

**PDC Energy, Inc.**  
Fourth Quarter 2020 Groundwater Monitoring Summary

December 9, 2020

Former French 5, 41-4, Sitzman 1 Tank Battery  
SWNE Section 4 T5N R64W  
Remediation # 15008

This groundwater monitoring summary has been prepared by Tasman Geosciences, Inc. for the former French 5, 41-4, Sitzman 1 tank battery. On November 25, 2020, 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, and total xylenes (BTEX) by EPA Method 8260B.

Fourth quarter 2020 analytical results indicated that BTEX concentrations were below the applicable COGCC Table 910-1 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 in Attachment A.

Monitored natural attenuation (MNA) was selected as the remediation strategy for this site during the second quarter 2020 and will remain the selected remediation strategy through the first quarter 2021.

First quarter 2021 groundwater sampling will be conducted in February 2021.



BH04		
Compound (µg/L)	8/6/2020	11/25/2020
Benzene	<1.0	<1.0
Toluene	<1.0	<1.0
Ethylbenzene	<1.0	<1.0
Total Xylenes	<2.0	<2.0
Depth to Water (ft. bgs)	7.28	8.51

BH08		
Compound (µg/L)	8/6/2020	11/25/2020
Benzene	<1.0	<1.0
Toluene	<1.0	<1.0
Ethylbenzene	<1.0	<1.0
Total Xylenes	<2.0	<2.0
Depth to Water (ft. bgs)	7.02	8.33

BH05		
Compound (µg/L)	8/6/2020	11/25/2020
Benzene	<1.0	<1.0
Toluene	<1.0	<1.0
Ethylbenzene	<1.0	<1.0
Total Xylenes	<2.0	<2.0
Depth to Water (ft. bgs)	7.45	8.69

BH03		
Compound (µg/L)	8/6/2020	11/25/2020
Benzene	<1.0	<1.0
Toluene	<1.0	<1.0
Ethylbenzene	<1.0	<1.0
Total Xylenes	<2.0	<2.0
Depth to Water (ft. bgs)	7.29	8.54

BH06		
Compound (µg/L)	8/6/2020	11/25/2020
Benzene	<1.0	<1.0
Toluene	<1.0	<1.0
Ethylbenzene	<1.0	<1.0
Total Xylenes	<2.0	<2.0
Depth to Water (ft. bgs)	7.29	8.53

BH02		
Compound (µg/L)	8/6/2020	11/25/2020
Benzene	<1.0	<1.0
Toluene	<1.0	<1.0
Ethylbenzene	<1.0	<1.0
Total Xylenes	<2.0	<2.0
Depth to Water (ft. bgs)	7.31	8.56

BH07		
Compound (µg/L)	8/6/2020	11/25/2020
Benzene	<1.0	<1.0
Toluene	<1.0	<1.0
Ethylbenzene	<1.0	<1.0
Total Xylenes	<2.0	<2.0
Depth to Water (ft. bgs)	7.16	8.47

BH01		
Compound (µg/L)	8/6/2020	11/25/2020
Benzene	<1.0	<1.0
Toluene	<1.0	<1.0
Ethylbenzene	<1.0	<1.0
Total Xylenes	<2.0	<2.0
Depth to Water (ft. bgs)	8.02	9.23

