



received 06/09/2016
Project 9281
Doc# 2212895

Corporate Office

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Denver, Colorado 80203
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June 6, 2016

Mr. Peter Gintautas, Ph.D.
Environmental Protection Specialist, Northeast Region
Colorado Oil and Gas Conservation Commission
1120 Lincoln Street, Suite 801
Denver, CO 80203

**FORM 27 ADDENDUM: POST-EXCAVATION AND CHEMICAL TREATMENT
REMEDICATION AND MONITORING WORK PLAN
URSULA #2 TANK BATTERY
API #: 05-123-09920
NENE S28 T2N R66W
WELD COUNTY, COLORADO
REMEDICATION #: 9281**

Dear Mr. Gintautas:

PDC Energy, Inc. (PDC) is submitting this Form 27 Addendum: Post-Excavation and Chemical Treatment Remediation and Monitoring Work Plan to the Colorado Oil and Gas Conservation Commission (COGCC) to summarize the proposed remediation and monitoring strategy for the Ursula #2 tank battery (Figure 1).

On March 23, 2015, a historic release was discovered below the produced water vessel during plug and abandonment activities at the Ursula #2 tank battery (Site). A summary of Site assessment activities and the proposed remediation strategy was submitted in a Form 27 on October 6, 2015. The COGCC issued Remediation Number 9281 to the project. Excavation and chemical treatment activities conducted in accordance with the approved Form 27 were summarized in a Form 27 Addendum: Summary of Remediation Activities submitted to the COGCC on February 4, 2016.

A summary of the proposed in-situ remediation strategy and monitoring plan for this Site is provided below.

Post-Excavation and Chemical Treatment Assessment

As summarized in the Form 27 Addendum submitted in February 2016, the lateral extent of dissolved phase impacts off-site was not defined during initial assessment and excavation activities. As such, a

supplemental site investigation was conducted on February 15 and February 18, 2016. Sixteen (16) boreholes (BH15 – BH30) were advanced using a hand auger to approximately 8 feet below ground surface (bgs). Temporary well casing was installed at each borehole location and wells were subsequently purged and sampled. Groundwater samples were submitted to Summit Scientific Laboratories (Summit) in Golden, Colorado for analysis of benzene, toluene, ethylbenzene, total xylenes (BTEX). Following sample collection, monitoring wells were abandoned and the borehole was backfilled and compacted.

Analytical results indicated that BTEX concentrations were in exceedance of COGCC Table 910-1 groundwater standards at 5 temporary monitoring well locations (BH15 and BH18 – BH21). Constituent concentrations were below regulatory standards at the remaining 11 sample locations.

Temporary monitoring well locations from the 2015 and 2016 site assessments and corresponding analytical data are illustrated on Figure 2. Groundwater analytical results are summarized in Table 3.

Path Forward

Petroleum hydrocarbon impacts are present in soil and groundwater on Site, as evidenced by the final excavation and monitoring well data. Based on this information, PDC will install a remediation well network both on- and off-site, consisting of the following:

- Directional drilling and installation of seven (7) horizontal EFR lines at 4 feet below ground surface (bgs) and five (5) horizontal AS lines at 10 feet bgs, and;
- Installation of 14 vertical dual-purpose (EFR/AS) remediation wells using direct-push drilling methods.

A fixed air sparge (AS) and soil vapor extraction (SVE) / enhanced fluid recovery (EFR) system will be installed and operated for an estimated 2 years. The proposed remediation well network and associated sub-grade conveyance line orientation are illustrated on Figure 3.

Concurrent with remedial activities, PDC will conduct quarterly groundwater monitoring at the 11 monitoring well locations which previously exhibited BTEX concentrations in exceedance of COGCC Table 910-1 standards during Site assessment activities. In addition, quarterly groundwater monitoring will be conducted at 7 monitoring wells down- and up- gradient to the impacted wells to establish point-of-compliance on Site. All 18 monitoring well locations (BH02, BH04, BH05, BH07 – BH10, BH13, BH15, BH16, BH18 – BH21, BH22, BH24, BH26, and BH28) will be installed each quarter using a hand auger, as off-site property is actively cultivated and/or occupied with livestock. Temporary wells will be purged and sampled, and subsequently abandoned. GPS points of the temporary wells will be collected to ensure groundwater sample locations remain consistent between quarters. The proposed monitoring well network is illustrated on Figure 3.

Quarterly groundwater monitoring will continue until four consecutive quarters of post-remediation groundwater concentrations are in compliance with COGCC Table 910-1 standards. Following monitoring and remediation activities, soil samples will be collected in the locations of the 11 excavation soil samples (SS01, SS02, SS05, SS06, SS15, SS17, SS18, SS22, SS23, SS25, and SS30) which previously exhibited constituent concentrations in exceedance of regulatory standards.

If you have any questions regarding this location, please contact me by phone at (303) 318-6106.

Sincerely,
PDC Energy, Inc.

Karen Shanahan Olson
Senior EHS Manager

Enclosures:

Figure 1 – Site Location Map
Figure 2 – Groundwater Analytical Results Map
Figure 3 – Proposed Remediation System Layout Map
Table 1 – Soil Analytical Results Summary Table
Table 2 – Confirmation Soil Analytical Results Summary Table
Table 3 – Groundwater Analytical Results Summary Table
Attachment A – Laboratory Analytical Reports

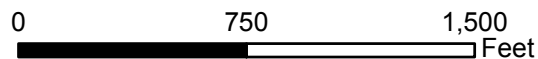
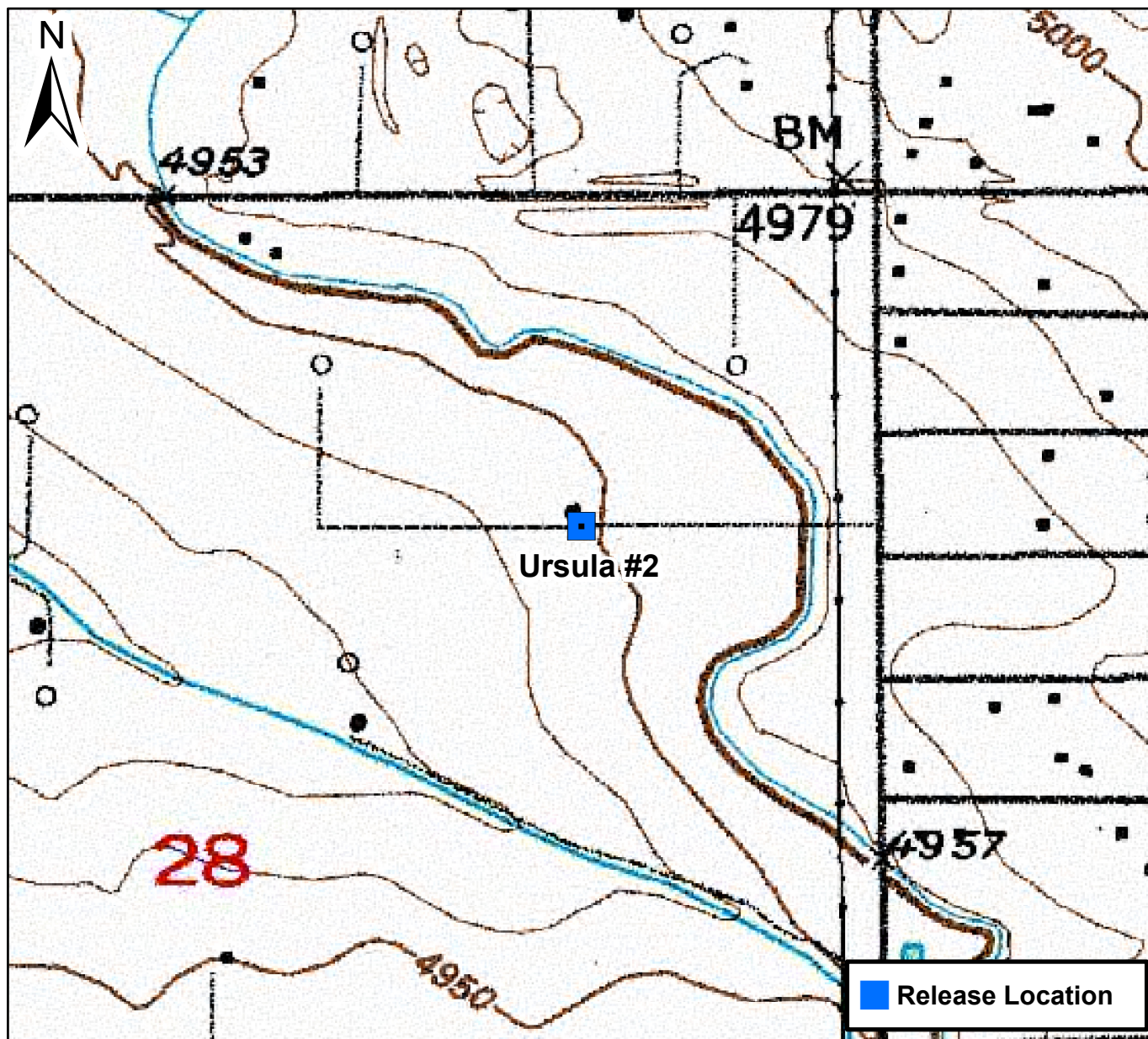
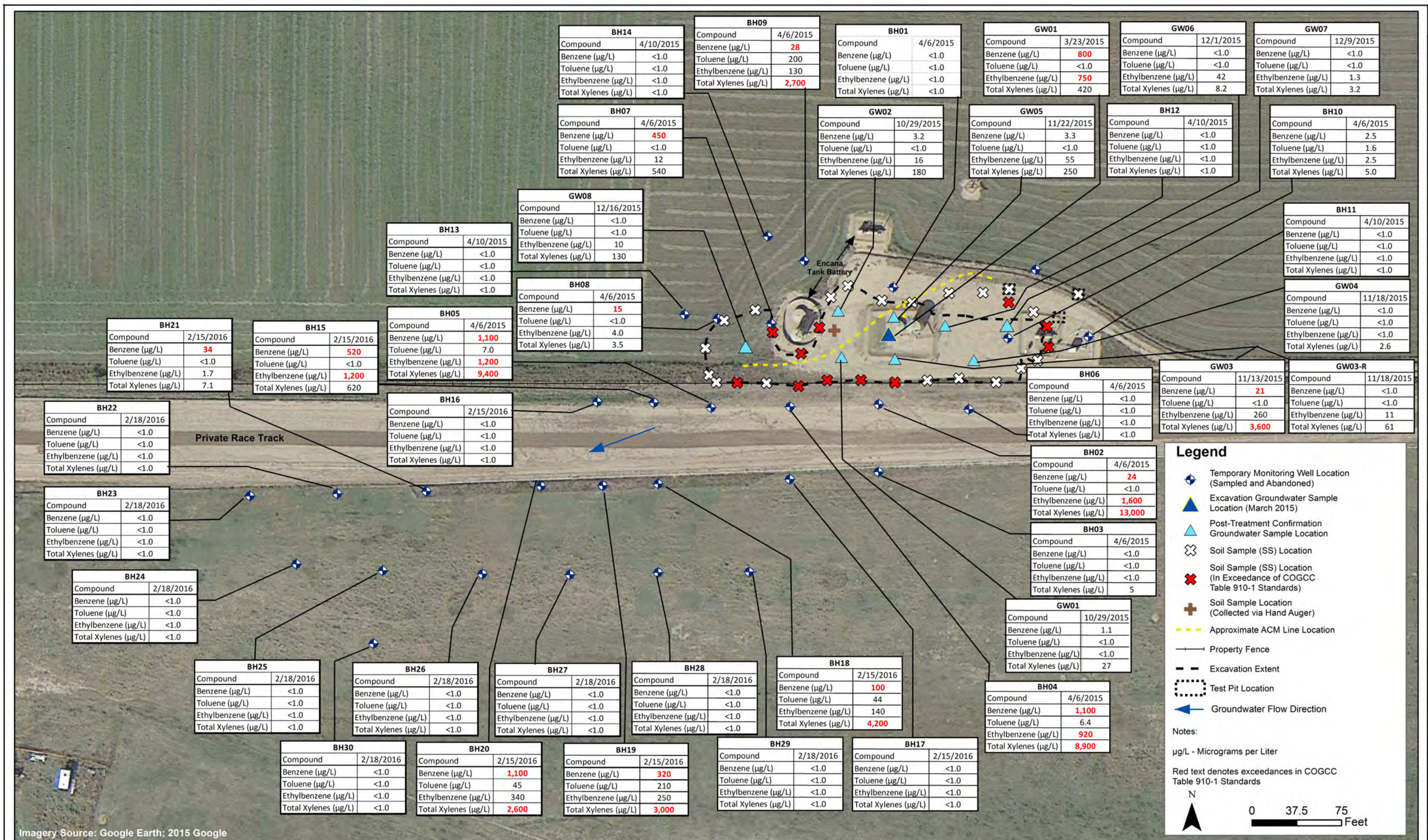
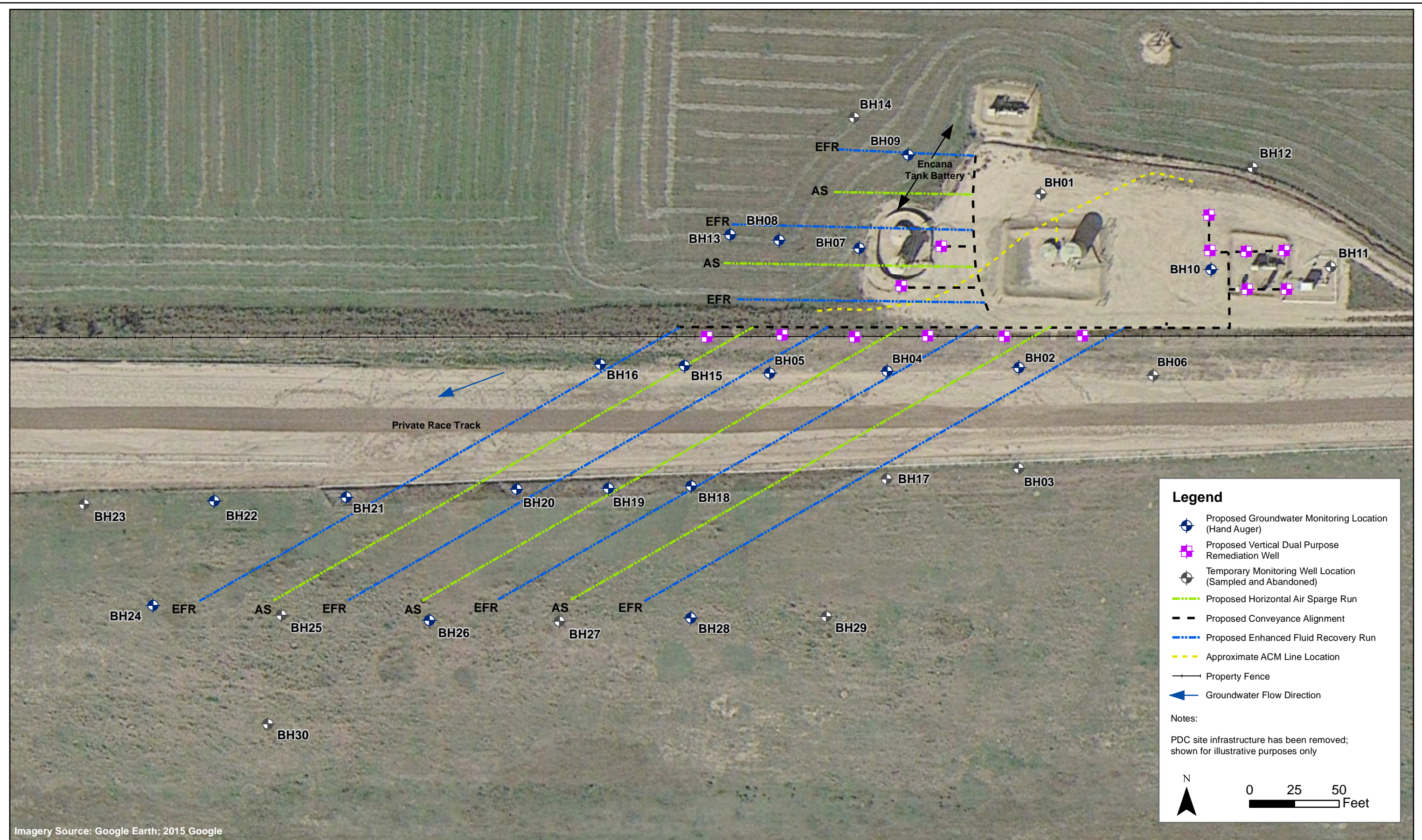


