

**TABLE 1**  
**SETH 1, 5 TANK BATTERY**  
**SOIL ANALYTICAL RESULTS SUMMARY TABLE**

Sample ID	Date Sampled	Depth (feet bgs)	Benzene (mg/kg)	Toluene (mg/kg)	Ethylbenzene (mg/kg)	Total Xylenes (mg/kg)	Naphthalene (mg/kg)	TPH <sup>(2)</sup> (mg/kg)
COGCC standards for soil (mg/kg) <sup>(1)</sup>			0.17	85	100	175	23	500
SS01 @ 4'	10/3/2017	4	<0.0020	<0.0050	<0.0050	<0.010	<0.010	<50

**Notes:**

1. Standards for soil are taken from 2 CCR 404-1, Table 910-1, effective January 30, 2015.

2. TPH - Total volatile and extractable petroleum hydrocarbons. Value calculated by adding GRO and DRO concentrations.

COGCC = Colorado Oil and Gas Conservation Commission

(<) = Analytical result is less than the indicated laboratory reporting limit.

GRO = Total volatile petroleum hydrocarbons - gasoline range organics

DRO = Total extractable petroleum hydrocarbons - diesel range organics

mg/kg = Milligrams per kilogram

bgs = Below ground surface

**BOLD** = Analytical result is in exceedance of COGCC soil standards.

**TABLE 2**  
**SETH 1, 5 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 (feet bgs) <sup>(2)</sup>
<b>COGCC Table 910-1 Groundwater Standard (µg/L) <sup>(1)</sup></b>		<b>5</b>	<b>560</b>	<b>700</b>	<b>1,400</b>	
GW01	10/12/2017	<1.0	<1.0	<1.0	<2.0	~5

**Notes:**

1. Groundwater standards referenced from 2 CCR 404-1, Table 910-1, effective January 30, 2015.

2. Depth to groundwater measured from ground surface.

COGCC = Colorado Oil and Gas Conservation Commission

µg/L= Micrograms per liter

bgs = Below ground surface

(<) = Analytical result is less than the indicated laboratory reporting limit.

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

## **ATTACHMENT A**

# Summit Scientific

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741 Corporate Circle – Suite I ♦ Golden, Colorado 80401

303.277.9310 - laboratory ♦ 303.277.9531 - fax

October 05, 2017

Mark Longhurst  
PDC Energy  
1775 Sherman St. STE. 3000  
Denver, CO 80203  
RE: Seth 1, 5

Enclosed are the results of analyses for samples received by Summit Scientific on 10/03/17 16:50. 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: Seth 1, 5  
Project Number: [none]  
Project Manager: Mark Longhurst

**Reported:**  
10/05/17 06:09

### ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
SS01@4'	1710018-01	Soil	10/03/17 09:01	10/03/17 16:50

Summit Scientific

A handwritten signature in black ink, appearing to be 'MSM'.

*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: Seth 1, 5  
Project Number: [none]  
Project Manager: Mark Longhurst

Reported:  
10/05/17 06:09

#### Sample Receipt Checklist

S2 Work Order: 1710018  
Client: PDC Client Project ID: Seth 1, 5  
Shipped Via: P/U (UPS, FedEx, Hand Delivered, Pick-up, etc.) Airbill #: \_\_\_\_\_  
Matrix (check all that apply): ☐ Air ☒ Soil/Solid ☐ Water ☐ Other: \_\_\_\_\_ (Describe)

Cooler ID					
Temp (°C)	<u>3.9</u>				

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> ?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
NOTE: If samples are delivered the same day of sampling, this requirement is met provided that there is evidence that cooling has begun.				
Were all samples received intact <sup>(1)</sup> ?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Was adequate sample volume provided <sup>(1)</sup> ?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
If custody seals are present, are they intact <sup>(1)</sup> ?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
Are short holding time analytes or samples with HTs due within 48 hours present?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
Is a chain-of-custody (COC) form present and filled out completely <sup>(1)</sup> ?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Does the COC agree with the number and type of sample bottles received <sup>(1)</sup> ?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Do the sample IDs on the bottle labels match the COC <sup>(1)</sup> ?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Is the COC properly relinquished by the client w/ date and time recorded <sup>(1)</sup> ?	<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 type="checkbox"/>	<input checked="" type="checkbox"/>	
Are samples preserved that require preservation (excluding cooling) <sup>(1)</sup> ?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
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 <sup>(1)</sup> ?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
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):				
<sup>(1)</sup> If NO, then contact the client before proceeding with analysis and note in case narrative.				

