

PDC Energy, Inc.
Second Quarter 2020 Groundwater Monitoring Summary

July 2, 2020

Former Webster Farms 31-11 Tank Battery
NWNE Section 11 T6N R65W
Remediation # 15125

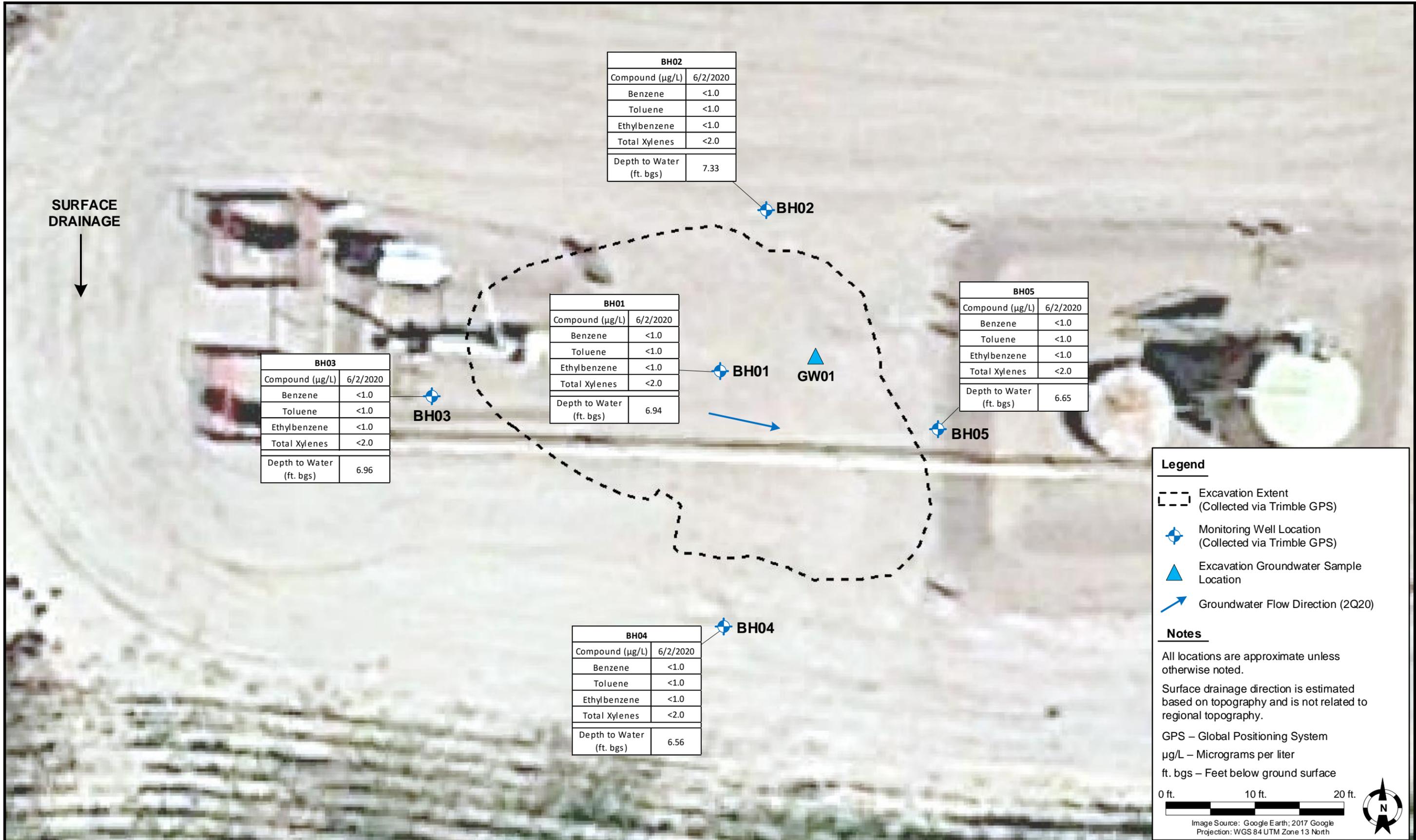
This groundwater monitoring summary has been prepared by Tasman Geosciences, Inc. for the former Webster 31-11 tank battery. On May 28, 2020, five monitoring wells (BH01 – BH05) were installed to confirm the absence of dissolved-phase hydrocarbon impacts within and adjacent to the former excavation extent. Lithologic descriptions and volatile organic compound (VOC) concentrations measured using a photoionization detector (PID) were recorded for each monitoring well. Boring and well completion logs are provided in Attachment A.

