PDC Energy, Inc.

Fourth Quarter 2021 Groundwater Monitoring Summary

November 30, 2021

Former LH Miller Unit 1 Tank Battery
NWNW Section 25 T4N R66W
Remediation # 16033

This groundwater monitoring summary has been prepared by Tasman, Inc. for the former LH Miller Unit 1 Tank Battery. On November 17, 2021, groundwater monitoring was conducted at all five monitoring wells (BH01 – BH05). Five groundwater samples were submitted to Summit Scientific Laboratories for analysis of benzene, toluene, ethylbenzene, total xylenes (BTEX), naphthalene, 1,2,4-trimethybenzene (TMB), and 1,3,5-TMB by EPA Method 8260B, chloride and sulfate anions by EPA Method 300.0, and total dissolved solids (TDS) by Method SM 2540C.

Fourth quarter 2021 analytical results indicated that organic compound concentrations were in compliance with the applicable COGCC Table 915-1 groundwater standards in all five monitoring well locations. Additionally, TDS and chloride and sulfate anion concentrations were in exceedance of the applicable regulatory standards and above 1.25x the background concentration of the up-gradient monitoring well (BH01) in monitoring wells BH04 and BH05. Inorganic parameters were below the applicable regulatory standards or within 1.25x the background concentration in the remaining three monitoring well locations. Sample locations and corresponding analytical results are illustrated on Figures 1 and 2. Groundwater elevation data is illustrated on Figure 3. Groundwater analytical results are summarized in Tables 1 and 2. The laboratory analytical report is included as Attachment A.

Monitored natural attenuation (MNA) was selected as the remediation strategy for this site during the second quarter 2021 and will remain the selected remediation strategy through the first quarter 2022.

First quarter 2022 groundwater sampling will be conducted in February 2022.

BH03		
Compound (µg/L)	8/26/2021	11/17/2021
Benzene	<1.0	<1.0
Toluene	<1.0	<1.0
Ethylbenzene	<1.0	<1.0
Total Xylenes	<2.0	<2.0
Naphthalene	<1.0	<1.0
1,2,4-TMB	<1.0	<1.0
1,3,5-TMB	<1.0	<1.0
Depth to Water (ft. bgs)	1.03	2.79

BH04		
Compound (µg/L)	8/26/2021	11/17/2021
Benzene	<1.0	<1.0
Toluene	<1.0	<1.0
Ethylbenzene	<1.0	<1.0
Total Xylenes	<2.0	<2.0
Naphthalene	<1.0	<1.0
1,2,4-TMB	<1.0	<1.0
1,3,5-TMB	<1.0	<1.0
Depth to Water (ft. bgs)	1.84	3.74

BH05		
Compound (µg/L)	8/26/2021	11/17/2021
Benzene	<1.0	<1.0
Toluene	<1.0	<1.0
Ethylbenzene	<1.0	<1.0
Total Xylenes	<2.0	<2.0
Naphthalene	<1.0	<1.0
1,2,4-TMB	<1.0	<1.0
1,3,5-TMB	<1.0	<1.0
Depth to Water (ft. bgs)	1.98	3.00

BH02		
Compound (µg/L)	8/26/2021	11/17/2021
Benzene	<1.0	<1.0
Toluene	<1.0	<1.0
Ethylbenzene	<1.0	<1.0
Total Xylenes	<2.0	<2.0
Naphthalene	<1.0	<1.0
1,2,4-TMB	<1.0	<1.0
1,3,5-TMB	<1.0	<1.0
Depth to Water (ft. bgs)	1.00	2.61

BH01		
Compound (µg/L)	8/26/2021	11/17/2021
Benzene	<1.0	<1.0
Toluene	<1.0	<1.0
Ethylbenzene	<1.0	<1.0
Total Xylenes	<2.0	<2.0
Naphthalene	<1.0	<1.0
1,2,4-TMB	<1.0	<1.0
1,3,5-TMB	<1.0	<1.0
Depth to Water (ft. bgs)	1.51	3.26

BH03

BH04

BH05

BH02

BH01

GW01

Legend

- Excavation Extent (Collected via Trimble GPS)
- Monitoring Well Location (Collected via Trimble GPS)
- Excavation Groundwater Sample Location
- Groundwater Flow Direction (4Q21)

Notes

All locations are approximate unless otherwise noted.

