

**TABLE 1**  
**EDWARDS 33, 43-9 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)
<b>COGCC standards for soil (mg/kg) <sup>(1)</sup></b>			<b>0.17</b>	<b>85</b>	<b>100</b>	<b>175</b>	<b>23</b>	<b>500</b>
SS01 @ 20	7/31/2015	20	<b>0.82</b>	64	15	<b>230</b>	2.5	<b>4,300</b>
SS02 @ 16	7/31/2015	16	0.0033	0.12	0.022	0.44	0.020	4.4
SS03 @ 16	7/31/2015	16	<0.0020	<0.0050	<0.0050	<0.010	<0.010	<50
SS04 @ 16	7/31/2015	16	<0.0020	0.019	<0.0050	0.014	<0.010	<50
SS05 @ 16	8/3/2015	16	<0.0020	<0.0050	<0.0050	<0.010	<0.010	<50
SS06 @ 16	8/3/2015	16	<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 February 1, 2014.

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.

**ATTACHMENT A**

# Summit Scientific

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741 Corporate Circle – Suite I ♦ Golden, Colorado 80401

303.277.9310 - laboratory ♦ 303.277.9531 - fax

August 01, 2015

Mark Longhurst  
PDC Energy  
1775 Sherman St. STE. 3000  
Denver, CO 80203  
RE: Edwards 33, 43-9

Enclosed are the results of analyses for samples received by Summit Scientific on 07/31/15 18:06. 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: Edwards 33, 43-9

Project Number: [none]  
Project Manager: Mark Longhurst

**Reported:**  
08/01/15 14:01

### ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
SS01@20'	1507319-01	Soil	07/31/15 08:40	07/31/15 18:06
SS02@16'	1507319-02	Soil	07/31/15 10:30	07/31/15 18:06
SS03@16'	1507319-03	Soil	07/31/15 10:40	07/31/15 18:06
SS04@16'	1507319-04	Soil	07/31/15 12:55	07/31/15 18:06

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.*

S<sub>2</sub>

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

Project: Edwards 33, 43-9

Project Number: [none]  
Project Manager: Mark Longhurst

Reported:  
08/01/15 14:01

# Summit Scientific 1507319

S<sub>2</sub>

741 Corporate Circle, Suite J&K ♦ Golden, Colorado 80401  
303-277-9310 ♦ 303-374-5933

Client: PDC/Tasman Project Manager: Mark Longhurst Page 1 of 1  
Address: \_\_\_\_\_ E-Mail: \_\_\_\_\_  
City/State/Zip: \_\_\_\_\_  
Phone: \_\_\_\_\_ Fax: \_\_\_\_\_ Project Name: Edwards 33, 43-9  
Sampler Name: Eric Siegel Project Number: \_\_\_\_\_

ID	Sample Description	Date Sampled	Time Sampled	# of containers	Preservative				Matrix		Analysis Requested				Special Instructions
					HCl	HNO <sub>3</sub>	None	Other (Specify)	Groundwater	Soil	Air-Canister #	Other (Specify)	GC/MS	GC/MS DRO	
1	SS01e20'	7/31/15	8:40	1			X			X		X	X		
2	SS02e16'	↓	10:30	↓											
3	SS03e16'	↓	10:40	↓											
4	SS04e16'	↓	12:55	↓											
5															
6															
7															
8															
9															
10															

  

Relinquished by: <u>E. A. Siegel</u> Date/Time: <u>7/31/15</u>	Received by: <u>[Signature]</u> Date/Time: <u>7:44</u>	<b>Turn Around Time (Check)</b> Same Day <input checked="" type="checkbox"/> 72 hours ___ 24 hours ___ Standard ___ 48 hours ___ <b>Sample Integrity:</b> Temperature Upon Receipt: <u>9.8°C</u> Intact: <input checked="" type="radio"/> Yes <input type="radio"/> No	<b>Notes:</b>
Relinquished by: <u>[Signature]</u> Date/Time: <u>7/31/15</u>	Received by: <u>[Signature]</u> Date/Time: <u>18:00</u>		
Relinquished by: _____ Date/Time: _____	Received by: _____ Date/Time: _____		

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

Project: Edwards 33, 43-9

Project Number: [none]  
Project Manager: Mark Longhurst

**Reported:**  
08/01/15 14:01

**SS01@20'**  
**1507319-01 (Soil)**

**Summit Scientific**

**Extractable Petroleum Hydrocarbons by 8015**

Date Sampled: **07/31/15 08:40**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
<b>C10-C28 (DRO)</b>	<b>1200</b>	50	mg/kg	1	1507337	07/31/15	07/31/15	8015M	