Wakita  
Custodian Printed Name

[Signature]  
Signature or Initials of Custodian

10/3/17 1715  
Date/Time



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

Project: Seth 1, 5  
Project Number: [none]  
Project Manager: Mark Longhurst

**Reported:**  
10/05/17 06:09

**SS01@4'**  
**1710018-01 (Soil)**

**Summit Scientific**

**Extractable Petroleum Hydrocarbons by 8015**

Date Sampled: **10/03/17 09:01**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
C10-C28 (DRO)	ND	50	mg/kg	1	1710017	10/03/17	10/03/17	8015M	

Date Sampled: **10/03/17 09:01**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: o-Terphenyl		107 %	30-150		"	"	"	"	

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

Date Sampled: **10/03/17 09:01**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Naphthalene	ND	0.010	mg/kg	1	1710016	"	10/04/17	EPA 8260B	
Benzene	ND	0.0020	"	"	"	"	"	"	
Toluene	ND	0.0050	"	"	"	"	"	"	
Ethylbenzene	ND	0.0050	"	"	"	"	"	"	
Xylenes (total)	ND	0.010	"	"	"	"	"	"	
Gasoline Range Hydrocarbons	ND	0.50	"	"	"	"	"	"	

Date Sampled: **10/03/17 09:01**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 1,2-Dichloroethane-d4		104 %	23-173		"	"	"	"	
Surrogate: Toluene-d8		99.6 %	20-170		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		96.0 %	21-167		"	"	"	"	

Summit Scientific

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

Project: Seth 1, 5  
Project Number: [none]  
Project Manager: Mark Longhurst

**Reported:**  
10/05/17 06:09

**Extractable Petroleum Hydrocarbons by 8015 - Quality Control**  
**Summit Scientific**

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

**Batch 1710017 - EPA 3550A**

**Blank (1710017-BLK1)**

Prepared & Analyzed: 10/03/17

C10-C28 (DRO)	ND	50	mg/kg							
Surrogate: o-Terphenyl	13.5		"	12.5		108	30-150			

**LCS (1710017-BS1)**

Prepared & Analyzed: 10/03/17

C10-C28 (DRO)	543	50	mg/kg	499		109	73-134			
Surrogate: o-Terphenyl	14.7		"	12.5		118	30-150			

**Matrix Spike (1710017-MS1)**

Source: 1710019-01

Prepared & Analyzed: 10/03/17

C10-C28 (DRO)	485	50	mg/kg	499	7.22	95.7	50-148			
Surrogate: o-Terphenyl	15.3		"	12.5		123	30-150			

**Matrix Spike Dup (1710017-MSD1)**

Source: 1710019-01

Prepared & Analyzed: 10/03/17

C10-C28 (DRO)	503	50	mg/kg	499	7.22	99.3	50-148	3.64	20	
Surrogate: o-Terphenyl	16.7		"	12.5		134	30-150			

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

Project: Seth 1, 5  
Project Number: [none]  
Project Manager: Mark Longhurst

**Reported:**  
10/05/17 06:09

**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 1710016 - EPA 5030 Soil MS**

**Blank (1710016-BLK1)**

Prepared: 10/03/17 Analyzed: 10/04/17

Naphthalene	ND	0.010	mg/kg							
Benzene	ND	0.0020	"							
Toluene	ND	0.0050	"							
Ethylbenzene	ND	0.0050	"							
Xylenes (total)	ND	0.010	"							
Gasoline Range Hydrocarbons	ND	0.50	"							
<i>Surrogate: 1,2-Dichloroethane-d4</i>	<i>0.0440</i>		<i>"</i>	<i>0.0400</i>		<i>110</i>	<i>23-173</i>			
<i>Surrogate: Toluene-d8</i>	<i>0.0396</i>		<i>"</i>	<i>0.0400</i>		<i>98.9</i>	<i>20-170</i>			
<i>Surrogate: 4-Bromofluorobenzene</i>	<i>0.0400</i>		<i>"</i>	<i>0.0400</i>		<i>99.9</i>	<i>21-167</i>			

**LCS (1710016-BS1)**

Prepared: 10/03/17 Analyzed: 10/04/17

Naphthalene	ND	0.010	mg/kg				66-138			
Benzene	0.116	0.0020	"	0.100		116	58-130			
Toluene	0.0929	0.0050	"	0.100		92.9	61-134			
Ethylbenzene	0.137	0.0050	"	0.0992		138	74-139			
m,p-Xylene	0.253	0.010	"	0.200		127	73-137			
o-Xylene	0.125	0.0050	"	0.0980		128	73-141			
Xylenes (total)	0.377	0.010	"				0-200			
Gasoline Range Hydrocarbons	2.84	0.50	"				30-150			
<i>Surrogate: 1,2-Dichloroethane-d4</i>	<i>0.0379</i>		<i>"</i>	<i>0.0400</i>		<i>94.7</i>	<i>23-173</i>			
<i>Surrogate: Toluene-d8</i>	<i>0.0304</i>		<i>"</i>	<i>0.0400</i>		<i>76.0</i>	<i>20-170</i>			
<i>Surrogate: 4-Bromofluorobenzene</i>	<i>0.0404</i>		<i>"</i>	<i>0.0400</i>		<i>101</i>	<i>21-167</i>			