GPS – Global Positioning System

TMB - Trimethylbenzene

µg/L – Micrograms per liter

ft. bgs – Feet below ground surface

0 ft. 20 ft. 40 ft.

N

Image Source: Google Earth; 2019 Google
Projection: WGS 84 UTM Zone 13 North

DATE:	November 30, 2021
DESIGNED BY:	C. Hamlin
DRAWN BY:	S. Anderson

TASMAN

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

PDC Energy, Inc. – DJ Basin
Former LH Miller Unit 1 Tank Battery
NWNW, Section 25, Township 4 North, Range 66 West
Weld County, Colorado

GROUNDWATER ANALYTICAL RESULTS MAP

FIGURE 1

BH03		
Compound (mg/L)	8/26/2021	11/17/2021
TDS	933	1,070
Chloride	155	239
Sulfate	246	**332**
Depth to Water (ft. bgs)	1.03	2.79

BH03

BH05		
Compound (mg/L)	8/26/2021	11/17/2021
TDS	**1,970**	**1,990**
Chloride	**299**	**413**
Sulfate	**1,240**	**1,370**
Depth to Water (ft. bgs)	1.98	3.00

BH04		
Compound (mg/L)	8/26/2021	11/17/2021
TDS	1,060	1,170
Chloride	182	**293**
Sulfate	316	**392**
Depth to Water (ft. bgs)	1.84	3.74

BH04

BH05

BH02

GW01

BH02		
Compound (mg/L)	8/26/2021	11/17/2021
TDS	1,020	974
Chloride	163	217
Sulfate	241	242
Depth to Water (ft. bgs)	1.00	2.61

BH01		
Compound (mg/L)	8/26/2021	11/17/2021
TDS	1,020	1,140
Chloride	159	228
Sulfate	286	340
Depth to Water (ft. bgs)	1.51	3.26

BH01

Legend

- Excavation Extent (Collected via Trimble GPS)
- Monitoring Well Location (Collected via Trimble GPS)
- Excavation Groundwater Sample Location
- Groundwater Flow Direction (4Q21)

Notes

All locations are approximate unless otherwise noted.

GPS – Global Positioning System

mg/L – Milligrams per liter

TDS – Total dissolved solids

Red text – exceedances of COGCC Table 915-1 standards.

Bold text – exceedances of COGCC Table 915-1 standards but within 1.25x BCKG concentration

COGCC – Colorado Oil and Gas Conservation Commission

BCKG – Background

0 ft. 20 ft. 40 ft.

N

Image Source: Google Earth; 2019 Google
Projection: WGS 84 UTM Zone 13 North

DATE: December 16, 2021

DESIGNED BY: C. Hamlin

DRAWN BY: J. Marcus

TASMAN

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

PDC Energy, Inc. – DJ Basin
Former LH Miller Unit 1 Tank Battery
NWNW, Section 25, Township 4 North, Range 66 West
Weld County, Colorado

GROUNDWATER ANALYTICAL RESULTS MAP (INORGANIC PARAMETERS)

FIGURE 2

DATE: November 18, 2021 DESIGNED BY: C. Hamlin DRAWN BY: C. Ambler	TASMAN **Tasman, Inc.** 6855 W. 119th Ave. Broomfield, CO 80020	**PDC Energy, Inc. – DJ Basin** **Former LH Miller Unit 1 Tank Battery** NWNW, Section 25, Township 4 North, Range 66 West Weld County, Colorado	GROUNDWATER ELEVATION CONTOUR MAP (11/17/2021)	FIGURE 3

