

# Summit Scientific

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4653 Table Mountain Drive, Golden, Colorado 80403

303.277.9310

September 12, 2024

Karen Olson

Tasman Geosciences

6855 W. 119th Ave.

Broomfield, CO 80020

RE: PDC - Dunham Tank Battery

Work Order #2409063

Enclosed are the results of analyses for samples received by Summit Scientific on 09/05/24 17:41. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

A handwritten signature in black ink, appearing to read "Natalie Tessier". The signature is written in a cursive, flowing style.

Natalie Tessier For Paul Shrewsbury

President



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

Project: PDC - Dunham Tank Battery

Project Number: 36700  
Project Manager: Karen Olson

**Reported:**  
09/12/24 09:01

**ANALYTICAL REPORT FOR SAMPLES**

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
SEP01-DL-B@3'	2409063-01	Soil	09/05/24 13:50	09/05/24 17:41
SEP01-DL-S@1.5'	2409063-03	Soil	09/05/24 13:40	09/05/24 17:41
SEP01-FL@3'	2409063-06	Soil	09/05/24 13:55	09/05/24 17:41
AST01@0-6"	2409063-07	Soil	09/05/24 13:05	09/05/24 17:41
BKG01@0-6"	2409063-08	Soil	09/05/24 14:04	09/05/24 17:41
BKG01@1.5'	2409063-09	Soil	09/05/24 14:08	09/05/24 17:41
BKG01@3'	2409063-10	Soil	09/05/24 14:12	09/05/24 17:41

Summit Scientific

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

Lab ID	Page 1 of 1
2409063	

Client: PDC / Tasman		Send Data To: Project Manager: Karen Olson		Send Invoice To: Company: PDC Energy	
Address: 6855 W 119th Ave		E-Mail: karen.olson@PDCE.com		Project Name/Location: <i>Dunham 415 Tank Battery</i>	
City/State/Zip: Broomfield / CO / 80020		Project Name: <i>Dunham 415 Tank Battery</i>		AFE#: <i>Px-900244</i>	
Phone: 303-487-1228		Project Number: <i>36700</i>		PO/Billing Codes:	
Sampler Name: <i>Molly Parks, David Erwin</i>		Contact: <i>Karen Olson, Deborah Pace</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	BTEXN - 8260B	TPH (C6-C36)	1,2,4 & 1,3,5-TMB	Boron - HWS	pH, EC, SAR		PAHs
1	SEP01-DL-B 0.3'	9-5-24	1350	3			X					X	X	X	X	X	X	X	
2	SEP01-DL-N 0.15'		1336									X	X	X	X	X	X	X	X
3	SEP01-DL-S 0.15'		1340									X	X	X	X	X	X	X	
4	SEP01-DL-E 0.15'		1344									X	X	X	X	X	X	X	X
5	SEP01-DL-W 0.15'		1346									X	X	X	X	X	X	X	X
6	SIRP01-FL 0.3'		1355									X	X	X	X	X	X	X	
7	AST01 00-6"		1305	5								X	X	X	X	X	X	X	
8	BKG01 00-6"		1404	2											X	X		X	
9	BKG01 0.15'		1408	2											X	X		X	
10	BKG01 0.3'		1412	2											X	X		X	
11																			
12																			
13																			
14																			
15																			

Relinquished by: <i>MP</i>	Date/Time: <i>09-05-24 / 1600</i>	Received by: <i>Tasmanlock box</i>	Date/Time: <i>09-05-24 / 1600</i>	TAT Business Days	Field DO	Notes:
				Same Day	Field EC	
Relinquished by: <i>Tasmanlock box</i>	Date/Time: <i>9524 / 1741</i>	Received by: <i>[Signature]</i>	Date/Time: <i>9524 / 1741</i>	1 Day	Field ORP	
				2 Days	Field pH	
Relinquished by:	Date/Time:	Received by:	Date/Time:	3 Days	Field Temp.	
				Standard	Field Turb.	
Temperature Upon Receipt: <i>79</i>	Corrected Temperature: <i>8</i>	IR gun #:		HNO3 lot #:		



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

Lab ID	Page 1 of 1
2409063	

Client: PDC / Tasman		Send Data To: Project Manager: Karen Olson		Send Invoice To: Company: PDC Energy	
Address: 6855 W 119th Ave		E-Mail: karen.olson@PDCE.com		Project Name/Location: <i>Dunham 415 Tank Battery</i>	
City/State/Zip: Broomfield / CO / 80020		Project Name: <i>Dunham 415 Tank Battery</i>		AFE#: <i>Px-900244</i>	
Phone: 303-487-1228		Project Number: <i>36700</i>		PO/Billing Codes:	
Sampler Name: <i>Molly Parks, David Erwin</i>		Contact: <i>Karen Olson, Deborah Pace</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	BTEXN - 8260B	TPH (C6-C36)	1,2,4 & 1,3,5-TMB	Boron - HWS	pH, EC, SAR		PAHs
1	SEP01-DL-B e3'	9-5-24	1350	3			X					X	X	X	X	X	X	X	
2	SEP01-DL-N e1.5'		1336									X	X	X	X	X	X	X	X
3	SEP01-DL-S e1.5'		1340									X	X	X	X	X	X	X	
4	SEP01-DL-E e1.5'		1344									X	X	X	X	X	X	X	X
5	SEP01-DL-W e1.5'		1346									X	X	X	X	X	X	X	X
6	SIRP01-FL e3'		1355									X	X	X	X	X	X	X	
7	AST01 e0-6"		1305	5								X	X	X	X	X	X	X	
8	BKG01 e0-6"		1404	2											X	X		X	
9	BKG01 e1.5'		1408	2											X	X		X	
10	BKG01 e3'		1412	2			X								X	X		X	
11																			
12																			
13																			
14																			
15																			

Relinquished by: <i>MP</i>	Date/Time: <i>09-05-24 / 1600</i>	Received by: <i>Tasmanlock box</i>	Date/Time: <i>09-05-24 / 1600</i>	TAT Business Days	Field DO	Notes:
				Same Day	Field EC	
Relinquished by: <i>Tasmanlock box</i>	Date/Time: <i>9524 / 1741</i>	Received by: <i>[Signature]</i>	Date/Time: <i>9524 / 1741</i>	1 Day	Field ORP	
				2 Days	Field pH	
Relinquished by:	Date/Time:	Received by:	Date/Time:	3 Days	Field Temp.	
				Standard	Field Turb.	
Temperature Upon Receipt: <i>79</i>	Corrected Temperature: <i>8</i>	IR gun #:		HNO3 lot #:		



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

Project: PDC - Dunham Tank Battery

Project Number: 36700  
Project Manager: Karen Olson

**Reported:**  
09/12/24 09:01

**SEP01-DL-B@3'**  
**2409063-01 (Soil)**

**Summit Scientific**

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

Date Sampled: **09/05/24 13:50**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Benzene	ND	0.0020		mg/kg	1	BHI0240	09/09/24	09/09/24	EPA 8260B	
Toluene	ND	0.0050		"	"	"	"	"	"	
Ethylbenzene	ND	0.0050		"	"	"	"	"	"	
Xylenes (total)	ND	0.010		"	"	"	"	"	"	
1,2,4-Trimethylbenzene	ND	0.0050		"	"	"	"	"	"	
1,3,5-Trimethylbenzene	ND	0.0050		"	"	"	"	"	"	
Naphthalene	ND	0.0038		"	"	"	"	"	"	
Gasoline Range Hydrocarbons	ND	0.50		"	"	"	"	"	"	

Date Sampled: **09/05/24 13:50**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Surrogate: 1,2-Dichloroethane-d4	0.0377	94.3 %		50-150		"	"	"	"	
Surrogate: Toluene-d8	0.0394	98.6 %		50-150		"	"	"	"	
Surrogate: 4-Bromofluorobenzene	0.0391	97.8 %		50-150		"	"	"	"	

**Extractable Petroleum Hydrocarbons by 8015**

Date Sampled: **09/05/24 13:50**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
C10-C28 (DRO)	ND	50		mg/kg	1	BHI0242	09/09/24	09/09/24	EPA 8015M	
C28-C36 (ORO)	ND	50		"	"	"	"	"	"	

