.
Wheat Ridge CO, 80033

Project: PDC - MDM 33-14 Flowline

Project Number: 32449
Project Manager: Andy Sagen

Reported:
06/16/25 09:43

BH03@7-8'
2504070-09 (Soil)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **04/03/25 10:14**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Benzene	ND	0.0020	mg/kg	1	BID0678	04/11/25	05/06/25	EPA 8260B	I-02
Toluene	ND	0.0050	"	"	"	"	"	"	I-02
Ethylbenzene	ND	0.0050	"	"	"	"	"	"	I-02
Xylenes (total)	ND	0.010	"	"	"	"	"	"	I-02
1,2,4-Trimethylbenzene	ND	0.0050	"	"	"	"	"	"	I-02
1,3,5-Trimethylbenzene	ND	0.0050	"	"	"	"	"	"	I-02
Naphthalene	ND	0.0038	"	"	"	"	"	"	I-02
Gasoline Range Hydrocarbons	ND	0.50	"	"	"	"	"	"	I-02

Date Sampled: **04/03/25 10:14**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 1,2-Dichloroethane-d4	0.0347	86.8 %	50-150	"	"	"	"	"	I-02
Surrogate: Toluene-d8	0.0402	100 %	50-150	"	"	"	"	"	I-02
Surrogate: 4-Bromofluorobenzene	0.0390	97.4 %	50-150	"	"	"	"	"	I-02

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **04/03/25 10:14**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
C10-C28 (DRO)	ND	50	mg/kg	1	BID0680	04/11/25	05/16/25	EPA 8015M	
C28-C36 (ORO)	ND	50	"	"	"	"	"	"	

Date Sampled: **04/03/25 10:14**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: o-Terphenyl	7.72	61.7 %	50-140	"	"	"	"	"	

PAH by EPA Method 8270E SIM

Summit Scientific

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Tasman Geosciences
4725 Independence St.
Wheat Ridge CO, 80033

Project: PDC - MDM 33-14 Flowline

Project Number: 32449
Project Manager: Andy Sagen

Reported:
06/16/25 09:43

BH03@7-8'
2504070-09 (Soil)

Summit Scientific

PAH by EPA Method 8270E SIM

Date Sampled: **04/03/25 10:14**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Acenaphthene	ND	0.00500	mg/kg	1	BID0638	04/11/25	05/16/25	EPA 8270E 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: **04/03/25 10:14**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 2-Methylnaphthalene-d10	0.0146	43.9 %	40-140		"	"	"	"	
Surrogate: Fluoranthene-d10	0.0125	37.6 %	40-140		"	"	"	"	S-09

Total Metals by EPA 6020B Hot Water Soluble Extraction

Date Sampled: **04/03/25 10:14**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Boron	ND	2.00	mg/L dry	1	BID0319	04/07/25	04/15/25	EPA 6020B	

Total Metals by EPA 6020B

Date Sampled: **04/03/25 10:14**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
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Tasman Geosciences
4725 Independence St.
Wheat Ridge CO, 80033

Project: PDC - MDM 33-14 Flowline

Project Number: 32449
Project Manager: Andy Sagen

Reported:
06/16/25 09:43

BH03@7-8'
2504070-09 (Soil)

Summit Scientific

Total Metals by EPA 6020B

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Arsenic	3.71	0.200	mg/kg dry	1	BID0426	04/08/25	05/22/25	EPA 6020B	
Barium	119	0.400	"	"	"	"	"	"	
Cadmium	0.291	0.200	"	"	"	"	"	"	
Copper	9.82	0.400	"	"	"	"	"	"	
Lead	9.00	0.200	"	"	"	"	"	"	
Nickel	9.55	0.400	"	"	"	"	"	"	
Silver	0.0314	0.0200	"	"	"	"	"	"	
Zinc	38.9	0.400	"	"	"	"	"	"	
Selenium	ND	0.260	"	"	"	"	"	"	

Hexavalent Chromium by EPA Method 7196

Date Sampled: **04/03/25 10:14**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Chromium, Hexavalent	ND	0.30	mg/kg dry	1	BID0515	04/09/25	04/11/25	EPA 7196A	

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

Date Sampled: **04/03/25 10:14**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Calcium	62.4	0.0500	mg/L dry	1	BID1434	04/28/25	05/13/25	EPA 6020B	
Magnesium	29.2	0.0500	"	"	"	"	"	"	
Sodium	88.3	0.0500	"	"	"	"	"	"	

Calculated Analysis

Date Sampled: **04/03/25 10:14**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	2.31	0.00100	units	1	BIE0522	05/14/25	05/14/25	Calculation	

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **04/03/25 10:14**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
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Summit Scientific

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Tasman Geosciences
 4725 Independence St.
 Wheat Ridge CO, 80033

Project: PDC - MDM 33-14 Flowline

Project Number: 32449
 Project Manager: Andy Sagen

Reported:
 06/16/25 09:43

BH03@7-8'
2504070-09 (Soil)

Summit Scientific

Physical Parameters by APHA/ASTM/EPA Methods

% Solids	78.4	%	1	BID0320	04/07/25	04/07/25	Calculation
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Specific Conductance by EPA Method 120.1, Saturated Paste Extraction

Date Sampled: **04/03/25 10:14**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Specific Conductance (EC)	0.860	0.0100	mmhos/cm	1	BID1439	04/28/25	05/01/25	EPA 120.1	

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

Date Sampled: **04/03/25 10:14**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
pH	7.96		pH Units	1	BID1437	04/28/25	05/01/25	EPA 9045D	

Summit Scientific

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Tasman Geosciences
4725 Independence St.
Wheat Ridge CO, 80033

Project: PDC - MDM 33-14 Flowline

Project Number: 32449
Project Manager: Andy Sagen

Reported:
06/16/25 09:43

BH04@3-4'
2504070-10 (Soil)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **04/03/25 10:30**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Benzene	ND	0.0020	mg/kg	1	BID0678	04/11/25	05/06/25	EPA 8260B	I-02
Toluene	ND	0.0050	"	"	"	"	"	"	I-02
Ethylbenzene	ND	0.0050	"	"	"	"	"	"	I-02
Xylenes (total)	ND	0.010	"	"	"	"	"	"	I-02
1,2,4-Trimethylbenzene	ND	0.0050	"	"	"	"	"	"	I-02
1,3,5-Trimethylbenzene	ND	0.0050	"	"	"	"	"	"	I-02
Naphthalene	ND	0.0038	"	"	"	"	"	"	I-02
Gasoline Range Hydrocarbons	ND	0.50	"	"	"	"	"	"	I-02

Date Sampled: **04/03/25 10:30**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 1,2-Dichloroethane-d4	0.0371	92.8 %	50-150	"	"	"	"	"	I-02
Surrogate: Toluene-d8	0.0408	102 %	50-150	"	"	"	"	"	I-02
Surrogate: 4-Bromofluorobenzene	0.0397	99.3 %	50-150	"	"	"	"	"	I-02

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **04/03/25 10:30**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
C10-C28 (DRO)	ND	50	mg/kg	1	BID0680	04/11/25	05/16/25	EPA 8015M	
C28-C36 (ORO)	ND	50	"	"	"	"	"	"	

Date Sampled: **04/03/25 10:30**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: o-Terphenyl	9.95	79.6 %	50-140	"	"	"	"	"	

PAH by EPA Method 8270E SIM

Summit Scientific

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Tasman Geosciences
4725 Independence St.
Wheat Ridge CO, 80033

Project: PDC - MDM 33-14 Flowline

Project Number: 32449
Project Manager: Andy Sagen

Reported:
06/16/25 09:43

BH04@3-4'
2504070-10 (Soil)

Summit Scientific

PAH by EPA Method 8270E SIM

Date Sampled: **04/03/25 10:30**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Acenaphthene	ND	0.00500	mg/kg	1	BID0638	04/11/25	05/16/25	EPA 8270E 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: **04/03/25 10:30**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 2-Methylnaphthalene-d10	0.0204	61.3 %	40-140		"	"	"	"	
Surrogate: Fluoranthene-d10	0.0203	61.0 %	40-140		"	"	"	"	

Total Metals by EPA 6020B Hot Water Soluble Extraction

Date Sampled: **04/03/25 10:30**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Boron	ND	2.00	mg/L dry	1	BID0319	04/07/25	04/15/25	EPA 6020B	

Total Metals by EPA 6020B

Date Sampled: **04/03/25 10:30**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
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Summit Scientific

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Tasman Geosciences
4725 Independence St.
Wheat Ridge CO, 80033

Project: PDC - MDM 33-14 Flowline

Project Number: 32449
Project Manager: Andy Sagen

Reported:
06/16/25 09:43

BH04@3-4'
2504070-10 (Soil)

Summit Scientific

Total Metals by EPA 6020B

Analyte	Result	Limit	Units	Dilution	Batch	Prepared	Analyzed	Method
Arsenic	3.81	0.200	mg/kg dry	1	BID0426	04/08/25	05/22/25	EPA 6020B
Barium	139	0.400	"	"	"	"	"	"
Cadmium	ND	0.200	"	"	"	"	"	"
Copper	11.0	0.400	"	"	"	"	"	"
Lead	10.2	0.200	"	"	"	"	"	"
Nickel	10.4	0.400	"	"	"	"	"	"
Silver	0.0567	0.0200	"	"	"	"	"	"
Zinc	41.9	0.400	"	"	"	"	"	"
Selenium	ND	0.260	"	"	"	"	"	"

Hexavalent Chromium by EPA Method 7196

Date Sampled: **04/03/25 10:30**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Chromium, Hexavalent	ND	0.30	mg/kg dry	1	BID0515	04/09/25	04/11/25	EPA 7196A	

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

Date Sampled: **04/03/25 10:30**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Calcium	35.1	0.0500	mg/L dry	1	BID1434	04/28/25	05/13/25	EPA 6020B	
Magnesium	15.0	0.0500	"	"	"	"	"	"	
Sodium	89.1	0.0500	"	"	"	"	"	"	

Calculated Analysis

Date Sampled: **04/03/25 10:30**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	3.17	0.00100	units	1	BIE0522	05/14/25	05/14/25	Calculation	

Physical Parameters by APHA/ASTM/EPA Methods

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Tasman Geosciences
 4725 Independence St.
 Wheat Ridge CO, 80033

Project: PDC - MDM 33-14 Flowline

Project Number: 32449
 Project Manager: Andy Sagen

Reported:
 06/16/25 09:43

BH04@3-4'
2504070-10 (Soil)

Summit Scientific

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **04/03/25 10:30**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
% Solids	84.6		%	1	BID0320	04/07/25	04/07/25	Calculation	

Specific Conductance by EPA Method 120.1, Saturated Paste Extraction

Date Sampled: **04/03/25 10:30**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Specific Conductance (EC)	0.712	0.0100	mmhos/cm	1	BID1439	04/28/25	05/01/25	EPA 120.1	

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

Date Sampled: **04/03/25 10:30**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
pH	8.18		pH Units	1	BID1437	04/28/25	05/01/25	EPA 9045D	

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Tasman Geosciences
4725 Independence St.
Wheat Ridge CO, 80033

Project: PDC - MDM 33-14 Flowline

Project Number: 32449
Project Manager: Andy Sagen

Reported:
06/16/25 09:43

BH04@5-6'
2504070-11 (Soil)

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Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **04/03/25 10:32**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Benzene	ND	0.0020		mg/kg	1	BID0678	04/11/25	05/06/25	EPA 8260B	I-02
Toluene	ND	0.0050		"	"	"	"	"	"	I-02
Ethylbenzene	ND	0.0050		"	"	"	"	"	"	I-02
Xylenes (total)	ND	0.010		"	"	"	"	"	"	I-02
1,2,4-Trimethylbenzene	ND	0.0050		"	"	"	"	"	"	I-02
1,3,5-Trimethylbenzene	ND	0.0050		"	"	"	"	"	"	I-02
Naphthalene	ND	0.0038		"	"	"	"	"	"	I-02
Gasoline Range Hydrocarbons	ND	0.50		"	"	"	"	"	"	I-02

Date Sampled: **04/03/25 10:32**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Surrogate: 1,2-Dichloroethane-d4	0.0374	93.4 %		50-150		"	"	"	"	I-02
Surrogate: Toluene-d8	0.0406	102 %		50-150		"	"	"	"	I-02
Surrogate: 4-Bromofluorobenzene	0.0389	97.3 %		50-150		"	"	"	"	I-02

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **04/03/25 10:32**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
C10-C28 (DRO)	ND	50		mg/kg	1	BID0680	04/11/25	05/16/25	EPA 8015M	
C28-C36 (ORO)	ND	50		"	"	"	"	"	"	

Date Sampled: **04/03/25 10:32**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Surrogate: o-Terphenyl	8.22	65.7 %		50-140		"	"	"	"	

PAH by EPA Method 8270E SIM

Summit Scientific

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Tasman Geosciences
4725 Independence St.
Wheat Ridge CO, 80033

Project: PDC - MDM 33-14 Flowline

Project Number: 32449
Project Manager: Andy Sagen

Reported:
06/16/25 09:43

BH04@5-6'
2504070-11 (Soil)

Summit Scientific

PAH by EPA Method 8270E SIM

Date Sampled: **04/03/25 10:32**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Acenaphthene	ND	0.00500	mg/kg	1	BID0638	04/11/25	05/16/25	EPA 8270E 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: **04/03/25 10:32**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 2-Methylnaphthalene-d10	0.0188	56.4 %	40-140		"	"	"	"	
Surrogate: Fluoranthene-d10	0.0196	58.8 %	40-140		"	"	"	"	

Total Metals by EPA 6020B Hot Water Soluble Extraction

Date Sampled: **04/03/25 10:32**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Boron	ND	2.00	mg/L dry	1	BID0318	04/07/25	04/15/25	EPA 6020B	

Total Metals by EPA 6020B

Date Sampled: **04/03/25 10:32**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
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Tasman Geosciences
4725 Independence St.
Wheat Ridge CO, 80033

Project: PDC - MDM 33-14 Flowline

Project Number: 32449
Project Manager: Andy Sagen

Reported:
06/16/25 09:43

BH04@5-6'
2504070-11 (Soil)