DATE: December 9, 2020

DESIGNED BY: C. Hamlin

DRAWN BY: M. Dahlgren

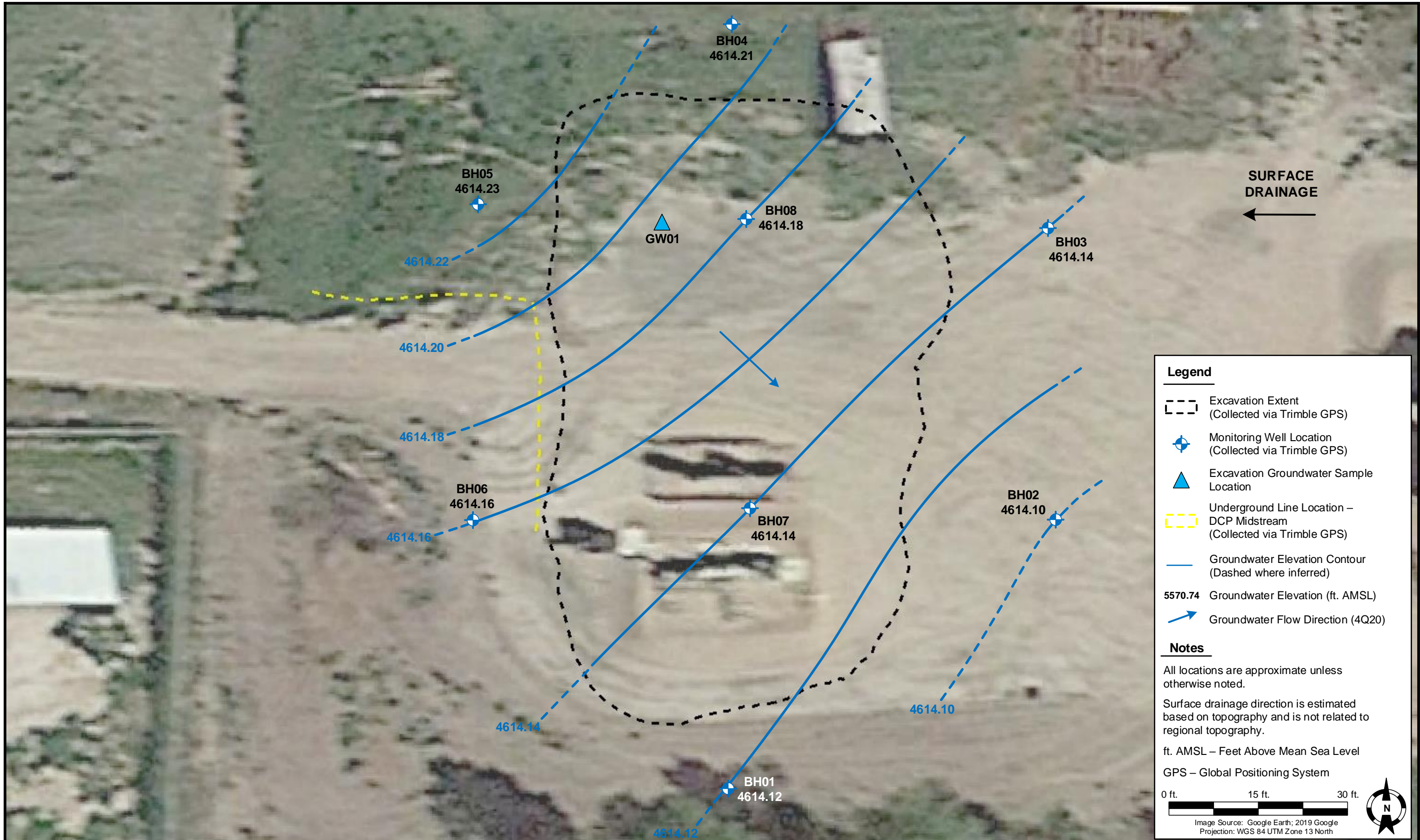


**Tasman Geosciences, Inc.**  
 6855 W. 119<sup>th</sup> Ave  
 Broomfield, CO 80020

**PDC Energy, Inc. – DJ Basin**  
**Former French 5, 41-4, Sitzman 1 Tank Battery**  
 SWNE, Section 4, Township 5 North, Range 64 West  
 Weld County, Colorado

**GROUNDWATER ANALYTICAL RESULTS MAP**

**FIGURE 1**



DATE: December 2, 2020

DESIGNED BY: C. Hamlin

DRAWN BY: A. Dahl



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

**PDC Energy, Inc. – DJ Basin**  
**Former French 5, 41-4, Sitzman 1 Tank Battery**  
SWNE, Section 4, Township 5 North, Range 64 West  
Weld County, Colorado