On June 2, 2020, 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, and total xylenes (BTEX) by EPA Method 8260B.

Second quarter 2020 analytical results indicated that BTEX concentrations were below the applicable COGCC Table 910-1 groundwater standards in all five 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 B.

Based on the analytical results collected during the initial groundwater assessment, monitored natural attenuation (MNA) was selected as the remediation strategy for this site for the second quarter 2020 and will remain the selected remediation strategy through the third quarter 2020.

Third quarter 2020 groundwater sampling will be conducted in September 2020.



BH02	
Compound (µg/L)	6/2/2020
Benzene	<1.0
Toluene	<1.0
Ethylbenzene	<1.0
Total Xylenes	<2.0
Depth to Water (ft. bgs)	7.33

BH01	
Compound (µg/L)	6/2/2020
Benzene	<1.0
Toluene	<1.0
Ethylbenzene	<1.0
Total Xylenes	<2.0
Depth to Water (ft. bgs)	6.94

BH05	
Compound (µg/L)	6/2/2020
Benzene	<1.0
Toluene	<1.0
Ethylbenzene	<1.0
Total Xylenes	<2.0
Depth to Water (ft. bgs)	6.65

BH03	
Compound (µg/L)	6/2/2020
Benzene	<1.0
Toluene	<1.0
Ethylbenzene	<1.0
Total Xylenes	<2.0
Depth to Water (ft. bgs)	6.96

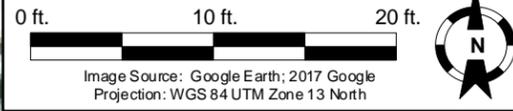
BH04	
Compound (µg/L)	6/2/2020
Benzene	<1.0
Toluene	<1.0
Ethylbenzene	<1.0
Total Xylenes	<2.0
Depth to Water (ft. bgs)	6.56

Legend

- Excavation Extent (Collected via Trimble GPS)
- Monitoring Well Location (Collected via Trimble GPS)
- Excavation Groundwater Sample Location
- Groundwater Flow Direction (2Q20)

Notes

All locations are approximate unless otherwise noted.
 Surface drainage direction is estimated based on topography and is not related to regional topography.
 GPS – Global Positioning System
 µg/L – Micrograms per liter
 ft. bgs – Feet below ground surface