Date Sampled: **09/05/24 13:50**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Surrogate: o-Terphenyl	8.42	67.3 %		30-150		"	"	"	"	

**PAH by EPA Method 8270D SIM**

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**SEP01-DL-B@3'**  
**2409063-01 (Soil)**

**Summit Scientific**

**PAH by EPA Method 8270D SIM**

Date Sampled: **09/05/24 13:50**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Acenaphthene	ND	0.00500	mg/kg	1	BHI0159	09/06/24	09/07/24	EPA 8270D SIM	
Anthracene	ND	0.00500	"	"	"	"	"	"	
Benzo (a) anthracene	ND	0.00500	"	"	"	"	"	"	
Benzo (a) pyrene	ND	0.00500	"	"	"	"	"	"	
Benzo (b) fluoranthene	ND	0.00500	"	"	"	"	"	"	
Benzo (k) fluoranthene	ND	0.00500	"	"	"	"	"	"	
Chrysene	ND	0.00500	"	"	"	"	"	"	
Dibenz (a,h) anthracene	ND	0.00500	"	"	"	"	"	"	
Fluoranthene	ND	0.00500	"	"	"	"	"	"	
Fluorene	ND	0.00500	"	"	"	"	"	"	
Indeno (1,2,3-cd) pyrene	ND	0.00500	"	"	"	"	"	"	
Pyrene	ND	0.00500	"	"	"	"	"	"	
<b>1-Methylnaphthalene</b>	<b>0.00880</b>	0.00500	"	"	"	"	"	"	
<b>2-Methylnaphthalene</b>	<b>0.0126</b>	0.00500	"	"	"	"	"	"	

Date Sampled: **09/05/24 13:50**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 2-Methylnaphthalene-d10	0.0187	56.2 %	40-150		"	"	"	"	
Surrogate: Fluoranthene-d10	0.0187	56.1 %	40-150		"	"	"	"	

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

Date Sampled: **09/05/24 13:50**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Boron	ND	2.00	mg/L	1	BHI0167	09/06/24	09/06/24	EPA 6020B	

**Total Metals by EPA 6020B**

Date Sampled: **09/05/24 13:50**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
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**Reported:**  
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**SEP01-DL-B@3'**  
**2409063-01 (Soil)**

**Summit Scientific**

**Total Metals by EPA 6020B**

Analyte	Result	Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Arsenic	3.42	0.200	mg/kg dry	1	BHI0213	09/09/24	09/09/24	EPA 6020B	
Barium	67.4	0.400	"	"	"	"	"	"	
Cadmium	ND	0.200	"	"	"	"	"	"	
Copper	7.91	0.400	"	"	"	"	"	"	
Lead	14.5	0.200	"	"	"	"	"	"	
Nickel	6.98	0.400	"	"	"	"	"	"	
Silver	0.0265	0.0200	"	"	"	"	"	"	
Zinc	26.8	0.400	"	"	"	"	"	"	
Selenium	ND	0.260	"	"	"	"	"	"	

**Hexavalent Chromium by EPA Method 7196**

Date Sampled: **09/05/24 13:50**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Chromium, Hexavalent	ND	0.30	mg/kg dry	1	BHI0178	09/06/24	09/06/24	EPA 7196A	

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

Date Sampled: **09/05/24 13:50**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Calcium	48.9	0.0500	mg/L dry	1	BHI0295	09/10/24	09/11/24	EPA 6020B	
Magnesium	5.37	0.0500	"	"	"	"	"	"	
Sodium	2.60	0.0500	"	"	"	"	"	"	

**Calculated Analysis**

Date Sampled: **09/05/24 13:50**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	0.0942	0.00100	units	1	BHI0379	09/12/24	09/12/24	Calculation	

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

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Project Number: 36700  
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09/12/24 09:01

**SEP01-DL-B@3'**  
**2409063-01 (Soil)**

**Summit Scientific**

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

Date Sampled: **09/05/24 13:50**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
% Solids	87.6		%	1	BHI0179	09/06/24	09/06/24	Calculation	

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

Date Sampled: **09/05/24 13:50**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Specific Conductance (EC)	0.247	0.0100	mmhos/cm	1	BHI0301	09/10/24	09/11/24	EPA 120.1	

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

Date Sampled: **09/05/24 13:50**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
pH	8.23		pH Units	1	BHI0299	09/10/24	09/11/24	EPA 9045D	

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Project: PDC - Dunham Tank Battery

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**Reported:**  
09/12/24 09:01

**SEP01-DL-S@1.5'**  
**2409063-03 (Soil)**

**Summit Scientific**

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

Date Sampled: **09/05/24 13:40**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Benzene	ND	0.0020	mg/kg	1	BHI0240	09/09/24	09/09/24	EPA 8260B	
Toluene	ND	0.0050	"	"	"	"	"	"	
Ethylbenzene	ND	0.0050	"	"	"	"	"	"	
Xylenes (total)	ND	0.010	"	"	"	"	"	"	
1,2,4-Trimethylbenzene	ND	0.0050	"	"	"	"	"	"	
1,3,5-Trimethylbenzene	ND	0.0050	"	"	"	"	"	"	
Naphthalene	ND	0.0038	"	"	"	"	"	"	
Gasoline Range Hydrocarbons	ND	0.50	"	"	"	"	"	"	

Date Sampled: **09/05/24 13:40**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 1,2-Dichloroethane-d4	0.0410	103 %	50-150		"	"	"	"	
Surrogate: Toluene-d8	0.0403	101 %	50-150		"	"	"	"	
Surrogate: 4-Bromofluorobenzene	0.0390	97.5 %	50-150		"	"	"	"	

**Extractable Petroleum Hydrocarbons by 8015**

Date Sampled: **09/05/24 13:40**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
C10-C28 (DRO)	ND	50	mg/kg	1	BHI0242	09/09/24	09/09/24	EPA 8015M	
C28-C36 (ORO)	ND	50	"	"	"	"	"	"	

Date Sampled: **09/05/24 13:40**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: o-Terphenyl	7.37	58.9 %	30-150		"	"	"	"	

**PAH by EPA Method 8270D SIM**

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**SEP01-DL-S@1.5'**  
**2409063-03 (Soil)**

**Summit Scientific**

**PAH by EPA Method 8270D SIM**

Date Sampled: **09/05/24 13:40**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Acenaphthene	ND	0.00500	mg/kg	1	BHI0159	09/06/24	09/07/24	EPA 8270D SIM	
Anthracene	ND	0.00500	"	"	"	"	"	"	
Benzo (a) anthracene	ND	0.00500	"	"	"	"	"	"	
Benzo (a) pyrene	ND	0.00500	"	"	"	"	"	"	
Benzo (b) fluoranthene	ND	0.00500	"	"	"	"	"	"	
Benzo (k) fluoranthene	ND	0.00500	"	"	"	"	"	"	
Chrysene	ND	0.00500	"	"	"	"	"	"	
Dibenz (a,h) anthracene	ND	0.00500	"	"	"	"	"	"	
Fluoranthene	ND	0.00500	"	"	"	"	"	"	
Fluorene	ND	0.00500	"	"	"	"	"	"	
Indeno (1,2,3-cd) pyrene	ND	0.00500	"	"	"	"	"	"	
Pyrene	ND	0.00500	"	"	"	"	"	"	
1-Methylnaphthalene	ND	0.00500	"	"	"	"	"	"	
2-Methylnaphthalene	ND	0.00500	"	"	"	"	"	"	

Date Sampled: **09/05/24 13:40**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 2-Methylnaphthalene-d10	0.0189	56.7 %	40-150		"	"	"	"	
Surrogate: Fluoranthene-d10	0.0183	55.0 %	40-150		"	"	"	"	

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

Date Sampled: **09/05/24 13:40**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Boron	ND	2.00	mg/L	1	BHI0167	09/06/24	09/06/24	EPA 6020B	