**GROUNDWATER ELEVATION  
CONTOUR MAP**  
(11/25/2020)

**FIGURE  
2**

**TABLE 1**  
**FORMER FRENCH 5, 41-4, SITZMAN 1 TANK BATTERY**  
**GROUNDWATER ANALYTICAL RESULTS SUMMARY TABLE**

Sample ID	Date Sampled	Benzene (µg/L)	Toluene (µg/L)	Ethylbenzene (µg/L)	Total Xylenes (µg/L)	Depth to Water <sup>(2)</sup> (ft.)	Groundwater Elevation (ft. AMSL)
COGCC Table 910-1 Groundwater Standard (µg/L) <sup>(1)</sup>		5	560	700	1,400		
GW01	3/12/2020	<1.0	<1.0	1.5	<2.0	~8	NM
BH01	5/20/2020	<1.0	<1.0	<1.0	<2.0	8.50	4614.85
BH01	8/6/2020	<1.0	<1.0	<1.0	<2.0	8.02	4615.33
BH01	11/25/2020	<1.0	<1.0	<1.0	<2.0	9.23	4614.12
BH02	5/20/2020	<1.0	<1.0	<1.0	<2.0	7.75	4614.91
BH02	8/6/2020	<1.0	<1.0	<1.0	<2.0	7.31	4615.35
BH02	11/25/2020	<1.0	<1.0	<1.0	<2.0	8.56	4614.10
BH03	5/20/2020	<1.0	<1.0	<1.0	<2.0	7.72	4614.96
BH03	8/6/2020	<1.0	<1.0	<1.0	<2.0	7.29	4615.39
BH03	11/25/2020	<1.0	<1.0	<1.0	<2.0	8.54	4614.14
BH04	5/20/2020	<1.0	<1.0	<1.0	<2.0	7.67	4615.05
BH04	8/6/2020	<1.0	<1.0	<1.0	<2.0	7.28	4615.44
BH04	11/25/2020	<1.0	<1.0	<1.0	<2.0	8.51	4614.21
BH05	5/20/2020	<1.0	<1.0	<1.0	<2.0	7.89	4615.03
BH05	8/6/2020	<1.0	<1.0	<1.0	<2.0	7.45	4615.47
BH05	11/25/2020	<1.0	<1.0	<1.0	<2.0	8.69	4614.23
BH06	5/20/2020	<1.0	<1.0	<1.0	<2.0	7.75	4614.94
BH06	8/6/2020	<1.0	<1.0	<1.0	<2.0	7.29	4615.40
BH06	11/25/2020	<1.0	<1.0	<1.0	<2.0	8.53	4614.16
BH07	5/20/2020	2.8	<1.0	14	<2.0	7.75	4614.86
BH07	8/6/2020	<1.0	<1.0	<1.0	<2.0	7.16	4615.45
BH07	11/25/2020	<1.0	<1.0	<1.0	<2.0	8.47	4614.14
BH08	5/20/2020	<1.0	<1.0	<1.0	<2.0	7.55	4614.96
BH08	8/6/2020	<1.0	<1.0	<1.0	<2.0	7.02	4615.49
BH08	11/25/2020	<1.0	<1.0	<1.0	<2.0	8.33	4614.18

**Notes:**

1. Groundwater standards referenced from 2 CCR 404-1, Table 910-1, effective May 1, 2018.

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.

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

# **ATTACHMENT A**

# Summit Scientific

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4653 Table Mountain Drive, Golden, Colorado 80403

303.277.9310

December 04, 2020

Mark Longhurst

PDC Energy

1775 Sherman St. STE. 3000


Denver, CO 80203

RE: French 5,41-4, Sitzman 1

Work Order #2011339

Enclosed are the results of analyses for samples received by Summit Scientific on 11/25/20 17:00. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

A handwritten signature in black ink that reads "Muri Premer". The signature is written in a cursive style with a large initial "M" and a long, sweeping underline.