TABLE 1
FORMER LH MILLER UNIT 1 TANK BATTERY
GROUNDWATER ANALYTICAL RESULTS SUMMARY TABLE
ORGANIC COMPOUNDS

Sample ID	Date Sampled	Benzene (µg/L)	Toluene (µg/L)	Ethylbenzene (µg/L)	Total Xylenes (µg/L)	Naphthalene (µg/L)	1,2,4-TMB (µg/L)	1,3,5-TMB (µg/L)	Depth to Water [2] (ft.)	Groundwater Elevation (ft. AMSL)
COGCC Table 915-1 Groundwater Standard (µg/L) [1]		**5**	**560**	**700**	**1,400**	**140**	**67**	**67**	**-**	**-**
GW01	1/14/2021	<1.0	<1.0	<1.0	6.6	NA	NA	NA	~ 6	NM
BH01	5/27/2021	<1.0	<1.0	<1.0	<2.0	<1.0	<1.0	<1.0	4.17	4742.29
BH01	8/26/2021	<1.0	<1.0	<1.0	<2.0	<1.0	<1.0	<1.0	1.51	4744.95
BH01	11/17/2021	<1.0	<1.0	<1.0	<2.0	<1.0	<1.0	<1.0	3.26	4743.20
BH02	5/27/2021	<1.0	<1.0	<1.0	<2.0	<1.0	<1.0	<1.0	3.52	4741.99
BH02	8/26/2021	<1.0	<1.0	<1.0	<2.0	<1.0	<1.0	<1.0	1.00	4744.51
BH02	11/17/2021	<1.0	<1.0	<1.0	<2.0	<1.0	<1.0	<1.0	2.61	4742.90
BH03	5/27/2021	<1.0	<1.0	<1.0	<2.0	<1.0	<1.0	<1.0	3.72	4741.58
BH03	8/26/2021	<1.0	<1.0	<1.0	<2.0	<1.0	<1.0	<1.0	1.03	4744.27
BH03	11/17/2021	<1.0	<1.0	<1.0	<2.0	<1.0	<1.0	<1.0	2.79	4742.51
BH04	5/27/2021	<1.0	<1.0	<1.0	<2.0	<1.0	<1.0	<1.0	4.69	4741.90
BH04	8/26/2021	<1.0	<1.0	<1.0	<2.0	<1.0	<1.0	<1.0	1.84	4744.75
BH04	11/17/2021	<1.0	<1.0	<1.0	<2.0	<1.0	<1.0	<1.0	3.74	4742.85
BH05	5/27/2021	<1.0	<1.0	<1.0	<2.0	<1.0	<1.0	<1.0	4.14	4741.74
BH05	8/26/2021	<1.0	<1.0	<1.0	<2.0	<1.0	<1.0	<1.0	1.98	4743.90
BH05	11/17/2021	<1.0	<1.0	<1.0	<2.0	<1.0	<1.0	<1.0	3.00	4742.88

Notes:

1. Groundwater standards referenced from 2 CCR 404-1, Table 915-1, January 15, 2021.
2. Depth to water measurements were measured from ground surface for excavation samples. Monitoring well measurements were collected from top of casing and adjusted using survey data to reflect depth of water from ground surface.

TMB = Trimethylbenzene
COGCC = Colorado Oil and Gas Conservation Commission
µg/L = Micrograms per liter
(<) = Analytical result is less than the indicated laboratory reporting limit.
ft. = Feet
AMSL = Above Mean Sea Level
NM = Not measured

TABLE 2
FORMER LH MILLER UNIT 1 TANK BATTERY
GROUNDWATER ANALYTICAL RESULTS SUMMARY TABLE
INORGANIC PARAMETERS

Sample ID	Date Sampled	TDS (unit)	Chloride Ion (mg/L)	Sulfate Ion (mg/L)	Depth to Water [2] (ft.)	Groundwater Elevation (ft. AMSL)
COGCC Table 915-1 Groundwater Standard (mg/L) [1]		<1.25 x BCKG	250 or <1.25 x BCKG	250 or <1.25 x BCKG	-	-
BH01	5/27/2021	1,020	120	122	4.17	4742.29
BH01	8/26/2021	1,020	159	286	1.51	4744.95
BH01	11/17/2021	1,140	228	340	3.26	4743.20
BH02	8/26/2021	1,020	163	241	1.00	4744.51
BH02	11/17/2021	974	217	242	2.61	4742.90
BH03	5/27/2021	957	112	118	3.72	4741.58
BH03	8/26/2021	933	155	246	1.03	4744.27
BH03	11/17/2021	1070	239	**332**	2.79	4742.51
BH04	5/27/2021	1,090	134	147	4.69	4741.90
BH04	8/26/2021	1,060	182	**316**	1.84	4744.75
BH04	11/17/2021	1,170	**293**	**392**	3.74	4742.85
BH05	5/27/2021	**1,310**	**251**	**1,090**	4.14	4741.74
BH05	8/26/2021	**1,970**	**299**	**1,240**	1.98	4743.90
BH05	11/17/2021	**1,990**	**413**	**1,370**	3.00	4742.88

Notes:

1. Groundwater standards referenced from 2 CCR 404-1, Table 915-1, January 15, 2021.
2. Depth to water measurements were measured from ground surface for excavation samples. Monitoring well measurements were collected from top of casing and adjusted using survey data to reflect depth of water from ground surface.