**Total Metals by EPA 6020B**

Date Sampled: **09/05/24 13:40**

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

Project Number: 36700  
Project Manager: Karen Olson

**Reported:**  
09/12/24 09:01

**SEP01-DL-S@1.5'**  
**2409063-03 (Soil)**

**Summit Scientific**

**Total Metals by EPA 6020B**

Analyte	Result	Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Arsenic	2.83	0.200	mg/kg dry	1	BHI0213	09/09/24	09/09/24	EPA 6020B	
Barium	76.7	0.400	"	"	"	"	"	"	
Cadmium	ND	0.200	"	"	"	"	"	"	
Copper	8.28	0.400	"	"	"	"	"	"	
Lead	6.89	0.200	"	"	"	"	"	"	
Nickel	7.69	0.400	"	"	"	"	"	"	
Silver	0.0279	0.0200	"	"	"	"	"	"	
Zinc	26.7	0.400	"	"	"	"	"	"	
Selenium	ND	0.260	"	"	"	"	"	"	

**Hexavalent Chromium by EPA Method 7196**

Date Sampled: **09/05/24 13:40**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Chromium, Hexavalent	ND	0.30	mg/kg dry	1	BHI0178	09/06/24	09/06/24	EPA 7196A	

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

Date Sampled: **09/05/24 13:40**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Calcium	25.3	0.0500	mg/L dry	1	BHI0295	09/10/24	09/11/24	EPA 6020B	
Magnesium	3.36	0.0500	"	"	"	"	"	"	
Sodium	0.722	0.0500	"	"	"	"	"	"	

**Calculated Analysis**

Date Sampled: **09/05/24 13:40**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	0.0358	0.00100	units	1	BHI0379	09/12/24	09/12/24	Calculation	

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

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Broomfield CO, 80020

Project: PDC - Dunham Tank Battery

Project Number: 36700  
Project Manager: Karen Olson

**Reported:**  
09/12/24 09:01

**SEP01-DL-S@1.5'**  
**2409063-03 (Soil)**

**Summit Scientific**

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

Date Sampled: **09/05/24 13:40**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
% Solids	87.0			%	1	BHI0179	09/06/24	09/06/24	Calculation	

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

Date Sampled: **09/05/24 13:40**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Specific Conductance (EC)	0.143	0.0100		mmhos/cm	1	BHI0301	09/10/24	09/11/24	EPA 120.1	

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

Date Sampled: **09/05/24 13:40**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
pH	8.38			pH Units	1	BHI0299	09/10/24	09/11/24	EPA 9045D	

Summit Scientific

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

Project: PDC - Dunham Tank Battery

Project Number: 36700  
Project Manager: Karen Olson

**Reported:**  
09/12/24 09:01

**SEP01-FL@3'**  
**2409063-06 (Soil)**

**Summit Scientific**

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

Date Sampled: **09/05/24 13:55**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Benzene	ND	0.0020	mg/kg	1	BHI0240	09/09/24	09/09/24	EPA 8260B	
Toluene	ND	0.0050	"	"	"	"	"	"	
Ethylbenzene	ND	0.0050	"	"	"	"	"	"	
Xylenes (total)	ND	0.010	"	"	"	"	"	"	
1,2,4-Trimethylbenzene	ND	0.0050	"	"	"	"	"	"	
1,3,5-Trimethylbenzene	ND	0.0050	"	"	"	"	"	"	
Naphthalene	ND	0.0038	"	"	"	"	"	"	
Gasoline Range Hydrocarbons	ND	0.50	"	"	"	"	"	"	

Date Sampled: **09/05/24 13:55**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 1,2-Dichloroethane-d4	0.0423	106 %	50-150		"	"	"	"	
Surrogate: Toluene-d8	0.0403	101 %	50-150		"	"	"	"	
Surrogate: 4-Bromofluorobenzene	0.0394	98.6 %	50-150		"	"	"	"	

**Extractable Petroleum Hydrocarbons by 8015**

Date Sampled: **09/05/24 13:55**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
C10-C28 (DRO)	ND	50	mg/kg	1	BHI0242	09/09/24	09/10/24	EPA 8015M	
C28-C36 (ORO)	ND	50	"	"	"	"	"	"	

Date Sampled: **09/05/24 13:55**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: o-Terphenyl	8.75	70.0 %	30-150		"	"	"	"	

**PAH by EPA Method 8270D SIM**

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

Project: PDC - Dunham Tank Battery

Project Number: 36700  
Project Manager: Karen Olson

**Reported:**  
09/12/24 09:01

**SEP01-FL@3'**  
**2409063-06 (Soil)**

**Summit Scientific**

**PAH by EPA Method 8270D SIM**

Date Sampled: **09/05/24 13:55**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Acenaphthene	ND	0.00500	mg/kg	1	BHI0159	09/06/24	09/07/24	EPA 8270D SIM	
Anthracene	ND	0.00500	"	"	"	"	"	"	
Benzo (a) anthracene	ND	0.00500	"	"	"	"	"	"	
Benzo (a) pyrene	ND	0.00500	"	"	"	"	"	"	
Benzo (b) fluoranthene	ND	0.00500	"	"	"	"	"	"	
Benzo (k) fluoranthene	ND	0.00500	"	"	"	"	"	"	
Chrysene	ND	0.00500	"	"	"	"	"	"	
Dibenz (a,h) anthracene	ND	0.00500	"	"	"	"	"	"	
Fluoranthene	ND	0.00500	"	"	"	"	"	"	
Fluorene	ND	0.00500	"	"	"	"	"	"	
Indeno (1,2,3-cd) pyrene	ND	0.00500	"	"	"	"	"	"	
Pyrene	ND	0.00500	"	"	"	"	"	"	
1-Methylnaphthalene	ND	0.00500	"	"	"	"	"	"	
2-Methylnaphthalene	ND	0.00500	"	"	"	"	"	"	

Date Sampled: **09/05/24 13:55**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 2-Methylnaphthalene-d10	0.0170	50.9 %	40-150		"	"	"	"	
Surrogate: Fluoranthene-d10	0.0171	51.2 %	40-150		"	"	"	"	

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

Date Sampled: **09/05/24 13:55**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Boron	ND	2.00	mg/L	1	BHI0167	09/06/24	09/06/24	EPA 6020B	

**Total Metals by EPA 6020B**

Date Sampled: **09/05/24 13:55**

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

Project: PDC - Dunham Tank Battery

Project Number: 36700  
Project Manager: Karen Olson

**Reported:**  
09/12/24 09:01

**SEP01-FL@3'**  
**2409063-06 (Soil)**

**Summit Scientific**

**Total Metals by EPA 6020B**

Analyte	Result	Limit	Units	Dilution	Batch	Prepared	Analyzed	Method
Arsenic	3.08	0.200	mg/kg dry	1	BHI0213	09/09/24	09/09/24	EPA 6020B
Barium	84.9	0.400	"	"	"	"	"	"
Cadmium	0.450	0.200	"	"	"	"	"	"
Copper	9.16	0.400	"	"	"	"	"	"
Lead	9.47	0.200	"	"	"	"	"	"
Nickel	8.74	0.400	"	"	"	"	"	"
Silver	0.0328	0.0200	"	"	"	"	"	"
Zinc	32.2	0.400	"	"	"	"	"	"
Selenium	ND	0.260	"	"	"	"	"	"

**Hexavalent Chromium by EPA Method 7196**

Date Sampled: 09/05/24 13:55

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Chromium, Hexavalent	ND	0.30	mg/kg dry	1	BHI0178	09/06/24	09/06/24	EPA 7196A	

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

Date Sampled: 09/05/24 13:55

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Calcium	32.3	0.0500	mg/L dry	1	BHI0295	09/10/24	09/11/24	EPA 6020B	
Magnesium	13.2	0.0500	"	"	"	"	"	"	
Sodium	87.1	0.0500	"	"	"	"	"	"	

**Calculated Analysis**

Date Sampled: 09/05/24 13:55

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	3.26	0.00100	units	1	BHI0379	09/12/24	09/12/24	Calculation	

