

PDC Energy, Inc.
First Quarter 2021 Groundwater Monitoring Summary

February 15, 2021

Former Schwab 26-6F Tank Battery
SENW Section 26 T4N R66W
Remediation # 15032

This groundwater monitoring summary has been prepared by Tasman Geosciences, Inc. for the former Schwab 26-6F tank battery. On January 29, 2021, groundwater monitoring was conducted at all 11 monitoring wells (BH01 – BH11). Eleven groundwater samples were submitted to Summit Scientific Laboratories for analysis of benzene, toluene, ethylbenzene, and total xylenes (BTEX) by EPA Method 8260B.

First quarter 2021 analytical results indicated that BTEX concentrations were below the applicable COGCC Table 910-1 groundwater standards in all 11 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 second quarter 2021.

Second quarter 2021 groundwater sampling will be conducted in April 2021.

BH11		
Compound (µg/L)	10/26/2020	1/29/2021
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)	5.07	5.24

BH10		
Compound (µg/L)	10/26/2020	1/29/2021
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)	5.13	5.29

BH09		
Compound (µg/L)	10/26/2020	1/29/2021
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)	5.32	5.44

BH08		
Compound (µg/L)	10/26/2020	1/29/2021
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)	5.11	5.21

BH04		
Compound (µg/L)	10/26/2020	1/29/2021
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)	5.14	5.30

BH05		
Compound (µg/L)	10/26/2020	1/29/2021
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)	4.73	4.89

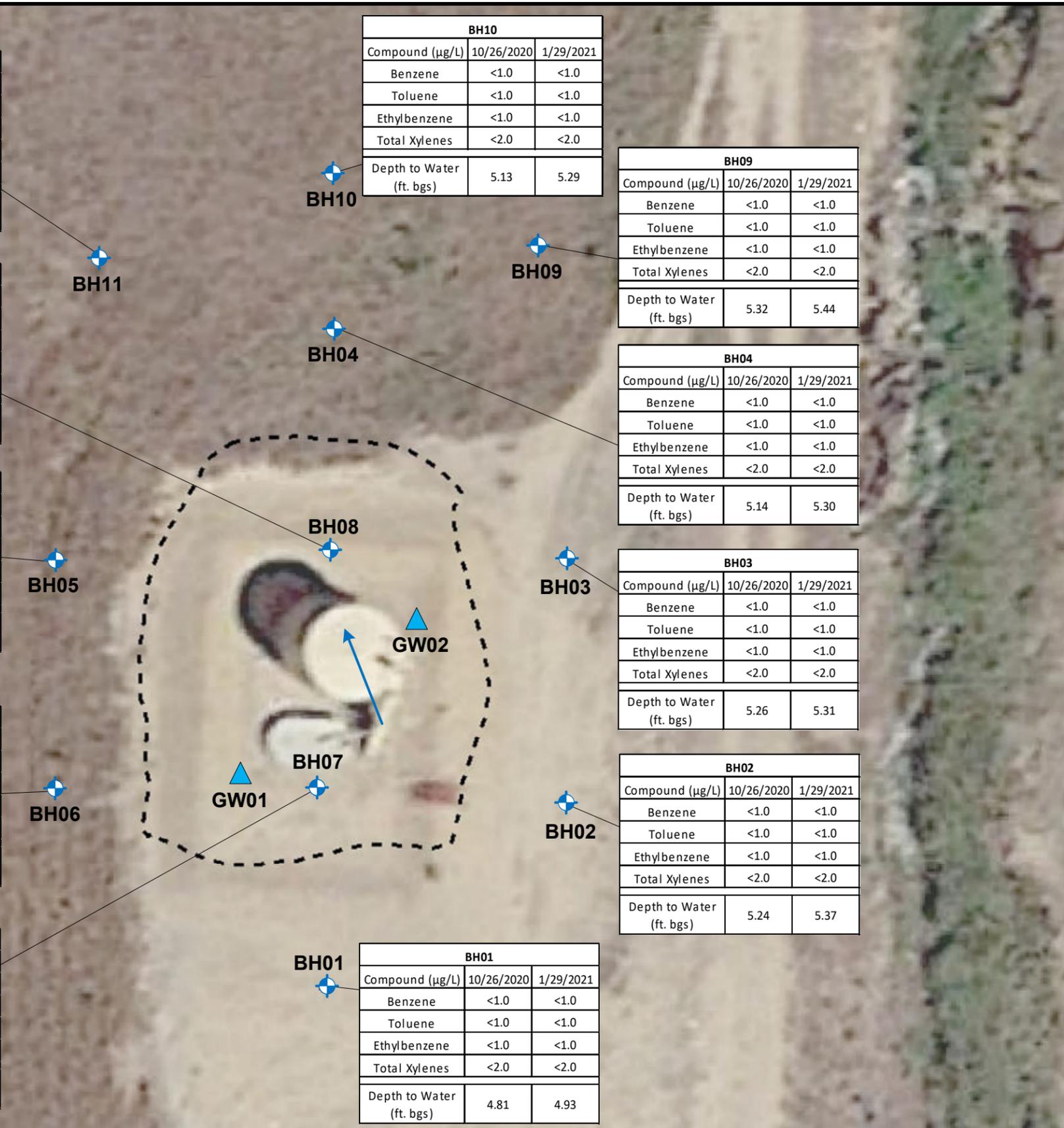
BH03		
Compound (µg/L)	10/26/2020	1/29/2021
Benzene	<1.0	<1.0
Toluene	<1.0	<1.0
Ethylbenzene	<1.0	<1.0
Total Xylenes	<2.0	<2.0
Depth to Water (ft. bgs)	5.26	5.31