Summit Scientific

Total Metals by EPA 6020B

Analyte	Result	Limit	Units	Dilution	Batch	Prepared	Analyzed	Method
Arsenic	4.30	0.200	mg/kg dry	1	BID0426	04/08/25	05/22/25	EPA 6020B
Barium	137	0.400	"	"	"	"	"	"
Cadmium	ND	0.200	"	"	"	"	"	"
Copper	11.6	0.400	"	"	"	"	"	"
Lead	8.51	0.200	"	"	"	"	"	"
Nickel	9.69	0.400	"	"	"	"	"	"
Silver	0.0370	0.0200	"	"	"	"	"	"
Zinc	37.3	0.400	"	"	"	"	"	"
Selenium	ND	0.260	"	"	"	"	"	"

Hexavalent Chromium by EPA Method 7196

Date Sampled: **04/03/25 10:32**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Chromium, Hexavalent	ND	0.30	mg/kg dry	1	BID0515	04/09/25	04/11/25	EPA 7196A	

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

Date Sampled: **04/03/25 10:32**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Calcium	71.5	0.0500	mg/L dry	1	BID1434	04/28/25	05/13/25	EPA 6020B	
Magnesium	25.8	0.0500	"	"	"	"	"	"	
Sodium	98.7	0.0500	"	"	"	"	"	"	

Calculated Analysis

Date Sampled: **04/03/25 10:32**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	2.55	0.00100	units	1	BIE0522	05/14/25	05/14/25	Calculation	

Physical Parameters by APHA/ASTM/EPA Methods

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Tasman Geosciences
4725 Independence St.
Wheat Ridge CO, 80033

Project: PDC - MDM 33-14 Flowline

Project Number: 32449
Project Manager: Andy Sagen

Reported:
06/16/25 09:43

BH04@5-6'
2504070-11 (Soil)

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Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **04/03/25 10:32**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
% Solids	80.0		%	1	BID0320	04/07/25	04/07/25	Calculation	

Specific Conductance by EPA Method 120.1, Saturated Paste Extraction

Date Sampled: **04/03/25 10:32**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Specific Conductance (EC)	0.909	0.0100	mmhos/cm	1	BID1439	04/28/25	05/01/25	EPA 120.1	

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

Date Sampled: **04/03/25 10:32**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
pH	7.94		pH Units	1	BID1437	04/28/25	05/01/25	EPA 9045D	

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4725 Independence St.
Wheat Ridge CO, 80033

Project: PDC - MDM 33-14 Flowline

Project Number: 32449
Project Manager: Andy Sagen

Reported:
06/16/25 09:43

BH04@7-8'
2504070-12 (Soil)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **04/03/25 10:34**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Benzene	ND	0.0020	mg/kg	1	BID0678	04/11/25	05/06/25	EPA 8260B	I-02
Toluene	ND	0.0050	"	"	"	"	"	"	I-02
Ethylbenzene	ND	0.0050	"	"	"	"	"	"	I-02
Xylenes (total)	ND	0.010	"	"	"	"	"	"	I-02
1,2,4-Trimethylbenzene	ND	0.0050	"	"	"	"	"	"	I-02
1,3,5-Trimethylbenzene	ND	0.0050	"	"	"	"	"	"	I-02
Naphthalene	ND	0.0038	"	"	"	"	"	"	I-02
Gasoline Range Hydrocarbons	ND	0.50	"	"	"	"	"	"	I-02

Date Sampled: **04/03/25 10:34**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 1,2-Dichloroethane-d4	0.0365	91.4 %	50-150	"	"	"	"	"	I-02
Surrogate: Toluene-d8	0.0405	101 %	50-150	"	"	"	"	"	I-02
Surrogate: 4-Bromofluorobenzene	0.0385	96.3 %	50-150	"	"	"	"	"	I-02

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **04/03/25 10:34**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
C10-C28 (DRO)	ND	50	mg/kg	1	BID0680	04/11/25	05/16/25	EPA 8015M	
C28-C36 (ORO)	ND	50	"	"	"	"	"	"	

Date Sampled: **04/03/25 10:34**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: o-Terphenyl	10.4	83.5 %	50-140	"	"	"	"	"	

PAH by EPA Method 8270E SIM

Summit Scientific

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4725 Independence St.
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Project: PDC - MDM 33-14 Flowline

Project Number: 32449
Project Manager: Andy Sagen

Reported:
06/16/25 09:43

BH04@7-8'
2504070-12 (Soil)

Summit Scientific

PAH by EPA Method 8270E SIM

Date Sampled: **04/03/25 10:34**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Acenaphthene	ND	0.00500	mg/kg	1	BID0638	04/11/25	05/16/25	EPA 8270E 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: **04/03/25 10:34**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 2-Methylnaphthalene-d10	0.0213	63.8 %	40-140		"	"	"	"	
Surrogate: Fluoranthene-d10	0.0223	66.8 %	40-140		"	"	"	"	

Total Metals by EPA 6020B Hot Water Soluble Extraction

Date Sampled: **04/03/25 10:34**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Boron	ND	2.00	mg/L dry	1	BID0318	04/07/25	04/15/25	EPA 6020B	

Total Metals by EPA 6020B

Date Sampled: **04/03/25 10:34**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
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4725 Independence St.
Wheat Ridge CO, 80033

Project: PDC - MDM 33-14 Flowline

Project Number: 32449
Project Manager: Andy Sagen

Reported:
06/16/25 09:43

BH04@7-8'
2504070-12 (Soil)

Summit Scientific

Total Metals by EPA 6020B

Analyte	Result	Limit	Units	Dilution	Batch	Prepared	Analyzed	Method
Arsenic	3.27	0.200	mg/kg dry	1	BID0427	04/08/25	05/21/25	EPA 6020B
Barium	148	0.400	"	"	"	"	"	"
Cadmium	0.376	0.200	"	"	"	"	"	"
Copper	6.21	0.400	"	"	"	"	"	"
Lead	13.4	0.200	"	"	"	"	"	"
Nickel	5.66	0.400	"	"	"	"	"	"
Silver	0.0293	0.0200	"	"	"	"	"	"
Zinc	21.0	0.400	"	"	"	"	"	"
Selenium	0.262	0.260	"	"	"	"	"	"

Hexavalent Chromium by EPA Method 7196

Date Sampled: **04/03/25 10:34**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Chromium, Hexavalent	ND	0.30	mg/kg dry	1	BID0515	04/09/25	04/11/25	EPA 7196A	

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

Date Sampled: **04/03/25 10:34**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Calcium	55.4	0.0500	mg/L dry	1	BID1434	04/28/25	05/13/25	EPA 6020B	
Magnesium	20.5	0.0500	"	"	"	"	"	"	
Sodium	79.5	0.0500	"	"	"	"	"	"	

Calculated Analysis

Date Sampled: **04/03/25 10:34**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	2.32	0.00100	units	1	BIE0522	05/14/25	05/14/25	Calculation	

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **04/03/25 10:34**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
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Project: PDC - MDM 33-14 Flowline

Project Number: 32449
 Project Manager: Andy Sagen

Reported:
 06/16/25 09:43

BH04@7-8'
2504070-12 (Soil)

Summit Scientific

Physical Parameters by APHA/ASTM/EPA Methods

% Solids	78.5	%	1	BID0320	04/07/25	04/07/25	Calculation
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Specific Conductance by EPA Method 120.1, Saturated Paste Extraction

Date Sampled: **04/03/25 10:34**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Specific Conductance (EC)	0.694	0.0100	mmhos/cm	1	BID1439	04/28/25	05/01/25	EPA 120.1	

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

Date Sampled: **04/03/25 10:34**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
pH	8.07		pH Units	1	BID1437	04/28/25	05/01/25	EPA 9045D	

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4725 Independence St.
Wheat Ridge CO, 80033

Project: PDC - MDM 33-14 Flowline

Project Number: 32449
Project Manager: Andy Sagen

Reported:
06/16/25 09:43

BH05@3-4'
2504070-13 (Soil)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **04/03/25 10:45**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Benzene	ND	0.0020	mg/kg	1	BID0678	04/11/25	05/06/25	EPA 8260B	I-02
Toluene	ND	0.0050	"	"	"	"	"	"	I-02
Ethylbenzene	ND	0.0050	"	"	"	"	"	"	I-02
Xylenes (total)	ND	0.010	"	"	"	"	"	"	I-02
1,2,4-Trimethylbenzene	ND	0.0050	"	"	"	"	"	"	I-02
1,3,5-Trimethylbenzene	ND	0.0050	"	"	"	"	"	"	I-02
Naphthalene	ND	0.0038	"	"	"	"	"	"	I-02
Gasoline Range Hydrocarbons	ND	0.50	"	"	"	"	"	"	I-02

Date Sampled: **04/03/25 10:45**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 1,2-Dichloroethane-d4	0.0372	92.9 %	50-150	"	"	"	"	"	I-02
Surrogate: Toluene-d8	0.0408	102 %	50-150	"	"	"	"	"	I-02
Surrogate: 4-Bromofluorobenzene	0.0388	97.0 %	50-150	"	"	"	"	"	I-02

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **04/03/25 10:45**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
C10-C28 (DRO)	ND	50	mg/kg	1	BID0680	04/11/25	05/16/25	EPA 8015M	
C28-C36 (ORO)	ND	50	"	"	"	"	"	"	

Date Sampled: **04/03/25 10:45**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: o-Terphenyl	8.38	67.1 %	50-140	"	"	"	"	"	

PAH by EPA Method 8270E SIM

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Project Manager: Andy Sagen

Reported:
06/16/25 09:43

BH05@3-4'
2504070-13 (Soil)

Summit Scientific

PAH by EPA Method 8270E SIM

Date Sampled: **04/03/25 10:45**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Acenaphthene	ND	0.00500	mg/kg	1	BID0638	04/11/25	05/16/25	EPA 8270E 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: **04/03/25 10:45**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 2-Methylnaphthalene-d10	0.0154	46.3 %	40-140		"	"	"	"	
Surrogate: Fluoranthene-d10	0.0145	43.5 %	40-140		"	"	"	"	

Total Metals by EPA 6020B Hot Water Soluble Extraction

Date Sampled: **04/03/25 10:45**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Boron	ND	2.00	mg/L dry	1	BID0318	04/07/25	04/15/25	EPA 6020B	

Total Metals by EPA 6020B

Date Sampled: **04/03/25 10:45**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
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Tasman Geosciences
4725 Independence St.
Wheat Ridge CO, 80033

Project: PDC - MDM 33-14 Flowline

Project Number: 32449
Project Manager: Andy Sagen

Reported:
06/16/25 09:43

BH05@3-4'
2504070-13 (Soil)

Summit Scientific

Total Metals by EPA 6020B

Analyte	Result	Limit	Units	Dilution	Batch	Prepared	Analyzed	Method
Arsenic	1.33	0.200	mg/kg dry	1	BID0427	04/08/25	05/21/25	EPA 6020B
Barium	106	0.400	"	"	"	"	"	"
Cadmium	ND	0.200	"	"	"	"	"	"
Copper	4.30	0.400	"	"	"	"	"	"
Lead	7.23	0.200	"	"	"	"	"	"
Nickel	4.46	0.400	"	"	"	"	"	"
Silver	0.0278	0.0200	"	"	"	"	"	"
Zinc	17.0	0.400	"	"	"	"	"	"
Selenium	ND	0.260	"	"	"	"	"	"

Hexavalent Chromium by EPA Method 7196

Date Sampled: **04/03/25 10:45**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Chromium, Hexavalent	ND	0.30	mg/kg dry	1	BID0515	04/09/25	04/11/25	EPA 7196A	

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

Date Sampled: **04/03/25 10:45**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Calcium	68.2	0.0500	mg/L dry	1	BID1434	04/28/25	05/13/25	EPA 6020B	
Magnesium	87.8	0.0500	"	"	"	"	"	"	
Sodium	441	0.0500	"	"	"	"	"	"	

Calculated Analysis

Date Sampled: **04/03/25 10:45**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	8.32	0.00100	units	1	BIE0522	05/14/25	05/14/25	Calculation	

Physical Parameters by APHA/ASTM/EPA Methods

Summit Scientific

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Tasman Geosciences
4725 Independence St.
Wheat Ridge CO, 80033

Project: PDC - MDM 33-14 Flowline

Project Number: 32449
Project Manager: Andy Sagen

Reported:
06/16/25 09:43

BH05@3-4'
2504070-13 (Soil)

Summit Scientific

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **04/03/25 10:45**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
% Solids	86.5		%	1	BID0320	04/07/25	04/07/25	Calculation	

Specific Conductance by EPA Method 120.1, Saturated Paste Extraction

Date Sampled: **04/03/25 10:45**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Specific Conductance (EC)	3.08	0.0100	mmhos/cm	1	BID1439	04/28/25	05/01/25	EPA 120.1	

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

Date Sampled: **04/03/25 10:45**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
pH	8.21		pH Units	1	BID1437	04/28/25	05/01/25	EPA 9045D	

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Tasman Geosciences
4725 Independence St.
Wheat Ridge CO, 80033

Project: PDC - MDM 33-14 Flowline

Project Number: 32449
Project Manager: Andy Sagen

Reported:
06/16/25 09:43

BH05@5-6'
2504070-14 (Soil)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **04/03/25 10:47**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Benzene	ND	0.0020	mg/kg	1	BID0678	04/11/25	05/06/25	EPA 8260B	I-02
Toluene	ND	0.0050	"	"	"	"	"	"	I-02
Ethylbenzene	ND	0.0050	"	"	"	"	"	"	I-02
Xylenes (total)	ND	0.010	"	"	"	"	"	"	I-02
1,2,4-Trimethylbenzene	ND	0.0050	"	"	"	"	"	"	I-02
1,3,5-Trimethylbenzene	ND	0.0050	"	"	"	"	"	"	I-02
Naphthalene	ND	0.0038	"	"	"	"	"	"	I-02
Gasoline Range Hydrocarbons	ND	0.50	"	"	"	"	"	"	I-02

Date Sampled: **04/03/25 10:47**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 1,2-Dichloroethane-d4	0.0376	94.0 %	50-150	"	"	"	"	"	I-02
Surrogate: Toluene-d8	0.0409	102 %	50-150	"	"	"	"	"	I-02
Surrogate: 4-Bromofluorobenzene	0.0386	96.4 %	50-150	"	"	"	"	"	I-02

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **04/03/25 10:47**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
C10-C28 (DRO)	ND	50	mg/kg	1	BID0680	04/11/25	05/16/25	EPA 8015M	
C28-C36 (ORO)	ND	50	"	"	"	"	"	"	

Date Sampled: **04/03/25 10:47**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: o-Terphenyl	9.51	76.0 %	50-140	"	"	"	"	"	

PAH by EPA Method 8270E SIM

Summit Scientific

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Tasman Geosciences
4725 Independence St.
Wheat Ridge CO, 80033