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

Date Sampled: 09/05/24 13:55

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

Project: PDC - Dunham Tank Battery

Project Number: 36700  
Project Manager: Karen Olson

**Reported:**  
09/12/24 09:01

**SEP01-FL@3'**  
**2409063-06 (Soil)**

**Summit Scientific**

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

% Solids	83.5	%	1	BHI0179	09/06/24	09/06/24	Calculation
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**Specific Conductance by EPA Method 120.1, Saturated Paste Extraction**

Date Sampled: **09/05/24 13:55**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Specific Conductance (EC)	<b>0.398</b>	0.0100	mmhos/cm	1	BHI0301	09/10/24	09/11/24	EPA 120.1	

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

Date Sampled: **09/05/24 13:55**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
pH	<b>8.59</b>		pH Units	1	BHI0299	09/10/24	09/11/24	EPA 9045D	

Summit Scientific

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

Project: PDC - Dunham Tank Battery

Project Number: 36700  
Project Manager: Karen Olson

**Reported:**  
09/12/24 09:01

**AST01@0-6"**  
**2409063-07 (Soil)**

**Summit Scientific**

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

Date Sampled: **09/05/24 13:05**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Benzene	ND	0.0020	mg/kg	1	BHI0240	09/09/24	09/09/24	EPA 8260B	
Toluene	ND	0.0050	"	"	"	"	"	"	
Ethylbenzene	ND	0.0050	"	"	"	"	"	"	
Xylenes (total)	ND	0.010	"	"	"	"	"	"	
1,2,4-Trimethylbenzene	ND	0.0050	"	"	"	"	"	"	
1,3,5-Trimethylbenzene	ND	0.0050	"	"	"	"	"	"	
Naphthalene	ND	0.0038	"	"	"	"	"	"	
Gasoline Range Hydrocarbons	ND	0.50	"	"	"	"	"	"	

Date Sampled: **09/05/24 13:05**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 1,2-Dichloroethane-d4	0.0404	101 %	50-150		"	"	"	"	
Surrogate: Toluene-d8	0.0403	101 %	50-150		"	"	"	"	
Surrogate: 4-Bromofluorobenzene	0.0388	96.9 %	50-150		"	"	"	"	

**Extractable Petroleum Hydrocarbons by 8015**

Date Sampled: **09/05/24 13:05**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
C10-C28 (DRO)	ND	50	mg/kg	1	BHI0242	09/09/24	09/10/24	EPA 8015M	
C28-C36 (ORO)	ND	50	"	"	"	"	"	"	

Date Sampled: **09/05/24 13:05**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: o-Terphenyl	10.1	80.9 %	30-150		"	"	"	"	

**PAH by EPA Method 8270D SIM**

Summit Scientific

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

Project: PDC - Dunham Tank Battery

Project Number: 36700  
Project Manager: Karen Olson

**Reported:**  
09/12/24 09:01

**AST01@0-6"**  
**2409063-07 (Soil)**

**Summit Scientific**

**PAH by EPA Method 8270D SIM**

Date Sampled: **09/05/24 13:05**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Acenaphthene	ND	0.00500	mg/kg	1	BHI0159	09/06/24	09/07/24	EPA 8270D SIM	
Anthracene	ND	0.00500	"	"	"	"	"	"	
Benzo (a) anthracene	ND	0.00500	"	"	"	"	"	"	
Benzo (a) pyrene	ND	0.00500	"	"	"	"	"	"	
Benzo (b) fluoranthene	ND	0.00500	"	"	"	"	"	"	
Benzo (k) fluoranthene	ND	0.00500	"	"	"	"	"	"	
Chrysene	ND	0.00500	"	"	"	"	"	"	
Dibenz (a,h) anthracene	ND	0.00500	"	"	"	"	"	"	
Fluoranthene	ND	0.00500	"	"	"	"	"	"	
Fluorene	ND	0.00500	"	"	"	"	"	"	
Indeno (1,2,3-cd) pyrene	ND	0.00500	"	"	"	"	"	"	
Pyrene	ND	0.00500	"	"	"	"	"	"	
1-Methylnaphthalene	ND	0.00500	"	"	"	"	"	"	
2-Methylnaphthalene	ND	0.00500	"	"	"	"	"	"	

Date Sampled: **09/05/24 13:05**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 2-Methylnaphthalene-d10	0.0198	59.5 %	40-150		"	"	"	"	
Surrogate: Fluoranthene-d10	0.0197	59.1 %	40-150		"	"	"	"	

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

Date Sampled: **09/05/24 13:05**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Boron	ND	2.00	mg/L	1	BHI0167	09/06/24	09/06/24	EPA 6020B	

**Total Metals by EPA 6020B**

Date Sampled: **09/05/24 13:05**

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

Project: PDC - Dunham Tank Battery

Project Number: 36700  
Project Manager: Karen Olson

**Reported:**  
09/12/24 09:01

**AST01@0-6"**  
**2409063-07 (Soil)**

**Summit Scientific**

**Total Metals by EPA 6020B**

Analyte	Result	Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Arsenic	1.95	0.200	mg/kg dry	1	BHI0213	09/09/24	09/09/24	EPA 6020B	
Barium	31.4	0.400	"	"	"	"	"	"	
Cadmium	ND	0.200	"	"	"	"	"	"	
Copper	5.45	0.400	"	"	"	"	"	"	
Lead	2.96	0.200	"	"	"	"	"	"	
Nickel	3.62	0.400	"	"	"	"	"	"	
Silver	ND	0.0200	"	"	"	"	"	"	
Zinc	12.9	0.400	"	"	"	"	"	"	
Selenium	ND	0.260	"	"	"	"	"	"	

**Hexavalent Chromium by EPA Method 7196**

Date Sampled: **09/05/24 13:05**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Chromium, Hexavalent	ND	0.30	mg/kg dry	1	BHI0178	09/06/24	09/06/24	EPA 7196A	

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

Date Sampled: **09/05/24 13:05**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Calcium	35.4	0.0500	mg/L dry	1	BHI0295	09/10/24	09/11/24	EPA 6020B	
Magnesium	9.68	0.0500	"	"	"	"	"	"	
Sodium	24.2	0.0500	"	"	"	"	"	"	

**Calculated Analysis**

Date Sampled: **09/05/24 13:05**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	0.930	0.00100	units	1	BHI0379	09/12/24	09/12/24	Calculation	

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

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

Project: PDC - Dunham Tank Battery

Project Number: 36700  
Project Manager: Karen Olson

**Reported:**  
09/12/24 09:01

**AST01@0-6"**  
**2409063-07 (Soil)**

**Summit Scientific**

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

Date Sampled: **09/05/24 13:05**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
% Solids	96.2			%	1	BHI0179	09/06/24	09/06/24	Calculation	

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

Date Sampled: **09/05/24 13:05**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Specific Conductance (EC)	0.492	0.0100		mmhos/cm	1	BHI0301	09/10/24	09/11/24	EPA 120.1	

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

Date Sampled: **09/05/24 13:05**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
pH	7.98			pH Units	1	BHI0299	09/10/24	09/11/24	EPA 9045D	

Summit Scientific

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

Project: PDC - Dunham Tank Battery

Project Number: 36700  
Project Manager: Karen Olson

**Reported:**  
09/12/24 09:01

**BKG01@0-6''**  
**2409063-08 (Soil)**

**Summit Scientific**

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

Date Sampled: **09/05/24 14:04**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Boron	ND	2.00	mg/L	1	BHI0167	09/06/24	09/06/24	EPA 6020B	

**Total Metals by EPA 6020B**

Date Sampled: **09/05/24 14:04**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Arsenic	3.09	0.200	mg/kg dry	1	BHI0213	09/09/24	09/09/24	EPA 6020B	
Barium	90.8	0.400	"	"	"	"	"	"	
Cadmium	0.267	0.200	"	"	"	"	"	"	
Copper	9.47	0.400	"	"	"	"	"	"	
Lead	9.94	0.200	"	"	"	"	"	"	
Nickel	8.89	0.400	"	"	"	"	"	"	
Silver	0.0410	0.0200	"	"	"	"	"	"	
Zinc	32.8	0.400	"	"	"	"	"	"	
Selenium	ND	0.260	"	"	"	"	"	"	

