

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 ⁽²⁾ (mg/kg)
COGCC standards for soil (mg/kg) ⁽¹⁾			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:

- Standards for soil are taken from 2 CCR 404-1, Table 910-1, effective January 30, 2015.
- 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) ⁽²⁾
COGCC Table 910-1 Groundwater Standard (µg/L) ⁽¹⁾		5	560	700	1,400	
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

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,



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

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

Summit Scientific

741 Corporate Circle Suite I ♦ Golden, Colorado 80401 1710018
 303-277-9310 ♦ 303-374-5933 Fax

Page 1 of 1

Client: PDC
 Address: _____ Project Manager: Mark Longhurst
 City/State/Zip: _____ E-Mail: Mark.Longhurst@pdce.com
 Phone: _____ Fax: _____ Project Name: Seth 1, 5
 Sampler Name: Tyler Blessisng Project Number: _____

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)	GBTEXN (9260)	DRO (TPH)					
SS01 @ 4'	10/3/2017	9:01	1		X			X					X	X				
Relinquished by:	Date/Time: 10/3/17 1050	Received by:	Date/Time: 10/3/17 1650	Turn Around Time (Check)				Notes: on ice										
Relinquished by:	Date/Time:	Received by:	Date/Time:	Same Day	<input checked="" type="checkbox"/>	72 Hours	<input type="checkbox"/>	24 Hours	<input type="checkbox"/>	Standard	<input type="checkbox"/>	48 Hours	<input type="checkbox"/>					
Relinquished by:	Date/Time:	Received in Lab by:	Date/Time:	Sample Integrity:														
				Temperature Upon Receipt:	3.9°C													
				Intact:	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No												

www.s2scientific.com

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

Sample Receipt Checklist

S2 Work Order: 170018
 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 ⁽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"/>			
Were all samples received intact ⁽¹⁾ ?	<input checked="" type="checkbox"/>			
Was adequate sample volume provided ⁽¹⁾ ?	<input checked="" type="checkbox"/>			
If custody seals are present, are they intact ⁽¹⁾ ?			<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 ⁽¹⁾ ?	<input checked="" type="checkbox"/>			
Does the COC agree with the number and type of sample bottles received ⁽¹⁾ ?	<input checked="" type="checkbox"/>			
Do the sample IDs on the bottle labels match the COC ⁽¹⁾ ?	<input checked="" type="checkbox"/>			
Is the COC properly relinquished by the client w/ date and time recorded ⁽¹⁾ ?	<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) ⁽¹⁾ ? 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 ⁽¹⁾ ? 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):				
⁽¹⁾ 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

[Signature]



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: <i>o</i> -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	Result	Reporting		Spike Level	Source		%REC		RPD		Notes
		Limit	Units		Result	%REC	Limits	RPD	Limit		

Batch 1710017 - EPA 3550A

Blank (1710017-BLK1)				Prepared & Analyzed: 10/03/17							
C10-C28 (DRO)	ND	50	mg/kg								
<i>Surrogate: o-Terphenyl</i>	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				
<i>Surrogate: o-Terphenyl</i>	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				
<i>Surrogate: o-Terphenyl</i>	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	
<i>Surrogate: o-Terphenyl</i>	16.7		"	12.5		134	30-150				

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

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 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>		

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

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 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	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
<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>0.0300</i>		<i>"</i>	<i>0.0400</i>		<i>75.0</i>	<i>20-170</i>			
<i>Surrogate: 4-Bromofluorobenzene</i>	<i>0.0405</i>		<i>"</i>	<i>0.0400</i>		<i>101</i>	<i>21-167</i>			

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 'Paul 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

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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

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 ⁽¹⁾ ?	<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 ⁽¹⁾ ?	<input checked="" type="checkbox"/>			
Was adequate sample volume provided ⁽¹⁾ ?	<input checked="" type="checkbox"/>			
If custody seals are present, are they intact ⁽¹⁾ ?			<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 ⁽¹⁾ ?	<input checked="" type="checkbox"/>			
Does the COC agree with the number and type of sample bottles received ⁽¹⁾ ?	<input checked="" type="checkbox"/>			
Do the sample IDs on the bottle labels match the COC ⁽¹⁾ ?	<input checked="" type="checkbox"/>			
Is the COC properly relinquished by the client w/ date and time recorded ⁽¹⁾ ?	<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) ⁽¹⁾ ?	<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 ⁽¹⁾ ?			<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):				

⁽¹⁾ 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

[Signature]



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		Notes
	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	

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 Level	Source Result	%REC		RPD		Notes
	Result	Limit			Units	%REC	Limits	RPD	

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	
<i>Surrogate: 1,2-Dichloroethane-d4</i>	<i>14.3</i>		<i>"</i>	<i>13.3</i>	<i>108</i>	<i>37-154</i>			
<i>Surrogate: Toluene-d8</i>	<i>13.0</i>		<i>"</i>	<i>13.3</i>	<i>97.7</i>	<i>45-149</i>			
<i>Surrogate: 4-Bromofluorobenzene</i>	<i>12.7</i>		<i>"</i>	<i>13.3</i>	<i>95.3</i>	<i>45-146</i>			

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
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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