



**PDC Energy, Inc.**  
**Second Quarter 2022 Groundwater Monitoring Summary**

June 17, 2022

Former Dinner 14 B-1 Wellhead  
SESW Section 14 T4N R66W  
Remediation # 18114

This groundwater monitoring summary has been prepared by Tasman, Inc. for the former Dinner 14 B-1 Wellhead.

### **Site History and Background**

On July 15, 2021, a historic hydrocarbon release was discovered at the former wellhead. Following the discovery, mitigation activities were initiated and between July 15, and August 9, 2021, approximately 3,189.5 cubic yards of impacted material were removed from the former excavation. During excavation activities, groundwater was encountered in the excavation at approximately 11 feet below ground surface (bgs). Groundwater vacuum recovery was conducted concurrent with excavation activities and 9,685 barrels of groundwater were removed from site. On October 18, 2021, eight monitoring wells (BH01 – BH08) were installed to confirm the absence of dissolved-phase hydrocarbon impacts within and adjacent to the former excavation extent.

### **Groundwater Monitoring Activities**

On May 12, 2022, groundwater monitoring was conducted at all eight monitoring wells (BH01 – BH08). Eight groundwater samples were submitted to Summit Scientific Laboratories for analysis of benzene, toluene, ethylbenzene, total xylenes (BTEX), naphthalene, 1,2,4-trimethylbenzene (TMB) 1,3,5-TMB by EPA Method 8260B.

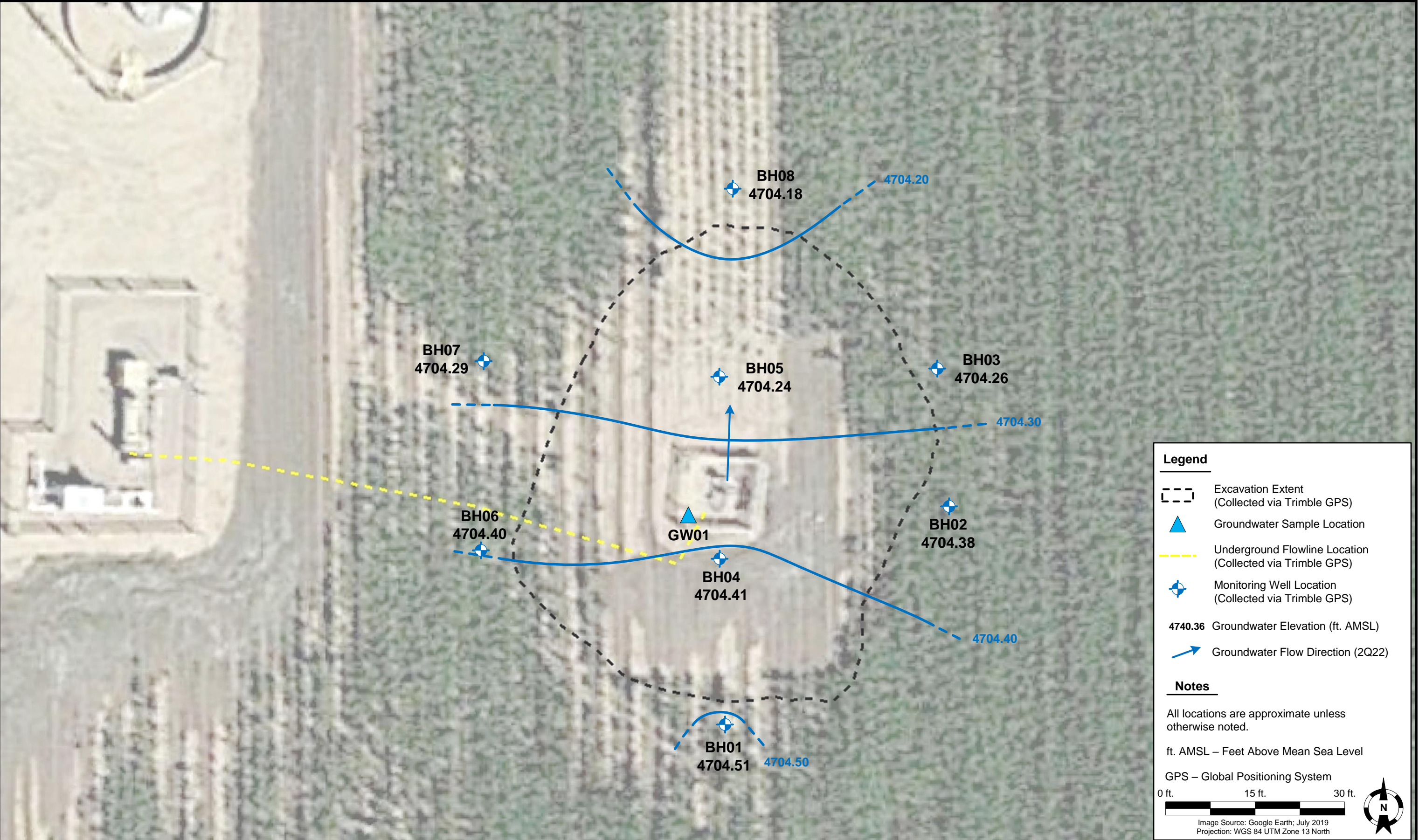
Second quarter 2022 analytical results indicated that organic compound concentrations were below the applicable COGCC Table 915-1 groundwater standards in all eight monitoring well locations. Sample locations and corresponding analytical results are illustrated on Figure 1. Groundwater elevation data is illustrated on Figure 2. Groundwater analytical results are summarized in Table 1. The laboratory analytical report is included as Attachment A.