Figure 1

Site Location Map
 Ursula #2 Tank Battery
 NENE S28 T2N R66W
 Weld County, Colorado







DATE:	February 2016
DESIGNED BY:	C. Wasko
DRAWN BY:	D. Arnold



**PDC Energy, Inc. - DJ Basin
Ursula #2**
NENE Section 28, Township 2 North, Range 66 West
Weld County, Colorado

Proposed Remediation System
Layout Map

Figure
3

TABLE 1
URSULA #2 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
Initial Assessment Activities								
BH01 @ 4-5	4/6/2015	4-5	<0.0020	<0.0050	<0.0050	<0.010	<0.010	<50
BH02 @ 5-6	4/6/2015	5-6	<0.0020	<0.0050	<0.0050	<0.010	<0.010	<50
BH04 @ 5-6	4/6/2015	5-6	<0.0020	<0.0050	<0.0050	<0.010	<0.010	<50
BH06 @ 6	4/6/2015	6	<0.0020	<0.0050	<0.0050	<0.010	<0.010	<50
BH07 @ 5-6	4/6/2015	5-6	0.014	<0.0050	2.3	69	0.34	6,100
BH08 @ 5-6	4/6/2015	5-6	<0.0020	<0.0050	<0.0050	<0.010	<0.010	<50
BH09 @ 5-6	4/6/2015	5-6	<0.0020	<0.0050	<0.0050	<0.010	<0.010	<50
BH10 @ 5-6	4/6/2015	5-6	0.0053	<0.0050	0.020	<0.010	0.076	680
BH11 @ 3-4	4/10/2015	3-4	<0.0020	<0.0050	<0.0050	<0.010	<0.010	0.55
BH12 @ 6-7	4/10/2015	6-7	<0.0020	<0.0050	<0.0050	<0.010	<0.010	<50
SB01 @ 2	4/10/2015	2	0.027	<0.0050	0.38	0.056	0.39	666
SB01 @ 5	4/10/2015	5	0.15	<0.0050	7.2	15	4.8	3,030
Excavation and Soil Treatment Activities								
SS01 @ 5'	10/20/2015	5	0.53	1.2	12	17	4.1	3,800
SS02 @ 5'	10/20/2015	5	0.46	1.1	9.0	35	4.6	3,600
SS03 @ 5'	10/28/2015	5	<0.0020	<0.0050	<0.0050	<0.010	<0.010	<50
SS04 @ 5'	10/28/2015	5	<0.0020	<0.0050	<0.0050	<0.010	<0.010	39
SS05 @ 5'	11/3/2015	5	0.0046	<0.0050	0.27	<0.010	2.8	2,100
SS06 @ 5'	11/9/2015	5	<0.0020	<0.0050	0.021	0.020	0.93	780
SS07 @ 6'	11/13/2015	6	<0.0020	<0.0050	<0.0050	<0.010	<0.010	0.92
SS08 @ 6'	11/16/2015	6	<0.0020	<0.0050	<0.0050	<0.010	<0.010	1.7
SS09 @ 6	11/17/2015	6	<0.0020	<0.0050	<0.0050	<0.010	<0.010	<50
SS10 @ 6'	11/17/2015	6	<0.0020	<0.0050	<0.0050	<0.010	<0.010	<50
SS11 @ 5'	11/19/2015	5	<0.0020	<0.0050	<0.0050	<0.010	<0.010	<50
SS12 @ 5'	11/19/2015	5	<0.0020	<0.0050	<0.0050	<0.010	<0.010	<50
SS13 @ 5'	12/7/2015	5	<0.0020	<0.0050	<0.0050	<0.010	<0.010	<50
SS14 @ 5'	12/7/2015	5	<0.0020	<0.0050	<0.0050	<0.010	<0.010	108.7
SS15 @ 5'	12/7/2015	5	<0.0020	<0.0050	0.016	<0.010	0.091	1,320
SS16 @ 5'	12/7/2015	5	<0.0020	<0.0050	<0.0050	<0.010	<0.010	<50
SS17 @ 5'	12/7/2015	5	0.092	<0.0050	2.3	1.5	3.8	1,940
SS18 @ 5'	12/8/2015	5	0.034	<0.0050	0.11	<0.010	0.13	1,290
SS19 @ 5'	12/8/2015	5	<0.0020	<0.0050	<0.0050	<0.010	<0.010	<50
SS20 @ 5'	12/8/2015	5	<0.0020	<0.0050	<0.0050	<0.010	<0.010	<50
SS21 @ 5'	12/9/2015	5	<0.0020	<0.0050	<0.0050	<0.010	<0.010	<50
SS22 @ 5'	12/10/2015	5	4.1	1.3	25	160	0.86	4,930
SS23 @ 5'	12/10/2015	5	0.084	<0.0050	2.0	0.93	0.94	1,130
SS24 @ 5'	12/11/2015	5	0.041	<0.0050	0.041	0.18	0.072	2.6
SS25 @ 5'	12/11/2015	5	0.47	1.3	3.9	77	2.2	3,010
SS26 @ 5'	12/11/2015	5	<0.0020	<0.0050	<0.0050	<0.010	<0.010	<50
SS27 @ 5'	12/11/2015	5	<0.0020	<0.0050	<0.0050	<0.010	<0.010	<50
SS28 @ 5'	12/14/2015	5	<0.0020	<0.0050	<0.0050	<0.010	<0.010	<50

TABLE 1
URSULA #2 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
SS29 @ 5'	12/14/2015	5	<0.0020	<0.0050	<0.0050	<0.010	<0.010	<50
SS30 @ 5'	12/14/2015	5	2.4	1.3	9.2	55	4.0	4,150
SS31 @ 5'	12/14/2015	5	<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
URSULA #2 TANK BATTERY
CONFIRMATION SOIL ANALYTICAL RESULTS SUMMARY TABLE

Sample ID	Date Sampled	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
CS01	10/23/2015	<0.0020	<0.0050	<0.0050	0.21	0.029	966
CS01-R	11/3/2015	<0.0020	<0.0050	<0.0050	0.069	0.031	140
CS02	10/23/2015	<0.0020	<0.0050	<0.0050	0.055	0.020	561
CS02-R	11/3/2015	0.0029	<0.0050	<0.0050	0.23	0.030	170
CS03	10/28/2015	<0.0020	<0.0050	<0.0050	0.25	0.041	662
CS03-R	11/3/2015	<0.0020	<0.0050	<0.0050	0.024	0.015	140
CS04	10/28/2015	<0.0020	<0.0050	<0.0050	0.14	0.028	643
CS04-R	11/3/2015	<0.0020	<0.0050	0.0050	0.18	0.049	670
CS04-R2	11/4/2015	<0.0020	<0.0050	0.028	0.66	0.12	250
CS05	10/28/2015	<0.0020	<0.0050	<0.0050	3.1	0.051	835
CS05-R	11/4/2015	<0.0020	<0.0050	<0.0050	0.12	0.037	240
CS06	10/28/2015	0.0050	<0.0050	0.22	0.97	0.31	940
CS06-R	11/4/2015	<0.0020	<0.0050	0.012	0.30	0.060	250
CS07-R ⁽³⁾	11/4/2015	<0.0020	<0.0050	<0.0050	0.14	0.034	230
CS08	11/5/2015	<0.0020	<0.0050	0.090	1.0	0.14	200
CS09	11/5/2015	0.21	0.36	1.1	0.31	2.7	540
CS09-R	11/9/2015	<0.0020	<0.0050	0.0086	0.014	0.018	1,090
CS09-R2	12/14/2015	<0.0020	<0.0050	<0.0050	<0.010	<0.010	49
CS10	11/13/2015	<0.0020	<0.0050	0.0078	0.37	0.083	120
CS11	11/13/2015	<0.0020	<0.0050	0.010	0.54	0.097	195
CS12	11/13/2015	<0.0020	<0.0050	0.0062	0.20	0.043	91
CS13	11/13/2015	<0.0020	<0.0050	0.016	0.37	0.079	86
CS14	11/16/2015	<0.0020	<0.0050	<0.0050	<0.010	<0.010	19
CS15	11/16/2015	<0.0020	<0.0050	<0.0050	<0.010	<0.010	36
CS16	11/18/2015	<0.0020	<0.0050	<0.0050	<0.010	<0.010	11
CS17	11/18/2015	<0.0020	<0.0050	<0.0050	<0.010	<0.010	6.4
CS18	11/22/2015	0.0030	<0.0050	0.035	0.14	0.11	394
CS19	11/22/2015	<0.0020	<0.0050	<0.0050	0.011	0.018	52
CS20	11/22/2015	<0.0020	<0.0050	0.0053	0.019	0.021	88
CS21	11/25/2015	<0.0020	<0.0050	<0.0050	0.015	<0.010	100
CS22	11/25/2015	<0.0020	<0.0050	<0.0050	<0.010	<0.010	134
CS23	11/25/2015	<0.0020	<0.0050	<0.0050	0.019	<0.010	50
CS24	11/25/2015	<0.0020	<0.0050	0.0057	0.019	<0.010	50
CS25	12/2/2015	<0.0020	<0.0050	0.073	0.096	0.25	319
CS26	12/2/2015	<0.0020	<0.0050	0.0051	0.050	0.068	760
CS26-R	12/14/2015	<0.0020	<0.0050	<0.0050	<0.010	<0.010	107
CS27	12/2/2015	<0.0020	<0.0050	0.014	0.026	0.050	290

TABLE 2
URSULA #2 TANK BATTERY
CONFIRMATION SOIL ANALYTICAL RESULTS SUMMARY TABLE

Sample ID	Date Sampled	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
CS28	12/2/2015	<0.0020	<0.0050	0.084	0.062	0.27	85
CS29	12/14/2015	<0.0020	<0.0050	<0.0050	<0.010	<0.010	77

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.
- CS07-R sample ID was used in place of CS07; soil sample CS07 was not submitted for analysis.

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 3
URSULA #2 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⁾ (feet)
COGCC Table 910-1 Groundwater Standard (µg/L) ⁽¹⁾		5	560	700	1,400	
Initial Assessment Activities						
GW01	3/23/2015	800	<1.0	750	420	~ 6
BH01	4/6/2015	<1.0	<1.0	<1.0	<1.0	6.53
BH02	4/6/2015	24	<1.0	1,600	13,000	7.02
BH03	4/6/2015	<1.0	<1.0	<1.0	5.0	7.78
BH04	4/6/2015	1,100	6.4	920	8,900	6.99
BH05	4/6/2015	1,100	7.0	1,200	9,400	9.23
BH06	4/6/2015	<1.0	<1.0	<1.0	<1.0	7.75
BH07	4/6/2015	450	<1.0	12	540	6.69
BH08	4/6/2015	15	<1.0	4.0	3.5	5.20
BH09	4/6/2015	28	200	130	2,700	6.00
BH10	4/6/2015	2.5	1.6	2.5	5.0	8.81
BH11	4/10/2015	<1.0	<1.0	<1.0	<1.0	8.03
BH12	4/10/2015	<1.0	<1.0	<1.0	<1.0	9.16
BH13	4/10/2015	<1.0	<1.0	<1.0	<1.0	4.71
BH14	4/10/2015	<1.0	<1.0	<1.0	<1.0	5.53
Excavation and Soil Treatment Activities						
GW01	10/29/2015	1.1	<1.0	<1.0	27	~ 7
GW02	10/29/2015	3.2	<1.0	16	180	~ 7
GW03	11/13/2015	21	<1.0	260	3,600	~ 7
GW03-R	11/18/2015	<1.0	<1.0	11	61	~ 7
GW04	11/18/2015	<1.0	<1.0	<1.0	2.6	~ 7
GW05	11/22/2015	3.3	<1.0	55	250	~ 7
GW06	12/1/2015	<1.0	<1.0	42	8.2	~ 7
GW07	12/9/2015	<1.0	<1.0	1.3	3.2	~ 7
GW08	12/16/2015	<1.0	<1.0	10	130	~ 7
Site Investigation Activities						
BH15	2/15/2016	520	<1.0	1,200	620	6.81
BH16	2/15/2016	<1.0	<1.0	<1.0	<1.0	6.76
BH17	2/15/2016	<1.0	<1.0	<1.0	<1.0	7.74
BH18	2/15/2016	100	44	140	4,200	7.29
BH19	2/15/2016	320	210	250	3,000	6.97

TABLE 3
URSULA #2 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⁾ (feet)
COGCC Table 910-1 Groundwater Standard (µg/L) ⁽¹⁾		5	560	700	1,400	
BH20	2/15/2016	1,100	45	340	2,600	6.84
BH21	2/15/2016	34	<1.0	1.7	7.1	7.19
BH22	2/18/2016	<1.0	<1.0	<1.0	<1.0	3.59
BH23	2/18/2016	<1.0	<1.0	<1.0	<1.0	3.79
BH24	2/18/2016	<1.0	<1.0	<1.0	<1.0	3.64
BH25	2/18/2016	<1.0	<1.0	<1.0	<1.0	3.64
BH26	2/18/2016	<1.0	<1.0	<1.0	<1.0	3.40
BH27	2/18/2016	<1.0	<1.0	<1.0	<1.0	3.55
BH28	2/18/2016	<1.0	<1.0	<1.0	<1.0	3.42
BH29	2/18/2016	<1.0	<1.0	<1.0	<1.0	3.48
BH30	2/18/2016	<1.0	<1.0	<1.0	<1.0	2.55

Notes:

1. Groundwater standards referenced from 2 CCR 404-1, Table 910-1, effective March 16, 2016.
2. Depth to water measured from top of well casing or ground surface for monitoring well samples and excavation samples, respectively.

Depth to water in samples BH22 - BH30 have been corrected to ground surface.