Date Sampled: **07/31/15 08:40**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
<i>Surrogate: o-Terphenyl</i>		108 %	30-150		"	"	"	"	

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

Date Sampled: **07/31/15 08:40**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
<b>Naphthalene</b>	<b>2.5</b>	1.0	mg/kg	100	1507338	"	07/31/15	EPA 8260B	
<b>Benzene</b>	<b>0.82</b>	0.20	"	"	"	"	"	"	
<b>Toluene</b>	<b>64</b>	0.50	"	"	"	"	"	"	
<b>Ethylbenzene</b>	<b>15</b>	0.50	"	"	"	"	"	"	
<b>Xylenes (total)</b>	<b>230</b>	1.0	"	"	"	"	"	"	
<b>Gasoline Range Hydrocarbons</b>	<b>3100</b>	50	"	"	"	"	"	"	

Date Sampled: **07/31/15 08:40**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
<i>Surrogate: 1,2-Dichloroethane-d4</i>		101 %	23-173		"	"	"	"	
<i>Surrogate: Toluene-d8</i>		115 %	20-170		"	"	"	"	
<i>Surrogate: 4-Bromofluorobenzene</i>		131 %	21-167		"	"	"	"	

Summit Scientific

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

Project: Edwards 33, 43-9

Project Number: [none]  
 Project Manager: Mark Longhurst

**Reported:**  
 08/01/15 14:01

**SS02@16'**  
**1507319-02 (Soil)**

**Summit Scientific**

**Extractable Petroleum Hydrocarbons by 8015**

Date Sampled: **07/31/15 10:30**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
C10-C28 (DRO)	ND	50	mg/kg	1	1507337	07/31/15	07/31/15	8015M	

Date Sampled: **07/31/15 10:30**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: <i>o</i> -Terphenyl		102 %	30-150		"	"	"	"	

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

Date Sampled: **07/31/15 10:30**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
<b>Naphthalene</b>	<b>0.020</b>	0.010	mg/kg	1	1507338	"	07/31/15	EPA 8260B	
<b>Benzene</b>	<b>0.0033</b>	0.0020	"	"	"	"	"	"	
<b>Toluene</b>	<b>0.12</b>	0.0050	"	"	"	"	"	"	
<b>Ethylbenzene</b>	<b>0.022</b>	0.0050	"	"	"	"	"	"	
<b>Xylenes (total)</b>	<b>0.44</b>	0.010	"	"	"	"	"	"	
<b>Gasoline Range Hydrocarbons</b>	<b>4.4</b>	0.50	"	"	"	"	"	"	

Date Sampled: **07/31/15 10:30**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 1,2-Dichloroethane-d4		105 %	23-173		"	"	"	"	
Surrogate: Toluene-d8		99.8 %	20-170		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		94.2 %	21-167		"	"	"	"	

Summit Scientific

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

Project: Edwards 33, 43-9

Project Number: [none]  
Project Manager: Mark Longhurst

**Reported:**  
08/01/15 14:01

**SS03@16'**  
**1507319-03 (Soil)**

**Summit Scientific**

**Extractable Petroleum Hydrocarbons by 8015**

Date Sampled: **07/31/15 10:40**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
C10-C28 (DRO)	ND	50	mg/kg	1	1507337	07/31/15	07/31/15	8015M	

Date Sampled: **07/31/15 10:40**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: <i>o</i> -Terphenyl		103 %	30-150		"	"	"	"	

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

Date Sampled: **07/31/15 10:40**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Naphthalene	ND	0.010	mg/kg	1	1507338	"	07/31/15	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: **07/31/15 10:40**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 1,2-Dichloroethane-d4		106 %	23-173		"	"	"	"	
Surrogate: Toluene-d8		91.2 %	20-170		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		98.8 %	21-167		"	"	"	"	

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

Project: Edwards 33, 43-9

Project Number: [none]  
 Project Manager: Mark Longhurst

**Reported:**  
 08/01/15 14:01

**SS04@16'**  
**1507319-04 (Soil)**

**Summit Scientific**

**Extractable Petroleum Hydrocarbons by 8015**

Date Sampled: **07/31/15 12:55**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
C10-C28 (DRO)	ND	50	mg/kg	1	1507337	07/31/15	07/31/15	8015M	

Date Sampled: **07/31/15 12:55**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: <i>o</i> -Terphenyl		103 %	30-150		"	"	"	"	