### **Current Remediation Activities and Path Forward**

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

Third quarter 2022 groundwater sampling will be conducted in August 2022.





DATE:	May 17, 2022
DESIGNED BY:	B. Nelson
DRAWN BY:	J. Clonts



**Tasman, Inc.**  
6855 W. 119<sup>th</sup> Ave.  
Broomfield, CO 80020

**PDC Energy, Inc. – DJ Basin**  
**Former Dinner 14 B-1 Wellhead**  
SESW, Section 14, Township 4 North, Range 66 West  
Weld County, Colorado

**GROUNDWATER  
ELEVATION CONTOUR  
MAP (05/12/2022)**

**FIGURE  
2**

**TABLE 1**  
**FORMER DINNER 14-B1 WELLHEAD**  
**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 <sup>(2)</sup> (ft.)	Groundwater Elevation (ft. AMSL)
<b>COGCC Table 915-1 Groundwater Standard (µg/L) <sup>(1)</sup></b>		<b>5</b>	<b>560</b>	<b>700</b>	<b>1,400</b>	<b>140</b>	<b>67</b>	<b>67</b>	<b>-</b>	<b>-</b>
BH01	11/12/2021	<1.0	<1.0	<1.0	<2.0	<1.0	<1.0	<1.0	7.08	4707.94
BH01	2/16/2022	<1.0	<1.0	<1.0	<2.0	<1.0	<1.0	<1.0	9.50	4705.52
BH01	5/12/2022	<1.0	<1.0	<1.0	<2.0	<1.0	<1.0	<1.0	10.51	4704.51
BH02	11/12/2021	<1.0	<1.0	<1.0	<2.0	<1.0	<1.0	<1.0	7.12	4707.79
BH02	2/16/2022	<1.0	<1.0	<1.0	<2.0	<1.0	<1.0	<1.0	9.48	4705.43
BH02	5/12/2022	<1.0	<1.0	<1.0	<2.0	<1.0	<1.0	<1.0	10.53	4704.38
BH03	11/12/2021	<1.0	<1.0	<1.0	<2.0	<1.0	<1.0	<1.0	7.01	4707.65
BH03	2/16/2022	<1.0	<1.0	<1.0	<2.0	<1.0	<1.0	<1.0	9.30	4705.36
BH03	5/12/2022	<1.0	<1.0	<1.0	<2.0	<1.0	<1.0	<1.0	10.40	4704.26
BH04	11/12/2021	<1.0	<1.0	<1.0	<2.0	<1.0	<1.0	<1.0	6.86	4707.86
BH04	2/16/2022	<1.0	<1.0	<1.0	<2.0	<1.0	<1.0	<1.0	9.23	4705.49
BH04	5/12/2022	<1.0	<1.0	<1.0	<2.0	<1.0	<1.0	<1.0	10.31	4704.41
BH05	11/12/2021	<1.0	<1.0	<1.0	<2.0	<1.0	<1.0	<1.0	6.67	4707.66
BH05	2/16/2022	<1.0	<1.0	<1.0	<2.0	<1.0	<1.0	<1.0	8.95	4705.38
BH05	5/12/2022	<1.0	<1.0	<1.0	<2.0	<1.0	<1.0	<1.0	10.09	4704.24
BH06	11/12/2021	<1.0	<1.0	<1.0	<2.0	<1.0	<1.0	<1.0	7.08	4707.86
BH06	2/16/2022	<1.0	<1.0	<1.0	<2.0	<1.0	<1.0	<1.0	9.43	4705.51
BH06	5/12/2022	<1.0	<1.0	<1.0	<2.0	<1.0	<1.0	<1.0	10.54	4704.40
BH07	11/12/2021	<1.0	<1.0	<1.0	<2.0	<1.0	<1.0	<1.0	6.85	4707.79
BH07	2/16/2022	<1.0	<1.0	<1.0	<2.0	<1.0	<1.0	<1.0	9.20	4705.44
BH07	5/12/2022	<1.0	<1.0	<1.0	<2.0	<1.0	<1.0	<1.0	10.35	4704.29
BH08	11/12/2021	<1.0	<1.0	<1.0	<2.0	<1.0	<1.0	<1.0	6.88	4707.66
BH08	2/16/2022	<1.0	<1.0	<1.0	<2.0	<1.0	<1.0	<1.0	9.19	4705.35
BH08	5/12/2022	<1.0	<1.0	<1.0	<2.0	<1.0	<1.0	<1.0	10.36	4704.18