TDS = Total dissolved solids
COGCC = Colorado Oil and Gas Conservation Commission
BCKG = Background
mg/L = Milligrams per liter
(<) = Analytical result is less than the indicated laboratory reporting limit.
ft. = Feet
AMSL = Above Mean Sea Level
= Up-gradient well location used for background concentration.
BOLD = Analytical result is in exceedance of applicable standard but within 1.25x background concentration.
BOLD = Analytical result is in exceedance of applicable standard.

Attachment A

Summit Scientific

4653 Table Mountain Drive, Golden, Colorado 80403

303.277.9310

November 30, 2021

Mark Longhurst
PDC Energy
1775 Sherman St. STE. 3000
Denver, CO 80203

RE: LH Miller Unit 1
Work Order #2111326

Enclosed are the results of analyses for samples received by Summit Scientific on 11/17/21 14:56. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Paul Shrewsbury
President

S2

PDC Energy 1775 Sherman St. STE. 3000 Denver CO, 80203	Project: LH Miller Unit 1 Project Number: [none] Project Manager: Mark Longhurst	**Reported:** 11/30/21 10:45

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
BH01	2111326-01	Water	11/17/21 13:13	11/17/21 14:56
BH02	2111326-02	Water	11/17/21 13:24	11/17/21 14:56
BH03	2111326-03	Water	11/17/21 13:12	11/17/21 14:56
BH04	2111326-04	Water	11/17/21 13:26	11/17/21 14:56
BH05	2111326-05	Water	11/17/21 13:35	11/17/21 14:56

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.

Summit Scientific

2111326

4653 Table Mountain Drive ♦ Golden, Colorado 80403
303-277-9310

Page 1 of 1

Client: PDC / Tasman Geosciences
Address: 6855 W. 119th Ave.
City/State/Zip: Broomfield / CO/ 80020
Phone: 303-487-1228
Sampler Name: Colette Ramey

Project Manager: Mark Longhurst
E-Mail: mark.longhurst@pdce.com
Project Name: LH Miller Unit 1
Project Number: N/A

					Preservative				Matrix				Analysis Requested							Special Instructions
ID	Sample Description	Date Sampled	Time Sampled	# of containers	HCl	HNO3	None	Other ____	Water	Soil	Air-Canister #	Other ____	BTEX	Naphthalene	1,2,4-TMB	1,3,5-TMB	TDS	Chloride	Sulfate	
1	BH01	11/17/21	1313	4			✓		✓				✓	✓	✓	✓	✓	✓	✓	
2	BH02		1324																	
3	BH03		1312																	
4	BH04		1326																	
5	BH05		1335																	
6																				
7																				
8																				
9																				
10																				

Relinquished by:	Date/Time: 11/17/2021 1456	Received by: Tasman's Lock Box	Date/Time: 11/17/2021 1456
Relinquished by: Tasman's Lock Box	Date/Time:	Received by:	Date/Time: 111721 1456
Relinquished by:	Date/Time:	Received by:	Date/Time:

Turn Around Time (Check)

___ Same Day ___ 72 hours
___ 24 hours ✓ Standard
___ 48 hours ___

Sample Integrity:
Temperature Upon Receipt: 4.4
Samples Intact: (Yes) No

Notes:

S2

2111326

Sample Receipt Checklist

S2 Work Order#_____

Client: Bc/Tasman Client Project ID: LH miller unit #1

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

☐ ☑ ☐ ☐ ☐

Matrix (check all that apply): ☐ Air ☐ Soil/Solid ☑ Water ☐ Other:_____ (Describe)