COGCC = Colorado Oil and Gas Conservation Commission

µg/L= Micrograms per liter

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

March 24, 2015

Brandon Bruns
PDC Energy
1775 Sherman St. STE. 3000
Denver, CO 80203
RE: Ursula 2

Enclosed are the results of analyses for samples received by Summit Scientific on 03/23/15 18:10. 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: Ursula 2
Project Number: [none]
Project Manager: Brandon Bruns

Reported:
03/24/15 07:50

GW01
1503195-01 (Water)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: 03/23/15 11:00

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Benzene	800	100	ug/l	100	1503265	03/23/15	03/23/15	EPA 8260B	
Toluene	ND	1.0	"	1	"	"	03/23/15	"	
Ethylbenzene	750	100	"	100	"	"	03/23/15	"	
Xylenes (total)	420	1.0	"	1	"	"	03/23/15	"	

Date Sampled: 03/23/15 11:00

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 1,2-Dichloroethane-d4		92.7 %	37-154		"	"	"	"	
Surrogate: Toluene-d8		114 %	45-149		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		105 %	45-146		"	"	"	"	

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: Ursula 2
Project Number: [none]
Project Manager: Brandon Bruns

Reported:
03/24/15 07:50

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 1503265 - EPA 5030 Water MS

Blank (1503265-BLK1)

Prepared & Analyzed: 03/23/15

Benzene	ND	1.0	ug/l							
Toluene	ND	1.0	"							
Ethylbenzene	ND	1.0	"							
Xylenes (total)	ND	1.0	"							
Surrogate: 1,2-Dichloroethane-d4	11.0		"	13.2		83.0	37-154			
Surrogate: Toluene-d8	12.7		"	13.3		95.3	45-149			
Surrogate: 4-Bromofluorobenzene	15.2		"	13.3		114	45-146			

LCS (1503265-BS1)

Prepared & Analyzed: 03/23/15

Benzene	31.3	1.0	ug/l	33.3		93.9	51-132			
Toluene	29.5	1.0	"	33.3		88.6	51-138			
Ethylbenzene	31.4	1.0	"	33.1		94.8	58-146			
m,p-Xylene	64.6	2.0	"	66.5		97.2	57-144			
o-Xylene	30.6	1.0	"	32.8		93.2	53-146			
Surrogate: 1,2-Dichloroethane-d4	11.5		"	13.2		87.0	37-154			
Surrogate: Toluene-d8	13.0		"	13.3		97.7	45-149			
Surrogate: 4-Bromofluorobenzene	13.8		"	13.3		103	45-146			

Matrix Spike (1503265-MS1)

Source: 1503186-01

Prepared & Analyzed: 03/23/15

Benzene	31.4	1.0	ug/l	33.3	ND	94.3	34-141			
Toluene	29.6	1.0	"	33.3	ND	88.7	27-151			
Ethylbenzene	32.4	1.0	"	33.1	ND	97.8	29-160			
m,p-Xylene	65.9	2.0	"	66.5	ND	99.1	20-166			
o-Xylene	31.6	1.0	"	32.8	ND	96.3	33-159			
Surrogate: 1,2-Dichloroethane-d4	11.7		"	13.2		88.3	37-154			
Surrogate: Toluene-d8	12.6		"	13.3		94.4	45-149			
Surrogate: 4-Bromofluorobenzene	14.0		"	13.3		105	45-146			

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: Ursula 2
Project Number: [none]
Project Manager: Brandon Brunns

Reported:
03/24/15 07:50

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 1503265 - EPA 5030 Water MS

Matrix Spike Dup (1503265-MSD1)	Source: 1503186-01			Prepared & Analyzed: 03/23/15						
Benzene	32.2	1.0	ug/l	33.3	ND	96.7	34-141	2.51	32	
Toluene	30.5	1.0	"	33.3	ND	91.4	27-151	3.03	25	
Ethylbenzene	32.5	1.0	"	33.1	ND	98.3	29-160	0.524	50	
m,p-Xylene	66.7	2.0	"	66.5	ND	100	20-166	1.19	36	
o-Xylene	31.7	1.0	"	32.8	ND	96.6	33-159	0.348	26	
Surrogate: 1,2-Dichloroethane-d4	12.4		"	13.2		94.3	37-154			
Surrogate: Toluene-d8	13.0		"	13.3		97.7	45-149			
Surrogate: 4-Bromofluorobenzene	14.0		"	13.3		105	45-146			

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: Ursula 2
Project Number: [none]
Project Manager: Brandon Bruns

Reported:
03/24/15 07:50

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

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

Summit Scientific

741 Corporate Circle – Suite I ♦ Golden, Colorado 80401

303.277.9310 - laboratory ♦ 303.277.9531 - fax

April 09, 2015

Brandon Bruns
PDC Energy
1775 Sherman St. STE. 3000
Denver, CO 80203
RE: Ursula 2

Enclosed are the results of analyses for samples received by Summit Scientific on 04/06/15 16:20. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

A handwritten signature in black ink, appearing to be 'Ben Shrewsbury', with a long, sweeping horizontal line extending to the right.

Ben Shrewsbury For Paul Shrewsbury
President



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

Project: Ursula 2
Project Number: [none]
Project Manager: Brandon Bruns

Reported:
04/09/15 14:16

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
BH01@4-5'	1504044-01	Soil	04/06/15 09:20	04/06/15 16:20
BH02@5-6'	1504044-02	Soil	04/06/15 10:10	04/06/15 16:20
BH04@5-6'	1504044-03	Soil	04/06/15 11:40	04/06/15 16:20
BH06@6'	1504044-04	Soil	04/06/15 12:50	04/06/15 16:20
BH07@5-6'	1504044-05	Soil	04/06/15 13:25	04/06/15 16:20
BH08@5-6'	1504044-06	Soil	04/06/15 13:55	04/06/15 16:20
BH09@5-6'	1504044-07	Soil	04/06/15 14:25	04/06/15 16:20
BH10@5-6'	1504044-08	Soil	04/06/15 14:50	04/06/15 16:20
BH01	1504044-09	Water	04/06/15 10:20	04/06/15 16:20
BH02	1504044-10	Water	04/06/15 11:00	04/06/15 16:20
BH03	1504044-11	Water	04/06/15 11:30	04/06/15 16:20
BH04	1504044-12	Water	04/06/15 12:20	04/06/15 16:20
BH05	1504044-13	Water	04/06/15 12:45	04/06/15 16:20
BH06	1504044-14	Water	04/06/15 13:10	04/06/15 16:20
BH07	1504044-15	Water	04/06/15 13:45	04/06/15 16:20
BH08	1504044-16	Water	04/06/15 14:10	04/06/15 16:20
BH09	1504044-17	Water	04/06/15 14:40	04/06/15 16:20
BH10	1504044-18	Water	04/06/15 15:15	04/06/15 16:20

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: Ursula 2

Project Number: [none]
Project Manager: Brandon Bruns

Reported:
04/09/15 14:16

Summit Scientific 1504044.1

S₂

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

Page 1 of 2

Client: PDC/Tasman

Project Manager: Brandon Bruns

Address:

E-Mail:

City/State/Zip:

Phone:

Fax:

Project Name: Ursula #2

Sampler Name: Eric Sigel

Project Number:

ID	Sample Description	Date Sampled	Time Sampled	# of containers	Preservative				Matrix			Analysis Requested								Special Instructions
					HCl	HNO ₃	None	Other (Specify)	Groundwater	Soil	Air-Canister #	Other (Specify)	8260 GBXN	8015 DRO						
1	BH01 e 5-6'	4/6/15	920	1			X			X			X	X						
2	BH02 e 5-6'		1010																	
3	BH04 e 5-6'		1140																	
4	BH06 e 6'		1250																	
5	BH07 e 5-6'		1325																	
6	BH08 e 5-6'		1355																	
7	BH09 e 5-6'		1425																	
8	BH10 e 5-6'		1450																	
9																				
10																				

Relinquished by: <i>E. A. Sigel</i>	Date/Time: 4/6/15	Received by: <i>Autie Cole</i>	Date/Time: 4/6/15	Turn Around Time (Check)	Notes:
Relinquished by:	Date/Time:	Received by:	Date/Time:	Same Day <input type="checkbox"/>	72 hours <input checked="" type="checkbox"/> Standard <input type="checkbox"/>
Relinquished by:	Date/Time:	Received by:	Date/Time:	24 hours <input type="checkbox"/>	
Relinquished by:	Date/Time:	Received by:	Date/Time:	48 hours <input type="checkbox"/>	
Sample Integrity:				Temperature Upon Receipt: 7.6	on ice
Intact: <input checked="" type="radio"/> Yes <input type="radio"/> No					

www.s2scientific.com

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: Ursula 2
Project Number: [none]
Project Manager: Brandon Bruns

Reported:
04/09/15 14:16

Summit Scientific

1504044.2

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

Page 2 of 2

Client: PDC/Tasman

Project Manager: Brandon Bruns

Address:

E-Mail:

City/State/Zip:

Phone:

Fax:

Project Name: Ursula #2

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)				
1	BH01	4/6/15	1020	3	X				X			X				
2	BH02		1100		X											
3	BH03		1130		X											
4	BH04		1220		X											
5	BH05		1245		X											
6	BH06		1310		X											
7	BH07		1345		X											
8	BH08		1410		X											
9	BH09		1440		X											
10	BH10		1515		X											

Relinquished by: Eric A. Siegel	Date/Time: 4/6/15	Received by: [Signature]	Date/Time: 4/6/15	Turn Around Time (Check)	Notes:
Relinquished by:	Date/Time:	Received by:	Date/Time:	Same Day <input type="checkbox"/>	72 hours <input checked="" type="checkbox"/> Standard <input type="checkbox"/> 48 hours <input type="checkbox"/> Sample Integrity: Temperature Upon Receipt: 7.6 Intact: <input checked="" type="radio"/> Yes <input type="radio"/> No
Relinquished by:	Date/Time:	Received by:	Date/Time:		
Relinquished by:	Date/Time:	Received by:	Date/Time:		

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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: Ursula 2
Project Number: [none]
Project Manager: Brandon Bruns

Reported:
04/09/15 14:16

BH01@4-5'
1504044-01 (Soil)

Summit Scientific

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **04/06/15 09:20**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
C10-C28 (DRO)	ND	50	mg/kg	1	1504063	04/07/15	04/08/15	8015M	

Date Sampled: **04/06/15 09:20**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: o-Terphenyl		110 %	30-150		"	"	"	"	

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **04/06/15 09:20**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Naphthalene	ND	0.010	mg/kg	1	1504062	04/07/15	04/09/15	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: **04/06/15 09:20**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 1,2-Dichloroethane-d4		101 %	23-173		"	"	"	"	
Surrogate: Toluene-d8		99.3 %	20-170		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		99.2 %	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: Ursula 2
Project Number: [none]
Project Manager: Brandon Brunns

Reported:
04/09/15 14:16

BH02@5-6'
1504044-02 (Soil)

Summit Scientific

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **04/06/15 10:10**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
C10-C28 (DRO)	ND	50	mg/kg	1	1504063	04/07/15	04/09/15	8015M	

Date Sampled: **04/06/15 10:10**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: o-Terphenyl		110 %	30-150		"	"	"	"	

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **04/06/15 10:10**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Naphthalene	ND	0.010	mg/kg	1	1504062	04/07/15	04/09/15	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: **04/06/15 10:10**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 1,2-Dichloroethane-d4		105 %	23-173		"	"	"	"	
Surrogate: Toluene-d8		96.4 %	20-170		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		98.0 %	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: Ursula 2
Project Number: [none]
Project Manager: Brandon Brunns

Reported:
04/09/15 14:16

BH04@5-6'
1504044-03 (Soil)

Summit Scientific

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **04/06/15 11:40**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
C10-C28 (DRO)	ND	50	mg/kg	1	1504063	04/07/15	04/09/15	8015M	

Date Sampled: **04/06/15 11:40**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: o-Terphenyl		109 %	30-150		"	"	"	"	

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **04/06/15 11:40**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Naphthalene	ND	0.010	mg/kg	1	1504062	04/07/15	04/09/15	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: **04/06/15 11:40**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 1,2-Dichloroethane-d4		107 %	23-173		"	"	"	"	
Surrogate: Toluene-d8		101 %	20-170		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		104 %	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: Ursula 2
Project Number: [none]
Project Manager: Brandon Brunns

Reported:
04/09/15 14:16

BH06@6'
1504044-04 (Soil)

Summit Scientific

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **04/06/15 12:50**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
C10-C28 (DRO)	ND	50	mg/kg	1	1504063	04/07/15	04/09/15	8015M	

Date Sampled: **04/06/15 12:50**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: o-Terphenyl		110 %	30-150		"	"	"	"	

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **04/06/15 12:50**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Naphthalene	ND	0.010	mg/kg	1	1504062	04/07/15	04/09/15	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: **04/06/15 12:50**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 1,2-Dichloroethane-d4		104 %	23-173		"	"	"	"	
Surrogate: Toluene-d8		98.8 %	20-170		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		102 %	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: Ursula 2
Project Number: [none]
Project Manager: Brandon Bruns

Reported:
04/09/15 14:16

BH07@5-6'
1504044-05 (Soil)

Summit Scientific

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **04/06/15 13:25**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
C10-C28 (DRO)	2400	50	mg/kg	1	1504063	04/07/15	04/09/15	8015M	

Date Sampled: **04/06/15 13:25**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
<i>Surrogate: o-Terphenyl</i>		110 %	30-150		"	"	"	"	

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **04/06/15 13:25**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Naphthalene	0.34	0.010	mg/kg	1	1504062	04/07/15	04/09/15	EPA 8260B	
Benzene	0.014	0.0020	"	"	"	"	"	"	
Toluene	ND	0.0050	"	"	"	"	"	"	
Ethylbenzene	2.3	0.50	"	100	"	"	04/09/15	"	
Xylenes (total)	69	1.0	"	"	"	"	"	"	
Gasoline Range Hydrocarbons	3700	50	"	"	"	"	"	"	

Date Sampled: **04/06/15 13:25**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
<i>Surrogate: 1,2-Dichloroethane-d4</i>		114 %	23-173		"	"	04/09/15	"	
<i>Surrogate: Toluene-d8</i>		701 %	20-170		"	"	"	"	S-02
<i>Surrogate: 4-Bromofluorobenzene</i>		161 %	21-167		"	"	"	"	S-02

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: Ursula 2
Project Number: [none]
Project Manager: Brandon Brunns

Reported:
04/09/15 14:16

BH08@5-6'
1504044-06 (Soil)

Summit Scientific

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **04/06/15 13:55**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
C10-C28 (DRO)	ND	50	mg/kg	1	1504063	04/07/15	04/09/15	8015M	

Date Sampled: **04/06/15 13:55**

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

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **04/06/15 13:55**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Naphthalene	ND	0.010	mg/kg	1	1504062	04/07/15	04/09/15	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: **04/06/15 13:55**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 1,2-Dichloroethane-d4		107 %	23-173		"	"	"	"	
Surrogate: Toluene-d8		99.5 %	20-170		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		102 %	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: Ursula 2
Project Number: [none]
Project Manager: Brandon Brunns

Reported:
04/09/15 14:16

BH09@5-6'
1504044-07 (Soil)

Summit Scientific

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **04/06/15 14:25**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
C10-C28 (DRO)	ND	50	mg/kg	1	1504063	04/07/15	04/09/15	8015M	

Date Sampled: **04/06/15 14:25**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: o-Terphenyl		109 %	30-150		"	"	"	"	

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **04/06/15 14:25**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Naphthalene	ND	0.010	mg/kg	1	1504062	04/07/15	04/09/15	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: **04/06/15 14:25**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 1,2-Dichloroethane-d4		105 %	23-173		"	"	"	"	
Surrogate: Toluene-d8		97.6 %	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: Ursula 2
Project Number: [none]
Project Manager: Brandon Bruns

Reported:
04/09/15 14:16

BH10@5-6'
1504044-08 (Soil)

Summit Scientific

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **04/06/15 14:50**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
C10-C28 (DRO)	240	50	mg/kg	1	1504063	04/07/15	04/09/15	8015M	

Date Sampled: **04/06/15 14:50**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
<i>Surrogate: o-Terphenyl</i>		116 %	30-150		"	"	"	"	

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **04/06/15 14:50**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Naphthalene	0.076	0.010	mg/kg	1	1504062	04/07/15	04/09/15	EPA 8260B	
Benzene	0.0053	0.0020	"	"	"	"	"	"	
Toluene	ND	0.0050	"	"	"	"	"	"	
Ethylbenzene	0.020	0.0050	"	"	"	"	"	"	
Xylenes (total)	ND	0.010	"	"	"	"	"	"	
Gasoline Range Hydrocarbons	440	5.0	"	10	"	"	04/09/15	"	

Date Sampled: **04/06/15 14:50**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
<i>Surrogate: 1,2-Dichloroethane-d4</i>		105 %	23-173		"	"	04/09/15	"	
<i>Surrogate: Toluene-d8</i>		121 %	20-170		"	"	"	"	
<i>Surrogate: 4-Bromofluorobenzene</i>		167 %	21-167		"	"	"	"	

Summit Scientific

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

Project: Ursula 2
Project Number: [none]
Project Manager: Brandon Brunns

Reported:
04/09/15 14:16

BH01
1504044-09 (Water)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **04/06/15 10:20**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Benzene	ND	1.0	ug/l	1	1504061	04/08/15	04/08/15	EPA 8260B	
Toluene	ND	1.0	"	"	"	"	"	"	
Ethylbenzene	ND	1.0	"	"	"	"	"	"	
Xylenes (total)	ND	1.0	"	"	"	"	"	"	