Project: PDC - MDM 33-14 Flowline

Project Number: 32449
Project Manager: Andy Sagen

Reported:
06/16/25 09:43

BH05@5-6'
2504070-14 (Soil)

Summit Scientific

PAH by EPA Method 8270E SIM

Date Sampled: **04/03/25 10:47**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Acenaphthene	ND	0.00500	mg/kg	1	BID0638	04/11/25	05/16/25	EPA 8270E 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: **04/03/25 10:47**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 2-Methylnaphthalene-d10	0.0178	53.4 %	40-140		"	"	"	"	
Surrogate: Fluoranthene-d10	0.0163	48.9 %	40-140		"	"	"	"	

Total Metals by EPA 6020B Hot Water Soluble Extraction

Date Sampled: **04/03/25 10:47**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Boron	ND	2.00	mg/L dry	1	BID0318	04/07/25	04/15/25	EPA 6020B	

Total Metals by EPA 6020B

Date Sampled: **04/03/25 10:47**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
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Tasman Geosciences
4725 Independence St.
Wheat Ridge CO, 80033

Project: PDC - MDM 33-14 Flowline

Project Number: 32449
Project Manager: Andy Sagen

Reported:
06/16/25 09:43

BH05@5-6'
2504070-14 (Soil)

Summit Scientific

Total Metals by EPA 6020B

Analyte	Result	Limit	Units	Dilution	Batch	Prepared	Analyzed	Method
Arsenic	3.59	0.200	mg/kg dry	1	BID0427	04/08/25	05/21/25	EPA 6020B
Barium	129	0.400	"	"	"	"	"	"
Cadmium	0.240	0.200	"	"	"	"	"	"
Copper	6.59	0.400	"	"	"	"	"	"
Lead	9.88	0.200	"	"	"	"	"	"
Nickel	8.04	0.400	"	"	"	"	"	"
Silver	0.0366	0.0200	"	"	"	"	"	"
Zinc	26.7	0.400	"	"	"	"	"	"
Selenium	ND	0.260	"	"	"	"	"	"

Hexavalent Chromium by EPA Method 7196

Date Sampled: **04/03/25 10:47**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Chromium, Hexavalent	ND	0.30	mg/kg dry	1	BID0515	04/09/25	04/11/25	EPA 7196A	

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

Date Sampled: **04/03/25 10:47**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Calcium	55.9	0.0500	mg/L dry	1	BID1434	04/28/25	05/13/25	EPA 6020B	
Magnesium	21.2	0.0500	"	"	"	"	"	"	
Sodium	77.2	0.0500	"	"	"	"	"	"	

Calculated Analysis

Date Sampled: **04/03/25 10:47**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	2.23	0.00100	units	1	BIE0522	05/14/25	05/14/25	Calculation	

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **04/03/25 10:47**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
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Tasman Geosciences
4725 Independence St.
Wheat Ridge CO, 80033

Project: PDC - MDM 33-14 Flowline
Project Number: 32449
Project Manager: Andy Sagen

Reported:
06/16/25 09:43

BH05@5-6'
2504070-14 (Soil)

Summit Scientific

Physical Parameters by APHA/ASTM/EPA Methods

% Solids	81.0	%	1	BID0320	04/07/25	04/07/25	Calculation
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Specific Conductance by EPA Method 120.1, Saturated Paste Extraction

Date Sampled: **04/03/25 10:47**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Specific Conductance (EC)	0.719	0.0100	mmhos/cm	1	BID1439	04/28/25	05/01/25	EPA 120.1	

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

Date Sampled: **04/03/25 10:47**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
pH	8.27		pH Units	1	BID1437	04/28/25	05/01/25	EPA 9045D	

Summit Scientific

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Tasman Geosciences
4725 Independence St.
Wheat Ridge CO, 80033

Project: PDC - MDM 33-14 Flowline

Project Number: 32449
Project Manager: Andy Sagen

Reported:
06/16/25 09:43

BH05@7-8'
2504070-15 (Soil)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **04/03/25 10:49**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Benzene	ND	0.0020	mg/kg	1	BID0678	04/11/25	05/06/25	EPA 8260B	I-02
Toluene	ND	0.0050	"	"	"	"	"	"	I-02
Ethylbenzene	ND	0.0050	"	"	"	"	"	"	I-02
Xylenes (total)	ND	0.010	"	"	"	"	"	"	I-02
1,2,4-Trimethylbenzene	ND	0.0050	"	"	"	"	"	"	I-02
1,3,5-Trimethylbenzene	ND	0.0050	"	"	"	"	"	"	I-02
Naphthalene	ND	0.0038	"	"	"	"	"	"	I-02
Gasoline Range Hydrocarbons	ND	0.50	"	"	"	"	"	"	I-02

Date Sampled: **04/03/25 10:49**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 1,2-Dichloroethane-d4	0.0348	87.0 %	50-150	"	"	"	"	"	I-02
Surrogate: Toluene-d8	0.0402	100 %	50-150	"	"	"	"	"	I-02
Surrogate: 4-Bromofluorobenzene	0.0398	99.5 %	50-150	"	"	"	"	"	I-02

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **04/03/25 10:49**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
C10-C28 (DRO)	ND	50	mg/kg	1	BID0680	04/11/25	05/16/25	EPA 8015M	
C28-C36 (ORO)	ND	50	"	"	"	"	"	"	

Date Sampled: **04/03/25 10:49**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: o-Terphenyl	7.07	56.6 %	50-140	"	"	"	"	"	

PAH by EPA Method 8270E SIM

Summit Scientific

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Tasman Geosciences
4725 Independence St.
Wheat Ridge CO, 80033

Project: PDC - MDM 33-14 Flowline

Project Number: 32449
Project Manager: Andy Sagen

Reported:
06/16/25 09:43

BH05@7-8'
2504070-15 (Soil)

Summit Scientific

PAH by EPA Method 8270E SIM

Date Sampled: **04/03/25 10:49**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Acenaphthene	ND	0.00500	mg/kg	1	BID0638	04/11/25	05/16/25	EPA 8270E 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: **04/03/25 10:49**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 2-Methylnaphthalene-d10	0.0160	47.9 %	40-140		"	"	"	"	
Surrogate: Fluoranthene-d10	0.0175	52.4 %	40-140		"	"	"	"	

Total Metals by EPA 6020B Hot Water Soluble Extraction

Date Sampled: **04/03/25 10:49**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Boron	ND	2.00	mg/L dry	1	BID0318	04/07/25	04/15/25	EPA 6020B	

Total Metals by EPA 6020B

Date Sampled: **04/03/25 10:49**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
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Summit Scientific

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Tasman Geosciences
4725 Independence St.
Wheat Ridge CO, 80033

Project: PDC - MDM 33-14 Flowline

Project Number: 32449
Project Manager: Andy Sagen

Reported:
06/16/25 09:43

BH05@7-8'
2504070-15 (Soil)

Summit Scientific

Total Metals by EPA 6020B

Analyte	Result	Limit	Units	Dilution	Batch	Prepared	Analyzed	Method
Arsenic	2.37	0.200	mg/kg dry	1	BID0427	04/08/25	05/21/25	EPA 6020B
Barium	84.2	0.400	"	"	"	"	"	"
Cadmium	ND	0.200	"	"	"	"	"	"
Copper	5.99	0.400	"	"	"	"	"	"
Lead	8.75	0.200	"	"	"	"	"	"
Nickel	5.49	0.400	"	"	"	"	"	"
Silver	0.0319	0.0200	"	"	"	"	"	"
Zinc	20.3	0.400	"	"	"	"	"	"
Selenium	ND	0.260	"	"	"	"	"	"

Hexavalent Chromium by EPA Method 7196

Date Sampled: **04/03/25 10:49**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Chromium, Hexavalent	ND	0.30	mg/kg dry	1	BID0515	04/09/25	04/11/25	EPA 7196A	

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

Date Sampled: **04/03/25 10:49**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Calcium	80.9	0.0500	mg/L dry	1	BID1434	04/28/25	05/13/25	EPA 6020B	
Magnesium	43.2	0.0500	"	"	"	"	"	"	
Sodium	142	0.0500	"	"	"	"	"	"	

Calculated Analysis

Date Sampled: **04/03/25 10:49**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	3.17	0.00100	units	1	BIE0522	05/14/25	05/14/25	Calculation	

Physical Parameters by APHA/ASTM/EPA Methods

Summit Scientific

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Tasman Geosciences
 4725 Independence St.
 Wheat Ridge CO, 80033

Project: PDC - MDM 33-14 Flowline

Project Number: 32449
 Project Manager: Andy Sagen

Reported:
 06/16/25 09:43

BH05@7-8'
2504070-15 (Soil)

Summit Scientific

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **04/03/25 10:49**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
% Solids	78.9		%	1	BID0320	04/07/25	04/07/25	Calculation	

Specific Conductance by EPA Method 120.1, Saturated Paste Extraction

Date Sampled: **04/03/25 10:49**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Specific Conductance (EC)	1.23	0.0100	mmhos/cm	1	BID1439	04/28/25	05/01/25	EPA 120.1	

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

Date Sampled: **04/03/25 10:49**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
pH	7.80		pH Units	1	BID1437	04/28/25	05/01/25	EPA 9045D	

Summit Scientific

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Tasman Geosciences
4725 Independence St.
Wheat Ridge CO, 80033

Project: PDC - MDM 33-14 Flowline

Project Number: 32449
Project Manager: Andy Sagen

Reported:
06/16/25 09:43

BKG02@3-4'
2504070-16 (Soil)

Summit Scientific

Total Metals by EPA 6020B Hot Water Soluble Extraction

Date Sampled: **04/03/25 11:30**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Boron	ND	2.00	mg/L dry	1	BID0318	04/07/25	04/15/25	EPA 6020B	

Total Metals by EPA 6020B

Date Sampled: **04/03/25 11:30**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Arsenic	1.56	0.200	mg/kg dry	1	BID0427	04/08/25	05/21/25	EPA 6020B	
Barium	118	0.400	"	"	"	"	"	"	
Cadmium	ND	0.200	"	"	"	"	"	"	
Copper	5.50	0.400	"	"	"	"	"	"	
Lead	10.2	0.200	"	"	"	"	"	"	
Nickel	5.43	0.400	"	"	"	"	"	"	
Silver	0.0382	0.0200	"	"	"	"	"	"	
Zinc	18.7	0.400	"	"	"	"	"	"	
Selenium	ND	0.260	"	"	"	"	"	"	

Hexavalent Chromium by EPA Method 7196

Date Sampled: **04/03/25 11:30**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Chromium, Hexavalent	ND	0.30	mg/kg dry	1	BID0515	04/09/25	04/11/25	EPA 7196A	

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

Date Sampled: **04/03/25 11:30**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Calcium	62.0	0.0500	mg/L dry	1	BID1434	04/28/25	05/13/25	EPA 6020B	
Magnesium	29.5	0.0500	"	"	"	"	"	"	
Sodium	225	0.0500	"	"	"	"	"	"	

Summit Scientific

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Tasman Geosciences
4725 Independence St.
Wheat Ridge CO, 80033

Project: PDC - MDM 33-14 Flowline

Project Number: 32449
Project Manager: Andy Sagen

Reported:
06/16/25 09:43

BKG02@3-4'
2504070-16 (Soil)

Summit Scientific

Calculated Analysis

Date Sampled: **04/03/25 11:30**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	5.89	0.00100	units	1	BIE0522	05/14/25	05/14/25	Calculation	

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **04/03/25 11:30**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
% Solids	86.5		%	1	BID0320	04/07/25	04/07/25	Calculation	

Specific Conductance by EPA Method 120.1, Saturated Paste Extraction

Date Sampled: **04/03/25 11:30**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Specific Conductance (EC)	1.61	0.0100	mmhos/cm	1	BID1439	04/28/25	05/01/25	EPA 120.1	

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

Date Sampled: **04/03/25 11:30**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
pH	8.11		pH Units	1	BID1437	04/28/25	05/01/25	EPA 9045D	

Summit Scientific

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Tasman Geosciences
4725 Independence St.
Wheat Ridge CO, 80033

Project: PDC - MDM 33-14 Flowline

Project Number: 32449
Project Manager: Andy Sagen

Reported:
06/16/25 09:43

BKG02@5-6'
2504070-17 (Soil)

Summit Scientific

Total Metals by EPA 6020B Hot Water Soluble Extraction

Date Sampled: **04/03/25 11:32**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Boron	ND	2.00	mg/L dry	1	BID0318	04/07/25	04/15/25	EPA 6020B	

Total Metals by EPA 6020B

Date Sampled: **04/03/25 11:32**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Arsenic	1.77	0.200	mg/kg dry	1	BID0427	04/08/25	05/21/25	EPA 6020B	
Barium	94.8	0.400	"	"	"	"	"	"	
Cadmium	ND	0.200	"	"	"	"	"	"	
Copper	5.03	0.400	"	"	"	"	"	"	
Lead	6.96	0.200	"	"	"	"	"	"	
Nickel	5.24	0.400	"	"	"	"	"	"	
Silver	0.0291	0.0200	"	"	"	"	"	"	
Zinc	17.8	0.400	"	"	"	"	"	"	
Selenium	ND	0.260	"	"	"	"	"	"	

Hexavalent Chromium by EPA Method 7196

Date Sampled: **04/03/25 11:32**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Chromium, Hexavalent	ND	0.30	mg/kg dry	1	BID0515	04/09/25	04/11/25	EPA 7196A	

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

Date Sampled: **04/03/25 11:32**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Calcium	66.0	0.0500	mg/L dry	1	BID1434	04/28/25	05/13/25	EPA 6020B	
Magnesium	23.5	0.0500	"	"	"	"	"	"	
Sodium	116	0.0500	"	"	"	"	"	"	

Summit Scientific

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Tasman Geosciences
4725 Independence St.
Wheat Ridge CO, 80033

Project: PDC - MDM 33-14 Flowline

Project Number: 32449
Project Manager: Andy Sagen

Reported:
06/16/25 09:43

BKG02@5-6'
2504070-17 (Soil)

Summit Scientific

Calculated Analysis

Date Sampled: **04/03/25 11:32**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	3.12	0.00100	units	1	BIE0522	05/14/25	05/14/25	Calculation	

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **04/03/25 11:32**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
% Solids	81.7		%	1	BID0320	04/07/25	04/07/25	Calculation	