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

Date Sampled: **07/31/15 12:55**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Naphthalene	ND	0.010	mg/kg	1	1507338	"	07/31/15	EPA 8260B	
Benzene	ND	0.0020	"	"	"	"	"	"	
<b>Toluene</b>	<b>0.019</b>	0.0050	"	"	"	"	"	"	
Ethylbenzene	ND	0.0050	"	"	"	"	"	"	
<b>Xylenes (total)</b>	<b>0.014</b>	0.010	"	"	"	"	"	"	
Gasoline Range Hydrocarbons	ND	0.50	"	"	"	"	"	"	

Date Sampled: **07/31/15 12:55**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 1,2-Dichloroethane-d4		105 %	23-173		"	"	"	"	
Surrogate: Toluene-d8		96.6 %	20-170		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		97.0 %	21-167		"	"	"	"	

Summit Scientific

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

Project: Edwards 33, 43-9

Project Number: [none]  
 Project Manager: Mark Longhurst

**Reported:**  
 08/01/15 14:01

**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 1507337 - EPA 3550A**

<b>Blank (1507337-BLK1)</b>				Prepared & Analyzed: 07/31/15							
C10-C28 (DRO)	ND	50	mg/kg								
<i>Surrogate: o-Terphenyl</i>	12.6		"	12.2		103	30-150				
<b>LCS (1507337-BS1)</b>				Prepared & Analyzed: 07/31/15							
C10-C28 (DRO)	453	50	mg/kg	501		90.4	73-134				
<i>Surrogate: o-Terphenyl</i>	12.8		"	12.2		105	30-150				
<b>Matrix Spike (1507337-MS1)</b>				<b>Source: 1507317-02</b>		Prepared & Analyzed: 07/31/15					
C10-C28 (DRO)	469	50	mg/kg	475	ND	98.7	50-148				
<i>Surrogate: o-Terphenyl</i>	12.2		"	11.6		106	30-150				
<b>Matrix Spike Dup (1507337-MSD1)</b>				<b>Source: 1507317-02</b>		Prepared & Analyzed: 07/31/15					
C10-C28 (DRO)	447	50	mg/kg	470	ND	95.1	50-148	4.89		13	
<i>Surrogate: o-Terphenyl</i>	11.6		"	11.4		101	30-150				

Summit Scientific

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

Project: Edwards 33, 43-9

Project Number: [none]  
Project Manager: Mark Longhurst

Reported:  
08/01/15 14:01

**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 1507338 - EPA 5030 Soil MS**

**Blank (1507338-BLK1)**

Prepared & Analyzed: 07/31/15

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>0.0396</i>		<i>"</i>	<i>0.0396</i>		<i>100</i>	<i>23-173</i>			
<i>Surrogate: Toluene-d8</i>	<i>0.0388</i>		<i>"</i>	<i>0.0400</i>		<i>97.0</i>	<i>20-170</i>			
<i>Surrogate: 4-Bromofluorobenzene</i>	<i>0.0377</i>		<i>"</i>	<i>0.0400</i>		<i>94.2</i>	<i>21-167</i>			

**LCS (1507338-BS1)**

Prepared & Analyzed: 07/31/15

Naphthalene	ND	0.010	mg/kg				66-138			
Benzene	0.120	0.0020	"	0.100		120	58-130			
Toluene	0.119	0.0050	"	0.100		119	61-134			
Ethylbenzene	0.129	0.0050	"	0.0992		130	74-139			
m,p-Xylene	0.267	0.010	"	0.200		134	73-137			
o-Xylene	0.131	0.0050	"	0.0984		133	73-141			
<i>Surrogate: 1,2-Dichloroethane-d4</i>	<i>0.0390</i>		<i>"</i>	<i>0.0396</i>		<i>98.5</i>	<i>23-173</i>			
<i>Surrogate: Toluene-d8</i>	<i>0.0400</i>		<i>"</i>	<i>0.0400</i>		<i>100</i>	<i>20-170</i>			
<i>Surrogate: 4-Bromofluorobenzene</i>	<i>0.0373</i>		<i>"</i>	<i>0.0400</i>		<i>93.3</i>	<i>21-167</i>			