Date Sampled: **04/06/15 10:20**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 1,2-Dichloroethane-d4		97.8 %	37-154		"	"	"	"	
Surrogate: Toluene-d8		96.5 %	45-149		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		111 %	45-146		"	"	"	"	

Summit Scientific

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

Project: Ursula 2
Project Number: [none]
Project Manager: Brandon Brunns

Reported:
04/09/15 14:16

BH02
1504044-10 (Water)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **04/06/15 11:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Benzene	24	1.0	ug/l	1	1504061	04/08/15	04/08/15	EPA 8260B	
Toluene	ND	1.0	"	"	"	"	"	"	
Ethylbenzene	1600	100	"	100	"	"	"	"	
Xylenes (total)	13000	100	"	"	"	"	"	"	

Date Sampled: **04/06/15 11:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
<i>Surrogate: 1,2-Dichloroethane-d4</i>		95.2 %	37-154		"	"	"	"	
<i>Surrogate: Toluene-d8</i>		98.8 %	45-149		"	"	"	"	
<i>Surrogate: 4-Bromofluorobenzene</i>		111 %	45-146		"	"	"	"	

Summit Scientific

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

Project: Ursula 2
Project Number: [none]
Project Manager: Brandon Brunns

Reported:
04/09/15 14:16

BH03
1504044-11 (Water)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **04/06/15 11:30**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Benzene	ND	1.0		ug/l	1	1504061	04/08/15	04/08/15	EPA 8260B	
Toluene	ND	1.0		"	"	"	"	"	"	
Ethylbenzene	ND	1.0		"	"	"	"	"	"	
Xylenes (total)	5.0	1.0		"	"	"	"	"	"	

Date Sampled: **04/06/15 11:30**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Surrogate: 1,2-Dichloroethane-d4		102 %		37-154		"	"	"	"	
Surrogate: Toluene-d8		98.3 %		45-149		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		112 %		45-146		"	"	"	"	

Summit Scientific

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

Project: Ursula 2
Project Number: [none]
Project Manager: Brandon Bruns

Reported:
04/09/15 14:16

BH04
1504044-12 (Water)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **04/06/15 12:20**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Benzene	1100	100	ug/l	100	1504061	04/08/15	04/08/15	EPA 8260B	
Toluene	6.4	1.0	"	1	"	"	"	"	
Ethylbenzene	920	100	"	100	"	"	"	"	
Xylenes (total)	8900	100	"	"	"	"	"	"	

Date Sampled: **04/06/15 12:20**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
<i>Surrogate: 1,2-Dichloroethane-d4</i>		99.2 %	37-154		"	"	"	"	
<i>Surrogate: Toluene-d8</i>		98.6 %	45-149		"	"	"	"	
<i>Surrogate: 4-Bromofluorobenzene</i>		107 %	45-146		"	"	"	"	

Summit Scientific

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

Project: Ursula 2
Project Number: [none]
Project Manager: Brandon Bruns

Reported:
04/09/15 14:16

BH05
1504044-13 (Water)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **04/06/15 12:45**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Benzene	1100	100	ug/l	100	1504061	04/08/15	04/08/15	EPA 8260B	
Toluene	7.0	1.0	"	1	"	"	"	"	
Ethylbenzene	1200	100	"	100	"	"	"	"	
Xylenes (total)	9400	100	"	"	"	"	"	"	

Date Sampled: **04/06/15 12:45**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
<i>Surrogate: 1,2-Dichloroethane-d4</i>		<i>94.4 %</i>	<i>37-154</i>		<i>"</i>	<i>"</i>	<i>"</i>	<i>"</i>	
<i>Surrogate: Toluene-d8</i>		<i>97.7 %</i>	<i>45-149</i>		<i>"</i>	<i>"</i>	<i>"</i>	<i>"</i>	
<i>Surrogate: 4-Bromofluorobenzene</i>		<i>111 %</i>	<i>45-146</i>		<i>"</i>	<i>"</i>	<i>"</i>	<i>"</i>	

Summit Scientific

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

Project: Ursula 2
Project Number: [none]
Project Manager: Brandon Brunns

Reported:
04/09/15 14:16

BH06
1504044-14 (Water)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **04/06/15 13:10**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Benzene	ND	1.0	ug/l	1	1504061	04/08/15	04/08/15	EPA 8260B	
Toluene	ND	1.0	"	"	"	"	"	"	
Ethylbenzene	ND	1.0	"	"	"	"	"	"	
Xylenes (total)	ND	1.0	"	"	"	"	"	"	

Date Sampled: **04/06/15 13:10**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Surrogate: 1,2-Dichloroethane-d4		99.7 %	37-154		"	"	"	"	
Surrogate: Toluene-d8		96.9 %	45-149		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		110 %	45-146		"	"	"	"	

Summit Scientific

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

Project: Ursula 2
Project Number: [none]
Project Manager: Brandon Bruns

Reported:
04/09/15 14:16

BH07
1504044-15 (Water)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **04/06/15 13:45**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Benzene	450	10	ug/l	10	1504061	04/08/15	04/08/15	EPA 8260B	
Toluene	ND	1.0	"	1	"	"	"	"	
Ethylbenzene	12	1.0	"	"	"	"	"	"	
Xylenes (total)	540	1.0	"	"	"	"	"	"	

Date Sampled: **04/06/15 13:45**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
<i>Surrogate: 1,2-Dichloroethane-d4</i>		<i>101 %</i>	<i>37-154</i>		<i>"</i>	<i>"</i>	<i>"</i>	<i>"</i>	
<i>Surrogate: Toluene-d8</i>		<i>110 %</i>	<i>45-149</i>		<i>"</i>	<i>"</i>	<i>"</i>	<i>"</i>	
<i>Surrogate: 4-Bromofluorobenzene</i>		<i>113 %</i>	<i>45-146</i>		<i>"</i>	<i>"</i>	<i>"</i>	<i>"</i>	

Summit Scientific

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

Project: Ursula 2
Project Number: [none]
Project Manager: Brandon Brunns

Reported:
04/09/15 14:16

BH08
1504044-16 (Water)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **04/06/15 14:10**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Benzene	15	1.0	ug/l	1	1504061	04/08/15	04/08/15	EPA 8260B	
Toluene	ND	1.0	"	"	"	"	"	"	
Ethylbenzene	4.0	1.0	"	"	"	"	"	"	
Xylenes (total)	3.5	1.0	"	"	"	"	"	"	

Date Sampled: **04/06/15 14:10**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 1,2-Dichloroethane-d4		96.1 %	37-154		"	"	"	"	
Surrogate: Toluene-d8		98.9 %	45-149		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		107 %	45-146		"	"	"	"	

Summit Scientific

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

Project: Ursula 2
Project Number: [none]
Project Manager: Brandon Bruns

Reported:
04/09/15 14:16

BH09
1504044-17 (Water)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **04/06/15 14:40**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Benzene	28	1.0	ug/l	1	1504061	04/08/15	04/08/15	EPA 8260B	
Toluene	200	1.0	"	"	"	"	"	"	
Ethylbenzene	130	1.0	"	"	"	"	"	"	
Xylenes (total)	2700	10	"	10	"	"	"	"	

Date Sampled: **04/06/15 14:40**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
<i>Surrogate: 1,2-Dichloroethane-d4</i>		94.8 %	37-154		"	"	"	"	
<i>Surrogate: Toluene-d8</i>		96.3 %	45-149		"	"	"	"	
<i>Surrogate: 4-Bromofluorobenzene</i>		104 %	45-146		"	"	"	"	

Summit Scientific

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

Project: Ursula 2
Project Number: [none]
Project Manager: Brandon Bruns

Reported:
04/09/15 14:16

BH10
1504044-18 (Water)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **04/06/15 15:15**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Benzene	2.5	1.0	ug/l	1	1504061	04/08/15	04/08/15	EPA 8260B	
Toluene	1.6	1.0	"	"	"	"	"	"	
Ethylbenzene	2.5	1.0	"	"	"	"	"	"	
Xylenes (total)	5.0	1.0	"	"	"	"	"	"	

Date Sampled: **04/06/15 15:15**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
<i>Surrogate: 1,2-Dichloroethane-d4</i>		91.7 %	37-154		"	"	"	"	
<i>Surrogate: Toluene-d8</i>		98.2 %	45-149		"	"	"	"	
<i>Surrogate: 4-Bromofluorobenzene</i>		110 %	45-146		"	"	"	"	

Summit Scientific

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

Project: Ursula 2
Project Number: [none]
Project Manager: Brandon Bruns

Reported:
04/09/15 14:16

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 1504063 - EPA 3550A

Blank (1504063-BLK1)

Prepared & Analyzed: 04/07/15

C10-C28 (DRO) ND 50 mg/kg

Surrogate: o-Terphenyl 13.9 " 12.2 114 30-150

LCS (1504063-BS1)

Prepared & Analyzed: 04/07/15

C10-C28 (DRO) 452 50 mg/kg 501 90.2 73-134

Surrogate: o-Terphenyl 13.2 " 12.2 108 30-150

Matrix Spike (1504063-MS1)

Source: 1504052-03

Prepared & Analyzed: 04/07/15

C10-C28 (DRO) 438 50 mg/kg 474 ND 92.3 50-148

Surrogate: o-Terphenyl 13.1 " 11.6 114 30-150

Matrix Spike Dup (1504063-MSD1)

Source: 1504052-03

Prepared & Analyzed: 04/07/15

C10-C28 (DRO) 440 50 mg/kg 475 ND 92.6 50-148 0.501 13

Surrogate: o-Terphenyl 13.1 " 11.6 113 30-150

Summit Scientific

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

Project: Ursula 2
Project Number: [none]
Project Manager: Brandon Bruns

Reported:
04/09/15 14:16

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 1504061 - EPA 5030 Water MS

Blank (1504061-BLK1)

Prepared & Analyzed: 04/07/15

Benzene	ND	1.0	ug/l							
Toluene	ND	1.0	"							
Ethylbenzene	ND	1.0	"							
Xylenes (total)	ND	1.0	"							
Surrogate: 1,2-Dichloroethane-d4	12.5		"	13.2		95.0	37-154			
Surrogate: Toluene-d8	13.0		"	13.3		97.4	45-149			
Surrogate: 4-Bromofluorobenzene	14.8		"	13.3		111	45-146			

LCS (1504061-BS1)

Prepared & Analyzed: 04/07/15

Benzene	30.8	1.0	ug/l	33.3		92.4	51-132			
Toluene	29.3	1.0	"	33.3		87.9	51-138			
Ethylbenzene	31.2	1.0	"	33.1		94.2	58-146			
m,p-Xylene	62.7	2.0	"	66.5		94.3	57-144			
o-Xylene	30.6	1.0	"	32.8		93.4	53-146			
Surrogate: 1,2-Dichloroethane-d4	12.9		"	13.2		97.6	37-154			
Surrogate: Toluene-d8	13.3		"	13.3		100	45-149			
Surrogate: 4-Bromofluorobenzene	14.2		"	13.3		106	45-146			

Matrix Spike (1504061-MS1)

Source: 1504048-01

Prepared & Analyzed: 04/07/15

Benzene	30.4	1.0	ug/l	33.3	ND	91.2	34-141			
Toluene	28.9	1.0	"	33.3	ND	86.6	27-151			
Ethylbenzene	31.8	1.0	"	33.1	ND	96.3	29-160			
m,p-Xylene	63.7	2.0	"	66.5	ND	95.8	20-166			
o-Xylene	30.8	1.0	"	32.8	ND	94.0	33-159			
Surrogate: 1,2-Dichloroethane-d4	12.8		"	13.2		97.0	37-154			
Surrogate: Toluene-d8	13.0		"	13.3		97.2	45-149			
Surrogate: 4-Bromofluorobenzene	14.2		"	13.3		107	45-146			

Summit Scientific

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

Project: Ursula 2
Project Number: [none]
Project Manager: Brandon Bruns

Reported:
04/09/15 14:16

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 1504061 - EPA 5030 Water MS

Matrix Spike Dup (1504061-MSD1)			Source: 1504048-01		Prepared & Analyzed: 04/07/15					
Benzene	30.9	1.0	ug/l	33.3	ND	92.7	34-141	1.66	32	
Toluene	29.4	1.0	"	33.3	ND	88.4	27-151	2.02	25	
Ethylbenzene	32.2	1.0	"	33.1	ND	97.5	29-160	1.22	50	
m,p-Xylene	64.9	2.0	"	66.5	ND	97.6	20-166	1.83	36	
o-Xylene	31.0	1.0	"	32.8	ND	94.6	33-159	0.582	26	
Surrogate: 1,2-Dichloroethane-d4	13.9		"	13.2		105	37-154			
Surrogate: Toluene-d8	13.1		"	13.3		98.0	45-149			
Surrogate: 4-Bromofluorobenzene	14.5		"	13.3		109	45-146			

Batch 1504062 - EPA 5030 Soil MS

Blank (1504062-BLK1)			Prepared & Analyzed: 04/07/15							
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	"							
Surrogate: 1,2-Dichloroethane-d4	0.0340		"	0.0396		85.8	23-173			
Surrogate: Toluene-d8	0.0387		"	0.0400		96.8	20-170			
Surrogate: 4-Bromofluorobenzene	0.0437		"	0.0400		109	21-167			

LCS (1504062-BS1)			Prepared & Analyzed: 04/07/15							
Naphthalene	ND	0.010	mg/kg							
Benzene	0.0907	0.0020	"	0.100		90.7	58-130			
Toluene	0.0882	0.0050	"	0.100		88.2	61-134			
Ethylbenzene	0.0961	0.0050	"	0.0992		96.9	74-139			
m,p-Xylene	0.194	0.010	"	0.200		97.1	73-137			
o-Xylene	0.0923	0.0050	"	0.0984		93.8	73-141			
Surrogate: 1,2-Dichloroethane-d4	0.0364		"	0.0396		92.0	23-173			
Surrogate: Toluene-d8	0.0385		"	0.0400		96.2	20-170			
Surrogate: 4-Bromofluorobenzene	0.0424		"	0.0400		106	21-167			

Summit Scientific

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

Project: Ursula 2
Project Number: [none]
Project Manager: Brandon Bruns

Reported:
04/09/15 14:16

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 1504062 - EPA 5030 Soil MS

Matrix Spike (1504062-MS1)

Source: 1504052-03

Prepared & Analyzed: 04/07/15

Naphthalene	ND	0.010	mg/kg		ND		10-158			
Benzene	0.0904	0.0020	"	0.0982	ND	92.1	30-131			
Toluene	0.0877	0.0050	"	0.0982	ND	89.3	30-134			
Ethylbenzene	0.0938	0.0050	"	0.0974	ND	96.3	22-153			
m,p-Xylene	0.190	0.010	"	0.196	ND	97.0	10-159			
o-Xylene	0.0913	0.0050	"	0.0967	ND	94.5	31-151			
Surrogate: 1,2-Dichloroethane-d4	0.0354		"	0.0389		91.1	23-173			
Surrogate: Toluene-d8	0.0391		"	0.0393		99.4	20-170			
Surrogate: 4-Bromofluorobenzene	0.0400		"	0.0393		102	21-167			

Matrix Spike Dup (1504062-MSD1)

Source: 1504052-03

Prepared & Analyzed: 04/07/15

Naphthalene	ND	0.010	mg/kg		ND		10-158		42	
Benzene	0.0873	0.0020	"	0.0952	ND	91.7	30-131	3.52	34	
Toluene	0.0864	0.0050	"	0.0952	ND	90.7	30-134	1.46	30	
Ethylbenzene	0.0919	0.0050	"	0.0945	ND	97.3	22-153	2.03	24	
m,p-Xylene	0.184	0.010	"	0.190	ND	96.8	10-159	3.27	68	
o-Xylene	0.0869	0.0050	"	0.0937	ND	92.7	31-151	4.98	38	
Surrogate: 1,2-Dichloroethane-d4	0.0358		"	0.0377		95.0	23-173			
Surrogate: Toluene-d8	0.0381		"	0.0381		100	20-170			
Surrogate: 4-Bromofluorobenzene	0.0400		"	0.0381		105	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: Ursula 2
Project Number: [none]
Project Manager: Brandon Bruns

Reported:
04/09/15 14:16

Notes and Definitions

S-02 The surrogate recovery for this sample cannot be accurately quantified due to interference from coeluting organic compounds present in the sample extract.