Specific Conductance by EPA Method 120.1, Saturated Paste Extraction

Date Sampled: **04/03/25 11:32**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Specific Conductance (EC)	0.930	0.0100	mmhos/cm	1	BID1439	04/28/25	05/01/25	EPA 120.1	

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

Date Sampled: **04/03/25 11:32**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
pH	7.88		pH Units	1	BID1437	04/28/25	05/01/25	EPA 9045D	

Summit Scientific

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Tasman Geosciences
4725 Independence St.
Wheat Ridge CO, 80033

Project: PDC - MDM 33-14 Flowline

Project Number: 32449
Project Manager: Andy Sagen

Reported:
06/16/25 09:43

BKG02@7-8'
2504070-18 (Soil)

Summit Scientific

Total Metals by EPA 6020B Hot Water Soluble Extraction

Date Sampled: **04/03/25 11:34**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Boron	ND	2.00	mg/L dry	1	BID0318	04/07/25	04/15/25	EPA 6020B	

Total Metals by EPA 6020B

Date Sampled: **04/03/25 11:34**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Arsenic	1.77	0.200	mg/kg dry	1	BID0427	04/08/25	05/21/25	EPA 6020B	
Barium	98.4	0.400	"	"	"	"	"	"	
Cadmium	ND	0.200	"	"	"	"	"	"	
Copper	4.65	0.400	"	"	"	"	"	"	
Lead	6.59	0.200	"	"	"	"	"	"	
Nickel	4.73	0.400	"	"	"	"	"	"	
Silver	0.0246	0.0200	"	"	"	"	"	"	
Zinc	18.4	0.400	"	"	"	"	"	"	
Selenium	ND	0.260	"	"	"	"	"	"	

Hexavalent Chromium by EPA Method 7196

Date Sampled: **04/03/25 11:34**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Chromium, Hexavalent	ND	0.30	mg/kg dry	1	BID0515	04/09/25	04/11/25	EPA 7196A	

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

Date Sampled: **04/03/25 11:34**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Calcium	65.6	0.0500	mg/L dry	1	BID1434	04/28/25	05/13/25	EPA 6020B	
Magnesium	25.2	0.0500	"	"	"	"	"	"	
Sodium	104	0.0500	"	"	"	"	"	"	

Summit Scientific

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Tasman Geosciences
4725 Independence St.
Wheat Ridge CO, 80033

Project: PDC - MDM 33-14 Flowline

Project Number: 32449
Project Manager: Andy Sagen

Reported:
06/16/25 09:43

BKG02@7-8'
2504070-18 (Soil)

Summit Scientific

Calculated Analysis

Date Sampled: **04/03/25 11:34**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	2.77	0.00100	units	1	BIE0522	05/14/25	05/14/25	Calculation	

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **04/03/25 11:34**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
% Solids	83.2		%	1	BID0320	04/07/25	04/07/25	Calculation	

Specific Conductance by EPA Method 120.1, Saturated Paste Extraction

Date Sampled: **04/03/25 11:34**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Specific Conductance (EC)	0.934	0.0100	mmhos/cm	1	BID1439	04/28/25	05/01/25	EPA 120.1	

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

Date Sampled: **04/03/25 11:34**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
pH	7.82		pH Units	1	BID1437	04/28/25	05/01/25	EPA 9045D	

Summit Scientific

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Tasman Geosciences
4725 Independence St.
Wheat Ridge CO, 80033

Project: PDC - MDM 33-14 Flowline

Project Number: 32449
Project Manager: Andy Sagen

Reported:
06/16/25 09:43

BKG03@3-4'
2504070-19 (Soil)

Summit Scientific

Total Metals by EPA 6020B Hot Water Soluble Extraction

Date Sampled: **04/03/25 12:00**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Boron	ND	2.00	mg/L dry	1	BID0318	04/07/25	04/15/25	EPA 6020B	

Total Metals by EPA 6020B

Date Sampled: **04/03/25 12:00**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Arsenic	1.65	0.200	mg/kg dry	1	BID0427	04/08/25	05/21/25	EPA 6020B	
Barium	90.0	0.400	"	"	"	"	"	"	
Cadmium	ND	0.200	"	"	"	"	"	"	
Copper	6.43	0.400	"	"	"	"	"	"	
Lead	7.33	0.200	"	"	"	"	"	"	
Nickel	5.13	0.400	"	"	"	"	"	"	
Silver	0.0429	0.0200	"	"	"	"	"	"	
Zinc	17.8	0.400	"	"	"	"	"	"	
Selenium	ND	0.260	"	"	"	"	"	"	

Hexavalent Chromium by EPA Method 7196

Date Sampled: **04/03/25 12:00**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Chromium, Hexavalent	ND	0.30	mg/kg dry	1	BID0515	04/09/25	04/11/25	EPA 7196A	

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

Date Sampled: **04/03/25 12:00**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Calcium	33.6	0.0500	mg/L dry	1	BID1434	04/28/25	05/13/25	EPA 6020B	
Magnesium	25.6	0.0500	"	"	"	"	"	"	
Sodium	307	0.0500	"	"	"	"	"	"	

Summit Scientific

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Tasman Geosciences
4725 Independence St.
Wheat Ridge CO, 80033

Project: PDC - MDM 33-14 Flowline

Project Number: 32449
Project Manager: Andy Sagen

Reported:
06/16/25 09:43

BKG03@3-4'
2504070-19 (Soil)

Summit Scientific

Calculated Analysis

Date Sampled: **04/03/25 12:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	9.71	0.00100	units	1	BIE0522	05/14/25	05/14/25	Calculation	

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **04/03/25 12:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
% Solids	86.7		%	1	BID0320	04/07/25	04/07/25	Calculation	

Specific Conductance by EPA Method 120.1, Saturated Paste Extraction

Date Sampled: **04/03/25 12:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Specific Conductance (EC)	1.83	0.0100	mmhos/cm	1	BID1439	04/28/25	05/01/25	EPA 120.1	

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

Date Sampled: **04/03/25 12:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
pH	8.55		pH Units	1	BID1437	04/28/25	05/01/25	EPA 9045D	

Summit Scientific

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Tasman Geosciences
4725 Independence St.
Wheat Ridge CO, 80033

Project: PDC - MDM 33-14 Flowline

Project Number: 32449
Project Manager: Andy Sagen

Reported:
06/16/25 09:43

BKG03@5-6'
2504070-20 (Soil)

Summit Scientific

Total Metals by EPA 6020B Hot Water Soluble Extraction

Date Sampled: **04/03/25 12:02**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Boron	ND	2.00	mg/L dry	1	BID0318	04/07/25	04/15/25	EPA 6020B	

Total Metals by EPA 6020B

Date Sampled: **04/03/25 12:02**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Arsenic	1.90	0.200	mg/kg dry	1	BID0427	04/08/25	05/21/25	EPA 6020B	
Barium	135	0.400	"	"	"	"	"	"	
Cadmium	0.242	0.200	"	"	"	"	"	"	
Copper	5.62	0.400	"	"	"	"	"	"	
Lead	10.6	0.200	"	"	"	"	"	"	
Nickel	6.31	0.400	"	"	"	"	"	"	
Silver	0.0393	0.0200	"	"	"	"	"	"	
Zinc	21.4	0.400	"	"	"	"	"	"	
Selenium	ND	0.260	"	"	"	"	"	"	

Hexavalent Chromium by EPA Method 7196

Date Sampled: **04/03/25 12:02**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Chromium, Hexavalent	ND	0.30	mg/kg dry	1	BID0515	04/09/25	04/11/25	EPA 7196A	

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

Date Sampled: **04/03/25 12:02**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Calcium	42.0	0.0500	mg/L dry	1	BID1434	04/28/25	05/13/25	EPA 6020B	
Magnesium	14.4	0.0500	"	"	"	"	"	"	
Sodium	74.3	0.0500	"	"	"	"	"	"	

Summit Scientific

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Tasman Geosciences
4725 Independence St.
Wheat Ridge CO, 80033

Project: PDC - MDM 33-14 Flowline

Project Number: 32449
Project Manager: Andy Sagen

Reported:
06/16/25 09:43

BKG03@5-6'
2504070-20 (Soil)

Summit Scientific

Calculated Analysis

Date Sampled: **04/03/25 12:02**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	2.52	0.00100	units	1	BIE0522	05/14/25	05/14/25	Calculation	

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **04/03/25 12:02**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
% Solids	79.5		%	1	BID0320	04/07/25	04/07/25	Calculation	

Specific Conductance by EPA Method 120.1, Saturated Paste Extraction

Date Sampled: **04/03/25 12:02**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Specific Conductance (EC)	0.644	0.0100	mmhos/cm	1	BID1439	04/28/25	05/01/25	EPA 120.1	

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

Date Sampled: **04/03/25 12:02**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
pH	8.33		pH Units	1	BID1437	04/28/25	05/01/25	EPA 9045D	

Summit Scientific

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Tasman Geosciences
4725 Independence St.
Wheat Ridge CO, 80033

Project: PDC - MDM 33-14 Flowline

Project Number: 32449
Project Manager: Andy Sagen

Reported:
06/16/25 09:43

BKG03@7-8'
2504070-21 (Soil)

Summit Scientific

Total Metals by EPA 6020B Hot Water Soluble Extraction

Date Sampled: **04/03/25 12:04**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Boron	ND	2.00	mg/L dry	1	BID0318	04/07/25	04/15/25	EPA 6020B	

Total Metals by EPA 6020B

Date Sampled: **04/03/25 12:04**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Arsenic	1.83	0.200	mg/kg dry	1	BID0427	04/08/25	05/21/25	EPA 6020B	
Barium	245	0.400	"	"	"	"	"	"	
Cadmium	ND	0.200	"	"	"	"	"	"	
Copper	8.71	0.400	"	"	"	"	"	"	
Lead	9.22	0.200	"	"	"	"	"	"	
Nickel	8.53	0.400	"	"	"	"	"	"	
Silver	0.0400	0.0200	"	"	"	"	"	"	
Zinc	26.5	0.400	"	"	"	"	"	"	
Selenium	ND	0.260	"	"	"	"	"	"	

Hexavalent Chromium by EPA Method 7196

Date Sampled: **04/03/25 12:04**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Chromium, Hexavalent	ND	0.30	mg/kg dry	1	BID0516	04/09/25	04/11/25	EPA 7196A	

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

Date Sampled: **04/03/25 12:04**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Calcium	36.8	0.0500	mg/L dry	1	BID1434	04/28/25	05/13/25	EPA 6020B	
Magnesium	14.8	0.0500	"	"	"	"	"	"	
Sodium	57.7	0.0500	"	"	"	"	"	"	

Summit Scientific

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Tasman Geosciences
4725 Independence St.
Wheat Ridge CO, 80033

Project: PDC - MDM 33-14 Flowline

Project Number: 32449
Project Manager: Andy Sagen

Reported:
06/16/25 09:43

BKG03@7-8'
2504070-21 (Soil)

Summit Scientific

Calculated Analysis

Date Sampled: **04/03/25 12:04**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	2.03	0.00100	units	1	BIE0522	05/14/25	05/14/25	Calculation	

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **04/03/25 12:04**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
% Solids	77.7		%	1	BID0320	04/07/25	04/07/25	Calculation	

Specific Conductance by EPA Method 120.1, Saturated Paste Extraction

Date Sampled: **04/03/25 12:04**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Specific Conductance (EC)	0.514	0.0100	mmhos/cm	1	BID1439	04/28/25	05/01/25	EPA 120.1	

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

Date Sampled: **04/03/25 12:04**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
pH	8.15		pH Units	1	BID1437	04/28/25	05/01/25	EPA 9045D	

Summit Scientific

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Tasman Geosciences
4725 Independence St.
Wheat Ridge CO, 80033

Project: PDC - MDM 33-14 Flowline

Project Number: 32449
Project Manager: Andy Sagen

Reported:
06/16/25 09:43

BKG04@3-4'
2504070-22 (Soil)

Summit Scientific

Total Metals by EPA 6020B Hot Water Soluble Extraction

Date Sampled: **04/03/25 13:44**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Boron	ND	2.00	mg/L dry	1	BID0318	04/07/25	04/15/25	EPA 6020B	

Total Metals by EPA 6020B

Date Sampled: **04/03/25 13:44**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Arsenic	1.35	0.200	mg/kg dry	1	BID0427	04/08/25	05/21/25	EPA 6020B	
Barium	90.8	0.400	"	"	"	"	"	"	
Cadmium	0.221	0.200	"	"	"	"	"	"	
Copper	4.39	0.400	"	"	"	"	"	"	
Lead	9.62	0.200	"	"	"	"	"	"	
Nickel	4.13	0.400	"	"	"	"	"	"	
Silver	0.0357	0.0200	"	"	"	"	"	"	
Zinc	17.7	0.400	"	"	"	"	"	"	
Selenium	ND	0.260	"	"	"	"	"	"	

Hexavalent Chromium by EPA Method 7196

Date Sampled: **04/03/25 13:44**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Chromium, Hexavalent	ND	0.30	mg/kg dry	1	BID0516	04/09/25	04/11/25	EPA 7196A	

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

Date Sampled: **04/03/25 13:44**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Calcium	47.5	0.0500	mg/L dry	1	BID1434	04/28/25	05/13/25	EPA 6020B	
Magnesium	37.2	0.0500	"	"	"	"	"	"	
Sodium	370	0.0500	"	"	"	"	"	"	

Summit Scientific

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Tasman Geosciences
 4725 Independence St.
 Wheat Ridge CO, 80033

Project: PDC - MDM 33-14 Flowline

Project Number: 32449
 Project Manager: Andy Sagen

Reported:
 06/16/25 09:43

BKG04@3-4'
2504070-22 (Soil)

Summit Scientific

Calculated Analysis

Date Sampled: **04/03/25 13:44**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	9.77	0.00100	units	1	BIE0522	05/14/25	05/14/25	Calculation	

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **04/03/25 13:44**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
% Solids	91.4		%	1	BID0320	04/07/25	04/07/25	Calculation	

Specific Conductance by EPA Method 120.1, Saturated Paste Extraction

Date Sampled: **04/03/25 13:44**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Specific Conductance (EC)	2.46	0.0100	mmhos/cm	1	BID1439	04/28/25	05/01/25	EPA 120.1	

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

Date Sampled: **04/03/25 13:44**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
pH	8.52		pH Units	1	BID1437	04/28/25	05/01/25	EPA 9045D	

Summit Scientific

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Tasman Geosciences
4725 Independence St.
Wheat Ridge CO, 80033