**Matrix Spike (1507338-MS1)**

Source: 1507317-03

Prepared & Analyzed: 07/31/15

Naphthalene	ND	0.010	mg/kg		0.00677		10-158			
Benzene	0.119	0.0020	"	0.0916	0.00617	123	30-131			
Toluene	0.125	0.0050	"	0.0916	0.0180	117	30-134			
Ethylbenzene	0.134	0.0050	"	0.0908	0.00880	138	22-153			
m,p-Xylene	0.300	0.010	"	0.183	0.0741	123	10-159			
o-Xylene	0.153	0.0050	"	0.0901	0.0447	121	31-151			
<i>Surrogate: 1,2-Dichloroethane-d4</i>	<i>0.0378</i>		<i>"</i>	<i>0.0363</i>		<i>104</i>	<i>23-173</i>			
<i>Surrogate: Toluene-d8</i>	<i>0.0368</i>		<i>"</i>	<i>0.0366</i>		<i>100</i>	<i>20-170</i>			
<i>Surrogate: 4-Bromofluorobenzene</i>	<i>0.0349</i>		<i>"</i>	<i>0.0366</i>		<i>95.2</i>	<i>21-167</i>			

Summit Scientific

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

Project: Edwards 33, 43-9

Project Number: [none]  
 Project Manager: Mark Longhurst

**Reported:**  
 08/01/15 14:01

**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 1507338 - EPA 5030 Soil MS**

<b>Matrix Spike Dup (1507338-MSD1)</b>	<b>Source: 1507317-03</b>			<b>Prepared &amp; Analyzed: 07/31/15</b>						
Naphthalene	ND	0.010	mg/kg		0.00677		10-158		42	
Benzene	0.127	0.0020	"	0.0978	0.00617	124	30-131	6.95	34	
Toluene	0.137	0.0050	"	0.0978	0.0180	122	30-134	9.50	30	
Ethylbenzene	0.144	0.0050	"	0.0971	0.00880	139	22-153	6.81	24	
m,p-Xylene	0.354	0.010	"	0.195	0.0741	143	10-159	16.6	68	
o-Xylene	0.181	0.0050	"	0.0963	0.0447	142	31-151	16.6	38	
<i>Surrogate: 1,2-Dichloroethane-d4</i>	<i>0.0385</i>		<i>"</i>	<i>0.0387</i>		<i>99.3</i>	<i>23-173</i>			
<i>Surrogate: Toluene-d8</i>	<i>0.0392</i>		<i>"</i>	<i>0.0391</i>		<i>100</i>	<i>20-170</i>			
<i>Surrogate: 4-Bromofluorobenzene</i>	<i>0.0370</i>		<i>"</i>	<i>0.0391</i>		<i>94.4</i>	<i>21-167</i>			

Summit Scientific

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

Project: Edwards 33, 43-9

Project Number: [none]  
Project Manager: Mark Longhurst

**Reported:**  
08/01/15 14:01

### 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

August 04, 2015

Mark Longhurst  
PDC Energy  
1775 Sherman St. STE. 3000  
Denver, CO 80203  
RE: Edwards 33, 43-9

Enclosed are the results of analyses for samples received by Summit Scientific on 08/03/15 18:27. 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', written in a cursive style.

Paul Shrewsbury  
President



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

Project: Edwards 33, 43-9

Project Number: [none]  
Project Manager: Mark Longhurst

**Reported:**  
08/04/15 06:30

### ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
SS05@16'	1508008-01	Soil	08/03/15 11:00	08/03/15 18:27
SS06@16'	1508008-02	Soil	08/03/15 11:30	08/03/15 18:27

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: Edwards 33, 43-9

Project Number: [none]  
Project Manager: Mark Longhurst

Reported:  
08/04/15 06:30

# Summit Scientific 1508008

S<sub>2</sub>

741 Corporate Circle, Suite J&K ♦ Golden, Colorado 80401  
303-277-9310 ♦ 303-374-5933

Page 1 of 1

Client: PDC/Tasman Project Manager: Mark Longhurst  
Address: \_\_\_\_\_ E-Mail: \_\_\_\_\_  
City/State/Zip: \_\_\_\_\_  
Phone: \_\_\_\_\_ Fax: \_\_\_\_\_ Project Name: Edwards 33, 43-9  
Sampler Name: Eric Siegel Project Number: \_\_\_\_\_

ID	Sample Description	Date Sampled	Time Sampled	# of containers	Preservative				Matrix			Analysis Requested				Special Instructions
					HCl	HNO3	None	Other (Specify)	Groundwater	Soil	Air-Canister #	Other (Specify)	GC/MS	GC/MS	GC/MS	
1	SS05e 16'	8/3/15	1100	1			X			X			X	X		
2	SS06e 16'	8/3/15	1130	1			X			X			X	X		
3																
4																
5																
6																
7																
8																
9																
10																