Temp (°C)	4.4

Thermometer ID: G86A9201901378

	Yes	No	N/A	Comments (if any)
If samples require cooling, was the temperature at 4°C +/- 2°C (1)? NOTE: If samples are delivered the same day of sampling, this requirement is met if there is evidence that cooling has begun.	✓			on ICE
Were all samples received intact (1)?	✓			
Was adequate sample volume provided (1)?	✓			
If custody seals are present, are they intact (1)?	✓			
Are samples with holding times due within 48 hours sample due within 48 hours present?		✓		
Is a chain-of-custody (COC) form present and filled out completely (1)?	✓			
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)?	✓			
Is the COC properly relinquished by the client w/ date and time recorded (1)?	✓			
For volatiles in water – is there headspace present? **If yes, contact client and note in narrative.**		✓		
Are samples preserved that require preservation **(excluding cooling)** (1)? Note the type of preservative in the Comments column – HCl, H2SO4, NaOH, HNO3, 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?			✓	
Additional Comments (if any):				

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

[signature] 11-17-21

Custodian Printed Name or Initials **Date/Time**

PDC Energy 1775 Sherman St. STE. 3000 Denver CO, 80203	Project: LH Miller Unit 1 Project Number: [none] Project Manager: Mark Longhurst	**Reported:** 11/30/21 10:45

BH01

2111326-01 (Water)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **11/17/21 13:13**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Benzene	ND	1.0	ug/l	1	BEK0486	11/22/21	11/24/21	EPA 8260B	
Toluene	ND	1.0	"	"	"	"	"	"	
Ethylbenzene	ND	1.0	"	"	"	"	"	"	
Xylenes (total)	ND	2.0	"	"	"	"	"	"	
Naphthalene	ND	1.0	"	"	"	"	"	"	
1,2,4-Trimethylbenzene	ND	1.0	"	"	"	"	"	"	
1,3,5-Trimethylbenzene	ND	1.0	"	"	"	"	"	"	

Date Sampled: **11/17/21 13:13**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 1,2-Dichloroethane-d4		*100 %*	*23-173*		"	"	"	"	
Surrogate: Toluene-d8		*99.3 %*	*20-170*		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		*102 %*	*21-167*		"	"	"	"	

Anions by EPA Method 300.0

Date Sampled: **11/17/21 13:13**

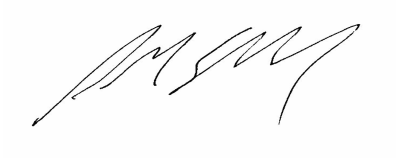
Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Chloride	**228**	12.0	mg/L	200	BEK0506	11/23/21	11/23/21	EPA 300.0	
Sulfate	**340**	60.0	"	"	"	"	"	"	

Total Dissolved Solids by SM2540C

Date Sampled: **11/17/21 13:13**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Total Dissolved Solids	**1140**	10.0	mg/L	1	BEK0505	11/22/21	11/23/21	SM2540C	

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.

S2

PDC Energy 1775 Sherman St. STE. 3000 Denver CO, 80203	Project: LH Miller Unit 1 Project Number: [none] Project Manager: Mark Longhurst	**Reported:** 11/30/21 10:45

BH02

2111326-02 (Water)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **11/17/21 13:24**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Benzene	ND	1.0	ug/l	1	BEK0486	11/22/21	11/24/21	EPA 8260B	
Toluene	ND	1.0	"	"	"	"	"	"	
Ethylbenzene	ND	1.0	"	"	"	"	"	"	
Xylenes (total)	ND	2.0	"	"	"	"	"	"	
Naphthalene	ND	1.0	"	"	"	"	"	"	
1,2,4-Trimethylbenzene	ND	1.0	"	"	"	"	"	"	
1,3,5-Trimethylbenzene	ND	1.0	"	"	"	"	"	"	

Date Sampled: **11/17/21 13:24**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 1,2-Dichloroethane-d4		*98.9 %*	*23-173*		"	"	"	"	
Surrogate: Toluene-d8		*98.4 %*	*20-170*		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		*101 %*	*21-167*		"	"	"	"	

Anions by EPA Method 300.0

Date Sampled: **11/17/21 13:24**

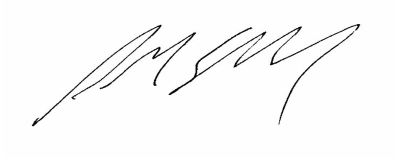
Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Chloride	**217**	12.0	mg/L	200	BEK0506	11/23/21	11/23/21	EPA 300.0	
Sulfate	**242**	60.0	"	"	"	"	"	"	

Total Dissolved Solids by SM2540C

Date Sampled: **11/17/21 13:24**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Total Dissolved Solids	**974**	10.0	mg/L	1	BEK0505	11/22/21	11/23/21	SM2540C	

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.