Project: PDC - MDM 33-14 Flowline

Project Number: 32449
Project Manager: Andy Sagen

Reported:
06/16/25 09:43

BKG04@5-6'
2504070-23 (Soil)

Summit Scientific

Total Metals by EPA 6020B Hot Water Soluble Extraction

Date Sampled: **04/03/25 13:46**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Boron	ND	2.00	mg/L dry	1	BID0318	04/07/25	04/15/25	EPA 6020B	

Total Metals by EPA 6020B

Date Sampled: **04/03/25 13:46**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Arsenic	1.63	0.200	mg/kg dry	1	BID0427	04/08/25	05/21/25	EPA 6020B	
Barium	112	0.400	"	"	"	"	"	"	
Cadmium	ND	0.200	"	"	"	"	"	"	
Copper	6.33	0.400	"	"	"	"	"	"	
Lead	8.40	0.200	"	"	"	"	"	"	
Nickel	5.73	0.400	"	"	"	"	"	"	
Silver	0.0400	0.0200	"	"	"	"	"	"	
Zinc	20.4	0.400	"	"	"	"	"	"	
Selenium	ND	0.260	"	"	"	"	"	"	

Hexavalent Chromium by EPA Method 7196

Date Sampled: **04/03/25 13:46**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Chromium, Hexavalent	ND	0.30	mg/kg dry	1	BID0516	04/09/25	04/11/25	EPA 7196A	

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

Date Sampled: **04/03/25 13:46**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Calcium	45.0	0.0500	mg/L dry	1	BID1434	04/28/25	05/13/25	EPA 6020B	
Magnesium	16.9	0.0500	"	"	"	"	"	"	
Sodium	101	0.0500	"	"	"	"	"	"	

Summit Scientific

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Tasman Geosciences
4725 Independence St.
Wheat Ridge CO, 80033

Project: PDC - MDM 33-14 Flowline
Project Number: 32449
Project Manager: Andy Sagen

Reported:
06/16/25 09:43

BKG04@5-6'
2504070-23 (Soil)

Summit Scientific

Calculated Analysis

Date Sampled: **04/03/25 13:46**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	3.26	0.00100	units	1	BIE0522	05/14/25	05/14/25	Calculation	

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **04/03/25 13:46**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
% Solids	75.4		%	1	BID0320	04/07/25	04/07/25	Calculation	

Specific Conductance by EPA Method 120.1, Saturated Paste Extraction

Date Sampled: **04/03/25 13:46**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Specific Conductance (EC)	0.732	0.0100	mmhos/cm	1	BID1439	04/28/25	05/01/25	EPA 120.1	

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

Date Sampled: **04/03/25 13:46**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
pH	8.08		pH Units	1	BID1437	04/28/25	05/01/25	EPA 9045D	

Summit Scientific

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Tasman Geosciences
4725 Independence St.
Wheat Ridge CO, 80033

Project: PDC - MDM 33-14 Flowline

Project Number: 32449
Project Manager: Andy Sagen

Reported:
06/16/25 09:43

BKG04@7-8'
2504070-24 (Soil)

Summit Scientific

Total Metals by EPA 6020B Hot Water Soluble Extraction

Date Sampled: **04/03/25 13:48**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Boron	ND	2.00	mg/L dry	1	BID0318	04/07/25	04/15/25	EPA 6020B	

Total Metals by EPA 6020B

Date Sampled: **04/03/25 13:48**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Arsenic	1.70	0.200	mg/kg dry	1	BID0427	04/08/25	05/21/25	EPA 6020B	
Barium	102	0.400	"	"	"	"	"	"	
Cadmium	ND	0.200	"	"	"	"	"	"	
Copper	5.10	0.400	"	"	"	"	"	"	
Lead	6.61	0.200	"	"	"	"	"	"	
Nickel	5.41	0.400	"	"	"	"	"	"	
Silver	0.0274	0.0200	"	"	"	"	"	"	
Zinc	19.5	0.400	"	"	"	"	"	"	
Selenium	ND	0.260	"	"	"	"	"	"	

Hexavalent Chromium by EPA Method 7196

Date Sampled: **04/03/25 13:48**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Chromium, Hexavalent	ND	0.30	mg/kg dry	1	BID0516	04/09/25	04/11/25	EPA 7196A	

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

Date Sampled: **04/03/25 13:48**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Calcium	701	0.0500	mg/L dry	1	BID1434	04/28/25	05/13/25	EPA 6020B	
Magnesium	60.0	0.0500	"	"	"	"	"	"	
Sodium	111	0.0500	"	"	"	"	"	"	

Summit Scientific

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Tasman Geosciences
4725 Independence St.
Wheat Ridge CO, 80033

Project: PDC - MDM 33-14 Flowline
Project Number: 32449
Project Manager: Andy Sagen

Reported:
06/16/25 09:43

BKG04@7-8'
2504070-24 (Soil)

Summit Scientific

Calculated Analysis

Date Sampled: **04/03/25 13:48**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	1.08	0.00100	units	1	BIE0522	05/14/25	05/14/25	Calculation	

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **04/03/25 13:48**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
% Solids	76.9		%	1	BID0320	04/07/25	04/07/25	Calculation	

Specific Conductance by EPA Method 120.1, Saturated Paste Extraction

Date Sampled: **04/03/25 13:48**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Specific Conductance (EC)	0.905	0.0100	mmhos/cm	1	BID1439	04/28/25	05/01/25	EPA 120.1	

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

Date Sampled: **04/03/25 13:48**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
pH	7.77		pH Units	1	BID1437	04/28/25	05/01/25	EPA 9045D	

Summit Scientific

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Tasman Geosciences
4725 Independence St.
Wheat Ridge CO, 80033

Project: PDC - MDM 33-14 Flowline

Project Number: 32449
Project Manager: Andy Sagen

Reported:
06/16/25 09:43

BKG05@3-4'
2504070-25 (Soil)

Summit Scientific

Total Metals by EPA 6020B Hot Water Soluble Extraction

Date Sampled: **04/03/25 14:00**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Boron	ND	2.00	mg/L dry	1	BID0318	04/07/25	04/15/25	EPA 6020B	

Total Metals by EPA 6020B

Date Sampled: **04/03/25 14:00**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Arsenic	1.24	0.200	mg/kg dry	1	BID0427	04/08/25	05/21/25	EPA 6020B	
Barium	192	0.400	"	"	"	"	"	"	
Cadmium	0.275	0.200	"	"	"	"	"	"	
Copper	6.73	0.400	"	"	"	"	"	"	
Lead	13.3	0.200	"	"	"	"	"	"	
Nickel	5.37	0.400	"	"	"	"	"	"	
Silver	0.0494	0.0200	"	"	"	"	"	"	
Zinc	21.7	0.400	"	"	"	"	"	"	
Selenium	ND	0.260	"	"	"	"	"	"	

Hexavalent Chromium by EPA Method 7196

Date Sampled: **04/03/25 14:00**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Chromium, Hexavalent	ND	0.30	mg/kg dry	1	BID0516	04/09/25	04/11/25	EPA 7196A	

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

Date Sampled: **04/03/25 14:00**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Calcium	49.6	0.0500	mg/L dry	1	BID1434	04/28/25	05/13/25	EPA 6020B	
Magnesium	29.3	0.0500	"	"	"	"	"	"	
Sodium	262	0.0500	"	"	"	"	"	"	

Summit Scientific

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Tasman Geosciences
4725 Independence St.
Wheat Ridge CO, 80033

Project: PDC - MDM 33-14 Flowline

Project Number: 32449
Project Manager: Andy Sagen

Reported:
06/16/25 09:43

BKG05@3-4'
2504070-25 (Soil)

Summit Scientific

Calculated Analysis

Date Sampled: **04/03/25 14:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	7.29	0.00100	units	1	BIE0522	05/14/25	05/14/25	Calculation	

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **04/03/25 14:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
% Solids	82.9		%	1	BID0320	04/07/25	04/07/25	Calculation	

Specific Conductance by EPA Method 120.1, Saturated Paste Extraction

Date Sampled: **04/03/25 14:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Specific Conductance (EC)	1.65	0.0100	mmhos/cm	1	BID1439	04/28/25	05/01/25	EPA 120.1	

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

Date Sampled: **04/03/25 14:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
pH	8.27		pH Units	1	BID1437	04/28/25	05/01/25	EPA 9045D	

Summit Scientific

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Tasman Geosciences
4725 Independence St.
Wheat Ridge CO, 80033

Project: PDC - MDM 33-14 Flowline

Project Number: 32449
Project Manager: Andy Sagen

Reported:
06/16/25 09:43

BKG05@5-6'
2504070-26 (Soil)

Summit Scientific

Total Metals by EPA 6020B Hot Water Soluble Extraction

Date Sampled: **04/03/25 14:02**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Boron	ND	2.00	mg/L dry	1	BID0318	04/07/25	04/15/25	EPA 6020B	

Total Metals by EPA 6020B

Date Sampled: **04/03/25 14:02**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Arsenic	1.89	0.200	mg/kg dry	1	BID0427	04/08/25	05/21/25	EPA 6020B	
Barium	132	0.400	"	"	"	"	"	"	
Cadmium	ND	0.200	"	"	"	"	"	"	
Copper	6.15	0.400	"	"	"	"	"	"	
Lead	10.2	0.200	"	"	"	"	"	"	
Nickel	5.95	0.400	"	"	"	"	"	"	
Silver	0.0486	0.0200	"	"	"	"	"	"	
Zinc	21.0	0.400	"	"	"	"	"	"	
Selenium	ND	0.260	"	"	"	"	"	"	

Hexavalent Chromium by EPA Method 7196

Date Sampled: **04/03/25 14:02**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Chromium, Hexavalent	ND	0.30	mg/kg dry	1	BID0516	04/09/25	04/11/25	EPA 7196A	

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

Date Sampled: **04/03/25 14:02**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Calcium	37.1	0.0500	mg/L dry	1	BID1434	04/28/25	05/13/25	EPA 6020B	
Magnesium	16.0	0.0500	"	"	"	"	"	"	
Sodium	75.9	0.0500	"	"	"	"	"	"	

Summit Scientific

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Tasman Geosciences
4725 Independence St.
Wheat Ridge CO, 80033

Project: PDC - MDM 33-14 Flowline

Project Number: 32449
Project Manager: Andy Sagen

Reported:
06/16/25 09:43

BKG05@5-6'
2504070-26 (Soil)

Summit Scientific

Calculated Analysis

Date Sampled: **04/03/25 14:02**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	2.62	0.00100	units	1	BIE0522	05/14/25	05/14/25	Calculation	

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **04/03/25 14:02**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
% Solids	79.9		%	1	BID0320	04/07/25	04/07/25	Calculation	

Specific Conductance by EPA Method 120.1, Saturated Paste Extraction

Date Sampled: **04/03/25 14:02**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Specific Conductance (EC)	0.625	0.0100	mmhos/cm	1	BID1439	04/28/25	05/01/25	EPA 120.1	

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

Date Sampled: **04/03/25 14:02**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
pH	8.00		pH Units	1	BID1437	04/28/25	05/01/25	EPA 9045D	

Summit Scientific

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Tasman Geosciences
4725 Independence St.
Wheat Ridge CO, 80033

Project: PDC - MDM 33-14 Flowline

Project Number: 32449
Project Manager: Andy Sagen

Reported:
06/16/25 09:43

BKG05@7-8'
2504070-27 (Soil)

Summit Scientific

Total Metals by EPA 6020B Hot Water Soluble Extraction

Date Sampled: **04/03/25 14:04**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Boron	ND	2.00	mg/L dry	1	BID0318	04/07/25	04/15/25	EPA 6020B	

Total Metals by EPA 6020B

Date Sampled: **04/03/25 14:04**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Arsenic	1.90	0.200	mg/kg dry	1	BID0427	04/08/25	05/21/25	EPA 6020B	
Barium	148	0.400	"	"	"	"	"	"	
Cadmium	0.208	0.200	"	"	"	"	"	"	
Copper	6.28	0.400	"	"	"	"	"	"	
Lead	10.3	0.200	"	"	"	"	"	"	
Nickel	5.91	0.400	"	"	"	"	"	"	
Silver	0.0472	0.0200	"	"	"	"	"	"	
Zinc	21.3	0.400	"	"	"	"	"	"	
Selenium	ND	0.260	"	"	"	"	"	"	

Hexavalent Chromium by EPA Method 7196

Date Sampled: **04/03/25 14:04**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Chromium, Hexavalent	ND	0.30	mg/kg dry	1	BID0516	04/09/25	04/11/25	EPA 7196A	

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

Date Sampled: **04/03/25 14:04**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Calcium	23.0	0.0500	mg/L dry	1	BID1434	04/28/25	05/13/25	EPA 6020B	
Magnesium	9.59	0.0500	"	"	"	"	"	"	
Sodium	43.0	0.0500	"	"	"	"	"	"	

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
4725 Independence St.
Wheat Ridge CO, 80033

Project: PDC - MDM 33-14 Flowline
Project Number: 32449
Project Manager: Andy Sagen

Reported:
06/16/25 09:43

BKG05@7-8'
2504070-27 (Soil)

Summit Scientific

Calculated Analysis

Date Sampled: **04/03/25 14:04**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	1.90	0.00100	units	1	BIE0522	05/14/25	05/14/25	Calculation	

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **04/03/25 14:04**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
% Solids	79.3		%	1	BID0320	04/07/25	04/07/25	Calculation	

Specific Conductance by EPA Method 120.1, Saturated Paste Extraction

Date Sampled: **04/03/25 14:04**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Specific Conductance (EC)	0.369	0.0100	mmhos/cm	1	BID1439	04/28/25	05/01/25	EPA 120.1	

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

Date Sampled: **04/03/25 14:04**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
pH	8.37		pH Units	1	BID1437	04/28/25	05/01/25	EPA 9045D	

Summit Scientific

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Tasman Geosciences
4725 Independence St.
Wheat Ridge CO, 80033

Project: PDC - MDM 33-14 Flowline

Project Number: 32449
Project Manager: Andy Sagen

Reported:
06/16/25 09:43

BKG06@3-4'
2504070-28 (Soil)

Summit Scientific

Total Metals by EPA 6020B Hot Water Soluble Extraction

Date Sampled: **04/03/25 11:15**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Boron	ND	2.00	mg/L dry	1	BID0318	04/07/25	04/15/25	EPA 6020B	