Muri Premer For Paul Shrewsbury  
President



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

Project: French 5,41-4, Sitzman 1

Project Number: [none]

Project Manager: Mark Longhurst

**Reported:**  
12/04/20 15:31

**ANALYTICAL REPORT FOR SAMPLES**

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
BH01	2011339-01	Water	11/25/20 14:13	11/25/20 17:00
BH02	2011339-02	Water	11/25/20 14:19	11/25/20 17:00
BH03	2011339-03	Water	11/25/20 14:24	11/25/20 17:00
BH04	2011339-04	Water	11/25/20 14:00	11/25/20 17:00
BH05	2011339-05	Water	11/25/20 14:08	11/25/20 17:00
BH06	2011339-06	Water	11/25/20 14:17	11/25/20 17:00
BH07	2011339-07	Water	11/25/20 14:32	11/25/20 17:00
BH08	2011339-08	Water	11/25/20 14:25	11/25/20 17:00

Summit Scientific

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# Summit Scientific

2011339

741 Corporate Circle Suite 1 ♦ Golden, Colorado 80401  
303-277-9310 ♦ 303-374-5933 Fax

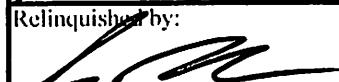

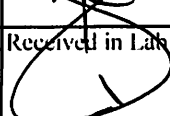
Page 1 of 1

Client: PDC / Tasman  
Address: 6855 W 119th Ave  
City/State/Zip: Broomfield CO 80020  
Phone: 303-487-1228 Fax:  
Sampler Name: J Marcus

Project Manager: Mark Longhurst  
E-Mail: mark.longhurst@PDCE.com  
Project Name: French S, 41-4, Sitzman I  
Project Number: N/A

Sample Description	Date Sampled	Time Sampled	Number of Containers	Preservative				Matrix			Analyze For:						Special Instructions		
				HCl	HNO <sub>3</sub>	None	Other (Specify)	Groundwater	Soil	Air - Canister Serial #	Other (Specify)								
BH01	11/25/20	1413	3			X		X											
BH02	11/25/20	1419	3			X		X											
BH03	11/25/20	1424	3			X		X											
BH04	11/25/20	1400	3			X		X											
BH05	11/25/20	1408	3			X		X											
BH06	11/25/20	1417	3			X		X											
BH07	11/25/20	1432	3			X		X											
BH08	11/25/20	1425	3			X		X											

Relinquished by: 	Date/Time: 11/25/20 1645	Received by: Tasman Lock Box	Date/Time: 11/25/20 1645	Turn Around Time (Check) Same Day <input type="checkbox"/> 72 Hours <input type="checkbox"/> 24 Hours <input type="checkbox"/> Standard <input checked="" type="checkbox"/> 48 Hours <input type="checkbox"/>  Sample Integrity: Temperature Upon Receipt: 21 Intact: Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Notes:
Relinquished by: Tasman Lock Box	Date/Time: 11/25/20 1700	Received by: 	Date/Time: 11/25/20 1700		
Relinquished by:	Date/Time:	Received in Lab by: 	Date/Time:		

### Sample Receipt Checklist

S2 Work Order 2011339

Client: PAC TASHMAN

Client Project ID: Friend # 5, 41-4, SITZMAN

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

Matrix (check all that apply): \_\_\_\_\_ Air \_\_\_\_\_ Soil/Solid  Water \_\_\_\_\_ Other: \_\_\_\_\_  
(Describe)