BH06		
Compound (µg/L)	10/26/2020	1/29/2021
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)	4.47	4.64

BH02		
Compound (µg/L)	10/26/2020	1/29/2021
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)	5.24	5.37

BH07		
Compound (µg/L)	10/26/2020	1/29/2021
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)	4.84	5.92

BH01		
Compound (µg/L)	10/26/2020	1/29/2021
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)	4.81	4.93



Legend

- Excavation Extent (Collected via Trimble GPS)
- Excavation Groundwater Sample Location
- Monitoring Well Location (Collected via Trimble GPS)
- Groundwater Flow Direction (1Q21)

Notes

All locations are approximate unless otherwise noted.
 GPS – Global Positioning System
 µg/L – Micrograms per liter
 ft. bgs – Feet below ground surface

0 ft. 15 ft. 30 ft.

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

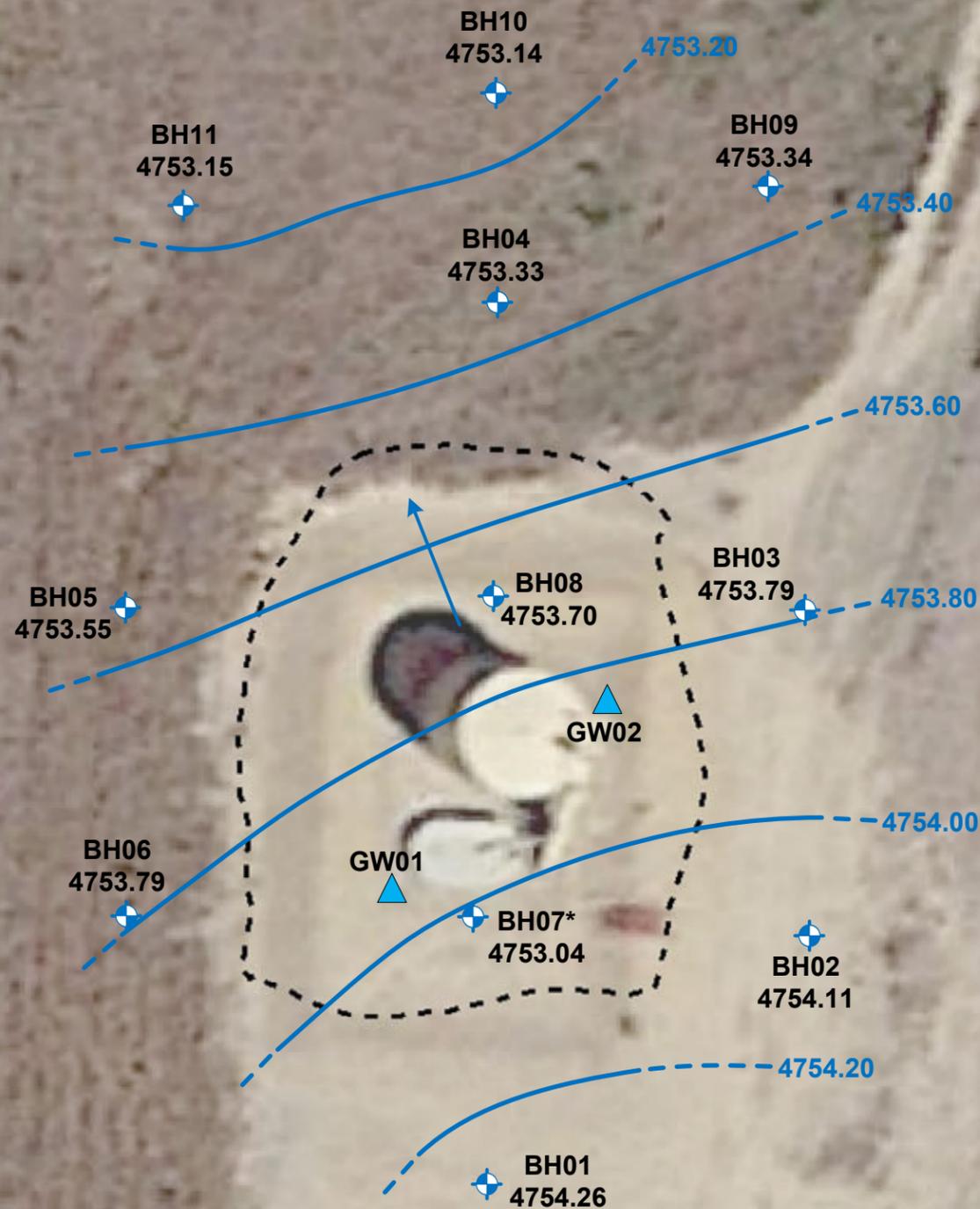
DATE: February 15, 2021
 DESIGNED BY: C. Hamlin
 DRAWN BY: J. Marcus

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

PDC Energy, Inc. – DJ Basin
Former Schwab 26-6F Tank Battery
 SENW, Section 26, Township 4 North, Range 66 West
 Weld County, Colorado

GROUNDWATER
 ANALYTICAL RESULTS
 MAP

FIGURE
 1



Legend

- Excavation Extent (Collected via Trimble GPS)
- Excavation Groundwater Sample Location
- Monitoring Well Location (Collected via Trimble GPS)
- Groundwater Elevation Contour (Dashed where inferred)
- 4816.00** Groundwater Elevation (ft. AMSL)
- Groundwater Flow Direction (1Q21)

Notes

All locations are approximate unless otherwise noted.

* - Well was not used for contouring purposes due to anomalous groundwater elevation.

GPS – Global Positioning System

0 ft. 15 ft. 30 ft.

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



DATE: February 15, 2020

DESIGNED BY: C. Hamlin

DRAWN BY: A. Dahl



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

PDC Energy, Inc. – DJ Basin
Former Schwab 26-6F Tank Battery
SENW, Section 26, Township 4 North, Range 66 West
Weld County, Colorado