**Notes:**

- Groundwater standards referenced from 2 CCR 404-1, Table 915-1, January 15, 2021.
  - 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

## Attachment A

# Summit Scientific

---

4653 Table Mountain Drive, Golden, Colorado 80403

303.277.9310

May 18, 2022

Mark Longhurst

PDC Energy

1775 Sherman St. STE. 3000

Denver, CO 80203

RE: Dinner 14 B-1

Work Order #2205189

Enclosed are the results of analyses for samples received by Summit Scientific on 05/12/22 17:40. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

A handwritten signature in black ink, appearing to read 'P. Shrewsbury', with a stylized, cursive script.

Paul Shrewsbury

President



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

Project: Dinner 14 B-1  
Project Number: [none]  
Project Manager: Mark Longhurst

**Reported:**  
05/18/22 12:55

#### ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
BH01	2205189-01	Water	05/12/22 12:12	05/12/22 17:40
BH02	2205189-02	Water	05/12/22 12:22	05/12/22 17:40
BH03	2205189-03	Water	05/12/22 12:48	05/12/22 17:40
BH04	2205189-04	Water	05/12/22 12:31	05/12/22 17:40
BH05	2205189-05	Water	05/12/22 12:28	05/12/22 17:40
BH06	2205189-06	Water	05/12/22 12:39	05/12/22 17:40
BH07	2205189-07	Water	05/12/22 12:37	05/12/22 17:40
BH08	2205189-08	Water	05/12/22 12:16	05/12/22 17:40

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

S<sub>2</sub>

2205189

4653 Table Mountain Drive ♦ Golden, Colorado 80403

303-277-9310

Page 1

of 1

Client: PDC / Tasman Geosciences

Project Manager: MARK LONGHURST

Address: 6855 W. 119th Ave.

E-Mail: mark.longhurst@pdce.com

City/State/Zip: Broomfield / CO/ 80020


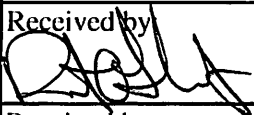
Phone: 303-487-1228

Project Name: DINNER 19 B-

Sampler Name: COLETTE RAMEY

Project Number: N/A

					Preservative				Matrix				Analysis Requested						Special Instructions		
ID	Sample Description	Date Sampled	Time Sampled	# of containers	HCl	HNO <sub>3</sub>	None	Other	Water	Soil	Air-Canister #	Other	BTEX	Naphthalene	1,2,4-TMB	1,3,5-TMB	TDS	Chloride	Sulfate		
1	BH01	5/12/22	1212	3	✓				✓				✓	✓	✓	✓					
2	BH02	5/12/22	1222	1	✓				✓				✓	✓	✓	✓					
3	BH03	5/12/22	1248	1	✓				✓				✓	✓	✓	✓					
4	BH04	5/12/22	1231	1	✓				✓				✓	✓	✓	✓					
5	BH05	5/12/22	1228	1	✓				✓				✓	✓	✓	✓					
6	BH06	5/12/22	1239	1	✓				✓				✓	✓	✓	✓					
7	BH07	5/12/22	1237	1	✓				✓				✓	✓	✓	✓					
8	BH08	5/12/22	1216	1	✓				✓				✓	✓	✓	✓					
9																					
10																					