PDC Energy 1775 Sherman St. STE. 3000 Denver CO, 80203	Project: LH Miller Unit 1 Project Number: [none] Project Manager: Mark Longhurst	**Reported:** 11/30/21 10:45

BH03

2111326-03 (Water)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **11/17/21 13:12**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Benzene	ND	1.0	ug/l	1	BEK0486	11/22/21	11/24/21	EPA 8260B	
Toluene	ND	1.0	"	"	"	"	"	"	
Ethylbenzene	ND	1.0	"	"	"	"	"	"	
Xylenes (total)	ND	2.0	"	"	"	"	"	"	
Naphthalene	ND	1.0	"	"	"	"	"	"	
1,2,4-Trimethylbenzene	ND	1.0	"	"	"	"	"	"	
1,3,5-Trimethylbenzene	ND	1.0	"	"	"	"	"	"	

Date Sampled: **11/17/21 13:12**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 1,2-Dichloroethane-d4		*99.9 %*	*23-173*		"	"	"	"	
Surrogate: Toluene-d8		*97.3 %*	*20-170*		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		*102 %*	*21-167*		"	"	"	"	

Anions by EPA Method 300.0

Date Sampled: **11/17/21 13:12**

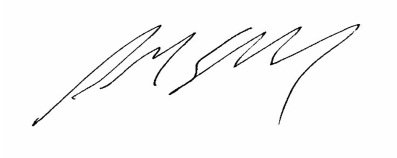
Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Chloride	**239**	12.0	mg/L	200	BEK0506	11/23/21	11/23/21	EPA 300.0	
Sulfate	**332**	60.0	"	"	"	"	"	"	

Total Dissolved Solids by SM2540C

Date Sampled: **11/17/21 13:12**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Total Dissolved Solids	**1070**	10.0	mg/L	1	BEK0505	11/22/21	11/23/21	SM2540C	

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.

PDC Energy 1775 Sherman St. STE. 3000 Denver CO, 80203	Project: LH Miller Unit 1 Project Number: [none] Project Manager: Mark Longhurst	**Reported:** 11/30/21 10:45

BH04

2111326-04 (Water)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **11/17/21 13:26**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Benzene	ND	1.0	ug/l	1	BEK0486	11/22/21	11/24/21	EPA 8260B	
Toluene	ND	1.0	"	"	"	"	"	"	
Ethylbenzene	ND	1.0	"	"	"	"	"	"	
Xylenes (total)	ND	2.0	"	"	"	"	"	"	
Naphthalene	ND	1.0	"	"	"	"	"	"	
1,2,4-Trimethylbenzene	ND	1.0	"	"	"	"	"	"	
1,3,5-Trimethylbenzene	ND	1.0	"	"	"	"	"	"	

Date Sampled: **11/17/21 13:26**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 1,2-Dichloroethane-d4		*102 %*	*23-173*		"	"	"	"	
Surrogate: Toluene-d8		*98.6 %*	*20-170*		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		*105 %*	*21-167*		"	"	"	"	

Anions by EPA Method 300.0

Date Sampled: **11/17/21 13:26**

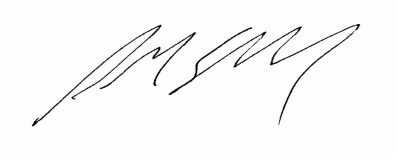
Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Chloride	**293**	12.0	mg/L	200	BEK0506	11/23/21	11/23/21	EPA 300.0	
Sulfate	**392**	60.0	"	"	"	"	"	"	

Total Dissolved Solids by SM2540C

Date Sampled: **11/17/21 13:26**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Total Dissolved Solids	**1170**	10.0	mg/L	1	BEK0505	11/22/21	11/23/21	SM2540C	

Summit Scientific



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PDC Energy 1775 Sherman St. STE. 3000 Denver CO, 80203	Project: LH Miller Unit 1 Project Number: [none] Project Manager: Mark Longhurst	**Reported:** 11/30/21 10:45

BH05

2111326-05 (Water)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **11/17/21 13:35**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Benzene	ND	1.0	ug/l	1	BEK0486	11/22/21	11/24/21	EPA 8260B	
Toluene	ND	1.0	"	"	"	"	"	"	
Ethylbenzene	ND	1.0	"	"	"	"	"	"	
Xylenes (total)	ND	2.0	"	"	"	"	"	"	
Naphthalene	ND	1.0	"	"	"	"	"	"	
1,2,4-Trimethylbenzene	ND	1.0	"	"	"	"	"	"	
1,3,5-Trimethylbenzene	ND	1.0	"	"	"	"	"	"	