Total Metals by EPA 6020B

Date Sampled: **04/03/25 11:15**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Arsenic	2.11	0.200	mg/kg dry	1	BID0427	04/08/25	05/21/25	EPA 6020B	
Barium	150	0.400	"	"	"	"	"	"	
Cadmium	0.273	0.200	"	"	"	"	"	"	
Copper	7.87	0.400	"	"	"	"	"	"	
Lead	13.4	0.200	"	"	"	"	"	"	
Nickel	7.45	0.400	"	"	"	"	"	"	
Silver	0.0722	0.0200	"	"	"	"	"	"	
Zinc	25.3	0.400	"	"	"	"	"	"	
Selenium	ND	0.260	"	"	"	"	"	"	

Hexavalent Chromium by EPA Method 7196

Date Sampled: **04/03/25 11:15**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Chromium, Hexavalent	ND	0.30	mg/kg dry	1	BID0516	04/09/25	04/11/25	EPA 7196A	

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

Date Sampled: **04/03/25 11:15**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Calcium	35.7	0.0500	mg/L dry	1	BID1434	04/28/25	05/13/25	EPA 6020B	
Magnesium	31.5	0.0500	"	"	"	"	"	"	
Sodium	193	0.0500	"	"	"	"	"	"	

Summit Scientific

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Tasman Geosciences
4725 Independence St.
Wheat Ridge CO, 80033

Project: PDC - MDM 33-14 Flowline

Project Number: 32449
Project Manager: Andy Sagen

Reported:
06/16/25 09:43

BKG06@3-4'
2504070-28 (Soil)

Summit Scientific

Calculated Analysis

Date Sampled: **04/03/25 11:15**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	5.68	0.00100	units	1	BIE0522	05/14/25	05/14/25	Calculation	

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **04/03/25 11:15**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
% Solids	77.8		%	1	BID0320	04/07/25	04/07/25	Calculation	

Specific Conductance by EPA Method 120.1, Saturated Paste Extraction

Date Sampled: **04/03/25 11:15**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Specific Conductance (EC)	1.26	0.0100	mmhos/cm	1	BID1439	04/28/25	05/01/25	EPA 120.1	

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

Date Sampled: **04/03/25 11:15**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
pH	8.41		pH Units	1	BID1437	04/28/25	05/01/25	EPA 9045D	

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Tasman Geosciences
4725 Independence St.
Wheat Ridge CO, 80033

Project: PDC - MDM 33-14 Flowline

Project Number: 32449
Project Manager: Andy Sagen

Reported:
06/16/25 09:43

BKG06@5-6'
2504070-29 (Soil)

Summit Scientific

Total Metals by EPA 6020B Hot Water Soluble Extraction

Date Sampled: **04/03/25 11:17**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Boron	ND	2.00	mg/L dry	1	BID0318	04/07/25	04/15/25	EPA 6020B	

Total Metals by EPA 6020B

Date Sampled: **04/03/25 11:17**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Arsenic	2.72	0.200	mg/kg dry	1	BID0427	04/08/25	05/21/25	EPA 6020B	
Barium	107	0.400	"	"	"	"	"	"	
Cadmium	0.225	0.200	"	"	"	"	"	"	
Copper	5.67	0.400	"	"	"	"	"	"	
Lead	11.0	0.200	"	"	"	"	"	"	
Nickel	6.33	0.400	"	"	"	"	"	"	
Silver	0.0344	0.0200	"	"	"	"	"	"	
Zinc	23.8	0.400	"	"	"	"	"	"	
Selenium	ND	0.260	"	"	"	"	"	"	

Hexavalent Chromium by EPA Method 7196

Date Sampled: **04/03/25 11:17**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Chromium, Hexavalent	ND	0.30	mg/kg dry	1	BID0516	04/09/25	04/11/25	EPA 7196A	

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

Date Sampled: **04/03/25 11:17**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Calcium	75.1	0.0500	mg/L dry	1	BID1434	04/28/25	05/13/25	EPA 6020B	
Magnesium	39.3	0.0500	"	"	"	"	"	"	
Sodium	152	0.0500	"	"	"	"	"	"	

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Tasman Geosciences
4725 Independence St.
Wheat Ridge CO, 80033

Project: PDC - MDM 33-14 Flowline

Project Number: 32449
Project Manager: Andy Sagen

Reported:
06/16/25 09:43

BKG06@5-6'
2504070-29 (Soil)

Summit Scientific

Calculated Analysis

Date Sampled: **04/03/25 11:17**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	3.54	0.00100	units	1	BIE0522	05/14/25	05/14/25	Calculation	

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **04/03/25 11:17**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
% Solids	75.7		%	1	BID0320	04/07/25	04/07/25	Calculation	

Specific Conductance by EPA Method 120.1, Saturated Paste Extraction

Date Sampled: **04/03/25 11:17**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Specific Conductance (EC)	1.20	0.0100	mmhos/cm	1	BID1439	04/28/25	05/01/25	EPA 120.1	

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

Date Sampled: **04/03/25 11:17**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
pH	8.09		pH Units	1	BID1437	04/28/25	05/01/25	EPA 9045D	

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Tasman Geosciences
4725 Independence St.
Wheat Ridge CO, 80033

Project: PDC - MDM 33-14 Flowline

Project Number: 32449
Project Manager: Andy Sagen

Reported:
06/16/25 09:43

BKG06@7-8'
2504070-30 (Soil)

Summit Scientific

Total Metals by EPA 6020B Hot Water Soluble Extraction

Date Sampled: **04/03/25 11:19**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Boron	ND	2.00	mg/L dry	1	BID0318	04/07/25	04/15/25	EPA 6020B	

Total Metals by EPA 6020B

Date Sampled: **04/03/25 11:19**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Arsenic	3.06	0.200	mg/kg dry	1	BID0427	04/08/25	05/21/25	EPA 6020B	
Barium	103	0.400	"	"	"	"	"	"	
Cadmium	0.253	0.200	"	"	"	"	"	"	
Copper	5.88	0.400	"	"	"	"	"	"	
Lead	11.0	0.200	"	"	"	"	"	"	
Nickel	6.57	0.400	"	"	"	"	"	"	
Silver	0.0315	0.0200	"	"	"	"	"	"	
Zinc	25.0	0.400	"	"	"	"	"	"	
Selenium	ND	0.260	"	"	"	"	"	"	

Hexavalent Chromium by EPA Method 7196

Date Sampled: **04/03/25 11:19**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Chromium, Hexavalent	ND	0.30	mg/kg dry	1	BID0516	04/09/25	04/11/25	EPA 7196A	

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

Date Sampled: **04/03/25 11:19**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Calcium	87.0	0.0500	mg/L dry	1	BID1434	04/28/25	05/13/25	EPA 6020B	
Magnesium	50.0	0.0500	"	"	"	"	"	"	
Sodium	171	0.0500	"	"	"	"	"	"	

Summit Scientific

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Tasman Geosciences
4725 Independence St.
Wheat Ridge CO, 80033

Project: PDC - MDM 33-14 Flowline

Project Number: 32449
Project Manager: Andy Sagen

Reported:
06/16/25 09:43

BKG06@7-8'
2504070-30 (Soil)

Summit Scientific

Calculated Analysis

Date Sampled: **04/03/25 11:19**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	3.62	0.00100	units	1	BIE0522	05/14/25	05/14/25	Calculation	

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **04/03/25 11:19**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
% Solids	75.4		%	1	BID0320	04/07/25	04/07/25	Calculation	

Specific Conductance by EPA Method 120.1, Saturated Paste Extraction

Date Sampled: **04/03/25 11:19**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Specific Conductance (EC)	1.34	0.0100	mmhos/cm	1	BID1439	04/28/25	05/01/25	EPA 120.1	

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

Date Sampled: **04/03/25 11:19**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
pH	7.52		pH Units	1	BID1437	04/28/25	05/01/25	EPA 9045D	

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Tasman Geosciences
4725 Independence St.
Wheat Ridge CO, 80033

Project: PDC - MDM 33-14 Flowline

Project Number: 32449
Project Manager: Andy Sagen

Reported:
06/16/25 09:43

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 BID0678 - EPA 5030 Soil MS

Blank (BID0678-BLK1)

Prepared: 04/11/25 Analyzed: 05/06/25

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	0.0350		"	0.0400		87.5	50-150			
Surrogate: Toluene-d8	0.0406		"	0.0400		101	50-150			
Surrogate: 4-Bromofluorobenzene	0.0388		"	0.0400		97.0	50-150			

LCS (BID0678-BS1)

Prepared: 04/11/25 Analyzed: 05/06/25

Benzene	0.0946	0.0020	mg/kg	0.100		94.6	70-130			
Toluene	0.0953	0.0050	"	0.100		95.3	70-130			
Ethylbenzene	0.0916	0.0050	"	0.100		91.6	70-130			
m,p-Xylene	0.178	0.010	"	0.200		88.9	70-130			
o-Xylene	0.0890	0.0050	"	0.100		89.0	70-130			
1,2,4-Trimethylbenzene	0.0837	0.0050	"	0.100		83.7	70-130			
1,3,5-Trimethylbenzene	0.0837	0.0050	"	0.100		83.7	70-130			
Naphthalene	0.0852	0.0038	"	0.100		85.2	70-130			
Surrogate: 1,2-Dichloroethane-d4	0.0354		"	0.0400		88.6	50-150			
Surrogate: Toluene-d8	0.0402		"	0.0400		101	50-150			
Surrogate: 4-Bromofluorobenzene	0.0390		"	0.0400		97.5	50-150			

Matrix Spike (BID0678-MS1)

Source: 2504070-01

Prepared: 04/11/25 Analyzed: 05/06/25

Benzene	0.0951	0.0020	mg/kg	0.100	ND	95.1	70-130			
Toluene	0.0959	0.0050	"	0.100	ND	95.9	70-130			
Ethylbenzene	0.0941	0.0050	"	0.100	ND	94.1	70-130			
m,p-Xylene	0.185	0.010	"	0.200	ND	92.6	70-130			
o-Xylene	0.0897	0.0050	"	0.100	ND	89.7	70-130			
1,2,4-Trimethylbenzene	0.0880	0.0050	"	0.100	ND	88.0	70-130			
1,3,5-Trimethylbenzene	0.0880	0.0050	"	0.100	ND	88.0	70-130			
Naphthalene	0.0794	0.0038	"	0.100	ND	79.4	70-130			
Surrogate: 1,2-Dichloroethane-d4	0.0387		"	0.0400		96.8	50-150			
Surrogate: Toluene-d8	0.0405		"	0.0400		101	50-150			
Surrogate: 4-Bromofluorobenzene	0.0398		"	0.0400		99.5	50-150			

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Tasman Geosciences
4725 Independence St.
Wheat Ridge CO, 80033

Project: PDC - MDM 33-14 Flowline

Project Number: 32449
Project Manager: Andy Sagen

Reported:
06/16/25 09:43

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 BID0678 - EPA 5030 Soil MS

Matrix Spike Dup (BID0678-MSD1)	Source: 2504070-01			Prepared: 04/11/25 Analyzed: 05/06/25						
Benzene	0.0888	0.0020	mg/kg	0.100	ND	88.8	70-130	6.79	30	
Toluene	0.0904	0.0050	"	0.100	ND	90.4	70-130	5.99	30	
Ethylbenzene	0.0878	0.0050	"	0.100	ND	87.8	70-130	6.99	30	
m,p-Xylene	0.175	0.010	"	0.200	ND	87.5	70-130	5.65	30	
o-Xylene	0.0857	0.0050	"	0.100	ND	85.7	70-130	4.55	30	
1,2,4-Trimethylbenzene	0.0828	0.0050	"	0.100	ND	82.8	70-130	6.18	30	
1,3,5-Trimethylbenzene	0.0831	0.0050	"	0.100	ND	83.1	70-130	5.75	30	
Naphthalene	0.0776	0.0038	"	0.100	ND	77.6	70-130	2.25	30	
Surrogate: 1,2-Dichloroethane-d4	0.0376		"	0.0400		94.0	50-150			
Surrogate: Toluene-d8	0.0411		"	0.0400		103	50-150			
Surrogate: 4-Bromofluorobenzene	0.0394		"	0.0400		98.4	50-150			

Summit Scientific

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Tasman Geosciences
4725 Independence St.
Wheat Ridge CO, 80033

Project: PDC - MDM 33-14 Flowline

Project Number: 32449
Project Manager: Andy Sagen

Reported:
06/16/25 09:43

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 BID0680 - EPA 3550A

Blank (BID0680-BLK1)

Prepared: 04/11/25 Analyzed: 05/16/25

C10-C28 (DRO)	ND	50	mg/kg								
C28-C36 (ORO)	ND	50	"								
Surrogate: <i>o</i> -Terphenyl	12.6		"	12.5	101	50-140					

LCS (BID0680-BS1)

Prepared: 04/11/25 Analyzed: 05/16/25

C10-C28 (DRO)	555	50	mg/kg	500	111	50-140					
Surrogate: <i>o</i> -Terphenyl	12.4		"	12.5	98.9	50-140					

Matrix Spike (BID0680-MS1)

Source: 2504070-01

Prepared: 04/11/25 Analyzed: 05/16/25

C10-C28 (DRO)	576	50	mg/kg	500	ND	115	50-140				
Surrogate: <i>o</i> -Terphenyl	12.6		"	12.5	101	50-140					

Matrix Spike Dup (BID0680-MSD1)

Source: 2504070-01

Prepared: 04/11/25 Analyzed: 05/16/25

C10-C28 (DRO)	466	50	mg/kg	500	ND	93.2	50-140	21.1	20		QR-02
Surrogate: <i>o</i> -Terphenyl	10.8		"	12.5	86.4	50-140					

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4725 Independence St.
Wheat Ridge CO, 80033

Project: PDC - MDM 33-14 Flowline

Project Number: 32449
Project Manager: Andy Sagen

Reported:
06/16/25 09:43

PAH by EPA Method 8270E SIM - Quality Control

Summit Scientific

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

Batch BID0576 - EPA 5030 Soil MS

Blank (BID0576-BLK1)

Prepared: 04/10/25 Analyzed: 05/10/25

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	0.0256		"	0.0333		76.8	40-140			
Surrogate: Fluoranthene-d10	0.0257		"	0.0333		77.0	40-140			

LCS (BID0576-BS1)