**Matrix Spike (1710016-MS1)**

**Source: 1710019-01**

Prepared: 10/03/17 Analyzed: 10/04/17

Naphthalene	ND	0.010	mg/kg		ND		10-158			
Benzene	0.119	0.0020	"	0.100	ND	119	30-131			
Toluene	0.0939	0.0050	"	0.100	ND	93.9	30-134			
Ethylbenzene	0.135	0.0050	"	0.0992	ND	136	22-153			
m,p-Xylene	0.247	0.010	"	0.200	ND	124	10-159			
o-Xylene	0.122	0.0050	"	0.0980	ND	124	31-151			
Xylenes (total)	0.368	0.010	"		ND		30-160			
Gasoline Range Hydrocarbons	2.89	0.50	"		0.322		30-160			
<i>Surrogate: 1,2-Dichloroethane-d4</i>	<i>0.0440</i>		<i>"</i>	<i>0.0400</i>		<i>110</i>	<i>23-173</i>			
<i>Surrogate: Toluene-d8</i>	<i>0.0303</i>		<i>"</i>	<i>0.0400</i>		<i>75.7</i>	<i>20-170</i>			
<i>Surrogate: 4-Bromofluorobenzene</i>	<i>0.0390</i>		<i>"</i>	<i>0.0400</i>		<i>97.4</i>	<i>21-167</i>			

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

Project: Seth 1, 5  
Project Number: [none]  
Project Manager: Mark Longhurst

**Reported:**  
10/05/17 06:09

**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 1710016 - EPA 5030 Soil MS**

Matrix Spike Dup (1710016-MSD1)		Source: 1710019-01			Prepared: 10/03/17		Analyzed: 10/04/17			
Naphthalene	ND	0.010	mg/kg		ND		10-158		42	
Benzene	0.113	0.0020	"	0.100	ND	113	30-131	5.65	34	
Toluene	0.0876	0.0050	"	0.100	ND	87.6	30-134	6.94	30	
Ethylbenzene	0.130	0.0050	"	0.0992	ND	131	22-153	3.51	24	
m,p-Xylene	0.239	0.010	"	0.200	ND	120	10-159	3.34	68	
o-Xylene	0.119	0.0050	"	0.0980	ND	121	31-151	2.14	38	
Xylenes (total)	0.358	0.010	"		ND		30-160	2.94	30	
Gasoline Range Hydrocarbons	2.73	0.50	"		0.322		30-160	5.76	30	
Surrogate: 1,2-Dichloroethane-d4	0.0440		"	0.0400		110	23-173			
Surrogate: Toluene-d8	0.0300		"	0.0400		75.0	20-170			
Surrogate: 4-Bromofluorobenzene	0.0405		"	0.0400		101	21-167			

Summit Scientific

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

Project: Seth 1, 5  
Project Number: [none]  
Project Manager: Mark Longhurst

**Reported:**  
10/05/17 06:09

### 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

# Summit Scientific

---

741 Corporate Circle – Suite I ♦ Golden, Colorado 80401

303.277.9310 - laboratory ♦ 303.277.9531 - fax

October 13, 2017

Mark Longhurst  
PDC Energy  
1775 Sherman St. STE. 3000  
Denver, CO 80203  
RE: Seth 1, 5

Enclosed are the results of analyses for samples received by Summit Scientific on 10/12/17 16:50. 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: Seth 1, 5  
Project Number: [none]  
Project Manager: Mark Longhurst

**Reported:**  
10/13/17 06:14

### ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
GW01	1710128-01	Water	10/12/17 11:16	10/12/17 16:50

Summit Scientific

A handwritten signature in black ink, appearing to be 'MSM'.

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Page 2 of 7



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

Project: Seth 1, 5  
Project Number: [none]  
Project Manager: Mark Longhurst

Reported:  
10/13/17 06:14

#### Sample Receipt Checklist

S2 Work Order: 1710128

Client: PDC

Client Project ID: Seth 1, 5

Shipped Via: P/U

(UPS, FedEx, Hand Delivered, Pick-up, etc.)

Airbill #: \_\_\_\_\_

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

Cooler ID					
Temp (°C)	<u>4-9</u>				

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> ?	<input checked="" type="checkbox"/>			
NOTE: If samples are delivered the same day of sampling, this requirement is met provided that there is evidence that cooling has begun.				
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 short holding time analytes or samples with HTs 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? If yes, contact client and note in narrative.		<input checked="" type="checkbox"/>		
Are samples preserved that require preservation (excluding cooling) <sup>(1)</sup> ?	<input checked="" type="checkbox"/>			<u>HCl</u>
Note the type of preservative in the Comments column – HCl, H2SO4, NaOH, HNO3, ect				
If samples are acid preserved for metals, is the pH ≤ 2 <sup>(1)</sup> ?			<input checked="" type="checkbox"/>	
Record the pH in Comments.				
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.				