**GROUNDWATER
ELEVATION CONTOUR
MAP (01/29/2021)**

**FIGURE
2**

TABLE 1
FORMER SCHWAB 26-6F 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 ⁽²⁾ (ft)	Groundwater Elevation (ft AMSL)
COGCC Table 910-1 Groundwater Standard (µg/L) ⁽¹⁾		5	560	700	1,400		
GW01	2/21/2020	35	66	24	390	~ 7	NM
GW02	3/2/2020	120	170	15	430	~ 7	NM
BH01	4/28/2020	3.7	<1.0	<1.0	<2.0	4.10	4755.09
BH01	7/1/2020	<1.0	<1.0	<1.0	<2.0	3.92	4755.27
BH01	10/26/2020	<1.0	<1.0	<1.0	<2.0	4.81	4754.38
BH01	1/29/2021	<1.0	<1.0	<1.0	<2.0	4.93	4754.26
BH02	4/28/2020	<1.0	<1.0	<1.0	<2.0	4.65	4754.83
BH02	7/1/2020	<1.0	<1.0	<1.0	<2.0	4.40	4755.08
BH02	10/26/2020	<1.0	<1.0	<1.0	<2.0	5.24	4754.24
BH02	1/29/2021	<1.0	<1.0	<1.0	<2.0	5.37	4754.11
BH03	4/28/2020	<1.0	<1.0	<1.0	<2.0	4.62	4754.48
BH03	7/1/2020	<1.0	<1.0	<1.0	<2.0	4.38	4754.72
BH03	10/26/2020	<1.0	<1.0	<1.0	<2.0	5.26	4753.84
BH03	1/29/2021	<1.0	<1.0	<1.0	<2.0	5.31	4753.79
BH04	4/28/2020	4.1	<1.0	25	300	4.40	4754.23
BH04	7/1/2020	13	<1.0	22	120	4.24	4754.39
BH04	10/26/2020	<1.0	<1.0	<1.0	<2.0	5.14	4753.49
BH04	1/29/2021	<1.0	<1.0	<1.0	<2.0	5.30	4753.33
BH05	4/28/2020	<1.0	<1.0	<1.0	2.1	3.86	4754.58
BH05	7/1/2020	<1.0	<1.0	<1.0	<2.0	3.76	4754.68
BH05	10/26/2020	<1.0	<1.0	<1.0	<2.0	4.73	4753.71
BH05	1/29/2021	<1.0	<1.0	<1.0	<2.0	4.89	4753.55
BH06	4/28/2020	<1.0	<1.0	<1.0	<2.0	3.59	4754.84
BH06	7/1/2020	<1.0	<1.0	<1.0	<2.0	3.50	4754.93
BH06	10/26/2020	<1.0	<1.0	<1.0	<2.0	4.47	4753.96
BH06	1/29/2021	<1.0	<1.0	<1.0	<2.0	4.64	4753.79
BH07	4/28/2020	83	8.7	23	430	3.78	4755.18
BH07	7/1/2020	310	<1.0	11	81	3.87	4755.09
BH07	10/26/2020	<1.0	<1.0	<1.0	<2.0	4.84	4754.12
BH07	1/29/2021	<1.0	<1.0	<1.0	<2.0	5.92	4753.04
BH08	4/28/2020	98	<1.0	1.3	15	4.41	4754.50
BH08	7/1/2020	25	<1.0	<1.0	<2.0	4.22	4754.69
BH08	10/26/2020	<1.0	<1.0	<1.0	<2.0	5.11	4753.80
BH08	1/29/2021	<1.0	<1.0	<1.0	<2.0	5.21	4753.70
BH09	10/26/2020	<1.0	<1.0	<1.0	<2.0	5.32	4753.46

TABLE 1
FORMER SCHWAB 26-6F 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 ⁽²⁾ (ft)	Groundwater Elevation (ft AMSL)
COGCC Table 910-1 Groundwater Standard (µg/L) ⁽¹⁾		5	560	700	1,400		
BH09	1/29/2021	<1.0	<1.0	<1.0	<2.0	5.44	4753.34
BH10	10/26/2020	<1.0	<1.0	<1.0	<2.0	5.13	4753.30
BH10	1/29/2021	<1.0	<1.0	<1.0	<2.0	5.29	4753.14
BH11	10/26/2020	<1.0	<1.0	<1.0	<2.0	5.07	4753.32
BH11	1/29/2021	<1.0	<1.0	<1.0	<2.0	5.24	4753.15

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

BOLD = Analytical result is in exceedance of COGCC groundwater standards.