Prepared: 04/10/25 Analyzed: 05/10/25

Acenaphthene	0.0243	0.00500	mg/kg	0.0333		72.9	40-140			
Anthracene	0.0249	0.00500	"	0.0333		74.6	40-140			
Benzo (a) anthracene	0.0260	0.00500	"	0.0333		78.1	40-140			
Benzo (a) pyrene	0.0250	0.00500	"	0.0333		74.9	40-140			
Benzo (b) fluoranthene	0.0264	0.00500	"	0.0333		79.3	40-140			
Benzo (k) fluoranthene	0.0261	0.00500	"	0.0333		78.2	40-140			
Chrysene	0.0245	0.00500	"	0.0333		73.6	40-140			
Dibenz (a,h) anthracene	0.0189	0.00500	"	0.0333		56.8	40-140			
Fluoranthene	0.0247	0.00500	"	0.0333		74.0	40-140			
Fluorene	0.0213	0.00500	"	0.0333		63.9	40-140			
Indeno (1,2,3-cd) pyrene	0.0190	0.00500	"	0.0333		57.0	40-140			
Pyrene	0.0243	0.00500	"	0.0333		73.0	40-140			
1-Methylnaphthalene	0.0238	0.00500	"	0.0333		71.3	40-140			
2-Methylnaphthalene	0.0230	0.00500	"	0.0333		69.1	40-140			
Surrogate: 2-Methylnaphthalene-d10	0.0262		"	0.0333		78.7	40-140			
Surrogate: Fluoranthene-d10	0.0270		"	0.0333		81.1	40-140			

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Tasman Geosciences
4725 Independence St.
Wheat Ridge CO, 80033

Project: PDC - MDM 33-14 Flowline

Project Number: 32449
Project Manager: Andy Sagen

Reported:
06/16/25 09:43

PAH by EPA Method 8270E SIM - Quality Control

Summit Scientific

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

Batch BID0576 - EPA 5030 Soil MS

Matrix Spike (BID0576-MS1)	Source: 2504048-01			Prepared: 04/10/25 Analyzed: 05/10/25						
Acenaphthene	0.0247	0.00500	mg/kg	0.0333	ND	74.0	40-140			
Anthracene	0.0263	0.00500	"	0.0333	ND	78.8	40-140			
Benzo (a) anthracene	0.0276	0.00500	"	0.0333	ND	82.7	40-140			
Benzo (a) pyrene	0.0266	0.00500	"	0.0333	ND	79.9	40-140			
Benzo (b) fluoranthene	0.0279	0.00500	"	0.0333	ND	83.8	40-140			
Benzo (k) fluoranthene	0.0266	0.00500	"	0.0333	ND	79.8	40-140			
Chrysene	0.0259	0.00500	"	0.0333	ND	77.8	40-140			
Dibenz (a,h) anthracene	0.0231	0.00500	"	0.0333	ND	69.3	40-140			
Fluoranthene	0.0266	0.00500	"	0.0333	ND	79.7	40-140			
Fluorene	0.0230	0.00500	"	0.0333	ND	69.0	40-140			
Indeno (1,2,3-cd) pyrene	0.0143	0.00500	"	0.0333	ND	42.8	40-140			
Pyrene	0.0253	0.00500	"	0.0333	ND	75.9	40-140			
1-Methylnaphthalene	0.0244	0.00500	"	0.0333	ND	73.3	40-140			
2-Methylnaphthalene	0.0230	0.00500	"	0.0333	ND	69.0	40-140			
<i>Surrogate: 2-Methylnaphthalene-d10</i>	<i>0.0264</i>		<i>"</i>	<i>0.0333</i>		<i>79.2</i>	<i>40-140</i>			
<i>Surrogate: Fluoranthene-d10</i>	<i>0.0294</i>		<i>"</i>	<i>0.0333</i>		<i>88.3</i>	<i>40-140</i>			

Matrix Spike Dup (BID0576-MSD1)	Source: 2504048-01			Prepared: 04/10/25 Analyzed: 05/10/25						
Acenaphthene	0.0249	0.00500	mg/kg	0.0333	ND	74.8	40-140	1.07	30	
Anthracene	0.0260	0.00500	"	0.0333	ND	78.0	40-140	1.04	30	
Benzo (a) anthracene	0.0274	0.00500	"	0.0333	ND	82.1	40-140	0.766	30	
Benzo (a) pyrene	0.0263	0.00500	"	0.0333	ND	79.0	40-140	1.06	30	
Benzo (b) fluoranthene	0.0264	0.00500	"	0.0333	ND	79.2	40-140	5.60	30	
Benzo (k) fluoranthene	0.0254	0.00500	"	0.0333	ND	76.1	40-140	4.84	30	
Chrysene	0.0260	0.00500	"	0.0333	ND	78.1	40-140	0.330	30	
Dibenz (a,h) anthracene	0.0260	0.00500	"	0.0333	ND	77.9	40-140	11.7	30	
Fluoranthene	0.0261	0.00500	"	0.0333	ND	78.4	40-140	1.60	30	
Fluorene	0.0242	0.00500	"	0.0333	ND	72.6	40-140	5.19	30	
Indeno (1,2,3-cd) pyrene	0.0159	0.00500	"	0.0333	ND	47.7	40-140	10.9	30	
Pyrene	0.0247	0.00500	"	0.0333	ND	74.2	40-140	2.23	30	
1-Methylnaphthalene	0.0269	0.00500	"	0.0333	ND	80.7	40-140	9.57	30	
2-Methylnaphthalene	0.0245	0.00500	"	0.0333	ND	73.4	40-140	6.18	30	
<i>Surrogate: 2-Methylnaphthalene-d10</i>	<i>0.0267</i>		<i>"</i>	<i>0.0333</i>		<i>80.0</i>	<i>40-140</i>			
<i>Surrogate: Fluoranthene-d10</i>	<i>0.0282</i>		<i>"</i>	<i>0.0333</i>		<i>84.7</i>	<i>40-140</i>			

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Tasman Geosciences
4725 Independence St.
Wheat Ridge CO, 80033

Project: PDC - MDM 33-14 Flowline

Project Number: 32449
Project Manager: Andy Sagen

Reported:
06/16/25 09:43

PAH by EPA Method 8270E SIM - Quality Control

Summit Scientific

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

Batch BID0638 - EPA 5030 Soil MS

Blank (BID0638-BLK1)

Prepared: 04/11/25 Analyzed: 05/16/25

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	0.0158		"	0.0333		47.5	40-140			
Surrogate: Fluoranthene-d10	0.0167		"	0.0333		50.1	40-140			

LCS (BID0638-BS1)

Prepared: 04/11/25 Analyzed: 05/16/25

Acenaphthene	0.0171	0.00500	mg/kg	0.0333		51.4	40-140			
Anthracene	0.0167	0.00500	"	0.0333		50.0	40-140			
Benzo (a) anthracene	0.0173	0.00500	"	0.0333		51.9	40-140			
Benzo (a) pyrene	0.0172	0.00500	"	0.0333		51.5	40-140			
Benzo (b) fluoranthene	0.0186	0.00500	"	0.0333		55.9	40-140			
Benzo (k) fluoranthene	0.0191	0.00500	"	0.0333		57.2	40-140			
Chrysene	0.0169	0.00500	"	0.0333		50.7	40-140			
Dibenz (a,h) anthracene	0.0149	0.00500	"	0.0333		44.7	40-140			
Fluoranthene	0.0181	0.00500	"	0.0333		54.4	40-140			
Fluorene	0.0173	0.00500	"	0.0333		52.0	40-140			
Indeno (1,2,3-cd) pyrene	0.0156	0.00500	"	0.0333		46.9	40-140			
Pyrene	0.0193	0.00500	"	0.0333		58.0	40-140			
1-Methylnaphthalene	0.0200	0.00500	"	0.0333		60.1	40-140			
2-Methylnaphthalene	0.0213	0.00500	"	0.0333		63.9	40-140			
Surrogate: 2-Methylnaphthalene-d10	0.0205		"	0.0333		61.6	40-140			
Surrogate: Fluoranthene-d10	0.0204		"	0.0333		61.1	40-140			

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4725 Independence St.
Wheat Ridge CO, 80033

Project: PDC - MDM 33-14 Flowline

Project Number: 32449
Project Manager: Andy Sagen

Reported:
06/16/25 09:43

PAH by EPA Method 8270E SIM - Quality Control

Summit Scientific

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

Batch BID0638 - EPA 5030 Soil MS

Matrix Spike (BID0638-MS1)		Source: 2504070-08			Prepared: 04/11/25 Analyzed: 05/16/25	
Acenaphthene	0.0173	0.00500	mg/kg	0.0333	ND	51.8 40-140
Anthracene	0.0160	0.00500	"	0.0333	ND	48.1 40-140
Benzo (a) anthracene	0.0161	0.00500	"	0.0333	ND	48.2 40-140
Benzo (a) pyrene	0.0156	0.00500	"	0.0333	ND	46.8 40-140
Benzo (b) fluoranthene	0.0168	0.00500	"	0.0333	ND	50.3 40-140
Benzo (k) fluoranthene	0.0172	0.00500	"	0.0333	ND	51.7 40-140
Chrysene	0.0157	0.00500	"	0.0333	ND	47.1 40-140
Dibenz (a,h) anthracene	0.0138	0.00500	"	0.0333	ND	41.4 40-140
Fluoranthene	0.0160	0.00500	"	0.0333	ND	48.1 40-140
Fluorene	0.0164	0.00500	"	0.0333	ND	49.3 40-140
Indeno (1,2,3-cd) pyrene	0.0144	0.00500	"	0.0333	ND	43.3 40-140
Pyrene	0.0179	0.00500	"	0.0333	ND	53.8 40-140
1-Methylnaphthalene	0.0196	0.00500	"	0.0333	ND	59.0 40-140
2-Methylnaphthalene	0.0210	0.00500	"	0.0333	ND	63.1 40-140
<i>Surrogate: 2-Methylnaphthalene-d10</i>	<i>0.0198</i>		"	<i>0.0333</i>		<i>59.3 40-140</i>
<i>Surrogate: Fluoranthene-d10</i>	<i>0.0189</i>		"	<i>0.0333</i>		<i>56.8 40-140</i>

Matrix Spike Dup (BID0638-MSD1)		Source: 2504070-08			Prepared: 04/11/25 Analyzed: 05/16/25	
Acenaphthene	0.0137	0.00500	mg/kg	0.0333	ND	41.2 40-140 22.8 30
Anthracene	0.0129	0.00500	"	0.0333	ND	38.7 40-140 21.9 30 QM-05
Benzo (a) anthracene	0.0132	0.00500	"	0.0333	ND	39.6 40-140 19.6 30 QM-05
Benzo (a) pyrene	0.0126	0.00500	"	0.0333	ND	37.8 40-140 21.2 30 QM-05
Benzo (b) fluoranthene	0.0136	0.00500	"	0.0333	ND	40.7 40-140 21.1 30
Benzo (k) fluoranthene	0.0140	0.00500	"	0.0333	ND	41.9 40-140 20.9 30
Chrysene	0.0129	0.00500	"	0.0333	ND	38.8 40-140 19.4 30 QM-05
Dibenz (a,h) anthracene	0.0108	0.00500	"	0.0333	ND	32.5 40-140 24.0 30 QM-05
Fluoranthene	0.0131	0.00500	"	0.0333	ND	39.2 40-140 20.4 30 QM-05
Fluorene	0.0129	0.00500	"	0.0333	ND	38.8 40-140 23.6 30 QM-05
Indeno (1,2,3-cd) pyrene	0.0115	0.00500	"	0.0333	ND	34.6 40-140 22.4 30 QM-05
Pyrene	0.0145	0.00500	"	0.0333	ND	43.5 40-140 21.1 30
1-Methylnaphthalene	0.0155	0.00500	"	0.0333	ND	46.5 40-140 23.6 30
2-Methylnaphthalene	0.0166	0.00500	"	0.0333	ND	49.7 40-140 23.8 30
<i>Surrogate: 2-Methylnaphthalene-d10</i>	<i>0.0155</i>		"	<i>0.0333</i>		<i>46.5 40-140</i>
<i>Surrogate: Fluoranthene-d10</i>	<i>0.0154</i>		"	<i>0.0333</i>		<i>46.1 40-140</i>

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Tasman Geosciences
4725 Independence St.
Wheat Ridge CO, 80033

Project: PDC - MDM 33-14 Flowline

Project Number: 32449
Project Manager: Andy Sagen

Reported:
06/16/25 09:43

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 BID0318 - EPA 3050B

Blank (BID0318-BLK1)											
Prepared: 04/07/25 Analyzed: 04/15/25											
Boron	ND	2.00	mg/L wet								
LCS (BID0318-BS1)											
Prepared: 04/07/25 Analyzed: 04/15/25											
Boron	4.93	2.00	mg/L wet	5.00		98.7	80-120				
Duplicate (BID0318-DUP1)											
Source: 2504070-11 Prepared: 04/07/25 Analyzed: 04/15/25											
Boron	0.416	2.00	mg/L dry		0.384			8.06	20		
Matrix Spike (BID0318-MS1)											
Source: 2504070-11 Prepared: 04/07/25 Analyzed: 04/15/25											
Boron	6.83	2.00	mg/L dry	6.26	0.384	103	75-125				
Matrix Spike Dup (BID0318-MSD1)											
Source: 2504070-11 Prepared: 04/07/25 Analyzed: 04/15/25											
Boron	6.98	2.00	mg/L dry	6.26	0.384	105	75-125	2.17	25		

Batch BID0319 - EPA 3050B

Blank (BID0319-BLK1)											
Prepared: 04/07/25 Analyzed: 04/15/25											
Boron	ND	2.00	mg/L wet								
LCS (BID0319-BS1)											
Prepared: 04/07/25 Analyzed: 04/15/25											
Boron	5.04	2.00	mg/L wet	5.00		101	80-120				
Duplicate (BID0319-DUP1)											
Source: 2504059-01 Prepared: 04/07/25 Analyzed: 04/15/25											
Boron	0.177	2.00	mg/L dry		0.181			2.45	20		
Matrix Spike (BID0319-MS1)											
Source: 2504059-01 Prepared: 04/07/25 Analyzed: 04/15/25											
Boron	6.37	2.00	mg/L dry	6.00	0.181	103	75-125				

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Tasman Geosciences
 4725 Independence St.
 Wheat Ridge CO, 80033

Project: PDC - MDM 33-14 Flowline

Project Number: 32449
 Project Manager: Andy Sagen

Reported:
 06/16/25 09:43

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 BID0319 - EPA 3050B

Matrix Spike Dup (BID0319-MSD1)

Source: 2504059-01

Prepared: 04/07/25 Analyzed: 04/15/25

Boron	6.21	2.00	mg/L dry	6.00	0.181	100	75-125	2.57	25	
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Tasman Geosciences
4725 Independence St.
Wheat Ridge CO, 80033