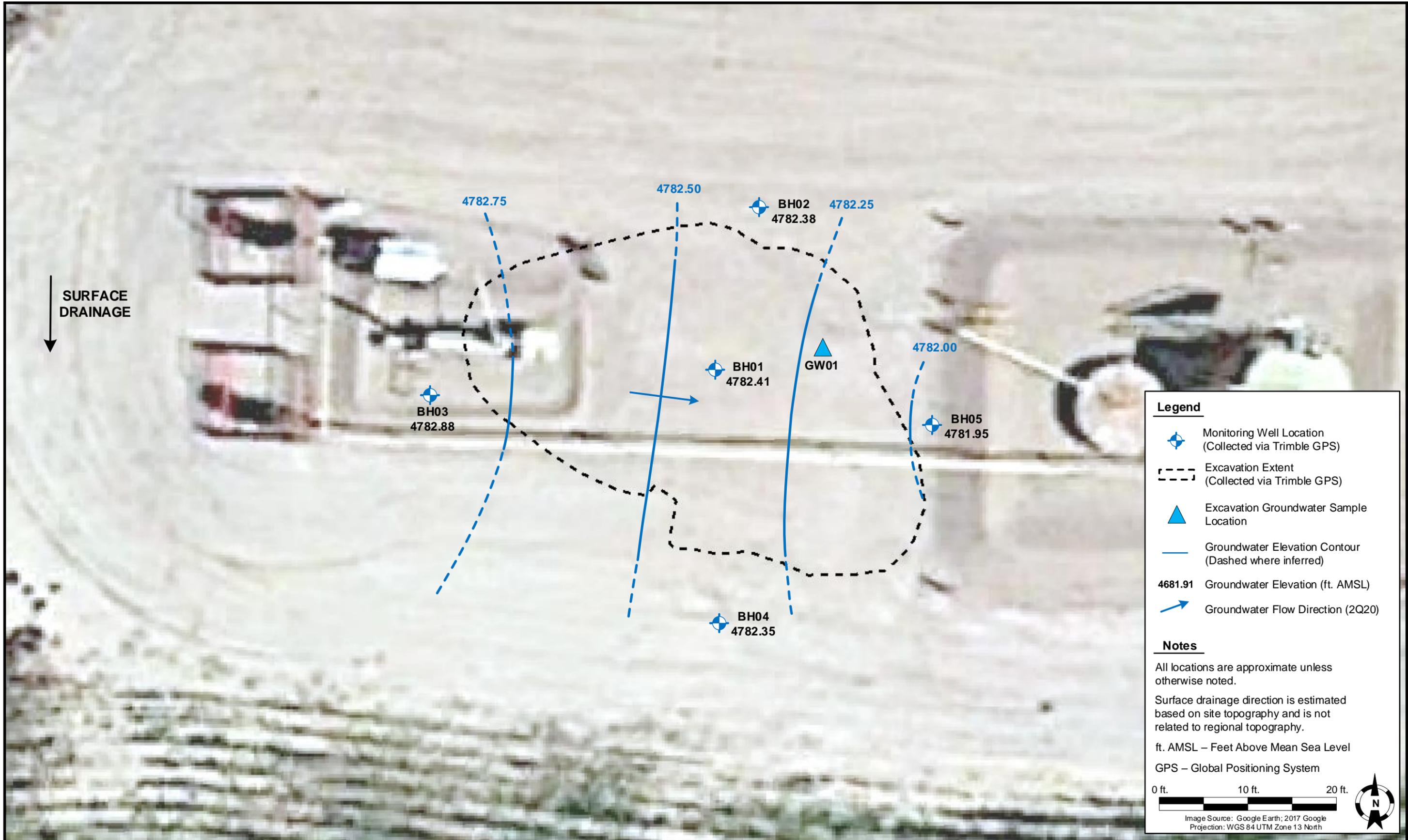
DATE: July 2, 2020
 DESIGNED BY: C. Hamlin
 DRAWN BY: J. McCarver

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

PDC Energy, Inc. – DJ Basin
Former Webster Farms 31-11 Tank Battery
 NWNE, Section 11, Township 6 North, Range 65 West
 Weld County, Colorado

GROUNDWATER ANALYTICAL RESULTS MAP

FIGURE 1



DATE: June 19, 2020

DESIGNED BY: C. Hamlin

DRAWN BY: A. Dahl



Tasman Geosciences, Inc.
6855 West 119th Avenue
Broomfield, CO 80020

PDC Energy, Inc. – DJ Basin
Former Webster Farms 31-11 Tank Battery
NWNE, Section 11, Township 6 North, Range 65 West
Weld County, Colorado

GROUNDWATER ELEVATION CONTOUR MAP (06/02/2020)

FIGURE 2

TABLE 1
FORMER WEBSTER FARMS 31-11 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	4/1/2020	<1.0	<1.0	<1.0	<2.0	~6	NM
BH01	6/2/2020	<1.0	<1.0	<1.0	<2.0	6.94	4782.41
BH02	6/2/2020	<1.0	<1.0	<1.0	<2.0	7.33	4782.38
BH03	6/2/2020	<1.0	<1.0	<1.0	<2.0	6.96	4782.88
BH04	6/2/2020	<1.0	<1.0	<1.0	<2.0	6.56	4782.35
BH05	6/2/2020	<1.0	<1.0	<1.0	<2.0	6.65	4781.95

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

Borehole Logging Form

BOREHOLE ID: BH01	SITE NAME: Webster Farms 31-11	CLIENT NAME: PDC ENERGY
Date Completed: 5/28/2020	Location: Source	
Drilling Company: Tasman	Surface Completion: Stick-Up	DTW: 7' TD: 13'
Type of Drill: Push Probe	Geologist: M. Dahlgren	Project Manager: C. Hamlin
Bit Size: 2 3/8"	Logging Method: Continuous Macro Liner	
Well Const. Material: Diameter: 1" Screen: Sch 40 PVC Slotted 0.10 Riser: Sch 40 PVC Blank		