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

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.

A handwritten signature in black ink, appearing to be 'Brandon Bruns', written over a horizontal line.

Summit Scientific

741 Corporate Circle – Suite I ♦ Golden, Colorado 80401

303.277.9310 - laboratory ♦ 303.277.9531 - fax

April 12, 2015

Brandon Bruns
PDC Energy
1775 Sherman St. STE. 3000
Denver, CO 80203
RE: Ursula 2

Enclosed are the results of analyses for samples received by Summit Scientific on 04/10/15 17:30. 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: Ursula 2
Project Number: [none]
Project Manager: Brandon Bruns

Reported:
04/12/15 19:55

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
BH11@3-4'	1504106-01	Soil	04/10/15 09:45	04/10/15 17:30
BH12@6-7'	1504106-02	Soil	04/10/15 10:30	04/10/15 17:30
SB01@2'	1504106-03	Soil	04/10/15 11:10	04/10/15 17:30
SB01@5'	1504106-04	Soil	04/10/15 11:15	04/10/15 17:30
BH11	1504106-05	Water	04/10/15 10:22	04/10/15 17:30
BH12	1504106-06	Water	04/10/15 11:40	04/10/15 17:30
BH13	1504106-07	Water	04/10/15 11:30	04/10/15 17:30
BH14	1504106-08	Water	04/10/15 12:15	04/10/15 17:30

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: Ursula 2

Project Number: [none]
Project Manager: Brandon Bruns

Reported:
04/12/15 19:55

Summit Scientific *15041660*

S₂

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

Page *1* of *1*

Client: *PDC/Tasman* Project Manager: *Brandon Bruns*
Address: E-Mail:
City/State/Zip:
Phone: Fax: Project Name: *Ursula #2*
Sampler Name: *Eric Sigel* Project Number:

ID	Sample Description	Date Sampled	Time Sampled	# of containers	Preservative				Matrix				Analysis Requested				Special Instructions
					HCl	HNO ₃	None	Other (Specify)	Groundwater	Soil	Air-Canister #	Other (Specify)	8015 DRO	8260 GIBEN	8260 BTEX		
1	BH11 e3-4'	4/10/15	945	1			X			X			X	X			
2	BH12 e6-7'		1030	1			X			X			X	X			
3	SB01 e2'		1110	1			X			X			X	X			
4	SB01 e5'		1115	1			X			X			X	X			
5	BH11		1022	3	X				X						X		
6	BH12		1140	2			X		X						X		
7	BH13		1130	3	X				X						X		
8	BH14	↓	1215	3	X				X						X		
9																	
10																	

Relinquished by: <i>E. A. Sigel</i>	Date/Time: <i>4/10/15</i>	Received by: <i>[Signature]</i>	Date/Time: <i>4/10/15 1655</i>	Turn Around Time (Check)	Notes:
Relinquished by: <i>[Signature]</i>	Date/Time: <i>4/10/15 1730</i>	Received by: <i>[Signature]</i>	Date/Time: <i>4-10 1730</i>	Same Day <input type="checkbox"/> 72 hours <input type="checkbox"/> 24 hours <input checked="" type="checkbox"/> Standard <input type="checkbox"/> 48 hours <input type="checkbox"/>	<i>on ice</i>
Relinquished by:	Date/Time:	Received by:	Date/Time:	Sample Integrity: Temperature Upon Receipt: <i>3.6°C</i> Intact: <input checked="" type="radio"/> Yes <input type="radio"/> No	

www.s2scientific.com

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: Ursula 2
Project Number: [none]
Project Manager: Brandon Brunns

Reported:
04/12/15 19:55

BH11@3-4'
1504106-01 (Soil)

Summit Scientific

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **04/10/15 09:45**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
C10-C28 (DRO)	ND	50	mg/kg	1	1504109	04/10/15	04/10/15	8015M	

Date Sampled: **04/10/15 09:45**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: o-Terphenyl		114 %	70-130		"	"	"	"	

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **04/10/15 09:45**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Naphthalene	ND	0.010	mg/kg	1	1504110	04/10/15	04/10/15	EPA 8260B	
Benzene	ND	0.0020	"	"	"	"	"	"	
Toluene	ND	0.0050	"	"	"	"	"	"	
Ethylbenzene	ND	0.0050	"	"	"	"	"	"	
Xylenes (total)	ND	0.010	"	"	"	"	"	"	
Gasoline Range Hydrocarbons	0.55	0.50	"	"	"	"	"	"	

Date Sampled: **04/10/15 09:45**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 1,2-Dichloroethane-d4		101 %	23-173		"	"	"	"	
Surrogate: Toluene-d8		96.2 %	20-170		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		93.8 %	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: Ursula 2
Project Number: [none]
Project Manager: Brandon Brunns

Reported:
04/12/15 19:55

BH12@6-7'
1504106-02 (Soil)

Summit Scientific

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **04/10/15 10:30**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
C10-C28 (DRO)	ND	50	mg/kg	1	1504109	04/10/15	04/10/15	8015M	

Date Sampled: **04/10/15 10:30**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: o-Terphenyl		112 %	70-130		"	"	"	"	

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **04/10/15 10:30**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Naphthalene	ND	0.010	mg/kg	1	1504110	04/10/15	04/10/15	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: **04/10/15 10:30**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 1,2-Dichloroethane-d4		102 %	23-173		"	"	"	"	
Surrogate: Toluene-d8		97.5 %	20-170		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		93.8 %	21-167		"	"	"	"	

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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: Ursula 2
Project Number: [none]
Project Manager: Brandon Brunns

Reported:
04/12/15 19:55

SB01@2'
1504106-03 (Soil)

Summit Scientific

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **04/10/15 11:10**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
C10-C28 (DRO)	610	50	mg/kg	1	1504109	04/10/15	04/10/15	8015M	

Date Sampled: **04/10/15 11:10**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
<i>Surrogate: o-Terphenyl</i>		123 %	70-130		"	"	"	"	

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **04/10/15 11:10**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Naphthalene	0.39	0.010	mg/kg	1	1504110	04/10/15	04/10/15	EPA 8260B	
Benzene	0.027	0.0020	"	"	"	"	"	"	
Toluene	ND	0.0050	"	"	"	"	"	"	
Ethylbenzene	0.38	0.0050	"	"	"	"	"	"	
Xylenes (total)	0.056	0.010	"	"	"	"	"	"	
Gasoline Range Hydrocarbons	56	0.50	"	"	"	"	"	"	

Date Sampled: **04/10/15 11:10**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
<i>Surrogate: 1,2-Dichloroethane-d4</i>		96.8 %	23-173		"	"	"	"	
<i>Surrogate: Toluene-d8</i>		45.6 %	20-170		"	"	"	"	
<i>Surrogate: 4-Bromofluorobenzene</i>		260 %	21-167		"	"	"	"	S-02

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: Ursula 2
Project Number: [none]
Project Manager: Brandon Brunns

Reported:
04/12/15 19:55

SB01@5'
1504106-04 (Soil)

Summit Scientific

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **04/10/15 11:15**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
C10-C28 (DRO)	730	50	mg/kg	1	1504109	04/10/15	04/10/15	8015M	

Date Sampled: **04/10/15 11:15**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: o-Terphenyl		114 %	70-130		"	"	"	"	

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **04/10/15 11:15**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Naphthalene	4.8	1.0	mg/kg	100	1504110	04/10/15	04/10/15	EPA 8260B	
Benzene	0.15	0.0020	"	1	"	"	04/11/15	"	
Toluene	ND	0.0050	"	"	"	"	"	"	
Ethylbenzene	7.2	0.50	"	100	"	"	04/10/15	"	
Xylenes (total)	15	1.0	"	"	"	"	"	"	
Gasoline Range Hydrocarbons	2300	50	"	"	"	"	"	"	

Date Sampled: **04/10/15 11:15**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 1,2-Dichloroethane-d4		91.6 %	23-173		"	"	04/11/15	"	
Surrogate: Toluene-d8		1780 %	20-170		"	"	"	"	S-02
Surrogate: 4-Bromofluorobenzene		1580 %	21-167		"	"	"	"	S-02

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: Ursula 2
Project Number: [none]
Project Manager: Brandon Brunns

Reported:
04/12/15 19:55

BH11
1504106-05 (Water)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **04/10/15 10:22**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Benzene	ND	1.0	ug/l	1	1504123	04/11/15	04/11/15	EPA 8260B	
Toluene	ND	1.0	"	"	"	"	"	"	
Ethylbenzene	ND	1.0	"	"	"	"	"	"	
Xylenes (total)	ND	1.0	"	"	"	"	"	"	

Date Sampled: **04/10/15 10:22**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 1,2-Dichloroethane-d4		106 %	37-154		"	"	"	"	
Surrogate: Toluene-d8		95.6 %	45-149		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		102 %	45-146		"	"	"	"	

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: Ursula 2
Project Number: [none]
Project Manager: Brandon Brunns

Reported:
04/12/15 19:55

BH12
1504106-06 (Water)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **04/10/15 11:40**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Benzene	ND	1.0	ug/l	1	1504123	04/11/15	04/11/15	EPA 8260B	
Toluene	ND	1.0	"	"	"	"	"	"	
Ethylbenzene	ND	1.0	"	"	"	"	"	"	
Xylenes (total)	ND	1.0	"	"	"	"	"	"	

Date Sampled: **04/10/15 11:40**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Surrogate: 1,2-Dichloroethane-d4		98.7 %	37-154		"	"	"	"	
Surrogate: Toluene-d8		97.0 %	45-149		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		103 %	45-146		"	"	"	"	

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: Ursula 2
Project Number: [none]
Project Manager: Brandon Brunns

Reported:
04/12/15 19:55

BH13
1504106-07 (Water)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **04/10/15 11:30**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Benzene	ND	1.0	ug/l	1	1504123	04/11/15	04/11/15	EPA 8260B	
Toluene	ND	1.0	"	"	"	"	"	"	
Ethylbenzene	ND	1.0	"	"	"	"	"	"	
Xylenes (total)	ND	1.0	"	"	"	"	"	"	

Date Sampled: **04/10/15 11:30**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Surrogate: 1,2-Dichloroethane-d4		98.1 %	37-154		"	"	"	"	
Surrogate: Toluene-d8		97.1 %	45-149		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		100 %	45-146		"	"	"	"	

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: Ursula 2
Project Number: [none]
Project Manager: Brandon Brunns

Reported:
04/12/15 19:55

BH14
1504106-08 (Water)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **04/10/15 12:15**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Benzene	ND	1.0	ug/l	1	1504123	04/11/15	04/11/15	EPA 8260B	
Toluene	ND	1.0	"	"	"	"	"	"	
Ethylbenzene	ND	1.0	"	"	"	"	"	"	
Xylenes (total)	ND	1.0	"	"	"	"	"	"	

Date Sampled: **04/10/15 12:15**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Surrogate: 1,2-Dichloroethane-d4		103 %	37-154		"	"	"	"	
Surrogate: Toluene-d8		94.4 %	45-149		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		101 %	45-146		"	"	"	"	

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: Ursula 2
Project Number: [none]
Project Manager: Brandon Brunns

Reported:
04/12/15 19:55

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 1504109 - EPA 3550A

Blank (1504109-BLK1)

Prepared & Analyzed: 04/10/15

C10-C28 (DRO)	ND	50	mg/kg
C28-C36 (ORO)	ND	50	"

Surrogate: o-Terphenyl	15.0	"	12.2	123	70-130
------------------------	------	---	------	-----	--------

LCS (1504109-BS1)

Prepared & Analyzed: 04/10/15

C10-C28 (DRO)	493	50	mg/kg	501	98.3	50-150
Surrogate: o-Terphenyl	13.9	"	12.2	114	70-130	

Matrix Spike (1504109-MS1)

Source: 1504081-01

Prepared & Analyzed: 04/10/15

C10-C28 (DRO)	519	50	mg/kg	495	11.5	102	50-150
Surrogate: o-Terphenyl	14.0	"	12.1	116	70-130		

Matrix Spike Dup (1504109-MSD1)

Source: 1504081-01

Prepared & Analyzed: 04/10/15

C10-C28 (DRO)	486	50	mg/kg	490	11.5	96.8	50-150	6.45	20
Surrogate: o-Terphenyl	13.3	"	11.9	111	70-130				

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: Ursula 2
Project Number: [none]
Project Manager: Brandon Brunns

Reported:
04/12/15 19:55

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 1504110 - EPA 5030 Soil MS

Blank (1504110-BLK1)

Prepared & Analyzed: 04/10/15

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	"							
Surrogate: 1,2-Dichloroethane-d4	0.0372		"	0.0396	93.9	23-173				
Surrogate: Toluene-d8	0.0382		"	0.0400	95.6	20-170				
Surrogate: 4-Bromofluorobenzene	0.0368		"	0.0400	92.0	21-167				

LCS (1504110-BS1)

Prepared & Analyzed: 04/10/15

Naphthalene	ND	0.010	mg/kg			66-138				
Benzene	0.0935	0.0020	"	0.100	93.5	58-130				
Toluene	0.103	0.0050	"	0.100	103	61-134				
Ethylbenzene	0.107	0.0050	"	0.0992	108	74-139				
m,p-Xylene	0.223	0.010	"	0.200	112	73-137				
o-Xylene	0.115	0.0050	"	0.0984	117	73-141				
Surrogate: 1,2-Dichloroethane-d4	0.0382		"	0.0396	96.6	23-173				
Surrogate: Toluene-d8	0.0388		"	0.0400	96.9	20-170				
Surrogate: 4-Bromofluorobenzene	0.0367		"	0.0400	91.6	21-167				

Matrix Spike (1504110-MS1)

Source: 1504057-01

Prepared & Analyzed: 04/10/15

Naphthalene	ND	0.010	mg/kg		ND	10-158				
Benzene	0.0951	0.0020	"	0.0977	ND	97.4	30-131			
Toluene	0.102	0.0050	"	0.0977	ND	104	30-134			
Ethylbenzene	0.0970	0.0050	"	0.0969	ND	100	22-153			
m,p-Xylene	0.204	0.010	"	0.195	0.00776	101	10-159			
o-Xylene	0.105	0.0050	"	0.0961	ND	109	31-151			
Surrogate: 1,2-Dichloroethane-d4	0.0397		"	0.0387		103	23-173			
Surrogate: Toluene-d8	0.0383		"	0.0391		98.2	20-170			
Surrogate: 4-Bromofluorobenzene	0.0356		"	0.0391		91.0	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: Ursula 2
Project Number: [none]
Project Manager: Brandon Bruns

Reported:
04/12/15 19:55

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 1504110 - EPA 5030 Soil MS

Matrix Spike Dup (1504110-MSD1)

Source: 1504057-01

Prepared & Analyzed: 04/10/15

Naphthalene	ND	0.010	mg/kg		ND		10-158		42	
Benzene	0.0896	0.0020	"	0.0952	ND	94.1	30-131	5.95	34	
Toluene	0.0933	0.0050	"	0.0952	ND	97.9	30-134	8.79	30	
Ethylbenzene	0.0870	0.0050	"	0.0945	ND	92.1	22-153	10.8	24	
m,p-Xylene	0.185	0.010	"	0.190	0.00776	93.2	10-159	9.84	68	
o-Xylene	0.0936	0.0050	"	0.0937	ND	99.9	31-151	11.6	38	
Surrogate: 1,2-Dichloroethane-d4	0.0381		"	0.0377		101	23-173			
Surrogate: Toluene-d8	0.0371		"	0.0381		97.3	20-170			
Surrogate: 4-Bromofluorobenzene	0.0355		"	0.0381		93.1	21-167			