**Hexavalent Chromium by EPA Method 7196**

Date Sampled: **09/05/24 14:04**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Chromium, Hexavalent	ND	0.30	mg/kg dry	1	BHI0178	09/06/24	09/06/24	EPA 7196A	

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

Date Sampled: **09/05/24 14:04**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Calcium	41.6	0.0500	mg/L dry	1	BHI0295	09/10/24	09/11/24	EPA 6020B	
Magnesium	7.76	0.0500	"	"	"	"	"	"	
Sodium	29.5	0.0500	"	"	"	"	"	"	

Summit Scientific

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

Project: PDC - Dunham Tank Battery

Project Number: 36700  
Project Manager: Karen Olson

**Reported:**  
09/12/24 09:01

**BKG01@0-6''**  
**2409063-08 (Soil)**

**Summit Scientific**

**Calculated Analysis**

Date Sampled: **09/05/24 14:04**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	1.10	0.00100	units	1	BHI0379	09/12/24	09/12/24	Calculation	

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

Date Sampled: **09/05/24 14:04**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
% Solids	92.9		%	1	BHI0179	09/06/24	09/06/24	Calculation	

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

Date Sampled: **09/05/24 14:04**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Specific Conductance (EC)	0.279	0.0100	mmhos/cm	1	BHI0301	09/10/24	09/11/24	EPA 120.1	

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

Date Sampled: **09/05/24 14:04**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
pH	8.34		pH Units	1	BHI0299	09/10/24	09/11/24	EPA 9045D	

Summit Scientific

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

Project: PDC - Dunham Tank Battery

Project Number: 36700  
Project Manager: Karen Olson

**Reported:**  
09/12/24 09:01

**BKG01@1.5'**  
**2409063-09 (Soil)**

**Summit Scientific**

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

Date Sampled: **09/05/24 14:08**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
<b>Boron</b>	<b>3.24</b>	2.00	mg/L	1	BHI0167	09/06/24	09/06/24	EPA 6020B	

**Total Metals by EPA 6020B**

Date Sampled: **09/05/24 14:08**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
<b>Arsenic</b>	<b>3.56</b>	0.200	mg/kg dry	1	BHI0213	09/09/24	09/09/24	EPA 6020B	
<b>Barium</b>	<b>118</b>	0.400	"	"	"	"	"	"	
<b>Cadmium</b>	<b>0.264</b>	0.200	"	"	"	"	"	"	
<b>Copper</b>	<b>11.2</b>	0.400	"	"	"	"	"	"	
<b>Lead</b>	<b>9.12</b>	0.200	"	"	"	"	"	"	
<b>Nickel</b>	<b>12.7</b>	0.400	"	"	"	"	"	"	
<b>Silver</b>	<b>0.0375</b>	0.0200	"	"	"	"	"	"	
<b>Zinc</b>	<b>35.4</b>	0.400	"	"	"	"	"	"	
Selenium	ND	0.260	"	"	"	"	"	"	

**Hexavalent Chromium by EPA Method 7196**

Date Sampled: **09/05/24 14:08**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Chromium, Hexavalent	ND	0.30	mg/kg dry	1	BHI0230	09/09/24	09/09/24	EPA 7196A	

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

Date Sampled: **09/05/24 14:08**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
<b>Calcium</b>	<b>303</b>	0.0500	mg/L dry	1	BHI0295	09/10/24	09/11/24	EPA 6020B	
<b>Magnesium</b>	<b>169</b>	0.0500	"	"	"	"	"	"	
<b>Sodium</b>	<b>570</b>	0.0500	"	"	"	"	"	"	

**Calculated Analysis**

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

Project: PDC - Dunham Tank Battery

Project Number: 36700  
Project Manager: Karen Olson

**Reported:**  
09/12/24 09:01

**BKG01@1.5'**  
**2409063-09 (Soil)**

**Summit Scientific**

**Calculated Analysis**

Date Sampled: **09/05/24 14:08**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	6.51	0.00100	units	1	BHI0379	09/12/24	09/12/24	Calculation	

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

Date Sampled: **09/05/24 14:08**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
% Solids	91.6		%	1	BHI0179	09/06/24	09/06/24	Calculation	

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

Date Sampled: **09/05/24 14:08**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Specific Conductance (EC)	4.62	0.0100	mmhos/cm	1	BHI0301	09/10/24	09/11/24	EPA 120.1	

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

Date Sampled: **09/05/24 14:08**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
pH	7.93		pH Units	1	BHI0299	09/10/24	09/11/24	EPA 9045D	

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Project: PDC - Dunham Tank Battery

Project Number: 36700  
Project Manager: Karen Olson

**Reported:**  
09/12/24 09:01

**BKG01@3'**  
**2409063-10 (Soil)**

**Summit Scientific**

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

Date Sampled: **09/05/24 14:12**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Boron	ND	2.00	mg/L	1	BHI0167	09/06/24	09/06/24	EPA 6020B	

**Total Metals by EPA 6020B**

Date Sampled: **09/05/24 14:12**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Arsenic	2.42	0.200	mg/kg dry	1	BHI0213	09/09/24	09/09/24	EPA 6020B	
Barium	73.6	0.400	"	"	"	"	"	"	
Cadmium	ND	0.200	"	"	"	"	"	"	
Copper	5.97	0.400	"	"	"	"	"	"	
Lead	5.79	0.200	"	"	"	"	"	"	
Nickel	5.86	0.400	"	"	"	"	"	"	
Silver	0.0305	0.0200	"	"	"	"	"	"	
Zinc	21.0	0.400	"	"	"	"	"	"	
Selenium	ND	0.260	"	"	"	"	"	"	

**Hexavalent Chromium by EPA Method 7196**

Date Sampled: **09/05/24 14:12**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Chromium, Hexavalent	ND	0.30	mg/kg dry	1	BHI0230	09/09/24	09/09/24	EPA 7196A	

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

Date Sampled: **09/05/24 14:12**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Calcium	106	0.0500	mg/L dry	1	BHI0295	09/10/24	09/11/24	EPA 6020B	
Magnesium	211	0.0500	"	"	"	"	"	"	
Sodium	1930	0.0500	"	"	"	"	"	"	

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Project Number: 36700  
Project Manager: Karen Olson

**Reported:**  
09/12/24 09:01

**BKG01@3'**  
**2409063-10 (Soil)**

**Summit Scientific**

**Calculated Analysis**

Date Sampled: **09/05/24 14:12**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	24.9	0.00100	units	1	BHI0379	09/12/24	09/12/24	Calculation	

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

Date Sampled: **09/05/24 14:12**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
% Solids	88.7		%	1	BHI0179	09/06/24	09/06/24	Calculation	

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

Date Sampled: **09/05/24 14:12**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Specific Conductance (EC)	10.2	0.0100	mmhos/cm	1	BHI0301	09/10/24	09/11/24	EPA 120.1	

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

Date Sampled: **09/05/24 14:12**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
pH	8.20		pH Units	1	BHI0299	09/10/24	09/11/24	EPA 9045D	

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6855 W. 119th Ave.  
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Project: PDC - Dunham Tank Battery

Project Number: 36700  
Project Manager: Karen Olson

**Reported:**  
09/12/24 09:01

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

#### Summit Scientific

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

#### Batch BHI0240 - EPA 5030 Soil MS

##### Blank (BHI0240-BLK1)

Prepared & Analyzed: 09/09/24

Benzene	ND	0.0020	mg/kg								
Toluene	ND	0.0050	"								
Ethylbenzene	ND	0.0050	"								
Xylenes (total)	ND	0.010	"								
1,2,4-Trimethylbenzene	ND	0.0050	"								
1,3,5-Trimethylbenzene	ND	0.0050	"								
Naphthalene	ND	0.0038	"								
Gasoline Range Hydrocarbons	ND	0.50	"								
<i>Surrogate: 1,2-Dichloroethane-d4</i>	<i>0.0360</i>		<i>"</i>	<i>0.0400</i>		<i>90.0</i>		<i>50-150</i>			
<i>Surrogate: Toluene-d8</i>	<i>0.0394</i>		<i>"</i>	<i>0.0400</i>		<i>98.4</i>		<i>50-150</i>			
<i>Surrogate: 4-Bromofluorobenzene</i>	<i>0.0379</i>		<i>"</i>	<i>0.0400</i>		<i>94.8</i>		<i>50-150</i>			