Project: PDC - MDM 33-14 Flowline

Project Number: 32449
Project Manager: Andy Sagen

Reported:
06/16/25 09:43

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 BID0426 - EPA 3050B

Blank (BID0426-BLK1)

Prepared: 04/08/25 Analyzed: 05/22/25

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 (BID0426-BS1)

Prepared: 04/08/25 Analyzed: 05/22/25

Arsenic	44.7	0.200	mg/kg wet	41.0	109	80-120
Barium	44.1	0.400	"	41.0	108	80-120
Cadmium	2.19	0.200	"	2.05	107	80-120
Copper	48.5	0.400	"	41.0	118	80-120
Lead	21.9	0.200	"	20.5	107	80-120
Nickel	48.0	0.400	"	41.0	117	80-120
Silver	2.19	0.0200	"	2.05	107	80-120
Zinc	47.4	0.400	"	41.0	116	80-120
Selenium	4.37	0.260	"	4.10	107	80-120

Duplicate (BID0426-DUP1)

Source: 2504064-01

Prepared: 04/08/25 Analyzed: 05/22/25

Arsenic	0.459	0.200	mg/kg dry	0.534	15.2	20
Barium	10.8	0.400	"	10.1	7.37	20
Cadmium	0.0426	0.200	"	0.0380	11.2	20
Copper	1.52	0.400	"	2.18	35.8	20
Lead	1.43	0.200	"	1.54	7.01	20
Nickel	0.884	0.400	"	0.972	9.47	20
Silver	0.00562	0.0200	"	0.00588	4.53	20
Zinc	13.4	0.400	"	15.5	14.6	20
Selenium	ND	0.260	"	ND		20

QR-04

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Tasman Geosciences
4725 Independence St.
Wheat Ridge CO, 80033

Project: PDC - MDM 33-14 Flowline

Project Number: 32449
Project Manager: Andy Sagen

Reported:
06/16/25 09:43

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 BID0426 - EPA 3050B

Matrix Spike (BID0426-MS1)	Source: 2504064-01			Prepared: 04/08/25 Analyzed: 05/23/25								
Arsenic	37.9	0.200	mg/kg dry	41.5	0.534	90.2	75-125					
Barium	48.5	0.400	"	41.5	10.1	92.7	75-125					
Cadmium	1.97	0.200	"	2.07	0.0380	93.1	75-125					
Copper	37.2	0.400	"	41.5	2.18	84.4	75-125					
Lead	21.1	0.200	"	20.7	1.54	94.3	75-125					
Nickel	36.8	0.400	"	41.5	0.972	86.4	75-125					
Silver	1.92	0.0200	"	2.07	0.00588	92.2	75-125					
Zinc	43.9	0.400	"	41.5	15.5	68.4	75-125					QM-05
Selenium	4.26	0.260	"	4.15	ND	103	75-125					

Matrix Spike Dup (BID0426-MSD1)	Source: 2504064-01			Prepared: 04/08/25 Analyzed: 05/23/25								
Arsenic	40.7	0.200	mg/kg dry	41.1	0.534	97.7	75-125	7.10	25			
Barium	85.8	0.400	"	41.1	10.1	184	75-125	55.5	25			QM-05
Cadmium	1.81	0.200	"	2.06	0.0380	86.1	75-125	8.54	25			
Copper	39.9	0.400	"	41.1	2.18	91.6	75-125	6.94	25			
Lead	29.8	0.200	"	20.6	1.54	137	75-125	34.1	25			QM-05
Nickel	39.4	0.400	"	41.1	0.972	93.3	75-125	6.70	25			
Silver	1.78	0.0200	"	2.06	0.00588	86.3	75-125	7.41	25			
Zinc	45.7	0.400	"	41.1	15.5	73.4	75-125	4.06	25			QM-05
Selenium	4.51	0.260	"	4.11	ND	110	75-125	5.80	25			

Batch BID0427 - EPA 3050B

Blank (BID0427-BLK1)	Prepared: 04/08/25 Analyzed: 05/21/25											
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	"									

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Tasman Geosciences
4725 Independence St.
Wheat Ridge CO, 80033

Project: PDC - MDM 33-14 Flowline

Project Number: 32449
Project Manager: Andy Sagen

Reported:
06/16/25 09:43

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 BID0427 - EPA 3050B

LCS (BID0427-BS1)

Prepared: 04/08/25 Analyzed: 05/21/25

Arsenic	43.0	0.200	mg/kg wet	40.0		107	80-120			
Barium	45.2	0.400	"	40.0		113	80-120			
Cadmium	2.08	0.200	"	2.00		104	80-120			
Copper	44.5	0.400	"	40.0		111	80-120			
Lead	20.1	0.200	"	20.0		100	80-120			
Nickel	43.4	0.400	"	40.0		108	80-120			
Silver	2.09	0.0200	"	2.00		104	80-120			
Zinc	42.9	0.400	"	40.0		107	80-120			
Selenium	4.10	0.260	"	4.00		102	80-120			

Duplicate (BID0427-DUP1)

Source: 2504070-12

Prepared: 04/08/25 Analyzed: 05/21/25

Arsenic	2.38	0.200	mg/kg dry		3.27			31.5	20	QR-04
Barium	101	0.400	"		148			38.1	20	QR-04
Cadmium	0.204	0.200	"		0.376			59.4	20	QR-04
Copper	6.64	0.400	"		6.21			6.60	20	
Lead	9.53	0.200	"		13.4			33.7	20	QR-04
Nickel	5.44	0.400	"		5.66			3.97	20	
Silver	0.0298	0.0200	"		0.0293			1.60	20	
Zinc	19.7	0.400	"		21.0			6.42	20	
Selenium	ND	0.260	"		0.262			200	20	QR-01

Matrix Spike (BID0427-MS1)

Source: 2504070-12

Prepared: 04/08/25 Analyzed: 05/21/25

Arsenic	19.7	0.200	mg/kg dry	49.4	3.27	33.4	75-125			QM-05
Barium	183	0.400	"	49.4	148	69.2	75-125			QM-05
Cadmium	2.99	0.200	"	2.47	0.376	106	75-125			
Copper	22.2	0.400	"	49.4	6.21	32.4	75-125			QM-05
Lead	32.4	0.200	"	24.7	13.4	76.7	75-125			
Nickel	23.5	0.400	"	49.4	5.66	36.2	75-125			QM-05
Silver	2.48	0.0200	"	2.47	0.0293	99.0	75-125			
Zinc	37.8	0.400	"	49.4	21.0	34.0	75-125			QM-05
Selenium	4.23	0.260	"	4.94	0.262	80.3	75-125			

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Tasman Geosciences
4725 Independence St.
Wheat Ridge CO, 80033

Project: PDC - MDM 33-14 Flowline

Project Number: 32449
Project Manager: Andy Sagen

Reported:
06/16/25 09:43

Total Metals by EPA 6020B - Quality Control
Summit Scientific

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

Batch BID0427 - EPA 3050B

Matrix Spike Dup (BID0427-MSD1)	Source: 2504070-12			Prepared: 04/08/25		Analyzed: 05/21/25					
Arsenic	24.3	0.200	mg/kg dry	52.2	3.27	40.2	75-125	20.6	25		QM-05
Barium	210	0.400	"	52.2	148	117	75-125	13.8	25		
Cadmium	2.88	0.200	"	2.61	0.376	95.9	75-125	3.66	25		
Copper	28.1	0.400	"	52.2	6.21	41.9	75-125	23.2	25		QM-05
Lead	33.6	0.200	"	26.1	13.4	77.4	75-125	3.86	25		
Nickel	27.5	0.400	"	52.2	5.66	41.8	75-125	15.6	25		QM-05
Silver	2.63	0.0200	"	2.61	0.0293	99.7	75-125	6.19	25		
Zinc	40.2	0.400	"	52.2	21.0	36.8	75-125	6.27	25		QM-05
Selenium	4.62	0.260	"	5.22	0.262	83.5	75-125	8.86	25		

Summit Scientific

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Tasman Geosciences
4725 Independence St.
Wheat Ridge CO, 80033

Project: PDC - MDM 33-14 Flowline

Project Number: 32449
Project Manager: Andy Sagen

Reported:
06/16/25 09:43

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 BID0515 - 3060A Mod

Blank (BID0515-BLK1)											
Prepared: 04/09/25 Analyzed: 04/11/25											
Chromium, Hexavalent	ND	0.30	mg/kg wet								
LCS (BID0515-BS1)											
Prepared: 04/09/25 Analyzed: 04/11/25											
Chromium, Hexavalent	23.5	0.30	mg/kg wet	24.5	96.0	80-120					
Duplicate (BID0515-DUP1)											
Source: 2504070-01 Prepared: 04/09/25 Analyzed: 04/11/25											
Chromium, Hexavalent	ND	0.30	mg/kg dry		ND					20	
Matrix Spike (BID0515-MS1)											
Source: 2504070-01 Prepared: 04/09/25 Analyzed: 04/11/25											
Chromium, Hexavalent	29.9	0.30	mg/kg dry	31.4	ND	95.2	75-125				
Matrix Spike Dup (BID0515-MSD1)											
Source: 2504070-01 Prepared: 04/09/25 Analyzed: 04/11/25											
Chromium, Hexavalent	28.1	0.30	mg/kg dry	29.5	ND	95.0	75-125	6.33		20	

Batch BID0516 - 3060A Mod

Blank (BID0516-BLK1)											
Prepared: 04/09/25 Analyzed: 04/11/25											
Chromium, Hexavalent	ND	0.30	mg/kg wet								
LCS (BID0516-BS1)											
Prepared: 04/09/25 Analyzed: 04/11/25											
Chromium, Hexavalent	23.4	0.30	mg/kg wet	24.5	95.4	80-120					
Duplicate (BID0516-DUP1)											
Source: 2504057-01 Prepared: 04/09/25 Analyzed: 04/11/25											
Chromium, Hexavalent	ND	0.30	mg/kg dry		ND					20	
Matrix Spike (BID0516-MS1)											
Source: 2504057-01 Prepared: 04/09/25 Analyzed: 04/11/25											
Chromium, Hexavalent	30.0	0.30	mg/kg dry	32.0	ND	93.8	75-125				

Summit Scientific

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Tasman Geosciences
 4725 Independence St.
 Wheat Ridge CO, 80033

Project: PDC - MDM 33-14 Flowline

Project Number: 32449
 Project Manager: Andy Sagen

Reported:
 06/16/25 09:43

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 BID0516 - 3060A Mod

Matrix Spike Dup (BID0516-MSD1)

Source: 2504057-01

Prepared: 04/09/25 Analyzed: 04/11/25

Chromium, Hexavalent	29.4	0.30	mg/kg dry	31.7	ND	92.8	75-125	2.07	20	
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Tasman Geosciences
 4725 Independence St.
 Wheat Ridge CO, 80033

Project: PDC - MDM 33-14 Flowline

Project Number: 32449
 Project Manager: Andy Sagen

Reported:
 06/16/25 09:43

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

Summit Scientific

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

Batch BID1434 - General Preparation

Blank (BID1434-BLK1)

Prepared: 04/28/25 Analyzed: 05/11/25

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

LCS (BID1434-BS1)

Prepared: 04/28/25 Analyzed: 05/11/25

Calcium	4.41	0.0500	mg/L wet	5.00	88.3	70-130				
Magnesium	4.99	0.0500	"	5.00	99.8	70-130				
Sodium	4.71	0.0500	"	5.00	94.1	70-130				

Summit Scientific

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Tasman Geosciences
 4725 Independence St.
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Project: PDC - MDM 33-14 Flowline

Project Number: 32449
 Project Manager: Andy Sagen

Reported:
 06/16/25 09:43

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 BID0320 - General Preparation

Duplicate (BID0320-DUP1)

Source: 2504070-01

Prepared & Analyzed: 04/07/25

% Solids	84.2		%		83.8			0.535		20	
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Summit Scientific

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Tasman Geosciences
 4725 Independence St.
 Wheat Ridge CO, 80033

Project: PDC - MDM 33-14 Flowline

Project Number: 32449
 Project Manager: Andy Sagen

Reported:
 06/16/25 09:43

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 BID1439 - General Preparation

Blank (BID1439-BLK1)

Prepared: 04/28/25 Analyzed: 05/01/25

Specific Conductance (EC) ND 0.0100 mmhos/cm

LCS (BID1439-BS1)

Prepared: 04/28/25 Analyzed: 05/01/25

Specific Conductance (EC) 0.151 0.0100 mmhos/cm 0.150 101 95-105

Duplicate (BID1439-DUP1)

Source: 2504070-01

Prepared: 04/28/25 Analyzed: 05/01/25

Specific Conductance (EC) 0.413 0.0100 mmhos/cm 0.413 0.0242 20

Summit Scientific

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Tasman Geosciences
 4725 Independence St.
 Wheat Ridge CO, 80033

Project: PDC - MDM 33-14 Flowline

Project Number: 32449
 Project Manager: Andy Sagen

Reported:
 06/16/25 09:43

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 BID1437 - General Preparation

LCS (BID1437-BS1)

Prepared: 04/28/25 Analyzed: 05/01/25

pH	9.22	pH Units	9.18	100	95-105
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Duplicate (BID1437-DUP1)

Source: 2504070-01

Prepared: 04/28/25 Analyzed: 05/01/25

pH	8.10	pH Units	8.11	0.123	20
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Summit Scientific

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Tasman Geosciences
4725 Independence St.
Wheat Ridge CO, 80033

Project: PDC - MDM 33-14 Flowline

Project Number: 32449
Project Manager: Andy Sagen

Reported:
06/16/25 09:43

Notes and Definitions

- S-09 Surrogate recoveries for this sample are below established control limits. The sample matrix exhibits complex characteristics that can affect extraction efficiency, leading to reduced surrogate recoveries despite adherence to standard procedures.
- QR-04 The RPD value for the sample duplicate or MS/MSD was outside of QC acceptance limits. Sample results were accepted based on LCS and/or LCSD recoveries and/or RPD values. Only applies to source/DUP and MS/MSD pairs.
- 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.
- QR-01 Analyses are not controlled on RPD values from sample concentrations below the reporting limit. Sample results were accepted based on LCS and/or LCSD recoveries and/or RPD values.
- 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.
- I-02 Sample was prepared and/or analyzed outside of holding time.
- DET Analyte DETECTED
- ND Analyte NOT DETECTED at or above the reporting limit
- NR Not Reported
- dry Sample results reported on a dry weight basis
- RPD Relative Percent Difference