Depth (feet)	Well Completion	Sample Type	% Recovery	PID (ppm)	Laboratory Sample	USCS	Description
1							Cleared w/ hand auger to 6' lithology not logged
2							
3							
4							
5							
6							
7		Macro	25%	0.7		SM	Brown silty sand, moderately sorted, fine to medium grain, moist, no odor
8		liner					Same as above, saturated
9				1.6		SC	Gray tan silty clay, medium plasticity saturated, no odor
10							
11			75%	1.9		SC	Same as above, brown
12							Same as above, moist
13				0.7		CH	Gray clay high plasticity, dry, no odor
14							
15							
16							
17							
18							
19							
20							
21							
22							
23							
24							
25							



Borehole Logging Form

BOREHOLE ID: **BH02** SITE NAME: **Webster Farms 31-11** CLIENT NAME: **PDC ENERGY**

Date Completed: **5/28/2020** Location: **N POC**

Drilling Company: **Tasman** Surface Completion: **Stick-Up** DTW: **7'** TD: **13'**

Type of Drill: **Push Probe** Geologist: **M. Dahlgren** Project Manager: **C. Hamlin**

Bit Size: **2 3/8"** Logging Method: **Continuous Macro Liner**

Well Const. Material: Diameter: **1"** Screen: **Sch 40 PVC Slotted 0.10** Riser: **Sch 40 PVC Blank**

Depth (feet)	Well Completion	Sample Type	% Recovery	PID (ppm)	Laboratory Sample	USCS	Description
1							Cleared w/ hand auger to 6' Lithology not logged
2							
3							
4							
5							
6							
7		MACRO	90%	2.6		SM	Brown silty sand, moderately sorted, fine to medium grain, moist, no odor Same as above, saturated
8		liner					
9							
10							
11			90%	1.7		CL	Brown silty clay, medium phst. city Saturated, no odor
12				1.4			Same as above, Gray, moist Same as above, dry
13							
14	x						
15							
16							
17							
18							
19							
20							
21							
22							
23							
24							
25							

BOREHOLE ID: B1703	SITE NAME: Webster Farms 31-11	CLIENT NAME: PDC ENERGY
Date Completed: 5/28/2020	Location: W POC	
Drilling Company: Tasman	Surface Completion: Stick-Up	DTW: 7' TD: 13'
Type of Drill: Push Probe	Geologist: M. Dahlgren	Project Manager: C. Hamlin
Bit Size: 2 3/8"	Logging Method: Continuous Macro Liner	
Well Const. Material: Diameter: 1" Screen: Sch 40 PVC Slotted 0.10 Riser: Sch 40 PVC Blank		

Depth (feet)	Well Completion	Sample Type	% Recovery	PID (ppm)	Laboratory Sample	USCS	Description
1							Cleared w/ hand auger to 6' lithology not logged.
2							
3							
4							
5							
6							
7		MACRO	90%	0.6		↑ SM	Tan Silty Sand, well sorted, fine grain, dry no odor
8		liner				↓	Same as above, saturated
9				0.8		↑ CL	Tan Silty clay, medium plasticity saturated, no odor
10						↓	
11				0.5		↑	Same as above, moist
12			100%	1.3		CL	Same as above, black, saturated, no odor
13						↓	Same as above, dry, gray
14							
15							
16							
17							
18							
19							
20							
21							
22							
23							
24							
25							



Borehole Logging Form

BOREHOLE ID: B1104	SITE NAME: Webster Farms 31-11	CLIENT NAME: PDC ENERGY
Date Completed: 5/28/2020	Location: S POC	
Drilling Company: Tasman	Surface Completion: Stick-Up	DTW: 7' TD: 13
Type of Drill: Push Probe	Geologist: M. Dahlgren	Project Manager: C. Hamlin
Bit Size: 2 3/8"	Logging Method: Continuous Macro Liner	
Well Const. Material: Diameter: 1" Screen: Sch 40 PVC Slotted 0.10 Riser: Sch 40 PVC Blank		