  

Relinquished by: <u>E. Siegel</u>	Date/Time: <u>8/3/15</u>	Received by: <u>Mark Longhurst</u>	Date/Time: <u>8-3-2015</u>	Turn Around Time (Check)	Notes:
Relinquished by: <u>Mark Longhurst</u>	Date/Time: <u>8-3-15</u>	Received by: <u>Eric Siegel</u>	Date/Time: <u>8/3/15</u>	Same Day <input checked="" type="checkbox"/> 72 hours	
				24 hours <input type="checkbox"/> Standard	
				48 hours <input type="checkbox"/>	
Relinquished by:	Date/Time:	Received by:	Date/Time:	Sample Integrity:	
				Temperature Upon Receipt: <u>4.1°C</u>	
				Intact: <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	

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

Project: Edwards 33, 43-9

Project Number: [none]  
 Project Manager: Mark Longhurst

**Reported:**  
 08/04/15 06:30

**SS05@16'**  
**1508008-01 (Soil)**

**Summit Scientific**

**Extractable Petroleum Hydrocarbons by 8015**

Date Sampled: **08/03/15 11:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
C10-C28 (DRO)	ND	50	mg/kg	1	1508005	08/03/15	08/03/15	8015M	

Date Sampled: **08/03/15 11:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: <i>o</i> -Terphenyl		101 %	30-150		"	"	"	"	

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

Date Sampled: **08/03/15 11:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Naphthalene	ND	0.010	mg/kg	1	1508006	08/03/15	08/03/15	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: **08/03/15 11:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 1,2-Dichloroethane-d4		110 %	23-173		"	"	"	"	
Surrogate: Toluene-d8		97.9 %	20-170		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		98.9 %	21-167		"	"	"	"	

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

Project: Edwards 33, 43-9

Project Number: [none]  
 Project Manager: Mark Longhurst

**Reported:**  
 08/04/15 06:30

**SS06@16'**  
**1508008-02 (Soil)**

**Summit Scientific**

**Extractable Petroleum Hydrocarbons by 8015**

Date Sampled: **08/03/15 11:30**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
C10-C28 (DRO)	ND	50	mg/kg	1	1508005	08/03/15	08/03/15	8015M	

Date Sampled: **08/03/15 11:30**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: <i>o</i> -Terphenyl		98.9 %	30-150		"	"	"	"	

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

Date Sampled: **08/03/15 11:30**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Naphthalene	ND	0.010	mg/kg	1	1508006	08/03/15	08/03/15	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: **08/03/15 11:30**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 1,2-Dichloroethane-d4		103 %	23-173		"	"	"	"	
Surrogate: Toluene-d8		97.6 %	20-170		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		95.5 %	21-167		"	"	"	"	

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

Project: Edwards 33, 43-9

Project Number: [none]  
 Project Manager: Mark Longhurst

**Reported:**  
 08/04/15 06:30

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

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

**Batch 1508005 - EPA 3550A**

<b>Blank (1508005-BLK1)</b>				Prepared & Analyzed: 08/03/15							
C10-C28 (DRO)	ND	50	mg/kg								
Surrogate: <i>o</i> -Terphenyl	12.3		"	12.2		101	30-150				
<b>LCS (1508005-BS1)</b>				Prepared & Analyzed: 08/03/15							
C10-C28 (DRO)	490	50	mg/kg	501		97.9	73-134				
Surrogate: <i>o</i> -Terphenyl	12.3		"	12.2		101	30-150				
<b>Matrix Spike (1508005-MS1)</b>				<b>Source: 1508003-02</b>		Prepared & Analyzed: 08/03/15					
C10-C28 (DRO)	512	50	mg/kg	485	ND	106	50-148				
Surrogate: <i>o</i> -Terphenyl	13.3		"	11.8		112	30-150				
<b>Matrix Spike Dup (1508005-MSD1)</b>				<b>Source: 1508003-02</b>		Prepared & Analyzed: 08/03/15					
C10-C28 (DRO)	487	50	mg/kg	494	ND	98.6	50-148	4.99		13	
Surrogate: <i>o</i> -Terphenyl	12.3		"	12.0		102	30-150				