ATTACHMENT A

Summit Scientific

4653 Table Mountain Drive, Golden, Colorado 80403

303.277.9310

February 08, 2021

Mark Longhurst

PDC Energy

1775 Sherman St. STE. 3000

Denver, CO 80203

RE: Schwab 26-6F

Work Order #2101309

Enclosed are the results of analyses for samples received by Summit Scientific on 01/29/21 18:00. 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: Schwab 26-6F

Project Number: [none]

Project Manager: Mark Longhurst

Reported:
02/08/21 13:44

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
BH01	2101309-01	Water	01/29/21 11:51	01/29/21 18:00
BH02	2101309-02	Water	01/29/21 11:59	01/29/21 18:00
BH03	2101309-03	Water	01/29/21 12:07	01/29/21 18:00
BH04	2101309-04	Water	01/29/21 12:16	01/29/21 18:00
BH05	2101309-05	Water	01/29/21 12:04	01/29/21 18:00
BH06	2101309-06	Water	01/29/21 12:12	01/29/21 18:00
BH07	2101309-07	Water	01/29/21 12:28	01/29/21 18:00
BH08	2101309-08	Water	01/29/21 12:23	01/29/21 18:00
BH09	2101309-09	Water	01/29/21 11:39	01/29/21 18:00
BH10	2101309-10	Water	01/29/21 11:48	01/29/21 18:00
BH11	2101309-11	Water	01/29/21 11:56	01/29/21 18:00

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

S₂

2101309.2

4653 Table Mountain Drive ♦ Golden, Colorado 80403
303-277-9310 ♦ 303-374-5933 (f)

Client: PDC / Tasman

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: Schwab 26-6F

Sampler Name: Yianni Tsambis

Project Number: n/a

ID	Sample Description	Date Sampled	Time Sampled	# of containers	Preservative				Matrix				Analysis Requested						Special Instructions		
					HCl	HNO3	None	Other	Water	Soil	Air-Canister #	Other	BTEX								
1	BH11	1/29/2021	1156	3			X		X					X							
2																					
3																					
4																					
5																					
6																					
7																					
8																					
9																					
10																					

Relinquished by:  Date/Time: 1/29/21 1540

Received by: Tasman's Lock Box Date/Time: 1/29/21 1540

Turn Around Time (Check)
 Same Day 72 hours
 24 hours Standard
 48 hours

Notes:

Relinquished by:  Date/Time: 01/29/2021 1800

Received by:  Date/Time: 01/29/2021 1800

Sample Integrity:
 Temperature Upon Receipt: S₂
 Samples Intact: Yes No

2101309

Sample Receipt Checklist

S2 Work Order _____

Client: POC/TASMAN Client Project ID: SCHWAB 26-6F

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

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

Temp (°C)	<u>5.2</u>
-----------	------------

Thermometer ID: 61857155-K

	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 provided that there is evidence that cooling has begun.	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Were all samples received intact ⁽¹⁾ ?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Was adequate sample volume provided ⁽¹⁾ ?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
If custody seals are present, are they intact ⁽¹⁾ ?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
Are samples with holding times due within 48 hours sample due within 48 hours present?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
Is a chain-of-custody (COC) form present and filled out completely ⁽¹⁾ ?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Does the COC agree with the number and type of sample bottles received ⁽¹⁾ ?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Do the sample IDs on the bottle labels match the COC ⁽¹⁾ ?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Is the COC properly relinquished by the client w/ date and time recorded ⁽¹⁾ ?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
For volatiles in water – is there headspace present? If yes, contact client and note in narrative.	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
Are samples preserved that require preservation (excluding cooling) ⁽¹⁾ ? Note the type of preservative in the Comments column – HCl, H2SO4, NaOH, HNO3, ect	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
If samples are acid preserved for metals, is the pH ≤ 2 ⁽¹⁾ ? Record the pH in Comments.	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
If dissolved metals are requested, were samples field filtered?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	

Additional Comments (if any):

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

JS
Custodian Printed Name or Initials

[Signature]
Signature of Custodian

01/29/2021
Date/Time



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

Project: Schwab 26-6F

Project Number: [none]