Batch 1504123 - EPA 5030 Water MS

Blank (1504123-BLK1)

Prepared & Analyzed: 04/11/15

Benzene	ND	1.0	ug/l							
Toluene	ND	1.0	"							
Ethylbenzene	ND	1.0	"							
Xylenes (total)	ND	1.0	"							
Surrogate: 1,2-Dichloroethane-d4	12.9		"	13.2		97.4	37-154			
Surrogate: Toluene-d8	13.0		"	13.3		97.7	45-149			
Surrogate: 4-Bromofluorobenzene	12.6		"	13.3		94.3	45-146			

LCS (1504123-BS1)

Prepared & Analyzed: 04/11/15

Benzene	46.1	1.0	ug/l	50.0		92.2	51-132			
Toluene	47.2	1.0	"	50.0		94.5	51-138			
Ethylbenzene	47.4	1.0	"	50.0		94.9	58-146			
m,p-Xylene	96.8	2.0	"	100		96.8	57-144			
o-Xylene	48.6	1.0	"	50.0		97.1	53-146			
Surrogate: 1,2-Dichloroethane-d4	11.8		"	13.2		89.8	37-154			
Surrogate: Toluene-d8	13.2		"	13.3		98.7	45-149			
Surrogate: 4-Bromofluorobenzene	13.0		"	13.3		97.6	45-146			

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: Ursula 2
Project Number: [none]
Project Manager: Brandon Brunns

Reported:
04/12/15 19:55

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 1504123 - EPA 5030 Water MS

Matrix Spike (1504123-MS1)				Source: 1504047-01		Prepared & Analyzed: 04/11/15				
Benzene	47.2	1.0	ug/l	50.0	ND	94.3	34-141			
Toluene	48.0	1.0	"	50.0	ND	95.9	27-151			
Ethylbenzene	48.7	1.0	"	50.0	ND	97.4	29-160			
m,p-Xylene	99.3	2.0	"	100	ND	99.3	20-166			
o-Xylene	50.1	1.0	"	50.0	ND	100	33-159			
Surrogate: 1,2-Dichloroethane-d4	11.7		"	13.2		88.9	37-154			
Surrogate: Toluene-d8	13.2		"	13.3		99.2	45-149			
Surrogate: 4-Bromofluorobenzene	13.1		"	13.3		98.1	45-146			
Matrix Spike Dup (1504123-MSD1)				Source: 1504047-01		Prepared & Analyzed: 04/11/15				
Benzene	48.3	1.0	ug/l	50.0	ND	96.7	34-141	2.47	32	
Toluene	49.6	1.0	"	50.0	ND	99.3	27-151	3.46	25	
Ethylbenzene	49.8	1.0	"	50.0	ND	99.7	29-160	2.29	50	
m,p-Xylene	101	2.0	"	100	ND	101	20-166	1.96	36	
o-Xylene	51.5	1.0	"	50.0	ND	103	33-159	2.72	26	
Surrogate: 1,2-Dichloroethane-d4	11.9		"	13.2		90.5	37-154			
Surrogate: Toluene-d8	13.2		"	13.3		99.0	45-149			
Surrogate: 4-Bromofluorobenzene	13.1		"	13.3		98.3	45-146			

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: Ursula 2
Project Number: [none]
Project Manager: Brandon Bruns

Reported:
04/12/15 19:55

Notes and Definitions

S-02 The surrogate recovery for this sample cannot be accurately quantified due to interference from coeluting organic compounds present in the sample extract.

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

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.

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

Summit Scientific

741 Corporate Circle – Suite I ♦ Golden, Colorado 80401

303.277.9310 - laboratory ♦ 303.277.9531 - fax

October 27, 2015

Mark Longhurst
PDC Energy
1775 Sherman St. STE. 3000
Denver, CO 80203
RE: Ursula 2

Enclosed are the results of analyses for samples received by Summit Scientific on 10/20/15 17:05. 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: Ursula 2
Project Number: [none]
Project Manager: Mark Longhurst

Reported:
10/27/15 15:28

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
SS01@5'	1510140-01	Soil	10/20/15 11:30	10/20/15 17:05
SS02@5'	1510140-02	Soil	10/20/15 13:07	10/20/15 17:05

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: Ursula 2
Project Number: [none]
Project Manager: Mark Longhurst

Reported:
10/27/15 15:28

SS01@5'
1510140-01 (Soil)

Summit Scientific

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: 10/20/15 11:30

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
C10-C28 (DRO)	1400	50	mg/kg	1	1510178	10/21/15	10/27/15	8015M	

Date Sampled: 10/20/15 11:30

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: o-Terphenyl		123 %	30-150		"	"	"	"	

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: 10/20/15 11:30

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Naphthalene	4.1	1.0	mg/kg	100	1510176	10/21/15	10/22/15	EPA 8260B	
Benzene	0.53	0.20	"	"	"	"	"	"	
Toluene	1.2	0.50	"	"	"	"	"	"	
Ethylbenzene	12	0.50	"	"	"	"	"	"	
Xylenes (total)	17	1.0	"	"	"	"	"	"	
Gasoline Range Hydrocarbons	2400	50	"	"	"	"	"	"	

Date Sampled: 10/20/15 11:30

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 1,2-Dichloroethane-d4		103 %	23-173		"	"	"	"	
Surrogate: Toluene-d8		64.9 %	20-170		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		159 %	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: Ursula 2
Project Number: [none]
Project Manager: Mark Longhurst

Reported:
10/27/15 15:28

SS02@5'
1510140-02 (Soil)

Summit Scientific

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: 10/20/15 13:07

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
C10-C28 (DRO)	1100	50	mg/kg	1	1510178	10/21/15	10/27/15	8015M	

Date Sampled: 10/20/15 13:07

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: o-Terphenyl		113 %	30-150		"	"	"	"	

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: 10/20/15 13:07

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Naphthalene	4.6	1.0	mg/kg	100	1510176	10/21/15	10/22/15	EPA 8260B	
Benzene	0.46	0.20	"	"	"	"	"	"	
Toluene	1.1	0.50	"	"	"	"	"	"	
Ethylbenzene	9.0	0.50	"	"	"	"	"	"	
Xylenes (total)	35	1.0	"	"	"	"	"	"	
Gasoline Range Hydrocarbons	2500	50	"	"	"	"	"	"	

Date Sampled: 10/20/15 13:07

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 1,2-Dichloroethane-d4		105 %	23-173		"	"	"	"	
Surrogate: Toluene-d8		70.9 %	20-170		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		172 %	21-167		"	"	"	"	S-02

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: Ursula 2
Project Number: [none]
Project Manager: Mark Longhurst

Reported:
10/27/15 15:28

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 1510178 - EPA 3550A

Blank (1510178-BLK1)

Prepared & Analyzed: 10/21/15

C10-C28 (DRO) ND 50 mg/kg

Surrogate: o-Terphenyl 12.8 " 12.2 105 30-150

LCS (1510178-BS1)

Prepared & Analyzed: 10/21/15

C10-C28 (DRO) 599 50 mg/kg 499 120 73-134

Surrogate: o-Terphenyl 13.4 " 12.2 110 30-150

Matrix Spike (1510178-MS1)

Source: 1510142-02

Prepared & Analyzed: 10/21/15

C10-C28 (DRO) 569 50 mg/kg 499 46.3 105 50-148

Surrogate: o-Terphenyl 13.2 " 12.2 109 30-150

Matrix Spike Dup (1510178-MSD1)

Source: 1510142-02

Prepared & Analyzed: 10/21/15

C10-C28 (DRO) 596 50 mg/kg 499 46.3 110 50-148 4.61 13

Surrogate: o-Terphenyl 14.1 " 12.2 115 30-150

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: Ursula 2
Project Number: [none]
Project Manager: Mark Longhurst

Reported:
10/27/15 15:28

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 1510176 - EPA 5030 Soil MS

Blank (1510176-BLK1)

Prepared & Analyzed: 10/21/15

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>0.0442</i>		<i>"</i>	<i>0.0396</i>		<i>112</i>	<i>23-173</i>			
<i>Surrogate: Toluene-d8</i>	<i>0.0398</i>		<i>"</i>	<i>0.0400</i>		<i>99.5</i>	<i>20-170</i>			
<i>Surrogate: 4-Bromofluorobenzene</i>	<i>0.0429</i>		<i>"</i>	<i>0.0400</i>		<i>107</i>	<i>21-167</i>			

LCS (1510176-BS1)

Prepared & Analyzed: 10/21/15

Naphthalene	ND	0.010	mg/kg				66-138			
Benzene	0.0982	0.0020	"	0.100		98.2	58-130			
Toluene	0.0937	0.0050	"	0.100		93.7	61-134			
Ethylbenzene	0.110	0.0050	"	0.0992		111	74-139			
m,p-Xylene	0.205	0.010	"	0.200		103	73-137			
o-Xylene	0.0992	0.0050	"	0.0984		101	73-141			
Xylenes (total)	0.304	0.010	"				0-200			
Gasoline Range Hydrocarbons	2.16	0.50	"				30-150			
<i>Surrogate: 1,2-Dichloroethane-d4</i>	<i>0.0451</i>		<i>"</i>	<i>0.0396</i>		<i>114</i>	<i>23-173</i>			
<i>Surrogate: Toluene-d8</i>	<i>0.0410</i>		<i>"</i>	<i>0.0400</i>		<i>102</i>	<i>20-170</i>			
<i>Surrogate: 4-Bromofluorobenzene</i>	<i>0.0379</i>		<i>"</i>	<i>0.0400</i>		<i>94.6</i>	<i>21-167</i>			

Matrix Spike (1510176-MS1)

Source: 1510124-01

Prepared & Analyzed: 10/21/15

Naphthalene	ND	0.010	mg/kg		ND		10-158			
Benzene	0.0948	0.0020	"	0.0980	ND	96.7	30-131			
Toluene	0.0898	0.0050	"	0.0980	ND	91.6	30-134			
Ethylbenzene	0.104	0.0050	"	0.0973	ND	107	22-153			
m,p-Xylene	0.193	0.010	"	0.196	ND	98.6	10-159			
o-Xylene	0.0936	0.0050	"	0.0965	ND	97.0	31-151			
Xylenes (total)	0.286	0.010	"		0.00		30-160			
Gasoline Range Hydrocarbons	2.04	0.50	"		ND		30-160			
<i>Surrogate: 1,2-Dichloroethane-d4</i>	<i>0.0438</i>		<i>"</i>	<i>0.0388</i>		<i>113</i>	<i>23-173</i>			
<i>Surrogate: Toluene-d8</i>	<i>0.0400</i>		<i>"</i>	<i>0.0392</i>		<i>102</i>	<i>20-170</i>			
<i>Surrogate: 4-Bromofluorobenzene</i>	<i>0.0372</i>		<i>"</i>	<i>0.0392</i>		<i>94.9</i>	<i>21-167</i>			

Summit Scientific

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

Project: Ursula 2
Project Number: [none]
Project Manager: Mark Longhurst

Reported:
10/27/15 15:28

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 1510176 - EPA 5030 Soil MS

Matrix Spike Dup (1510176-MSD1)		Source: 1510124-01			Prepared & Analyzed: 10/21/15					
Naphthalene	ND	0.010	mg/kg		ND		10-158		42	
Benzene	0.0903	0.0020	"	0.0940	ND	96.1	30-131	4.88	34	
Toluene	0.0857	0.0050	"	0.0940	ND	91.2	30-134	4.62	30	
Ethylbenzene	0.0996	0.0050	"	0.0932	ND	107	22-153	4.42	24	
m,p-Xylene	0.187	0.010	"	0.188	ND	99.9	10-159	2.86	68	
o-Xylene	0.0902	0.0050	"	0.0925	ND	97.6	31-151	3.66	38	
Xylenes (total)	0.278	0.010	"		0.00		30-160	3.12	30	
Gasoline Range Hydrocarbons	1.91	0.50	"		ND		30-160	6.61	30	
Surrogate: 1,2-Dichloroethane-d4	0.0424		"	0.0372		114	23-173			
Surrogate: Toluene-d8	0.0382		"	0.0376		102	20-170			
Surrogate: 4-Bromofluorobenzene	0.0367		"	0.0376		97.6	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: Ursula 2
Project Number: [none]
Project Manager: Mark Longhurst

Reported:
10/27/15 15:28

Notes and Definitions

S-02 The surrogate recovery for this sample cannot be accurately quantified due to interference from coeluting organic compounds present in the sample extract.

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

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.

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

Summit Scientific

741 Corporate Circle – Suite I ♦ Golden, Colorado 80401

303.277.9310 - laboratory ♦ 303.277.9531 - fax

October 25, 2015

Mark Longhurst
PDC Energy
1775 Sherman St. STE. 3000
Denver, CO 80203
RE: Ursula 2

Enclosed are the results of analyses for samples received by Summit Scientific on 10/23/15 16:30. 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: Ursula 2
Project Number: [none]
Project Manager: Mark Longhurst

Reported:
10/25/15 13:23

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
CS01	1510162-01	Soil	10/23/15 09:49	10/23/15 16:30
CS02	1510162-02	Soil	10/23/15 13:30	10/23/15 16:30

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: Ursula 2
Project Number: [none]
Project Manager: Mark Longhurst

Reported:
10/25/15 13:23

CS01
1510162-01 (Soil)

Summit Scientific

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: 10/23/15 09:49

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
C10-C28 (DRO)	66	50	mg/kg	1	1510199	10/23/15	10/23/15	8015M	

Date Sampled: 10/23/15 09:49

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
<i>Surrogate: o-Terphenyl</i>		105 %	30-150		"	"	"	"	

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: 10/23/15 09:49

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Naphthalene	0.029	0.010	mg/kg	1	1510198	10/23/15	10/24/15	EPA 8260B	
Benzene	ND	0.0020	"	"	"	"	"	"	
Toluene	ND	0.0050	"	"	"	"	10/23/15	"	
Ethylbenzene	ND	0.0050	"	"	"	"	10/24/15	"	
Xylenes (total)	0.21	0.010	"	"	"	"	"	"	
Gasoline Range Hydrocarbons	900	50	"	100	"	"	10/23/15	"	

Date Sampled: 10/23/15 09:49

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
<i>Surrogate: 1,2-Dichloroethane-d4</i>		111 %	23-173		"	"	10/24/15	"	
<i>Surrogate: Toluene-d8</i>		181 %	20-170		"	"	"	"	S-02
<i>Surrogate: 4-Bromofluorobenzene</i>		349 %	21-167		"	"	"	"	S-02

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: Ursula 2
Project Number: [none]
Project Manager: Mark Longhurst

Reported:
10/25/15 13:23

CS02
1510162-02 (Soil)

Summit Scientific

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: 10/23/15 13:30

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
C10-C28 (DRO)	91	50	mg/kg	1	1510199	10/23/15	10/23/15	8015M	

Date Sampled: 10/23/15 13:30

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: o-Terphenyl		106 %	30-150		"	"	"	"	

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: 10/23/15 13:30

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Naphthalene	0.020	0.010	mg/kg	1	1510198	10/23/15	10/24/15	EPA 8260B	
Benzene	ND	0.0020	"	"	"	"	"	"	
Toluene	ND	0.0050	"	"	"	"	"	"	
Ethylbenzene	ND	0.0050	"	"	"	"	"	"	
Xylenes (total)	0.055	0.010	"	"	"	"	"	"	
Gasoline Range Hydrocarbons	470	5.0	"	10	"	"	10/23/15	"	

Date Sampled: 10/23/15 13:30

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 1,2-Dichloroethane-d4		113 %	23-173		"	"	10/24/15	"	
Surrogate: Toluene-d8		173 %	20-170		"	"	"	"	S-02
Surrogate: 4-Bromofluorobenzene		151 %	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: Ursula 2
Project Number: [none]
Project Manager: Mark Longhurst

Reported:
10/25/15 13:23

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 1510199 - EPA 3550A

Blank (1510199-BLK1)