##### LCS (BHI0240-BS1)

Prepared & Analyzed: 09/09/24

Benzene	0.102	0.0020	mg/kg	0.100		102		70-130			
Toluene	0.101	0.0050	"	0.100		101		70-130			
Ethylbenzene	0.109	0.0050	"	0.100		109		70-130			
m,p-Xylene	0.208	0.010	"	0.200		104		70-130			
o-Xylene	0.102	0.0050	"	0.100		102		70-130			
1,2,4-Trimethylbenzene	0.101	0.0050	"	0.100		101		70-130			
1,3,5-Trimethylbenzene	0.105	0.0050	"	0.100		105		70-130			
Naphthalene	0.0888	0.0038	"	0.100		88.8		70-130			
<i>Surrogate: 1,2-Dichloroethane-d4</i>	<i>0.0411</i>		<i>"</i>	<i>0.0400</i>		<i>103</i>		<i>50-150</i>			
<i>Surrogate: Toluene-d8</i>	<i>0.0404</i>		<i>"</i>	<i>0.0400</i>		<i>101</i>		<i>50-150</i>			
<i>Surrogate: 4-Bromofluorobenzene</i>	<i>0.0387</i>		<i>"</i>	<i>0.0400</i>		<i>96.7</i>		<i>50-150</i>			

##### Matrix Spike (BHI0240-MS1)

Source: 2409063-01

Prepared & Analyzed: 09/09/24

Benzene	0.115	0.0020	mg/kg	0.100	ND	115		70-130			
Toluene	0.111	0.0050	"	0.100	ND	111		70-130			
Ethylbenzene	0.113	0.0050	"	0.100	ND	113		70-130			
m,p-Xylene	0.217	0.010	"	0.200	ND	108		70-130			
o-Xylene	0.104	0.0050	"	0.100	ND	104		70-130			
1,2,4-Trimethylbenzene	0.0993	0.0050	"	0.100	ND	99.3		70-130			
1,3,5-Trimethylbenzene	0.103	0.0050	"	0.100	ND	103		70-130			
Naphthalene	0.0848	0.0038	"	0.100	ND	84.8		70-130			
<i>Surrogate: 1,2-Dichloroethane-d4</i>	<i>0.0436</i>		<i>"</i>	<i>0.0400</i>		<i>109</i>		<i>50-150</i>			
<i>Surrogate: Toluene-d8</i>	<i>0.0410</i>		<i>"</i>	<i>0.0400</i>		<i>103</i>		<i>50-150</i>			
<i>Surrogate: 4-Bromofluorobenzene</i>	<i>0.0397</i>		<i>"</i>	<i>0.0400</i>		<i>99.2</i>		<i>50-150</i>			

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Project: PDC - Dunham Tank Battery

Project Number: 36700  
Project Manager: Karen Olson

**Reported:**  
09/12/24 09:01

**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 BHI0240 - EPA 5030 Soil MS**

Matrix Spike Dup (BHI0240-MSD1)	Source: 2409063-01			Prepared & Analyzed: 09/09/24						
Benzene	0.101	0.0020	mg/kg	0.100	ND	101	70-130	12.6	30	
Toluene	0.0982	0.0050	"	0.100	ND	98.2	70-130	12.3	30	
Ethylbenzene	0.104	0.0050	"	0.100	ND	104	70-130	8.77	30	
m,p-Xylene	0.199	0.010	"	0.200	ND	99.6	70-130	8.58	30	
o-Xylene	0.0992	0.0050	"	0.100	ND	99.2	70-130	5.13	30	
1,2,4-Trimethylbenzene	0.0944	0.0050	"	0.100	ND	94.4	70-130	5.02	30	
1,3,5-Trimethylbenzene	0.0958	0.0050	"	0.100	ND	95.8	70-130	7.15	30	
Naphthalene	0.0895	0.0038	"	0.100	ND	89.5	70-130	5.37	30	
Surrogate: 1,2-Dichloroethane-d4	0.0406		"	0.0400		101	50-150			
Surrogate: Toluene-d8	0.0389		"	0.0400		97.2	50-150			
Surrogate: 4-Bromofluorobenzene	0.0403		"	0.0400		101	50-150			

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Broomfield CO, 80020

Project: PDC - Dunham Tank Battery

Project Number: 36700  
Project Manager: Karen Olson

**Reported:**  
09/12/24 09:01

**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 BHI0242 - EPA 3550A**

**Blank (BHI0242-BLK1)**

Prepared & Analyzed: 09/09/24

C10-C28 (DRO)	ND	50	mg/kg								
C28-C36 (ORO)	ND	50	"								
Surrogate: <i>o</i> -Terphenyl	14.3		"	12.5		115		30-150			

**LCS (BHI0242-BS1)**

Prepared & Analyzed: 09/09/24

C10-C28 (DRO)	439	50	mg/kg	500		87.8		70-130			
Surrogate: <i>o</i> -Terphenyl	13.5		"	12.5		108		30-150			

**Matrix Spike (BHI0242-MS1)**

Source: 2409063-01

Prepared & Analyzed: 09/09/24

C10-C28 (DRO)	488	50	mg/kg	500	ND	97.6		70-130			
Surrogate: <i>o</i> -Terphenyl	13.2		"	12.5		106		30-150			

**Matrix Spike Dup (BHI0242-MSD1)**

Source: 2409063-01

Prepared & Analyzed: 09/09/24

C10-C28 (DRO)	544	50	mg/kg	500	ND	109		70-130	10.9	20	
Surrogate: <i>o</i> -Terphenyl	13.8		"	12.5		110		30-150			

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Project: PDC - Dunham Tank Battery

Project Number: 36700  
Project Manager: Karen Olson

**Reported:**  
09/12/24 09:01

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

**Summit Scientific**

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

**Batch BHI0159 - EPA 5030 Soil MS**

**Blank (BHI0159-BLK1)**

Prepared & Analyzed: 09/06/24

Acenaphthene	ND	0.00500	mg/kg							
Anthracene	ND	0.00500	"							
Benzo (a) anthracene	ND	0.00500	"							
Benzo (a) pyrene	ND	0.00500	"							
Benzo (b) fluoranthene	ND	0.00500	"							
Benzo (k) fluoranthene	ND	0.00500	"							
Chrysene	ND	0.00500	"							
Dibenz (a,h) anthracene	ND	0.00500	"							
Fluoranthene	ND	0.00500	"							
Fluorene	ND	0.00500	"							
Indeno (1,2,3-cd) pyrene	ND	0.00500	"							
Pyrene	ND	0.00500	"							
1-Methylnaphthalene	ND	0.00500	"							
2-Methylnaphthalene	ND	0.00500	"							
Surrogate: 2-Methylnaphthalene-d10	0.0227		"	0.0333	68.2	40-150				
Surrogate: Fluoranthene-d10	0.0235		"	0.0333	70.6	40-150				