Depth (feet)	Well Completion	Sample Type	% Recovery	PID (ppm)	Laboratory Sample	USCS	Description
1							Cleared w/ hand auger to 6' lithology not logged
2							
3							
4							
5							
6							
7	Macro Liner	Macro Liner	75%	0.6		SM	Gray tan Silty Sand, well sorted, fine grain, dry, no odor Same as above, Saturated
8							
9				0.1		CL	Gray, black Silty Clay, medium plasticity moist, no odor
10							
11			90%	0.6		CL	Tan clay, medium plasticity, moist, no odor
12							Same as above, dry
13							
14	X						
15							
16							
17							
18							
19							
20							
21							
22							
23							
24							
25							



Borehole Logging Form

BOREHOLE ID: **BH65** SITE NAME: **Webster Farms 31-11** CLIENT NAME: **PDC ENERGY**

Date Completed: **5/28/2020** Location: **E POC**

Drilling Company: **Tasman** Surface Completion: **Stick-Up** DTW: **7'** TD: **15'**

Type of Drill: **Push Probe** Geologist: **M. Dahlgren** Project Manager: **C. Hamlin**

Bit Size: **2 3/8"** Logging Method: **Continuous Macro Liner**

Well Const. Material: Diameter: **1"** Screen: **Sch 40 PVC Slotted 0.10** Riser: **Sch 40 PVC Blank**

Depth (feet)	Well Completion	Sample Type	% Recovery	PID (ppm)	Laboratory Sample	USCS	Description
1							Cleared w/ hand auger to 6' Lithology not logged
2							
3							
4							
5							
6							
7		MACRO	20%	23		SM	Tan Silty Sand, well sorted, fine grain moist, no odor Same as above, Saturated
8		liner					
9							
10							
11						CH	Gray Tan Clay, high plasticity moist, no odor
12							
13							Same as above, dry
14							
15							
16							
17							
18							
19							
20							
21							
22							
23							
24							
25							

Attachment B

Summit Scientific

4653 Table Mountain Drive, Golden, Colorado 80403

303.277.9310

June 09, 2020

Mark Longhurst

PDC Energy

1775 Sherman St. STE. 3000

Denver, CO 80203

RE: Webster Farms 31-11

Work Order #2006017

Enclosed are the results of analyses for samples received by Summit Scientific on 06/02/20 17:20. 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: Webster Farms 31-11

Project Number: [none]

Project Manager: Mark Longhurst

Reported:
06/09/20 11:20

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
BH01	2006017-01	Water	06/02/20 12:50	06/02/20 17:20
BH02	2006017-02	Water	06/02/20 12:35	06/02/20 17:20
BH03	2006017-03	Water	06/02/20 12:30	06/02/20 17:20
BH04	2006017-04	Water	06/02/20 12:45	06/02/20 17:20
BH05	2006017-05	Water	06/02/20 12:40	06/02/20 17:20

Summit Scientific

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Summit Scientific

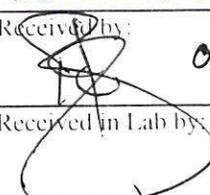
2006017

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

Page 1 of 1

Client: PDC/Tasman
Address: 6855 W 19th Ave
City/State/Zip: Broomfield CO 80020
Phone: 303-487-1228 Fax: -
Sampler Name: J Marcus

Project Manager: Mark Longhurst
E-Mail: mark.longhurst@PDC.E.com
Project Name: Webster Farms 31-11
Project Number: N/A

Sample Description	Date Sampled	Time Sampled	Number of Containers	Preservative				Matrix			Analyze For:						Special Instructions		
				HCl	HNO ₃	None	Other (Specify)	Groundwater	Soil	Air - Canister Serial #	Other (Specify)								
BH01	6/2/20	1250	3	✓				✓				BTEX							
BH02	6/2/20	1235	3	✓				✓				BTEX							
BH03	6/2/20	1230	3	✓				✓				BTEX							
BH04	6/2/20	1245	3	✓				✓				BTEX							
BH05	6/2/20	1240	3	✓				✓				BTEX							
Relinquished by: 				Date/Time: <u>6/2/20 1554</u>	Received by: <u>Tasman Lock Box</u>				Date/Time: <u>6/2/20 1554</u>	Turn Around Time (Check)						Notes:			
Relinquished by: <u>Tasman Lock Box</u>				Date/Time: <u>06/02/2020 1720</u>	Received by: 				Date/Time: <u>06/02/2020 1720</u>	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"/>					
Relinquished by:				Date/Time:	Received in Lab by:				Date/Time:	Sample Integrity: Temperature Upon Receipt: <u>4.7</u>									
				Date/Time:					Date/Time:	Intact: <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No									

2006017

Sample Receipt Checklist

S2 Work Order _____

Client: PDC / Tabman

Client Project ID: Webster Farms 31-11

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

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

Temp (°C) 4.7

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 checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	HCL
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.