Relinquished by: 	Date/Time: 5/12/2022 1415	Received by: Tasman's Lock Box	Date/Time: 5/12/2022 1415	<b>Turn Around Time</b> (Check) ___ Same Day ___ 24 hours ___ 48 hours <b>Sample Integrity:</b> Temperature Upon Receipt: <u>1.3</u> Samples Intact: <u>Yes</u> No	<b>Notes:</b>
Relinquished by: Tasman's Lock Box	Date/Time: 5/12/22 1740	Received by: 	Date/Time: 5/12/22 1740		
Relinquished by:	Date/Time:	Received by:	Date/Time:		

S<sub>2</sub>

## Sample Receipt Checklist

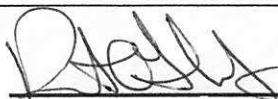
S2 Work Order# 2205189Client: Re/Tasman Client Project ID: Dinner 1413-1

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

	-			
--	---	--	--	--

Matrix (Check all that apply) Air ☐ Soil/Solid ☐ Water ☒ Other ☐Temp (°C) 1.3 Thermometer # 1

	Yes	No	N/A	Comments (if any)
If samples require cooling, is the temperature < 6 °C <sup>(1)</sup> ? <b>NOTE:</b> 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 <sup>(1)</sup> ?	-			
Was adequate sample volume provided <sup>(1)</sup> ?	-			
If custody seals are present, are they intact <sup>(1)</sup> ?	-			
Are samples due within 48 hours present?		-		
Are water samples with short hold times present? Note the short hold analysis in the comments column - pH, Nitrate/Nitrite, Ferrous Iron (Fe <sup>2+</sup> ), Hexavalent Chromium (Cr <sup>6+</sup> , Cr VI), COD/BOD, Total Coliform, E. Coli, Total Residual Chlorine (TRC), Dissolved Oxygen			-	
Is a chain-of-custody (COC) form present and filled out completely <sup>(1)</sup> ?	-			
Does the COC agree with the number and type of sample bottles received <sup>(1)</sup> ?	-			
Do the sample IDs on the bottle labels match the COC <sup>(1)</sup> ?	-			
Is the COC properly relinquished by the client w/ date and time recorded <sup>(1)</sup> ?	-			
For volatiles in water – is there headspace present? <b>If yes, contact client and note in narrative.</b>		-		
Are samples preserved that require preservation (excluding cooling) <sup>(1)</sup> ? Note the type of preservative in the comments column – HCl, H <sub>2</sub> SO <sub>4</sub> , NaOH, HNO <sub>3</sub> , etc.	-			HCl
If samples are acid preserved for metals, is the pH ≤ 2 <sup>(1)</sup> ? Record the pH in Comments.			-	
If dissolved metals are requested, were samples field filtered?			-	
Additional Comments (if any):				
<sup>(1)</sup> If NO, then contact the client before proceeding with analysis and note in case narrative.				



Custodian Printed Name

51222

Date/Time



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

Project: Dinner 14 B-1  
Project Number: [none]  
Project Manager: Mark Longhurst

**Reported:**  
05/18/22 12:55

**BH01**  
**2205189-01 (Water)**

**Summit Scientific**

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

Date Sampled: **05/12/22 12:12**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Benzene	ND	1.0		ug/l	1	BFE0319	05/16/22	05/17/22	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: **05/12/22 12:12**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Surrogate: 1,2-Dichloroethane-d4	9.61	72.1 %		23-173		"	"	"	"	
Surrogate: Toluene-d8	12.9	96.9 %		20-170		"	"	"	"	
Surrogate: 4-Bromofluorobenzene	11.9	89.3 %		21-167		"	"	"	"	

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: Dinner 14 B-1  
Project Number: [none]  
Project Manager: Mark Longhurst

**Reported:**  
05/18/22 12:55

**BH02**  
**2205189-02 (Water)**

**Summit Scientific**

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

Date Sampled: **05/12/22 12:22**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Benzene	ND	1.0	ug/l	1	BFE0319	05/16/22	05/17/22	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: **05/12/22 12:22**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: 1,2-Dichloroethane-d4	9.35	70.1 %	23-173		"	"	"	"	
Surrogate: Toluene-d8	13.1	98.0 %	20-170		"	"	"	"	
Surrogate: 4-Bromofluorobenzene	12.0	89.6 %	21-167		"	"	"	"	