Project Manager: Mark Longhurst

Reported:
 02/08/21 13:44

BH01
2101309-01 (Water)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **01/29/21 11:51**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Benzene	ND	1.0	ug/l	1	BEB0055	02/03/21	02/03/21	EPA 8260B	
Toluene	ND	1.0	"	"	"	"	"	"	
Ethylbenzene	ND	1.0	"	"	"	"	"	"	
Xylenes (total)	ND	2.0	"	"	"	"	"	"	

Date Sampled: **01/29/21 11:51**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Surrogate: 1,2-Dichloroethane-d4		146 %	23-173		"	"	"	"	
Surrogate: Toluene-d8		92.2 %	20-170		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		101 %	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: Schwab 26-6F

Project Number: [none]

Project Manager: Mark Longhurst

Reported:
 02/08/21 13:44

BH02
2101309-02 (Water)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **01/29/21 11:59**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Benzene	ND	1.0		ug/l	1	BEB0055	02/03/21	02/03/21	EPA 8260B	
Toluene	ND	1.0		"	"	"	"	"	"	
Ethylbenzene	ND	1.0		"	"	"	"	"	"	
Xylenes (total)	ND	2.0		"	"	"	"	"	"	

Date Sampled: **01/29/21 11:59**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Surrogate: 1,2-Dichloroethane-d4		147 %		23-173		"	"	"	"	
Surrogate: Toluene-d8		90.8 %		20-170		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		102 %		21-167		"	"	"	"	

Summit Scientific



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

Project: Schwab 26-6F

Project Number: [none]

Project Manager: Mark Longhurst

Reported:
 02/08/21 13:44

BH03
2101309-03 (Water)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **01/29/21 12:07**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Benzene	ND	1.0		ug/l	1	BEB0055	02/03/21	02/03/21	EPA 8260B	
Toluene	ND	1.0		"	"	"	"	"	"	
Ethylbenzene	ND	1.0		"	"	"	"	"	"	
Xylenes (total)	ND	2.0		"	"	"	"	"	"	

Date Sampled: **01/29/21 12:07**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Surrogate: 1,2-Dichloroethane-d4		147 %		23-173		"	"	"	"	
Surrogate: Toluene-d8		93.8 %		20-170		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		100 %		21-167		"	"	"	"	

Summit Scientific



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

Project: Schwab 26-6F

Project Number: [none]

Project Manager: Mark Longhurst

Reported:
 02/08/21 13:44

BH04
2101309-04 (Water)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **01/29/21 12:16**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Benzene	ND	1.0		ug/l	1	BEB0055	02/03/21	02/03/21	EPA 8260B	
Toluene	ND	1.0		"	"	"	"	"	"	
Ethylbenzene	ND	1.0		"	"	"	"	"	"	
Xylenes (total)	ND	2.0		"	"	"	"	"	"	

Date Sampled: **01/29/21 12:16**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Surrogate: 1,2-Dichloroethane-d4		145 %		23-173		"	"	"	"	
Surrogate: Toluene-d8		93.3 %		20-170		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		104 %		21-167		"	"	"	"	

Summit Scientific

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

Project: Schwab 26-6F

Project Number: [none]

Project Manager: Mark Longhurst

Reported:
 02/08/21 13:44

BH05
2101309-05 (Water)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **01/29/21 12:04**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Benzene	ND	1.0		ug/l	1	BEB0055	02/03/21	02/03/21	EPA 8260B	
Toluene	ND	1.0		"	"	"	"	"	"	
Ethylbenzene	ND	1.0		"	"	"	"	"	"	
Xylenes (total)	ND	2.0		"	"	"	"	"	"	

Date Sampled: **01/29/21 12:04**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Surrogate: 1,2-Dichloroethane-d4		143 %		23-173		"	"	"	"	
Surrogate: Toluene-d8		92.5 %		20-170		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		102 %		21-167		"	"	"	"	

Summit Scientific

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

Project: Schwab 26-6F

Project Number: [none]