Custodian Printed Name or Initials

Signature of Custodian

06/02/2020
Date/Time



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

Project: Webster Farms 31-11

Project Number: [none]
 Project Manager: Mark Longhurst

Reported:
 06/09/20 11:20

BH01
2006017-01 (Water)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **06/02/20 12:50**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Benzene	ND	1.0	ug/l	1	2006048	06/03/20	06/06/20	EPA 8260B	
Toluene	ND	1.0	"	"	"	"	"	"	
Ethylbenzene	ND	1.0	"	"	"	"	"	"	
Xylenes (total)	ND	2.0	"	"	"	"	"	"	

Date Sampled: **06/02/20 12:50**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Surrogate: 1,2-Dichloroethane-d4		95.3 %	23-173		"	"	"	"	
Surrogate: Toluene-d8		96.5 %	20-170		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		94.6 %	21-167		"	"	"	"	

Summit Scientific

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

Project: Webster Farms 31-11

Project Number: [none]
 Project Manager: Mark Longhurst

Reported:
 06/09/20 11:20

BH02
2006017-02 (Water)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **06/02/20 12:35**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Benzene	ND	1.0		ug/l	1	2006048	06/03/20	06/06/20	EPA 8260B	
Toluene	ND	1.0		"	"	"	"	"	"	
Ethylbenzene	ND	1.0		"	"	"	"	"	"	
Xylenes (total)	ND	2.0		"	"	"	"	"	"	

Date Sampled: **06/02/20 12:35**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Surrogate: 1,2-Dichloroethane-d4		100 %		23-173		"	"	"	"	
Surrogate: Toluene-d8		97.1 %		20-170		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		91.9 %		21-167		"	"	"	"	

Summit Scientific

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

Project: Webster Farms 31-11

Project Number: [none]
 Project Manager: Mark Longhurst

Reported:
 06/09/20 11:20

BH03
2006017-03 (Water)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **06/02/20 12:30**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Benzene	ND	1.0		ug/l	1	2006048	06/03/20	06/06/20	EPA 8260B	
Toluene	ND	1.0		"	"	"	"	"	"	
Ethylbenzene	ND	1.0		"	"	"	"	"	"	
Xylenes (total)	ND	2.0		"	"	"	"	"	"	

Date Sampled: **06/02/20 12:30**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Surrogate: 1,2-Dichloroethane-d4		93.3 %		23-173		"	"	"	"	
Surrogate: Toluene-d8		94.8 %		20-170		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		98.0 %		21-167		"	"	"	"	

Summit Scientific

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

Project: Webster Farms 31-11

Project Number: [none]
 Project Manager: Mark Longhurst

Reported:
 06/09/20 11:20

BH04
2006017-04 (Water)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **06/02/20 12:45**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Benzene	ND	1.0		ug/l	1	2006048	06/03/20	06/06/20	EPA 8260B	
Toluene	ND	1.0		"	"	"	"	"	"	
Ethylbenzene	ND	1.0		"	"	"	"	"	"	
Xylenes (total)	ND	2.0		"	"	"	"	"	"	

Date Sampled: **06/02/20 12:45**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Surrogate: 1,2-Dichloroethane-d4		94.4 %		23-173		"	"	"	"	
Surrogate: Toluene-d8		91.0 %		20-170		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		92.5 %		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: Webster Farms 31-11

Project Number: [none]
 Project Manager: Mark Longhurst

Reported:
 06/09/20 11:20

BH05
2006017-05 (Water)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **06/02/20 12:40**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Benzene	ND	1.0		ug/l	1	2006048	06/03/20	06/06/20	EPA 8260B	
Toluene	ND	1.0		"	"	"	"	"	"	
Ethylbenzene	ND	1.0		"	"	"	"	"	"	
Xylenes (total)	ND	2.0		"	"	"	"	"	"	