Prepared & Analyzed: 10/23/15

C10-C28 (DRO) ND 50 mg/kg

Surrogate: o-Terphenyl 13.6 " 12.2 111 30-150

LCS (1510199-BS1)

Prepared & Analyzed: 10/23/15

C10-C28 (DRO) 565 50 mg/kg 499 113 73-134

Surrogate: o-Terphenyl 14.3 " 12.2 117 30-150

Matrix Spike (1510199-MS1)

Source: 1510162-02

Prepared & Analyzed: 10/23/15

C10-C28 (DRO) 546 50 mg/kg 499 90.7 91.2 50-148

Surrogate: o-Terphenyl 13.2 " 12.2 108 30-150

Matrix Spike Dup (1510199-MSD1)

Source: 1510162-02

Prepared & Analyzed: 10/23/15

C10-C28 (DRO) 546 50 mg/kg 499 90.7 91.3 50-148 0.0676 13

Surrogate: o-Terphenyl 13.0 " 12.2 107 30-150

Summit Scientific

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

Project: Ursula 2
Project Number: [none]
Project Manager: Mark Longhurst

Reported:
10/25/15 13:23

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 1510198 - EPA 5030 Soil MS

Blank (1510198-BLK1)

Prepared & Analyzed: 10/23/15

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>0.0428</i>		<i>"</i>	<i>0.0396</i>		<i>108</i>	<i>23-173</i>			
<i>Surrogate: Toluene-d8</i>	<i>0.0404</i>		<i>"</i>	<i>0.0400</i>		<i>101</i>	<i>20-170</i>			
<i>Surrogate: 4-Bromofluorobenzene</i>	<i>0.0424</i>		<i>"</i>	<i>0.0400</i>		<i>106</i>	<i>21-167</i>			

LCS (1510198-BS1)

Prepared & Analyzed: 10/23/15

Naphthalene	ND	0.010	mg/kg				66-138			
Benzene	0.108	0.0020	"	0.100		108	58-130			
Toluene	0.0982	0.0050	"	0.100		98.2	61-134			
Ethylbenzene	0.114	0.0050	"	0.0992		114	74-139			
m,p-Xylene	0.222	0.010	"	0.200		111	73-137			
o-Xylene	0.118	0.0050	"	0.0984		120	73-141			
Xylenes (total)	0.340	0.010	"				0-200			
Gasoline Range Hydrocarbons	2.25	0.50	"				30-150			
<i>Surrogate: 1,2-Dichloroethane-d4</i>	<i>0.0428</i>		<i>"</i>	<i>0.0396</i>		<i>108</i>	<i>23-173</i>			
<i>Surrogate: Toluene-d8</i>	<i>0.0422</i>		<i>"</i>	<i>0.0400</i>		<i>105</i>	<i>20-170</i>			
<i>Surrogate: 4-Bromofluorobenzene</i>	<i>0.0432</i>		<i>"</i>	<i>0.0400</i>		<i>108</i>	<i>21-167</i>			

Matrix Spike (1510198-MS1)

Source: 1510162-02

Prepared & Analyzed: 10/23/15

Naphthalene	0.00765	0.010	mg/kg		0.0200		10-158			
Benzene	0.112	0.0020	"	0.100	ND	112	30-131			
Toluene	0.104	0.0050	"	0.100	ND	104	30-134			
Ethylbenzene	0.121	0.0050	"	0.0992	ND	122	22-153			
m,p-Xylene	0.260	0.010	"	0.200	0.0360	112	10-159			
o-Xylene	0.137	0.0050	"	0.0984	0.0190	120	31-151			
Xylenes (total)	0.397	0.010	"		0.0550		30-160			
Gasoline Range Hydrocarbons	3.36	0.50	"		470		30-160			
<i>Surrogate: 1,2-Dichloroethane-d4</i>	<i>0.0471</i>		<i>"</i>	<i>0.0396</i>		<i>119</i>	<i>23-173</i>			
<i>Surrogate: Toluene-d8</i>	<i>0.0422</i>		<i>"</i>	<i>0.0400</i>		<i>106</i>	<i>20-170</i>			
<i>Surrogate: 4-Bromofluorobenzene</i>	<i>0.0433</i>		<i>"</i>	<i>0.0400</i>		<i>108</i>	<i>21-167</i>			

Summit Scientific

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

Project: Ursula 2
Project Number: [none]
Project Manager: Mark Longhurst

Reported:
10/25/15 13:23

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 1510198 - EPA 5030 Soil MS

Matrix Spike Dup (1510198-MSD1)		Source: 1510162-02			Prepared & Analyzed: 10/23/15					
Naphthalene	0.0115	0.010	mg/kg		0.0200		10-158	40.4	42	
Benzene	0.114	0.0020	"	0.100	ND	114	30-131	1.49	34	
Toluene	0.106	0.0050	"	0.100	ND	106	30-134	1.28	30	
Ethylbenzene	0.123	0.0050	"	0.0992	ND	124	22-153	1.99	24	
m,p-Xylene	0.273	0.010	"	0.200	0.0360	119	10-159	4.73	68	
o-Xylene	0.142	0.0050	"	0.0984	0.0190	125	31-151	3.95	38	
Xylenes (total)	0.415	0.010	"		0.0550		30-160	4.46	30	
Gasoline Range Hydrocarbons	4.16	0.50	"		470		30-160	21.2	30	
Surrogate: 1,2-Dichloroethane-d4	0.0470		"	0.0396		119	23-173			
Surrogate: Toluene-d8	0.0419		"	0.0400		105	20-170			
Surrogate: 4-Bromofluorobenzene	0.0424		"	0.0400		106	21-167			

Summit Scientific

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

Project: Ursula 2
Project Number: [none]
Project Manager: Mark Longhurst

Reported:
10/25/15 13:23

Notes and Definitions

S-02 The surrogate recovery for this sample cannot be accurately quantified due to interference from coeluting organic compounds present in the sample extract.

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

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.

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

Summit Scientific

741 Corporate Circle – Suite I ♦ Golden, Colorado 80401

303.277.9310 - laboratory ♦ 303.277.9531 - fax

October 29, 2015

Mark Longhurst
PDC Energy
1775 Sherman St. STE. 3000
Denver, CO 80203
RE: Ursula 2

Enclosed are the results of analyses for samples received by Summit Scientific on 10/28/15 19:30. 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: Ursula 2
Project Number: [none]
Project Manager: Mark Longhurst

Reported:
10/29/15 06:58

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
SS03@5'	1510195-01	Soil	10/28/15 14:25	10/28/15 19:30
SS04@5'	1510195-02	Soil	10/28/15 14:41	10/28/15 19:30
CS03	1510195-03	Soil	10/28/15 16:30	10/28/15 19:30
CS04	1510195-04	Soil	10/28/15 16:35	10/28/15 19:30
CS05	1510195-05	Soil	10/28/15 16:45	10/28/15 19:30
CS06	1510195-06	Soil	10/28/15 16:50	10/28/15 19:30

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: Ursula 2
Project Number: [none]
Project Manager: Mark Longhurst

Reported:
10/29/15 06:58

SS03@5'
1510195-01 (Soil)

Summit Scientific

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: 10/28/15 14:25

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
C10-C28 (DRO)	ND	50	mg/kg	1	1510246	10/28/15	10/28/15	8015M	

Date Sampled: 10/28/15 14:25

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: o-Terphenyl		115 %	30-150		"	"	"	"	

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: 10/28/15 14:25

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Naphthalene	ND	0.010	mg/kg	1	1510245	10/28/15	10/28/15	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: 10/28/15 14:25

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 1,2-Dichloroethane-d4		113 %	23-173		"	"	"	"	
Surrogate: Toluene-d8		96.9 %	20-170		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		93.8 %	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: Ursula 2
Project Number: [none]
Project Manager: Mark Longhurst

Reported:
10/29/15 06:58

SS04@5'
1510195-02 (Soil)

Summit Scientific

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: 10/28/15 14:41

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
C10-C28 (DRO)	ND	50	mg/kg	1	1510246	10/28/15	10/28/15	8015M	

Date Sampled: 10/28/15 14:41

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: 10/28/15 14:41

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Naphthalene	ND	0.010	mg/kg	1	1510245	10/28/15	10/28/15	EPA 8260B	
Benzene	ND	0.0020	"	"	"	"	"	"	
Toluene	ND	0.0050	"	"	"	"	"	"	
Ethylbenzene	ND	0.0050	"	"	"	"	"	"	
Xylenes (total)	ND	0.010	"	"	"	"	"	"	
Gasoline Range Hydrocarbons	39	0.50	"	"	"	"	"	"	

Date Sampled: 10/28/15 14:41

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 1,2-Dichloroethane-d4		104 %	23-173		"	"	"	"	
Surrogate: Toluene-d8		109 %	20-170		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		128 %	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: Ursula 2
Project Number: [none]
Project Manager: Mark Longhurst

Reported:
10/29/15 06:58

CS03
1510195-03 (Soil)

Summit Scientific

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: 10/28/15 16:30

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
C10-C28 (DRO)	72	50	mg/kg	1	1510246	10/28/15	10/28/15	8015M	

Date Sampled: 10/28/15 16:30

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: o-Terphenyl		109 %	30-150		"	"	"	"	

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: 10/28/15 16:30

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Naphthalene	0.041	0.010	mg/kg	1	1510245	10/28/15	10/28/15	EPA 8260B	
Benzene	ND	0.0020	"	"	"	"	"	"	
Toluene	ND	0.0050	"	"	"	"	"	"	
Ethylbenzene	ND	0.0050	"	"	"	"	"	"	
Xylenes (total)	0.25	0.010	"	"	"	"	"	"	
Gasoline Range Hydrocarbons	590	5.0	"	10	"	"	10/28/15	"	

Date Sampled: 10/28/15 16:30

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 1,2-Dichloroethane-d4		95.6 %	23-173		"	"	10/28/15	"	
Surrogate: Toluene-d8		122 %	20-170		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		146 %	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: Ursula 2
Project Number: [none]
Project Manager: Mark Longhurst

Reported:
10/29/15 06:58

CS04
1510195-04 (Soil)

Summit Scientific

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: 10/28/15 16:35

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
C10-C28 (DRO)	73	50	mg/kg	1	1510246	10/28/15	10/28/15	8015M	

Date Sampled: 10/28/15 16:35

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: o-Terphenyl		109 %	30-150		"	"	"	"	

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: 10/28/15 16:35

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Naphthalene	0.028	0.010	mg/kg	1	1510245	10/28/15	10/28/15	EPA 8260B	
Benzene	ND	0.0020	"	"	"	"	"	"	
Toluene	ND	0.0050	"	"	"	"	"	"	
Ethylbenzene	ND	0.0050	"	"	"	"	"	"	
Xylenes (total)	0.14	0.010	"	"	"	"	"	"	
Gasoline Range Hydrocarbons	570	5.0	"	10	"	"	10/28/15	"	

Date Sampled: 10/28/15 16:35

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 1,2-Dichloroethane-d4		100 %	23-173		"	"	10/28/15	"	
Surrogate: Toluene-d8		117 %	20-170		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		139 %	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: Ursula 2
Project Number: [none]
Project Manager: Mark Longhurst

Reported:
10/29/15 06:58

CS05
1510195-05 (Soil)

Summit Scientific

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: 10/28/15 16:45

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
C10-C28 (DRO)	55	50	mg/kg	1	1510246	10/28/15	10/28/15	8015M	

Date Sampled: 10/28/15 16:45

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

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: 10/28/15 16:45

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Naphthalene	0.051	0.010	mg/kg	1	1510245	10/28/15	10/28/15	EPA 8260B	
Benzene	ND	0.0020	"	"	"	"	"	"	
Toluene	ND	0.0050	"	"	"	"	"	"	
Ethylbenzene	ND	0.0050	"	"	"	"	10/28/15	"	
Xylenes (total)	3.1	0.10	"	10	"	"	10/28/15	"	
Gasoline Range Hydrocarbons	780	5.0	"	"	"	"	10/28/15	"	

Date Sampled: 10/28/15 16:45

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 1,2-Dichloroethane-d4		104 %	23-173		"	"	10/28/15	"	
Surrogate: Toluene-d8		132 %	20-170		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		162 %	21-167		"	"	"	"	

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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: Ursula 2
Project Number: [none]
Project Manager: Mark Longhurst

Reported:
10/29/15 06:58

CS06
1510195-06 (Soil)

Summit Scientific

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **10/28/15 16:50**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
C10-C28 (DRO)	80	50	mg/kg	1	1510246	10/28/15	10/28/15	8015M	

Date Sampled: **10/28/15 16:50**

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: **10/28/15 16:50**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Naphthalene	0.31	0.010	mg/kg	1	1510245	10/28/15	10/29/15	EPA 8260B	
Benzene	0.0050	0.0020	"	"	"	"	"	"	
Toluene	ND	0.0050	"	"	"	"	"	"	
Ethylbenzene	0.22	0.0050	"	"	"	"	"	"	
Xylenes (total)	0.97	0.010	"	"	"	"	"	"	
Gasoline Range Hydrocarbons	860	5.0	"	10	"	"	10/28/15	"	

Date Sampled: **10/28/15 16:50**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
<i>Surrogate: 1,2-Dichloroethane-d4</i>		96.1 %	23-173		"	"	10/29/15	"	
<i>Surrogate: Toluene-d8</i>		134 %	20-170		"	"	"	"	
<i>Surrogate: 4-Bromofluorobenzene</i>		165 %	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: Ursula 2
Project Number: [none]
Project Manager: Mark Longhurst

Reported:
10/29/15 06:58

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 1510246 - EPA 3550A

Blank (1510246-BLK1)

Prepared & Analyzed: 10/28/15

C10-C28 (DRO)	ND	50	mg/kg							
Surrogate: o-Terphenyl	13.2		"	12.2		109	30-150			

LCS (1510246-BS1)

Prepared & Analyzed: 10/28/15

C10-C28 (DRO)	429	50	mg/kg	499		85.9	73-134			
Surrogate: o-Terphenyl	14.2		"	12.2		117	30-150			

Matrix Spike (1510246-MS1)

Source: 1510192-02

Prepared & Analyzed: 10/28/15

C10-C28 (DRO)	507	50	mg/kg	499	42.5	93.2	50-148			
Surrogate: o-Terphenyl	13.6		"	12.2		111	30-150			

Matrix Spike Dup (1510246-MSD1)

Source: 1510192-02

Prepared & Analyzed: 10/28/15

C10-C28 (DRO)	497	50	mg/kg	499	42.5	91.2	50-148	2.02	13	
Surrogate: o-Terphenyl	13.7		"	12.2		112	30-150			

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: Ursula 2
Project Number: [none]
Project Manager: Mark Longhurst

Reported:
10/29/15 06:58

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 1510245 - EPA 5030 Soil MS

Blank (1510245-BLK1)

Prepared & Analyzed: 10/28/15

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>0.0492</i>		<i>"</i>	<i>0.0396</i>		<i>124</i>	<i>23-173</i>			
<i>Surrogate: Toluene-d8</i>	<i>0.0392</i>		<i>"</i>	<i>0.0400</i>		<i>98.1</i>	<i>20-170</i>			
<i>Surrogate: 4-Bromofluorobenzene</i>	<i>0.0386</i>		<i>"</i>	<i>0.0400</i>		<i>96.4</i>	<i>21-167</i>			

LCS (1510245-BS1)

Prepared & Analyzed: 10/28/15

Naphthalene	ND	0.010	mg/kg				66-138			
Benzene	0.0776	0.0020	"	0.100		77.6	58-130			
Toluene	0.0856	0.0050	"	0.100		85.6	61-134			
Ethylbenzene	0.101	0.0050	"	0.0992		101	74-139			
m,p-Xylene	0.198	0.010	"	0.200		99.0	73-137			
o-Xylene	0.0999	0.0050	"	0.0984		102	73-141			
Xylenes (total)	0.298	0.010	"				0-200			
Gasoline Range Hydrocarbons	2.66	0.50	"				30-150			
<i>Surrogate: 1,2-Dichloroethane-d4</i>	<i>0.0472</i>		<i>"</i>	<i>0.0396</i>		<i>119</i>	<i>23-173</i>			
<i>Surrogate: Toluene-d8</i>	<i>0.0391</i>		<i>"</i>	<i>0.0400</i>		<i>97.7</i>	<i>20-170</i>			
<i>Surrogate: 4-Bromofluorobenzene</i>	<i>0.0377</i>		<i>"</i>	<i>0.0400</i>		<i>94.4</i>	<i>21-167</i>			