**LCS (BHI0159-BS1)**

Prepared & Analyzed: 09/06/24

Acenaphthene	0.0212	0.00500	mg/kg	0.0333	63.7	31-137				
Anthracene	0.0212	0.00500	"	0.0333	63.6	30-120				
Benzo (a) anthracene	0.0240	0.00500	"	0.0333	72.0	30-120				
Benzo (a) pyrene	0.0230	0.00500	"	0.0333	69.1	30-120				
Benzo (b) fluoranthene	0.0224	0.00500	"	0.0333	67.1	30-120				
Benzo (k) fluoranthene	0.0216	0.00500	"	0.0333	64.9	30-120				
Chrysene	0.0220	0.00500	"	0.0333	66.0	30-120				
Dibenz (a,h) anthracene	0.0240	0.00500	"	0.0333	71.8	30-120				
Fluoranthene	0.0216	0.00500	"	0.0333	64.9	30-120				
Fluorene	0.0217	0.00500	"	0.0333	65.1	30-120				
Indeno (1,2,3-cd) pyrene	0.0244	0.00500	"	0.0333	73.3	30-120				
Pyrene	0.0222	0.00500	"	0.0333	66.7	35-142				
1-Methylnaphthalene	0.0221	0.00500	"	0.0333	66.4	35-142				
2-Methylnaphthalene	0.0209	0.00500	"	0.0333	62.7	35-142				
Surrogate: 2-Methylnaphthalene-d10	0.0226		"	0.0333	67.7	40-150				
Surrogate: Fluoranthene-d10	0.0224		"	0.0333	67.2	40-150				

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Project: PDC - Dunham Tank Battery

Project Number: 36700  
Project Manager: Karen Olson

**Reported:**  
09/12/24 09:01

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

**Summit Scientific**

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

**Batch BHI0159 - EPA 5030 Soil MS**

<b>Matrix Spike (BHI0159-MS1)</b>	<b>Source: 2409056-01</b>			<b>Prepared &amp; Analyzed: 09/06/24</b>							
Acenaphthene	0.0194	0.00500	mg/kg	0.0333	ND	58.3	31-137				
Anthracene	0.0195	0.00500	"	0.0333	ND	58.5	30-120				
Benzo (a) anthracene	0.0223	0.00500	"	0.0333	ND	67.0	30-120				
Benzo (a) pyrene	0.0205	0.00500	"	0.0333	ND	61.6	30-120				
Benzo (b) fluoranthene	0.0201	0.00500	"	0.0333	ND	60.4	30-120				
Benzo (k) fluoranthene	0.0191	0.00500	"	0.0333	ND	57.4	30-120				
Chrysene	0.0202	0.00500	"	0.0333	ND	60.6	30-120				
Dibenz (a,h) anthracene	0.0206	0.00500	"	0.0333	ND	61.7	30-120				
Fluoranthene	0.0197	0.00500	"	0.0333	ND	59.1	30-120				
Fluorene	0.0198	0.00500	"	0.0333	ND	59.4	30-120				
Indeno (1,2,3-cd) pyrene	0.0214	0.00500	"	0.0333	ND	64.2	30-120				
Pyrene	0.0213	0.00500	"	0.0333	ND	63.9	35-142				
1-Methylnaphthalene	0.0190	0.00500	"	0.0333	ND	56.9	15-130				
2-Methylnaphthalene	0.0172	0.00500	"	0.0333	ND	51.5	15-130				
<i>Surrogate: 2-Methylnaphthalene-d10</i>	<i>0.0196</i>		<i>"</i>	<i>0.0333</i>		<i>58.8</i>	<i>40-150</i>				
<i>Surrogate: Fluoranthene-d10</i>	<i>0.0197</i>		<i>"</i>	<i>0.0333</i>		<i>59.2</i>	<i>40-150</i>				

<b>Matrix Spike Dup (BHI0159-MSD1)</b>	<b>Source: 2409056-01</b>			<b>Prepared &amp; Analyzed: 09/06/24</b>							
Acenaphthene	0.0201	0.00500	mg/kg	0.0333	ND	60.4	31-137	3.57	30		
Anthracene	0.0207	0.00500	"	0.0333	ND	62.2	30-120	6.14	30		
Benzo (a) anthracene	0.0230	0.00500	"	0.0333	ND	68.9	30-120	2.73	30		
Benzo (a) pyrene	0.0212	0.00500	"	0.0333	ND	63.5	30-120	3.02	30		
Benzo (b) fluoranthene	0.0209	0.00500	"	0.0333	ND	62.6	30-120	3.53	30		
Benzo (k) fluoranthene	0.0194	0.00500	"	0.0333	ND	58.1	30-120	1.05	30		
Chrysene	0.0207	0.00500	"	0.0333	ND	62.2	30-120	2.65	30		
Dibenz (a,h) anthracene	0.0224	0.00500	"	0.0333	ND	67.2	30-120	8.65	30		
Fluoranthene	0.0207	0.00500	"	0.0333	ND	62.1	30-120	4.96	30		
Fluorene	0.0207	0.00500	"	0.0333	ND	62.1	30-120	4.47	30		
Indeno (1,2,3-cd) pyrene	0.0228	0.00500	"	0.0333	ND	68.4	30-120	6.35	30		
Pyrene	0.0225	0.00500	"	0.0333	ND	67.4	35-142	5.30	30		
1-Methylnaphthalene	0.0194	0.00500	"	0.0333	ND	58.3	15-130	2.40	50		
2-Methylnaphthalene	0.0186	0.00500	"	0.0333	ND	55.7	15-130	7.82	50		
<i>Surrogate: 2-Methylnaphthalene-d10</i>	<i>0.0196</i>		<i>"</i>	<i>0.0333</i>		<i>58.7</i>	<i>40-150</i>				
<i>Surrogate: Fluoranthene-d10</i>	<i>0.0211</i>		<i>"</i>	<i>0.0333</i>		<i>63.3</i>	<i>40-150</i>				

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

Project: PDC - Dunham Tank Battery

Project Number: 36700  
Project Manager: Karen Olson

**Reported:**  
09/12/24 09:01

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

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

**Batch BHI0167 - EPA 3050B**

**Blank (BHI0167-BLK1)**

Prepared & Analyzed: 09/06/24

Boron ND 2.00 mg/L

**LCS (BHI0167-BS1)**

Prepared & Analyzed: 09/06/24

Boron 5.01 2.00 mg/L 5.00 100 80-120

**Duplicate (BHI0167-DUP1)**

Source: 2409051-01

Prepared & Analyzed: 09/06/24

Boron 0.562 2.00 mg/L 0.552 1.69 20

**Matrix Spike (BHI0167-MS1)**

Source: 2409051-01

Prepared & Analyzed: 09/06/24

Boron 5.39 2.00 mg/L 4.97 0.552 97.4 75-125

**Matrix Spike Dup (BHI0167-MSD1)**

Source: 2409051-01

Prepared & Analyzed: 09/06/24

Boron 5.55 2.00 mg/L 4.97 0.552 101 75-125 2.87 25

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Project: PDC - Dunham Tank Battery

Project Number: 36700  
Project Manager: Karen Olson

**Reported:**  
09/12/24 09:01

**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 BHI0213 - EPA 3050B**

**Blank (BHI0213-BLK1)**

Prepared & Analyzed: 09/09/24

Arsenic	ND	0.200	mg/kg wet							
Barium	ND	0.400	"							
Cadmium	ND	0.200	"							
Copper	ND	0.400	"							
Lead	ND	0.200	"							
Nickel	ND	0.400	"							
Silver	ND	0.0200	"							
Zinc	ND	0.400	"							
Selenium	ND	0.260	"							

**LCS (BHI0213-BS1)**

Prepared & Analyzed: 09/09/24

Arsenic	31.2	0.179	mg/kg wet	35.7	87.4	80-120
Barium	31.6	0.357	"	35.7	88.5	80-120
Cadmium	1.62	0.179	"	1.79	90.8	80-120
Copper	32.5	0.357	"	35.7	91.0	80-120
Lead	15.7	0.179	"	17.9	87.9	80-120
Nickel	32.3	0.357	"	35.7	90.4	80-120
Silver	1.64	0.0179	"	1.79	91.8	80-120
Zinc	31.5	0.357	"	35.7	88.3	80-120
Selenium	3.14	0.232	"	3.57	87.9	80-120

**Duplicate (BHI0213-DUP1)**

Source: 2409061-01

Prepared & Analyzed: 09/09/24

Arsenic	1.59	0.200	mg/kg dry	1.62	2.23	20	
Barium	64.8	0.400	"	107	49.1	20	QR-02
Cadmium	0.0959	0.200	"	0.116	19.0	20	
Copper	4.43	0.400	"	5.24	16.8	20	
Lead	4.55	0.200	"	4.89	7.34	20	
Nickel	4.49	0.400	"	4.55	1.30	20	
Silver	0.0232	0.0200	"	0.0278	18.0	20	
Zinc	18.9	0.400	"	19.6	3.63	20	
Selenium	ND	0.260	"	ND		20	