Date Sampled: **11/17/21 13:35**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 1,2-Dichloroethane-d4		*101 %*	*23-173*		"	"	"	"	
Surrogate: Toluene-d8		*98.3 %*	*20-170*		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		*102 %*	*21-167*		"	"	"	"	

Anions by EPA Method 300.0

Date Sampled: **11/17/21 13:35**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Chloride	**413**	12.0	mg/L	200	BEK0506	11/23/21	11/23/21	EPA 300.0	
Sulfate	**1370**	60.0	"	"	"	"	"	"	

Total Dissolved Solids by SM2540C

Date Sampled: **11/17/21 13:35**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Total Dissolved Solids	**1990**	10.0	mg/L	1	BEK0505	11/22/21	11/23/21	SM2540C	

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PDC Energy 1775 Sherman St. STE. 3000 Denver CO, 80203	Project: LH Miller Unit 1 Project Number: [none] Project Manager: Mark Longhurst	**Reported:** 11/30/21 10:45

Volatile Organic Compounds by EPA Method 8260B - Quality Control

Summit Scientific

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch BEK0486 - EPA 5030 Water MS										
Blank (BEK0486-BLK1)				Prepared: 11/22/21 Analyzed: 11/23/21						
Benzene	ND	1.0	ug/l							
Toluene	ND	1.0	"							
Ethylbenzene	ND	1.0	"							
Xylenes (total)	ND	2.0	"							
Naphthalene	ND	1.0	"							
1,2,4-Trimethylbenzene	ND	1.0	"							
1,3,5-Trimethylbenzene	ND	1.0	"							
Surrogate: 1,2-Dichloroethane-d4	*13.0*		*"*	*13.3*		*97.1*	*23-173*			
Surrogate: Toluene-d8	*13.0*		*"*	*13.3*		*97.3*	*20-170*			
Surrogate: 4-Bromofluorobenzene	*13.7*		*"*	*13.3*		*103*	*21-167*			
LCS (BEK0486-BS1)				Prepared: 11/22/21 Analyzed: 11/23/21						
Benzene	32.2	1.0	ug/l	33.3		96.8	51-132			
Toluene	34.0	1.0	"	33.3		102	51-138			
Ethylbenzene	40.3	1.0	"	33.3		121	58-146			
m,p-Xylene	78.3	2.0	"	66.7		117	57-144			
o-Xylene	38.0	1.0	"	33.3		114	53-146			
Naphthalene	39.3	1.0	"	33.3		118	70-130			
1,2,4-Trimethylbenzene	35.6	1.0	"	33.3		107	70-130			
1,3,5-Trimethylbenzene	35.1	1.0	"	33.3		105	70-130			
Surrogate: 1,2-Dichloroethane-d4	*13.2*		*"*	*13.3*		*99.3*	*23-173*			
Surrogate: Toluene-d8	*13.1*		*"*	*13.3*		*98.4*	*20-170*			
Surrogate: 4-Bromofluorobenzene	*13.8*		*"*	*13.3*		*104*	*21-167*			
Matrix Spike (BEK0486-MS1)	**Source: 2111326-01**			Prepared: 11/22/21 Analyzed: 11/23/21						
Benzene	32.2	1.0	ug/l	33.3	ND	96.7	34-141			
Toluene	34.1	1.0	"	33.3	ND	102	27-151			
Ethylbenzene	41.0	1.0	"	33.3	ND	123	29-160			
m,p-Xylene	80.1	2.0	"	66.7	ND	120	20-166			
o-Xylene	38.5	1.0	"	33.3	ND	115	33-159			
Naphthalene	42.3	1.0	"	33.3	ND	127	70-130			
1,2,4-Trimethylbenzene	36.4	1.0	"	33.3	ND	109	70-130			
1,3,5-Trimethylbenzene	36.5	1.0	"	33.3	ND	109	70-130			
Surrogate: 1,2-Dichloroethane-d4	*13.7*		*"*	*13.3*		*103*	*23-173*			
Surrogate: Toluene-d8	*13.2*		*"*	*13.3*		*99.2*	*20-170*			
Surrogate: 4-Bromofluorobenzene	*14.0*		*"*	*13.3*		*105*	*21-167*			