Temp (°C)	2.1
-----------	-----

Thermometer ID: 61857155-K

	Yes	No	N/A	Comments (if any)
If samples require cooling, was the temperature at 4°C +/- 2°C <sup>(1)</sup> ? NOTE: If samples are delivered the same day of sampling, this requirement is met provided that there is evidence that cooling has begun.	<input checked="" type="checkbox"/>			
Were all samples received intact <sup>(1)</sup> ?	<input checked="" type="checkbox"/>			
Was adequate sample volume provided <sup>(1)</sup> ?	<input checked="" type="checkbox"/>			
If custody seals are present, are they intact <sup>(1)</sup> ?			<input checked="" type="checkbox"/>	
Are samples with holding times due within 48 hours sample due within 48 hours present?		<input checked="" type="checkbox"/>		
Is a chain-of-custody (COC) form present and filled out completely <sup>(1)</sup> ?	<input checked="" type="checkbox"/>			
Does the COC agree with the number and type of sample bottles received <sup>(1)</sup> ?	<input checked="" type="checkbox"/>			
Do the sample IDs on the bottle labels match the COC <sup>(1)</sup> ?	<input checked="" type="checkbox"/>			
Is the COC properly relinquished by the client w/ date and time recorded <sup>(1)</sup> ?	<input checked="" type="checkbox"/>			
For volatiles in water – is there headspace present? <b>If yes, contact client and note in narrative.</b>		<input checked="" type="checkbox"/>		
Are samples preserved that require preservation <b>(excluding cooling)</b> <sup>(1)</sup> ? Note the type of preservative in the Comments column – HCl, H2SO4, NaOH, HNO3, ect			<input checked="" type="checkbox"/>	
If samples are acid preserved for metals, is the pH ≤ 2 <sup>(1)</sup> ? Record the pH in Comments.			<input checked="" type="checkbox"/>	
If dissolved metals are requested, were samples field filtered?			<input checked="" type="checkbox"/>	
Additional Comments (if any):				
<sup>(1)</sup> If NO, then contact the client before proceeding with analysis and note in case narrative.				

\_\_\_\_\_  
Custodian Printed Name or Initials

\_\_\_\_\_  
Signature of Custodian

11/25/2020  
Date/Time



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

Project: French 5,41-4, Sitzman 1

Project Number: [none]  
 Project Manager: Mark Longhurst

**Reported:**  
 12/04/20 15:31

**BH01**  
**2011339-01 (Water)**

**Summit Scientific**

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

Date Sampled: **11/25/20 14:13**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Benzene	ND	1.0		ug/l	1	BDK0334	11/28/20	11/30/20	EPA 8260B	
Toluene	ND	1.0		"	"	"	"	"	"	
Ethylbenzene	ND	1.0		"	"	"	"	"	"	
Xylenes (total)	ND	2.0		"	"	"	"	"	"	

Date Sampled: **11/25/20 14:13**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Surrogate: 1,2-Dichloroethane-d4		120 %		23-173		"	"	"	"	
Surrogate: Toluene-d8		110 %		20-170		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		88.9 %		21-167		"	"	"	"	

Summit Scientific

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

Project: French 5,41-4, Sitzman 1

Project Number: [none]  
 Project Manager: Mark Longhurst

**Reported:**  
 12/04/20 15:31

**BH02**  
**2011339-02 (Water)**

**Summit Scientific**

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

Date Sampled: **11/25/20 14:19**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Benzene	ND	1.0		ug/l	1	BDK0334	11/28/20	11/30/20	EPA 8260B	
Toluene	ND	1.0		"	"	"	"	"	"	
Ethylbenzene	ND	1.0		"	"	"	"	"	"	
Xylenes (total)	ND	2.0		"	"	"	"	"	"	

Date Sampled: **11/25/20 14:19**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Surrogate: 1,2-Dichloroethane-d4		102 %		23-173		"	"	"	"	
Surrogate: Toluene-d8		109 %		20-170		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		92.9 %		21-167		"	"	"	"	

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

Project: French 5,41-4, Sitzman 1

Project Number: [none]  
 Project Manager: Mark Longhurst

**Reported:**  
 12/04/20 15:31

**BH03**  
**2011339-03 (Water)**

**Summit Scientific**

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

Date Sampled: **11/25/20 14:24**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Benzene	ND	1.0		ug/l	1	BDK0334	11/28/20	11/30/20	EPA 8260B	
Toluene	ND	1.0		"	"	"	"	"	"	
Ethylbenzene	ND	1.0		"	"	"	"	"	"	
Xylenes (total)	ND	2.0		"	"	"	"	"	"	

Date Sampled: **11/25/20 14:24**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Surrogate: 1,2-Dichloroethane-d4		112 %		23-173		"	"	"	"	
Surrogate: Toluene-d8		106 %		20-170		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		93.3 %		21-167		"	"	"	"	