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

Project: Dinner 14 B-1  
Project Number: [none]  
Project Manager: Mark Longhurst

**Reported:**  
05/18/22 12:55

**BH03**  
**2205189-03 (Water)**

**Summit Scientific**

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

Date Sampled: **05/12/22 12:48**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Benzene	ND	1.0	ug/l	1	BFE0319	05/16/22	05/17/22	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: **05/12/22 12:48**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: 1,2-Dichloroethane-d4	9.51	71.3 %	23-173		"	"	"	"	
Surrogate: Toluene-d8	13.1	98.3 %	20-170		"	"	"	"	
Surrogate: 4-Bromofluorobenzene	12.0	89.6 %	21-167		"	"	"	"	

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

Project: Dinner 14 B-1  
Project Number: [none]  
Project Manager: Mark Longhurst

**Reported:**  
05/18/22 12:55

**BH04**  
**2205189-04 (Water)**

**Summit Scientific**

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

Date Sampled: **05/12/22 12:31**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Benzene	ND	1.0	ug/l	1	BFE0319	05/16/22	05/17/22	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: **05/12/22 12:31**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: 1,2-Dichloroethane-d4	10.6	79.3 %	23-173		"	"	"	"	
Surrogate: Toluene-d8	12.8	96.3 %	20-170		"	"	"	"	
Surrogate: 4-Bromofluorobenzene	12.2	91.3 %	21-167		"	"	"	"	

Summit Scientific

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

Project: Dinner 14 B-1  
Project Number: [none]  
Project Manager: Mark Longhurst

**Reported:**  
05/18/22 12:55

**BH05**  
**2205189-05 (Water)**

**Summit Scientific**

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

Date Sampled: **05/12/22 12:28**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Benzene	ND	1.0	ug/l	1	BFE0319	05/16/22	05/17/22	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: **05/12/22 12:28**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: 1,2-Dichloroethane-d4	9.56	71.7 %	23-173		"	"	"	"	
Surrogate: Toluene-d8	13.1	98.0 %	20-170		"	"	"	"	
Surrogate: 4-Bromofluorobenzene	12.1	90.5 %	21-167		"	"	"	"	

Summit Scientific

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

Project: Dinner 14 B-1  
Project Number: [none]  
Project Manager: Mark Longhurst

**Reported:**  
05/18/22 12:55

**BH06**  
**2205189-06 (Water)**

**Summit Scientific**

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

Date Sampled: **05/12/22 12:39**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Benzene	ND	1.0	ug/l	1	BFE0319	05/16/22	05/17/22	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: **05/12/22 12:39**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: 1,2-Dichloroethane-d4	9.53	71.5 %	23-173		"	"	"	"	
Surrogate: Toluene-d8	12.7	95.0 %	20-170		"	"	"	"	
Surrogate: 4-Bromofluorobenzene	11.8	88.9 %	21-167		"	"	"	"	

Summit Scientific

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

Project: Dinner 14 B-1  
Project Number: [none]  
Project Manager: Mark Longhurst

**Reported:**  
05/18/22 12:55

**BH07**  
**2205189-07 (Water)**

**Summit Scientific**

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

Date Sampled: **05/12/22 12:37**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Benzene	ND	1.0		ug/l	1	BFE0319	05/16/22	05/17/22	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: **05/12/22 12:37**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Surrogate: 1,2-Dichloroethane-d4	9.60	72.0 %		23-173		"	"	"	"	
Surrogate: Toluene-d8	12.9	97.0 %		20-170		"	"	"	"	
Surrogate: 4-Bromofluorobenzene	12.0	90.1 %		21-167		"	"	"	"	

Summit Scientific

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

Project: Dinner 14 B-1  
Project Number: [none]  
Project Manager: Mark Longhurst

**Reported:**  
05/18/22 12:55

**BH08**  
**2205189-08 (Water)**

**Summit Scientific**

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

Date Sampled: **05/12/22 12:16**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Benzene	ND	1.0	ug/l	1	BFE0319	05/16/22	05/17/22	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: **05/12/22 12:16**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: 1,2-Dichloroethane-d4	9.70	72.8 %	23-173		"	"	"	"	
Surrogate: Toluene-d8	13.1	98.3 %	20-170		"	"	"	"	
Surrogate: 4-Bromofluorobenzene	11.9	89.5 %	21-167		"	"	"	"	

Summit Scientific

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

Project: Dinner 14 B-1  
Project Number: [none]  
Project Manager: Mark Longhurst