Project Manager: Mark Longhurst

Reported:
 02/08/21 13:44

BH06
2101309-06 (Water)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **01/29/21 12:12**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Benzene	ND	1.0		ug/l	1	BEB0055	02/03/21	02/03/21	EPA 8260B	
Toluene	ND	1.0		"	"	"	"	"	"	
Ethylbenzene	ND	1.0		"	"	"	"	"	"	
Xylenes (total)	ND	2.0		"	"	"	"	"	"	

Date Sampled: **01/29/21 12:12**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Surrogate: 1,2-Dichloroethane-d4		146 %		23-173		"	"	"	"	
Surrogate: Toluene-d8		91.2 %		20-170		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		103 %		21-167		"	"	"	"	

Summit Scientific



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

Project: Schwab 26-6F

Project Number: [none]
 Project Manager: Mark Longhurst

Reported:
 02/08/21 13:44

BH07
2101309-07 (Water)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **01/29/21 12:28**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Benzene	ND	1.0		ug/l	1	BEB0055	02/03/21	02/03/21	EPA 8260B	
Toluene	ND	1.0		"	"	"	"	"	"	
Ethylbenzene	ND	1.0		"	"	"	"	"	"	
Xylenes (total)	ND	2.0		"	"	"	"	"	"	

Date Sampled: **01/29/21 12:28**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Surrogate: 1,2-Dichloroethane-d4		147 %		23-173		"	"	"	"	
Surrogate: Toluene-d8		93.2 %		20-170		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		104 %		21-167		"	"	"	"	

Summit Scientific

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

Project: Schwab 26-6F

Project Number: [none]
 Project Manager: Mark Longhurst

Reported:
 02/08/21 13:44

BH08
2101309-08 (Water)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **01/29/21 12:23**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Benzene	ND	1.0		ug/l	1	BEB0055	02/03/21	02/04/21	EPA 8260B	
Toluene	ND	1.0		"	"	"	"	"	"	
Ethylbenzene	ND	1.0		"	"	"	"	"	"	
Xylenes (total)	ND	2.0		"	"	"	"	"	"	

Date Sampled: **01/29/21 12:23**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Surrogate: 1,2-Dichloroethane-d4		150 %		23-173		"	"	"	"	
Surrogate: Toluene-d8		90.2 %		20-170		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		104 %		21-167		"	"	"	"	

Summit Scientific



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

Project: Schwab 26-6F

Project Number: [none]

Project Manager: Mark Longhurst

Reported:
 02/08/21 13:44

BH09
2101309-09 (Water)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **01/29/21 11:39**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Benzene	ND	1.0		ug/l	1	BEB0055	02/03/21	02/04/21	EPA 8260B	
Toluene	ND	1.0		"	"	"	"	"	"	
Ethylbenzene	ND	1.0		"	"	"	"	"	"	
Xylenes (total)	ND	2.0		"	"	"	"	"	"	

Date Sampled: **01/29/21 11:39**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Surrogate: 1,2-Dichloroethane-d4		153 %		23-173		"	"	"	"	
Surrogate: Toluene-d8		91.6 %		20-170		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		102 %		21-167		"	"	"	"	

Summit Scientific

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

Project: Schwab 26-6F

Project Number: [none]

Project Manager: Mark Longhurst

Reported:
 02/08/21 13:44

BH10
2101309-10 (Water)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **01/29/21 11:48**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Benzene	ND	1.0		ug/l	1	BEB0055	02/03/21	02/04/21	EPA 8260B	
Toluene	ND	1.0		"	"	"	"	"	"	
Ethylbenzene	ND	1.0		"	"	"	"	"	"	
Xylenes (total)	ND	2.0		"	"	"	"	"	"	

Date Sampled: **01/29/21 11:48**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Surrogate: 1,2-Dichloroethane-d4		144 %		23-173		"	"	"	"	
Surrogate: Toluene-d8		89.8 %		20-170		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		103 %		21-167		"	"	"	"	

Summit Scientific



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

Project: Schwab 26-6F

Project Number: [none]