Summit Scientific

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PDC Energy	Project: LH Miller Unit 1	
1775 Sherman St. STE. 3000	Project Number: [none]	**Reported:**
Denver CO, 80203	Project Manager: Mark Longhurst	11/30/21 10:45

Volatile Organic Compounds by EPA Method 8260B - Quality Control

Summit Scientific

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch BEK0486 - EPA 5030 Water MS										
Matrix Spike Dup (BEK0486-MSD1)	**Source: 2111326-01**			Prepared: 11/22/21 Analyzed: 11/23/21						
Benzene	33.0	1.0	ug/l	33.3	ND	99.0	34-141	2.36	30	
Toluene	34.9	1.0	"	33.3	ND	105	27-151	2.35	30	
Ethylbenzene	41.5	1.0	"	33.3	ND	124	29-160	1.21	30	
m,p-Xylene	79.9	2.0	"	66.7	ND	120	20-166	0.250	30	
o-Xylene	38.7	1.0	"	33.3	ND	116	33-159	0.545	30	
Naphthalene	44.7	1.0	"	33.3	ND	134	70-130	5.38	30	
1,2,4-Trimethylbenzene	36.9	1.0	"	33.3	ND	111	70-130	1.31	30	
1,3,5-Trimethylbenzene	36.6	1.0	"	33.3	ND	110	70-130	0.356	30	
Surrogate: 1,2-Dichloroethane-d4	*14.4*		*"*	*13.3*		*108*	*23-173*			
Surrogate: Toluene-d8	*13.1*		*"*	*13.3*		*98.6*	*20-170*			
Surrogate: 4-Bromofluorobenzene	*13.7*		*"*	*13.3*		*103*	*21-167*			

PDC Energy	Project: LH Miller Unit 1	
1775 Sherman St. STE. 3000	Project Number: [none]	**Reported:**
Denver CO, 80203	Project Manager: Mark Longhurst	11/30/21 10:45

Anions by EPA Method 300.0 - Quality Control

Summit Scientific

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch BEK0506 - General Preparation										
Blank (BEK0506-BLK1)				Prepared & Analyzed: 11/23/21						
Chloride	ND	0.0600	mg/L							
Sulfate	ND	0.300	"							
LCS (BEK0506-BS1)				Prepared & Analyzed: 11/23/21						
Chloride	3.25	0.0600	mg/L	3.00		108	90-110			
Sulfate	16.3	0.300	"	15.0		108	90-110			
Duplicate (BEK0506-DUP1)	**Source: 2111326-01**			Prepared & Analyzed: 11/23/21						
Chloride	267	12.0	mg/L		228			15.8	20	
Sulfate	370	60.0	"		340			8.45	20	
Matrix Spike (BEK0506-MS1)	**Source: 2111326-01**			Prepared & Analyzed: 11/23/21						
Chloride	1000	12.0	mg/L	600	228	129	80-120			QR-03
Sulfate	4060	60.0	"	3000	340	124	80-120			QR-03

Summit Scientific

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PDC Energy 1775 Sherman St. STE. 3000 Denver CO, 80203	Project: LH Miller Unit 1 Project Number: [none] Project Manager: Mark Longhurst	**Reported:** 11/30/21 10:45

Total Dissolved Solids by SM2540C - Quality Control

Summit Scientific

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch BEK0505 - General Preparation										
Blank (BEK0505-BLK1)				Prepared & Analyzed: 11/23/21						
Total Dissolved Solids	ND	10.0	mg/L							
Duplicate (BEK0505-DUP1)		**Source: 2111268-01**		Prepared & Analyzed: 11/23/21						
Total Dissolved Solids	938	10.0	mg/L		937			0.0960	20	

S2

PDC Energy 1775 Sherman St. STE. 3000 Denver CO, 80203	Project: LH Miller Unit 1 Project Number: [none] Project Manager: Mark Longhurst	**Reported:** 11/30/21 10:45

Notes and Definitions

QR-03	The RPD value for the sample duplicate or MS/MSD was outside of QC acceptance limits due to matrix interference. QC batch accepted based on LCS and/or LCSD recovery and/or RPD values.
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