**Reported:**  
05/18/22 12:55

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

### Summit Scientific

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

#### Batch BFE0319 - EPA 5030 Water MS

##### Blank (BFE0319-BLK1)

Prepared: 05/16/22 Analyzed: 05/17/22

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	11.1		"	13.3		83.3	23-173			
Surrogate: Toluene-d8	12.4		"	13.3		92.6	20-170			
Surrogate: 4-Bromofluorobenzene	12.3		"	13.3		92.4	21-167			

##### LCS (BFE0319-BS1)

Prepared: 05/16/22 Analyzed: 05/17/22

Benzene	20.1	1.0	ug/l	25.0		80.4	51-132			
Toluene	19.6	1.0	"	25.0		78.5	51-138			
Ethylbenzene	20.7	1.0	"	25.0		82.8	58-146			
m,p-Xylene	47.6	2.0	"	50.0		95.3	57-144			
o-Xylene	21.4	1.0	"	25.0		85.5	53-146			
Naphthalene	21.7	1.0	"	25.0		86.9	70-130			
1,2,4-Trimethylbenzene	19.1	1.0	"	25.0		76.2	70-130			
1,3,5-Trimethylbenzene	19.6	1.0	"	25.0		78.2	70-130			
Surrogate: 1,2-Dichloroethane-d4	10.7		"	13.3		80.0	23-173			
Surrogate: Toluene-d8	12.5		"	13.3		93.9	20-170			
Surrogate: 4-Bromofluorobenzene	12.4		"	13.3		92.9	21-167			

##### Matrix Spike (BFE0319-MS1)

Source: 2205189-01

Prepared: 05/16/22 Analyzed: 05/17/22

Benzene	19.6	1.0	ug/l	25.0	ND	78.4	34-141			
Toluene	19.4	1.0	"	25.0	ND	77.7	27-151			
Ethylbenzene	21.2	1.0	"	25.0	ND	85.0	29-160			
m,p-Xylene	48.9	2.0	"	50.0	ND	97.7	20-166			
o-Xylene	21.8	1.0	"	25.0	ND	87.2	33-159			
Naphthalene	22.3	1.0	"	25.0	ND	89.2	70-130			
1,2,4-Trimethylbenzene	20.3	1.0	"	25.0	ND	81.2	70-130			
1,3,5-Trimethylbenzene	20.5	1.0	"	25.0	ND	82.0	70-130			
Surrogate: 1,2-Dichloroethane-d4	9.52		"	13.3		71.4	23-173			
Surrogate: Toluene-d8	12.7		"	13.3		95.0	20-170			
Surrogate: 4-Bromofluorobenzene	12.2		"	13.3		91.7	21-167			

Summit Scientific

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

Project: Dinner 14 B-1  
Project Number: [none]  
Project Manager: Mark Longhurst

**Reported:**  
05/18/22 12:55

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

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

**Batch BFE0319 - EPA 5030 Water MS**

Matrix Spike Dup (BFE0319-MSD1)	Source: 2205189-01			Prepared: 05/16/22 Analyzed: 05/17/22						
Benzene	19.8	1.0	ug/l	25.0	ND	79.2	34-141	1.01	30	
Toluene	19.7	1.0	"	25.0	ND	78.6	27-151	1.18	30	
Ethylbenzene	21.2	1.0	"	25.0	ND	84.9	29-160	0.0942	30	
m,p-Xylene	49.2	2.0	"	50.0	ND	98.4	20-166	0.714	30	
o-Xylene	22.3	1.0	"	25.0	ND	89.0	33-159	2.09	30	
Naphthalene	25.2	1.0	"	25.0	ND	101	70-130	12.2	30	
1,2,4-Trimethylbenzene	20.3	1.0	"	25.0	ND	81.2	70-130	0.0985	30	
1,3,5-Trimethylbenzene	20.6	1.0	"	25.0	ND	82.3	70-130	0.341	30	
Surrogate: 1,2-Dichloroethane-d4	10.9		"	13.3		82.1	23-173			
Surrogate: Toluene-d8	12.4		"	13.3		92.6	20-170			
Surrogate: 4-Bromofluorobenzene	12.7		"	13.3		95.2	21-167			

Summit Scientific

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

Project: Dinner 14 B-1

Project Number: [none]

Project Manager: Mark Longhurst

**Reported:**  
05/18/22 12:55

### Notes and Definitions

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