Project Manager: Mark Longhurst

Reported:
 02/08/21 13:44

BH11
2101309-11 (Water)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **01/29/21 11:56**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Benzene	ND	1.0		ug/l	1	BEB0055	02/03/21	02/04/21	EPA 8260B	
Toluene	ND	1.0		"	"	"	"	"	"	
Ethylbenzene	ND	1.0		"	"	"	"	"	"	
Xylenes (total)	ND	2.0		"	"	"	"	"	"	

Date Sampled: **01/29/21 11:56**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Surrogate: 1,2-Dichloroethane-d4		144 %		23-173		"	"	"	"	
Surrogate: Toluene-d8		93.0 %		20-170		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		101 %		21-167		"	"	"	"	

Summit Scientific

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

Project: Schwab 26-6F

Project Number: [none]
Project Manager: Mark Longhurst

Reported:
02/08/21 13:44

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 BEB0055 - EPA 5030 Water MS

Blank (BEB0055-BLK1)

Prepared & Analyzed: 02/03/21

Benzene	ND	1.0	ug/l							
Toluene	ND	1.0	"							
Ethylbenzene	ND	1.0	"							
Xylenes (total)	ND	2.0	"							
Surrogate: 1,2-Dichloroethane-d4	18.8		"	13.3		141	23-173			
Surrogate: Toluene-d8	12.3		"	13.3		92.6	20-170			
Surrogate: 4-Bromofluorobenzene	13.4		"	13.3		101	21-167			

LCS (BEB0055-BS1)

Prepared & Analyzed: 02/03/21

Benzene	38.6	1.0	ug/l	33.3		116	51-132			
Toluene	34.8	1.0	"	33.3		105	51-138			
Ethylbenzene	38.6	1.0	"	33.3		116	58-146			
m,p-Xylene	62.0	2.0	"	66.7		93.0	57-144			
o-Xylene	36.8	1.0	"	33.3		110	53-146			
Surrogate: 1,2-Dichloroethane-d4	18.5		"	13.3		139	23-173			
Surrogate: Toluene-d8	12.4		"	13.3		93.3	20-170			
Surrogate: 4-Bromofluorobenzene	13.5		"	13.3		101	21-167			

Matrix Spike (BEB0055-MS1)

Source: 2101309-01

Prepared & Analyzed: 02/03/21

Benzene	39.4	1.0	ug/l	33.3	ND	118	34-141			
Toluene	36.0	1.0	"	33.3	ND	108	27-151			
Ethylbenzene	39.2	1.0	"	33.3	ND	118	29-160			
m,p-Xylene	63.5	2.0	"	66.7	ND	95.3	20-166			
o-Xylene	36.9	1.0	"	33.3	ND	111	33-159			
Surrogate: 1,2-Dichloroethane-d4	18.7		"	13.3		140	23-173			
Surrogate: Toluene-d8	12.8		"	13.3		95.9	20-170			
Surrogate: 4-Bromofluorobenzene	13.6		"	13.3		102	21-167			

Summit Scientific

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

Project: Schwab 26-6F

Project Number: [none]
 Project Manager: Mark Longhurst

Reported:
 02/08/21 13:44

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 BEB0055 - EPA 5030 Water MS

Matrix Spike Dup (BEB0055-MSD1)	Source: 2101309-01			Prepared & Analyzed: 02/03/21						
Benzene	39.2	1.0	ug/l	33.3	ND	118	34-141	0.559	30	
Toluene	35.7	1.0	"	33.3	ND	107	27-151	0.697	30	
Ethylbenzene	39.4	1.0	"	33.3	ND	118	29-160	0.381	30	
m,p-Xylene	63.9	2.0	"	66.7	ND	95.8	20-166	0.596	30	
o-Xylene	36.8	1.0	"	33.3	ND	110	33-159	0.271	30	
Surrogate: 1,2-Dichloroethane-d4	19.3		"	13.3		145	23-173			
Surrogate: Toluene-d8	12.6		"	13.3		94.7	20-170			
Surrogate: 4-Bromofluorobenzene	14.0		"	13.3		105	21-167			

Summit Scientific

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

Project: Schwab 26-6F

Project Number: [none]
Project Manager: Mark Longhurst

Reported:
02/08/21 13:44

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