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Project: PDC - Dunham Tank Battery

Project Number: 36700  
Project Manager: Karen Olson

**Reported:**  
09/12/24 09:01

**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 BHI0213 - EPA 3050B**

<b>Matrix Spike (BHI0213-MS1)</b>	<b>Source: 2409061-01</b>			<b>Prepared &amp; Analyzed: 09/09/24</b>								
Arsenic	38.4	0.200	mg/kg dry	41.2	1.62	89.3	75-125					
Barium	121	0.400	"	41.2	107	34.8	75-125					QM-05
Cadmium	1.89	0.200	"	2.06	0.116	85.9	75-125					
Copper	43.4	0.400	"	41.2	5.24	92.6	75-125					
Lead	22.8	0.200	"	20.6	4.89	87.2	75-125					
Nickel	43.0	0.400	"	41.2	4.55	93.4	75-125					
Silver	1.75	0.0200	"	2.06	0.0278	83.6	75-125					
Zinc	56.3	0.400	"	41.2	19.6	89.0	75-125					
Selenium	3.32	0.260	"	4.12	ND	80.6	75-125					

<b>Matrix Spike Dup (BHI0213-MSD1)</b>	<b>Source: 2409061-01</b>			<b>Prepared &amp; Analyzed: 09/09/24</b>								
Arsenic	37.7	0.200	mg/kg dry	40.3	1.62	89.6	75-125	1.89	25			
Barium	118	0.400	"	40.3	107	27.9	75-125	2.59	25			QM-05
Cadmium	1.84	0.200	"	2.01	0.116	85.4	75-125	2.66	25			
Copper	42.4	0.400	"	40.3	5.24	92.3	75-125	2.24	25			
Lead	22.5	0.200	"	20.1	4.89	87.2	75-125	1.72	25			
Nickel	42.1	0.400	"	40.3	4.55	93.2	75-125	2.26	25			
Silver	1.70	0.0200	"	2.01	0.0278	83.0	75-125	2.88	25			
Zinc	55.1	0.400	"	40.3	19.6	88.1	75-125	2.12	25			
Selenium	3.26	0.260	"	4.03	ND	81.0	75-125	1.79	25			

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Project: PDC - Dunham Tank Battery

Project Number: 36700  
Project Manager: Karen Olson

**Reported:**  
09/12/24 09:01

**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 BHI0178 - 3060A Mod**

<b>Blank (BHI0178-BLK1)</b>											
											Prepared & Analyzed: 09/06/24
Chromium, Hexavalent	ND	0.30	mg/kg wet								
<b>LCS (BHI0178-BS1)</b>											
											Prepared & Analyzed: 09/06/24
Chromium, Hexavalent	26.2	0.30	mg/kg wet	25.0	105	80-120					
<b>Duplicate (BHI0178-DUP1)</b>											
											Source: 2409056-01
											Prepared & Analyzed: 09/06/24
Chromium, Hexavalent	ND	0.30	mg/kg dry		ND					20	
<b>Matrix Spike (BHI0178-MS1)</b>											
											Source: 2409056-01
											Prepared & Analyzed: 09/06/24
Chromium, Hexavalent	30.9	0.30	mg/kg dry	29.1	ND	106	75-125				
<b>Matrix Spike Dup (BHI0178-MSD1)</b>											
											Source: 2409056-01
											Prepared & Analyzed: 09/06/24
Chromium, Hexavalent	31.0	0.30	mg/kg dry	29.1	ND	107	75-125	0.376		20	

**Batch BHI0230 - 3060A Mod**

<b>Blank (BHI0230-BLK1)</b>											
											Prepared & Analyzed: 09/09/24
Chromium, Hexavalent	ND	0.30	mg/kg wet								
<b>LCS (BHI0230-BS1)</b>											
											Prepared & Analyzed: 09/09/24
Chromium, Hexavalent	25.7	0.30	mg/kg wet	25.0	103	80-120					
<b>Duplicate (BHI0230-DUP1)</b>											
											Source: 2409055-01
											Prepared & Analyzed: 09/09/24
Chromium, Hexavalent	ND	0.30	mg/kg dry		ND					20	
<b>Matrix Spike (BHI0230-MS1)</b>											
											Source: 2409055-01
											Prepared & Analyzed: 09/09/24
Chromium, Hexavalent	24.7	0.30	mg/kg dry	25.6	ND	96.4	75-125				

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Project: PDC - Dunham Tank Battery

Project Number: 36700  
Project Manager: Karen Olson

**Reported:**  
09/12/24 09:01

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

**Summit Scientific**

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

**Batch BHI0230 - 3060A Mod**

**Matrix Spike Dup (BHI0230-MSD1)**

Source: 2409055-01

Prepared & Analyzed: 09/09/24

Chromium, Hexavalent	26.3	0.30	mg/kg dry	25.6	ND	103	75-125	6.23	20	
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**Reported:**  
09/12/24 09:01

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

**Summit Scientific**

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

**Batch BHI0295 - General Preparation**

**Blank (BHI0295-BLK1)**

Prepared: 09/10/24 Analyzed: 09/11/24

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

**LCS (BHI0295-BS1)**

Prepared: 09/10/24 Analyzed: 09/11/24

Calcium	5.31	0.0500	mg/L wet	5.00		106	70-130			
Magnesium	5.61	0.0500	"	5.00		112	70-130			
Sodium	5.21	0.0500	"	5.00		104	70-130			

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Project: PDC - Dunham Tank Battery

Project Number: 36700  
Project Manager: Karen Olson

**Reported:**  
09/12/24 09:01

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

**Summit Scientific**

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

**Batch BHI0179 - General Preparation**

**Duplicate (BHI0179-DUP2)**

**Source: 2408375-05**

Prepared & Analyzed: 09/06/24

% Solids	93.9		%		94.2			0.286	20	
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Project: PDC - Dunham Tank Battery

Project Number: 36700  
Project Manager: Karen Olson

**Reported:**  
09/12/24 09:01

**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 BHI0301 - General Preparation**

**Blank (BHI0301-BLK1)**

Prepared: 09/10/24 Analyzed: 09/11/24

Specific Conductance (EC) ND 0.0100 mmhos/cm

**LCS (BHI0301-BS1)**

Prepared: 09/10/24 Analyzed: 09/11/24

Specific Conductance (EC) 0.154 0.0100 mmhos/cm 0.150 102 95-105

**Duplicate (BHI0301-DUP1)**

**Source: 2409063-01**

Prepared: 09/10/24 Analyzed: 09/11/24

Specific Conductance (EC) 0.243 0.0100 mmhos/cm 0.247 1.51 20

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6855 W. 119th Ave.  
Broomfield CO, 80020

Project: PDC - Dunham Tank Battery

Project Number: 36700  
Project Manager: Karen Olson

**Reported:**  
09/12/24 09:01

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

**Summit Scientific**

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

**Batch BHI0299 - General Preparation**

**LCS (BHI0299-BS1)**

Prepared: 09/10/24 Analyzed: 09/11/24

pH	9.17	pH Units	9.18	99.9	95-105
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**Duplicate (BHI0299-DUP1)**

Source: 2409063-01

Prepared: 09/10/24 Analyzed: 09/11/24

pH	8.20	pH Units	8.23	0.365	20
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Project: PDC - Dunham Tank Battery

Project Number: 36700  
Project Manager: Karen Olson

**Reported:**  
09/12/24 09:01

### Notes and Definitions

- QR-02 The RPD result exceeded the QC control limits; however, both percent recoveries were acceptable. Sample results for the QC batch were accepted based on percent recoveries and completeness of QC data.
- QM-05 The spike recovery was outside acceptance limits for the MS and/or MSD due to matrix interference. The associated LCS and/or LCSD were within acceptance limits, therefore the data are considered valid.
- 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