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

Project: French 5,41-4, Sitzman 1

Project Number: [none]  
 Project Manager: Mark Longhurst

**Reported:**  
 12/04/20 15:31

**BH04**  
**2011339-04 (Water)**

**Summit Scientific**

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

Date Sampled: **11/25/20 14:00**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Benzene	ND	1.0		ug/l	1	BDK0334	11/28/20	12/01/20	EPA 8260B	
Toluene	ND	1.0		"	"	"	"	"	"	
Ethylbenzene	ND	1.0		"	"	"	"	"	"	
Xylenes (total)	ND	2.0		"	"	"	"	"	"	

Date Sampled: **11/25/20 14:00**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Surrogate: 1,2-Dichloroethane-d4		114 %		23-173		"	"	"	"	
Surrogate: Toluene-d8		100 %		20-170		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		87.9 %		21-167		"	"	"	"	

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

Project: French 5,41-4, Sitzman 1

Project Number: [none]  
 Project Manager: Mark Longhurst

**Reported:**  
 12/04/20 15:31

**BH05**  
**2011339-05 (Water)**

**Summit Scientific**

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

Date Sampled: **11/25/20 14:08**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Benzene	ND	1.0		ug/l	1	BDK0334	11/28/20	12/01/20	EPA 8260B	
Toluene	ND	1.0		"	"	"	"	"	"	
Ethylbenzene	ND	1.0		"	"	"	"	"	"	
Xylenes (total)	ND	2.0		"	"	"	"	"	"	

Date Sampled: **11/25/20 14:08**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Surrogate: 1,2-Dichloroethane-d4		109 %		23-173		"	"	"	"	
Surrogate: Toluene-d8		100 %		20-170		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		95.5 %		21-167		"	"	"	"	

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

Project: French 5,41-4, Sitzman 1

Project Number: [none]  
 Project Manager: Mark Longhurst

**Reported:**  
 12/04/20 15:31

**BH06**  
**2011339-06 (Water)**

**Summit Scientific**

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

Date Sampled: **11/25/20 14:17**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Benzene	ND	1.0		ug/l	1	BDK0334	11/28/20	12/01/20	EPA 8260B	
Toluene	ND	1.0		"	"	"	"	"	"	
Ethylbenzene	ND	1.0		"	"	"	"	"	"	
Xylenes (total)	ND	2.0		"	"	"	"	"	"	

Date Sampled: **11/25/20 14:17**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Surrogate: 1,2-Dichloroethane-d4		119 %		23-173		"	"	"	"	
Surrogate: Toluene-d8		108 %		20-170		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		91.4 %		21-167		"	"	"	"	

Summit Scientific

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

Project: French 5,41-4, Sitzman 1

Project Number: [none]  
 Project Manager: Mark Longhurst

**Reported:**  
 12/04/20 15:31

**BH07**  
**2011339-07 (Water)**

**Summit Scientific**

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

Date Sampled: **11/25/20 14:32**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Benzene	ND	1.0		ug/l	1	BDK0334	11/28/20	12/01/20	EPA 8260B	
Toluene	ND	1.0		"	"	"	"	"	"	
Ethylbenzene	ND	1.0		"	"	"	"	"	"	
Xylenes (total)	ND	2.0		"	"	"	"	"	"	

Date Sampled: **11/25/20 14:32**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Surrogate: 1,2-Dichloroethane-d4		112 %		23-173		"	"	"	"	
Surrogate: Toluene-d8		103 %		20-170		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		95.9 %		21-167		"	"	"	"	

Summit Scientific

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

Project: French 5,41-4, Sitzman 1

Project Number: [none]  
 Project Manager: Mark Longhurst

**Reported:**  
 12/04/20 15:31

**BH08**  
**2011339-08 (Water)**

**Summit Scientific**

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

Date Sampled: **11/25/20 14:25**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Benzene	ND	1.0	ug/l	1	BDK0334	11/28/20	12/01/20	EPA 8260B	
Toluene	ND	1.0	"	"	"	"	"	"	
Ethylbenzene	ND	1.0	"	"	"	"	"	"	
Xylenes (total)	ND	2.0	"	"	"	"	"	"	