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

Project: Edwards 33, 43-9

Project Number: [none]  
Project Manager: Mark Longhurst

Reported:  
08/04/15 06:30

**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 1508006 - EPA 5030 Soil MS**

**Blank (1508006-BLK1)**

Prepared & Analyzed: 08/03/15

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>0.0400</i>		<i>"</i>	<i>0.0396</i>		<i>101</i>	<i>23-173</i>			
<i>Surrogate: Toluene-d8</i>	<i>0.0397</i>		<i>"</i>	<i>0.0400</i>		<i>99.2</i>	<i>20-170</i>			
<i>Surrogate: 4-Bromofluorobenzene</i>	<i>0.0400</i>		<i>"</i>	<i>0.0400</i>		<i>100</i>	<i>21-167</i>			

**LCS (1508006-BS1)**

Prepared & Analyzed: 08/03/15

Naphthalene	ND	0.010	mg/kg				66-138			
Benzene	0.101	0.0020	"	0.100		101	58-130			
Toluene	0.101	0.0050	"	0.100		101	61-134			
Ethylbenzene	0.102	0.0050	"	0.0992		103	74-139			
m,p-Xylene	0.212	0.010	"	0.200		106	73-137			
o-Xylene	0.105	0.0050	"	0.0984		107	73-141			
<i>Surrogate: 1,2-Dichloroethane-d4</i>	<i>0.0369</i>		<i>"</i>	<i>0.0396</i>		<i>93.3</i>	<i>23-173</i>			
<i>Surrogate: Toluene-d8</i>	<i>0.0419</i>		<i>"</i>	<i>0.0400</i>		<i>105</i>	<i>20-170</i>			
<i>Surrogate: 4-Bromofluorobenzene</i>	<i>0.0378</i>		<i>"</i>	<i>0.0400</i>		<i>94.4</i>	<i>21-167</i>			

**Matrix Spike (1508006-MS1)**

Source: 1508003-02

Prepared & Analyzed: 08/03/15

Naphthalene	ND	0.010	mg/kg		ND		10-158			
Benzene	0.111	0.0020	"	0.0956	ND	116	30-131			
Toluene	0.110	0.0050	"	0.0956	ND	115	30-134			
Ethylbenzene	0.117	0.0050	"	0.0948	ND	123	22-153			
m,p-Xylene	0.241	0.010	"	0.191	ND	126	10-159			
o-Xylene	0.118	0.0050	"	0.0941	ND	125	31-151			
<i>Surrogate: 1,2-Dichloroethane-d4</i>	<i>0.0383</i>		<i>"</i>	<i>0.0379</i>		<i>101</i>	<i>23-173</i>			
<i>Surrogate: Toluene-d8</i>	<i>0.0399</i>		<i>"</i>	<i>0.0382</i>		<i>104</i>	<i>20-170</i>			
<i>Surrogate: 4-Bromofluorobenzene</i>	<i>0.0369</i>		<i>"</i>	<i>0.0382</i>		<i>96.6</i>	<i>21-167</i>			

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

Project: Edwards 33, 43-9

Project Number: [none]  
Project Manager: Mark Longhurst

**Reported:**  
08/04/15 06:30

**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 1508006 - EPA 5030 Soil MS**

<b>Matrix Spike Dup (1508006-MSD1)</b>	<b>Source: 1508003-02</b>			<b>Prepared &amp; Analyzed: 08/03/15</b>						
Naphthalene	ND	0.010	mg/kg	ND	ND	10-158			42	
Benzene	0.119	0.0020	"	0.0984	ND	121	30-131	6.65	34	
Toluene	0.120	0.0050	"	0.0984	ND	122	30-134	9.08	30	
Ethylbenzene	0.130	0.0050	"	0.0976	ND	133	22-153	10.9	24	
m,p-Xylene	0.266	0.010	"	0.196	ND	136	10-159	10.0	68	
o-Xylene	0.132	0.0050	"	0.0969	ND	136	31-151	11.3	38	
<i>Surrogate: 1,2-Dichloroethane-d4</i>	<i>0.0405</i>		<i>"</i>	<i>0.0390</i>		<i>104</i>	<i>23-173</i>			
<i>Surrogate: Toluene-d8</i>	<i>0.0403</i>		<i>"</i>	<i>0.0394</i>		<i>102</i>	<i>20-170</i>			
<i>Surrogate: 4-Bromofluorobenzene</i>	<i>0.0381</i>		<i>"</i>	<i>0.0394</i>		<i>96.8</i>	<i>21-167</i>			

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

Project: Edwards 33, 43-9

Project Number: [none]  
Project Manager: Mark Longhurst

**Reported:**  
08/04/15 06:30

### 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

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