Date Sampled: **06/02/20 12:40**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Surrogate: 1,2-Dichloroethane-d4		106 %		23-173		"	"	"	"	
Surrogate: Toluene-d8		100 %		20-170		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		93.5 %		21-167		"	"	"	"	

Summit Scientific

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

Project: Webster Farms 31-11

Project Number: [none]
Project Manager: Mark Longhurst

Reported:
06/09/20 11:20

Volatile Organic Compounds by EPA Method 8260B - Quality Control

Summit Scientific

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

Batch 2006048 - EPA 5030 Water MS

Blank (2006048-BLK1)

Prepared: 06/03/20 Analyzed: 06/06/20

Benzene	ND	1.0	ug/l							
Toluene	ND	1.0	"							
Ethylbenzene	ND	1.0	"							
Xylenes (total)	ND	2.0	"							
Surrogate: 1,2-Dichloroethane-d4	13.4		"	13.3		101		23-173		
Surrogate: Toluene-d8	12.5		"	13.3		93.5		20-170		
Surrogate: 4-Bromofluorobenzene	12.0		"	13.3		90.4		21-167		

LCS (2006048-BS1)

Prepared: 06/03/20 Analyzed: 06/06/20

Benzene	22.4	1.0	ug/l	33.3		67.3		51-132		
Toluene	27.4	1.0	"	33.3		82.2		51-138		
Ethylbenzene	29.5	1.0	"	33.3		88.4		58-146		
m,p-Xylene	56.9	2.0	"	66.7		85.4		57-144		
o-Xylene	26.4	1.0	"	33.3		79.2		53-146		
Surrogate: 1,2-Dichloroethane-d4	13.3		"	13.3		100		23-173		
Surrogate: Toluene-d8	12.8		"	13.3		95.9		20-170		
Surrogate: 4-Bromofluorobenzene	13.1		"	13.3		98.1		21-167		

Matrix Spike (2006048-MS1)

Source: 2006017-01

Prepared: 06/03/20 Analyzed: 06/06/20

Benzene	23.6	1.0	ug/l	33.3	ND	70.8		34-141		
Toluene	28.4	1.0	"	33.3	ND	85.1		27-151		
Ethylbenzene	29.7	1.0	"	33.3	ND	89.1		29-160		
m,p-Xylene	56.6	2.0	"	66.7	ND	84.9		20-166		
o-Xylene	25.8	1.0	"	33.3	ND	77.4		33-159		
Surrogate: 1,2-Dichloroethane-d4	13.8		"	13.3		103		23-173		
Surrogate: Toluene-d8	13.4		"	13.3		101		20-170		
Surrogate: 4-Bromofluorobenzene	13.0		"	13.3		97.1		21-167		

Summit Scientific

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

Project: Webster Farms 31-11

Project Number: [none]
 Project Manager: Mark Longhurst

Reported:
 06/09/20 11:20

Volatile Organic Compounds by EPA Method 8260B - Quality Control

Summit Scientific

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

Batch 2006048 - EPA 5030 Water MS

Matrix Spike Dup (2006048-MSD1)

Source: 2006017-01

Prepared: 06/03/20 Analyzed: 06/06/20

Benzene	24.7	1.0	ug/l	33.3	ND	74.1	34-141	4.47	30	
Toluene	29.3	1.0	"	33.3	ND	88.0	27-151	3.36	30	
Ethylbenzene	32.4	1.0	"	33.3	ND	97.2	29-160	8.69	30	
m,p-Xylene	62.0	2.0	"	66.7	ND	93.1	20-166	9.19	30	
o-Xylene	28.7	1.0	"	33.3	ND	86.0	33-159	10.5	30	
Surrogate: 1,2-Dichloroethane-d4	13.9		"	13.3		104	23-173			
Surrogate: Toluene-d8	13.7		"	13.3		103	20-170			
Surrogate: 4-Bromofluorobenzene	14.6		"	13.3		110	21-167			

Summit Scientific

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

Project: Webster Farms 31-11

Project Number: [none]
Project Manager: Mark Longhurst

Reported:
06/09/20 11:20

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