Date Sampled: **11/25/20 14:25**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 1,2-Dichloroethane-d4		121 %	23-173		"	"	"	"	
Surrogate: Toluene-d8		115 %	20-170		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		95.7 %	21-167		"	"	"	"	

Summit Scientific

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

Project: French 5,41-4, Sitzman 1

Project Number: [none]  
Project Manager: Mark Longhurst

**Reported:**  
12/04/20 15:31

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

**Summit Scientific**

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

**Batch BDK0334 - EPA 5030 Water MS**

**Blank (BDK0334-BLK1)**

Prepared: 11/28/20 Analyzed: 11/30/20

Benzene	ND	1.0	ug/l							
Toluene	ND	1.0	"							
Ethylbenzene	ND	1.0	"							
Xylenes (total)	ND	2.0	"							
Surrogate: 1,2-Dichloroethane-d4	14.3		"	13.3		107		23-173		
Surrogate: Toluene-d8	13.5		"	13.3		101		20-170		
Surrogate: 4-Bromofluorobenzene	12.7		"	13.3		95.6		21-167		

**LCS (BDK0334-BS1)**

Prepared: 11/28/20 Analyzed: 11/30/20

Benzene	36.0	1.0	ug/l	33.3		108		51-132		
Toluene	36.9	1.0	"	33.3		111		51-138		
Ethylbenzene	38.4	1.0	"	33.3		115		58-146		
m,p-Xylene	77.8	2.0	"	66.7		117		57-144		
o-Xylene	37.0	1.0	"	33.3		111		53-146		
Surrogate: 1,2-Dichloroethane-d4	14.8		"	13.3		111		23-173		
Surrogate: Toluene-d8	14.0		"	13.3		105		20-170		
Surrogate: 4-Bromofluorobenzene	12.6		"	13.3		94.3		21-167		

**Matrix Spike (BDK0334-MS1)**

Source: 2011329-01

Prepared: 11/28/20 Analyzed: 11/30/20

Benzene	36.2	1.0	ug/l	33.3	28.0	24.8		34-141		QM-07
Toluene	35.6	1.0	"	33.3	ND	107		27-151		
Ethylbenzene	39.2	1.0	"	33.3	ND	117		29-160		
m,p-Xylene	79.2	2.0	"	66.7	ND	119		20-166		
o-Xylene	37.2	1.0	"	33.3	ND	112		33-159		
Surrogate: 1,2-Dichloroethane-d4	14.6		"	13.3		109		23-173		
Surrogate: Toluene-d8	13.2		"	13.3		99.2		20-170		
Surrogate: 4-Bromofluorobenzene	12.3		"	13.3		92.3		21-167		

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

Project: French 5,41-4, Sitzman 1

Project Number: [none]  
 Project Manager: Mark Longhurst

**Reported:**  
 12/04/20 15:31

**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 BDK0334 - EPA 5030 Water MS**

Matrix Spike Dup (BDK0334-MSD1)	Source: 2011329-01			Prepared: 11/28/20 Analyzed: 11/30/20							
Benzene	33.1	1.0	ug/l	33.3	28.0	15.3	34-141	9.09	30		QM-07
Toluene	35.7	1.0	"	33.3	ND	107	27-151	0.253	30		
Ethylbenzene	39.0	1.0	"	33.3	ND	117	29-160	0.281	30		
m,p-Xylene	77.2	2.0	"	66.7	ND	116	20-166	2.48	30		
o-Xylene	37.1	1.0	"	33.3	ND	111	33-159	0.431	30		
Surrogate: 1,2-Dichloroethane-d4	14.8		"	13.3		111	23-173				
Surrogate: Toluene-d8	13.3		"	13.3		99.6	20-170				
Surrogate: 4-Bromofluorobenzene	12.8		"	13.3		95.6	21-167				

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

Project: French 5,41-4, Sitzman 1

Project Number: [none]  
Project Manager: Mark Longhurst

**Reported:**  
12/04/20 15:31

### Notes and Definitions

- QM-07 The spike recovery was outside acceptance limits for the MS and/or MSD. The batch was accepted based on acceptable LCS/LCSD recovery.
- 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