Nakita  
Custodian Printed Name

[Signature]  
Signature or Initials of Custodian

10/12/17 1730  
Date/Time





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

Project: Seth 1, 5  
Project Number: [none]  
Project Manager: Mark Longhurst

**Reported:**  
10/13/17 06:14

**GW01**  
**1710128-01 (Water)**

**Summit Scientific**

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

Date Sampled: **10/12/17 11:16**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Benzene	ND	1.0	ug/l	1	1710130	10/12/17	10/12/17	EPA 8260B	
Toluene	ND	1.0	"	"	"	"	"	"	
Ethylbenzene	ND	1.0	"	"	"	"	"	"	
Xylenes (total)	ND	2.0	"	"	"	"	"	"	

Date Sampled: **10/12/17 11:16**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 1,2-Dichloroethane-d4		109 %	37-154		"	"	"	"	
Surrogate: Toluene-d8		96.9 %	45-149		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		98.3 %	45-146		"	"	"	"	

Summit Scientific

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

Project: Seth 1, 5  
Project Number: [none]  
Project Manager: Mark Longhurst

**Reported:**  
10/13/17 06:14

## 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 1710130 - EPA 5030 Water MS

##### Blank (1710130-BLK1)

Prepared & Analyzed: 10/13/17

Benzene	ND	1.0	ug/l							
Toluene	ND	1.0	"							
Ethylbenzene	ND	1.0	"							
Xylenes (total)	ND	2.0	"							
Surrogate: 1,2-Dichloroethane-d4	14.4		"	13.3		108	37-154			
Surrogate: Toluene-d8	13.1		"	13.3		98.0	45-149			
Surrogate: 4-Bromofluorobenzene	13.0		"	13.3		97.7	45-146			

##### LCS (1710130-BS1)

Prepared & Analyzed: 10/13/17

Benzene	37.2	1.0	ug/l	33.3		112	51-132			
Toluene	37.1	1.0	"	33.3		111	51-138			
Ethylbenzene	39.7	1.0	"	33.1		120	58-146			
m,p-Xylene	73.1	2.0	"	66.5		110	57-144			
o-Xylene	36.4	1.0	"	32.7		111	53-146			
Surrogate: 1,2-Dichloroethane-d4	14.6		"	13.3		110	37-154			
Surrogate: Toluene-d8	13.4		"	13.3		100	45-149			
Surrogate: 4-Bromofluorobenzene	13.0		"	13.3		97.4	45-146			

##### Matrix Spike (1710130-MS1)

Source: 1710109-01

Prepared & Analyzed: 10/13/17

Benzene	40.4	1.0	ug/l	33.3		121	34-141			
Toluene	38.7	1.0	"	33.3		116	27-151			
Ethylbenzene	44.1	1.0	"	33.1		133	29-160			
m,p-Xylene	80.4	2.0	"	66.5		121	20-166			
o-Xylene	40.1	1.0	"	32.7		123	33-159			
Surrogate: 1,2-Dichloroethane-d4	14.5		"	13.3		109	37-154			
Surrogate: Toluene-d8	12.9		"	13.3		96.8	45-149			
Surrogate: 4-Bromofluorobenzene	12.8		"	13.3		95.9	45-146			

Summit Scientific

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

Project: Seth 1, 5  
Project Number: [none]  
Project Manager: Mark Longhurst

**Reported:**  
10/13/17 06:14

**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 1710130 - EPA 5030 Water MS**

Matrix Spike Dup (1710130-MSD1)		Source: 1710109-01			Prepared & Analyzed: 10/13/17					
Benzene	40.6	1.0	ug/l	33.3	122	34-141	0.543	32		
Toluene	40.6	1.0	"	33.3	122	27-151	4.92	25		
Ethylbenzene	45.8	1.0	"	33.1	139	29-160	3.80	50		
m,p-Xylene	83.3	2.0	"	66.5	125	20-166	3.52	36		
o-Xylene	41.6	1.0	"	32.7	127	33-159	3.58	26		
Surrogate: 1,2-Dichloroethane-d4	14.3		"	13.3	108	37-154				
Surrogate: Toluene-d8	13.0		"	13.3	97.7	45-149				
Surrogate: 4-Bromofluorobenzene	12.7		"	13.3	95.3	45-146				

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*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: Seth 1, 5  
Project Number: [none]  
Project Manager: Mark Longhurst

**Reported:**  
10/13/17 06:14

### 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