Matrix Spike (1510245-MS1)

Source: 1510192-02

Prepared & Analyzed: 10/28/15

Naphthalene	0.0353	0.010	mg/kg		0.0632		10-158			
Benzene	0.0800	0.0020	"	0.100	ND	80.0	30-131			
Toluene	0.0923	0.0050	"	0.100	0.00382	88.5	30-134			
Ethylbenzene	0.103	0.0050	"	0.0992	ND	104	22-153			
m,p-Xylene	0.295	0.010	"	0.200	0.143	76.4	10-159			
o-Xylene	0.156	0.0050	"	0.0984	0.0868	70.8	31-151			
Xylenes (total)	0.452	0.010	"		0.229		30-160			
Gasoline Range Hydrocarbons	4.04	0.50	"		12.9		30-160			
<i>Surrogate: 1,2-Dichloroethane-d4</i>	<i>0.0480</i>		<i>"</i>	<i>0.0396</i>		<i>121</i>	<i>23-173</i>			
<i>Surrogate: Toluene-d8</i>	<i>0.0398</i>		<i>"</i>	<i>0.0400</i>		<i>99.4</i>	<i>20-170</i>			
<i>Surrogate: 4-Bromofluorobenzene</i>	<i>0.0393</i>		<i>"</i>	<i>0.0400</i>		<i>98.2</i>	<i>21-167</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
1775 Sherman St. STE. 3000
Denver CO, 80203

Project: Ursula 2
Project Number: [none]
Project Manager: Mark Longhurst

Reported:
10/29/15 06:58

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 1510245 - EPA 5030 Soil MS

Matrix Spike Dup (1510245-MSD1)		Source: 1510192-02			Prepared & Analyzed: 10/28/15						
Naphthalene	0.0824	0.010	mg/kg		0.0632		10-158	80.1	42		QM-07
Benzene	0.0802	0.0020	"	0.100	ND	80.2	30-131	0.337	34		
Toluene	0.0927	0.0050	"	0.100	0.00382	88.9	30-134	0.454	30		
Ethylbenzene	0.104	0.0050	"	0.0992	ND	105	22-153	0.899	24		
m,p-Xylene	0.413	0.010	"	0.200	0.143	135	10-159	33.2	68		
o-Xylene	0.226	0.0050	"	0.0984	0.0868	141	31-151	36.2	38		
Xylenes (total)	0.638	0.010	"		0.229		30-160	34.2	30		QM-07
Gasoline Range Hydrocarbons	4.92	0.50	"		12.9		30-160	19.6	30		
Surrogate: 1,2-Dichloroethane-d4	0.0492		"	0.0396		124	23-173				
Surrogate: Toluene-d8	0.0422		"	0.0400		105	20-170				
Surrogate: 4-Bromofluorobenzene	0.0428		"	0.0400		107	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: Ursula 2
Project Number: [none]
Project Manager: Mark Longhurst

Reported:
10/29/15 06:58

Notes and Definitions

QM-07 The spike recovery was outside acceptance limits for the MS and/or MSD. The batch was accepted based on acceptable LCS/LCSD recovery.

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

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.

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

Summit Scientific

741 Corporate Circle – Suite I ♦ Golden, Colorado 80401

303.277.9310 - laboratory ♦ 303.277.9531 - fax

October 30, 2015

Mark Longhurst
PDC Energy
1775 Sherman St. STE. 3000
Denver, CO 80203
RE: Ursula 2

Enclosed are the results of analyses for samples received by Summit Scientific on 10/29/15 17:45. 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: Ursula 2
Project Number: [none]
Project Manager: Mark Longhurst

Reported:
10/30/15 06:37

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
GW01	1510205-01	Water	10/29/15 08:45	10/29/15 17:45
GW02	1510205-02	Water	10/29/15 09:01	10/29/15 17:45

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.

Page 2 of 7



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

Project: Ursula 2
Project Number: [none]
Project Manager: Mark Longhurst

Reported:
10/30/15 06:37

GW01
1510205-01 (Water)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: 10/29/15 08:45

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Benzene	1.1	1.0	ug/l	1	1510254	10/29/15	10/29/15	EPA 8260B	
Toluene	ND	1.0	"	"	"	"	"	"	
Ethylbenzene	ND	1.0	"	"	"	"	"	"	
Xylenes (total)	27	1.0	"	"	"	"	"	"	

Date Sampled: 10/29/15 08:45

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 1,2-Dichloroethane-d4		128 %	37-154		"	"	"	"	
Surrogate: Toluene-d8		100 %	45-149		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		102 %	45-146		"	"	"	"	

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: Ursula 2
Project Number: [none]
Project Manager: Mark Longhurst

Reported:
10/30/15 06:37

GW02
1510205-02 (Water)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **10/29/15 09:01**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Benzene	3.2	1.0		ug/l	1	1510254	10/29/15	10/29/15	EPA 8260B	
Toluene	ND	1.0		"	"	"	"	"	"	
Ethylbenzene	16	1.0		"	"	"	"	"	"	
Xylenes (total)	180	1.0		"	"	"	"	"	"	

Date Sampled: **10/29/15 09:01**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Surrogate: 1,2-Dichloroethane-d4		114 %		37-154		"	"	"	"	
Surrogate: Toluene-d8		106 %		45-149		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		97.5 %		45-146		"	"	"	"	

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: Ursula 2
Project Number: [none]
Project Manager: Mark Longhurst

Reported:
10/30/15 06:37

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 1510254 - EPA 5030 Water MS

Blank (1510254-BLK1)

Prepared & Analyzed: 10/29/15

Benzene	ND	1.0	ug/l							
Toluene	ND	1.0	"							
Ethylbenzene	ND	1.0	"							
Xylenes (total)	ND	1.0	"							
Surrogate: 1,2-Dichloroethane-d4	15.1		"	13.2		115	37-154			
Surrogate: Toluene-d8	12.7		"	13.3		95.5	45-149			
Surrogate: 4-Bromofluorobenzene	13.1		"	13.3		98.0	45-146			

LCS (1510254-BS1)

Prepared & Analyzed: 10/29/15

Benzene	34.6	1.0	ug/l	33.3		104	51-132			
Toluene	32.8	1.0	"	33.3		98.3	51-138			
Ethylbenzene	37.8	1.0	"	33.1		114	58-146			
m,p-Xylene	71.3	2.0	"	66.5		107	57-144			
o-Xylene	35.2	1.0	"	32.8		107	53-146			
Surrogate: 1,2-Dichloroethane-d4	15.2		"	13.2		115	37-154			
Surrogate: Toluene-d8	13.0		"	13.3		97.2	45-149			
Surrogate: 4-Bromofluorobenzene	13.0		"	13.3		97.2	45-146			

Matrix Spike (1510254-MS1)

Source: 1510196-01

Prepared & Analyzed: 10/29/15

Benzene	35.0	1.0	ug/l	33.3	ND	105	34-141			
Toluene	33.0	1.0	"	33.3	ND	98.9	27-151			
Ethylbenzene	39.4	1.0	"	33.1	ND	119	29-160			
m,p-Xylene	74.1	2.0	"	66.5	ND	111	20-166			
o-Xylene	36.6	1.0	"	32.8	ND	112	33-159			
Surrogate: 1,2-Dichloroethane-d4	14.8		"	13.2		112	37-154			
Surrogate: Toluene-d8	12.7		"	13.3		95.6	45-149			
Surrogate: 4-Bromofluorobenzene	13.2		"	13.3		99.0	45-146			

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: Ursula 2
Project Number: [none]
Project Manager: Mark Longhurst

Reported:
10/30/15 06:37

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 1510254 - EPA 5030 Water MS

Matrix Spike Dup (1510254-MSD1)	Source: 1510196-01			Prepared & Analyzed: 10/29/15						
Benzene	35.4	1.0	ug/l	33.3	ND	106	34-141	1.22	32	
Toluene	33.4	1.0	"	33.3	ND	100	27-151	1.30	25	
Ethylbenzene	39.0	1.0	"	33.1	ND	118	29-160	1.25	50	
m,p-Xylene	73.7	2.0	"	66.5	ND	111	20-166	0.595	36	
o-Xylene	35.9	1.0	"	32.8	ND	109	33-159	1.93	26	
Surrogate: 1,2-Dichloroethane-d4	15.1		"	13.2		115	37-154			
Surrogate: Toluene-d8	12.9		"	13.3		96.9	45-149			
Surrogate: 4-Bromofluorobenzene	12.9		"	13.3		96.6	45-146			

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: Ursula 2
Project Number: [none]
Project Manager: Mark Longhurst

Reported:
10/30/15 06:37

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

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.

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

Summit Scientific

741 Corporate Circle – Suite I ♦ Golden, Colorado 80401

303.277.9310 - laboratory ♦ 303.277.9531 - fax

November 04, 2015

Mark Longhurst
PDC Energy
1775 Sherman St. STE. 3000
Denver, CO 80203
RE: Ursula 2

Enclosed are the results of analyses for samples received by Summit Scientific on 11/03/15 18:00. 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: Ursula 2
Project Number: [none]
Project Manager: Mark Longhurst

Reported:
11/04/15 07:57

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
SS05@5'	1511012-01	Soil	11/03/15 13:20	11/03/15 18:00
CS01-R	1511012-02	Soil	11/03/15 13:25	11/03/15 18:00
CS02-R	1511012-03	Soil	11/03/15 13:40	11/03/15 18:00
CS03-R	1511012-04	Soil	11/03/15 13:35	11/03/15 18:00
CS04-R	1511012-05	Soil	11/03/15 13:30	11/03/15 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.



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

Project: Ursula 2
Project Number: [none]
Project Manager: Mark Longhurst

Reported:
11/04/15 07:57

SS05@5'
1511012-01 (Soil)

Summit Scientific

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: 11/03/15 13:20

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
C10-C28 (DRO)	400	50	mg/kg	1	1511028	11/03/15	11/03/15	8015M	

Date Sampled: 11/03/15 13:20

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: o-Terphenyl		98.4 %	70-130		"	"	"	"	

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: 11/03/15 13:20

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Naphthalene	2.8	1.0	mg/kg	100	1511027	11/03/15	11/04/15	EPA 8260B	
Benzene	0.0046	0.0020	"	1	"	"	"	"	
Toluene	ND	0.0050	"	"	"	"	11/04/15	"	
Ethylbenzene	0.27	0.0050	"	"	"	"	11/04/15	"	
Xylenes (total)	ND	0.010	"	"	"	"	"	"	
Gasoline Range Hydrocarbons	1700	50	"	100	"	"	11/04/15	"	

Date Sampled: 11/03/15 13:20

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 1,2-Dichloroethane-d4		106 %	23-173		"	"	11/04/15	"	
Surrogate: Toluene-d8		106 %	20-170		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		102 %	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: Ursula 2
Project Number: [none]
Project Manager: Mark Longhurst

Reported:
11/04/15 07:57

CS01-R
1511012-02 (Soil)

Summit Scientific

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: 11/03/15 13:25

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
C10-C28 (DRO)	ND	50	mg/kg	1	1511028	11/03/15	11/03/15	8015M	

Date Sampled: 11/03/15 13:25

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: o-Terphenyl		103 %	70-130		"	"	"	"	

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: 11/03/15 13:25

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Naphthalene	0.031	0.010	mg/kg	1	1511027	11/03/15	11/03/15	EPA 8260B	
Benzene	ND	0.0020	"	"	"	"	"	"	
Toluene	ND	0.0050	"	"	"	"	"	"	
Ethylbenzene	ND	0.0050	"	"	"	"	"	"	
Xylenes (total)	0.069	0.010	"	"	"	"	"	"	
Gasoline Range Hydrocarbons	140	0.50	"	"	"	"	"	"	E

Date Sampled: 11/03/15 13:25

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 1,2-Dichloroethane-d4		103 %	23-173		"	"	"	"	
Surrogate: Toluene-d8		146 %	20-170		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		247 %	21-167		"	"	"	"	S-02

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: Ursula 2
Project Number: [none]
Project Manager: Mark Longhurst

Reported:
11/04/15 07:57

CS02-R
1511012-03 (Soil)

Summit Scientific

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: 11/03/15 13:40

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
C10-C28 (DRO)	ND	50	mg/kg	1	1511028	11/03/15	11/03/15	8015M	

Date Sampled: 11/03/15 13:40

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: o-Terphenyl		94.8 %	70-130		"	"	"	"	

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: 11/03/15 13:40

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Naphthalene	0.030	0.010	mg/kg	1	1511027	11/03/15	11/04/15	EPA 8260B	
Benzene	0.0029	0.0020	"	"	"	"	"	"	
Toluene	ND	0.0050	"	"	"	"	"	"	
Ethylbenzene	ND	0.0050	"	"	"	"	"	"	
Xylenes (total)	0.23	0.010	"	"	"	"	"	"	
Gasoline Range Hydrocarbons	170	0.50	"	"	"	"	"	"	E

Date Sampled: 11/03/15 13:40

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 1,2-Dichloroethane-d4		101 %	23-173		"	"	"	"	
Surrogate: Toluene-d8		162 %	20-170		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		245 %	21-167		"	"	"	"	S-02

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: Ursula 2
Project Number: [none]
Project Manager: Mark Longhurst

Reported:
11/04/15 07:57

CS03-R
1511012-04 (Soil)

Summit Scientific

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: 11/03/15 13:35

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
C10-C28 (DRO)	ND	50	mg/kg	1	1511028	11/03/15	11/03/15	8015M	

Date Sampled: 11/03/15 13:35

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: o-Terphenyl		96.3 %	70-130		"	"	"	"	

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: 11/03/15 13:35

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Naphthalene	0.015	0.010	mg/kg	1	1511027	11/03/15	11/04/15	EPA 8260B	
Benzene	ND	0.0020	"	"	"	"	"	"	
Toluene	ND	0.0050	"	"	"	"	"	"	
Ethylbenzene	ND	0.0050	"	"	"	"	"	"	
Xylenes (total)	0.024	0.010	"	"	"	"	"	"	
Gasoline Range Hydrocarbons	140	0.50	"	"	"	"	"	"	E

Date Sampled: 11/03/15 13:35

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 1,2-Dichloroethane-d4		102 %	23-173		"	"	"	"	
Surrogate: Toluene-d8		145 %	20-170		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		212 %	21-167		"	"	"	"	S-02

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: Ursula 2
Project Number: [none]
Project Manager: Mark Longhurst

Reported:
11/04/15 07:57

CS04-R
1511012-05 (Soil)

Summit Scientific

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: 11/03/15 13:30

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
C10-C28 (DRO)	ND	50	mg/kg	1	1511028	11/03/15	11/04/15	8015M	

Date Sampled: 11/03/15 13:30

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: o-Terphenyl		102 %	70-130		"	"	"	"	

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: 11/03/15 13:30

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Naphthalene	0.049	0.010	mg/kg	1	1511027	11/03/15	11/04/15	EPA 8260B	
Benzene	ND	0.0020	"	"	"	"	"	"	
Toluene	ND	0.0050	"	"	"	"	"	"	
Ethylbenzene	0.0050	0.0050	"	"	"	"	"	"	
Xylenes (total)	0.18	0.010	"	"	"	"	"	"	
Gasoline Range Hydrocarbons	670	5.0	"	10	"	"	11/04/15	"	

Date Sampled: 11/03/15 13:30

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 1,2-Dichloroethane-d4		104 %	23-173		"	"	11/04/15	"	
Surrogate: Toluene-d8		145 %	20-170		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		137 %	21-167		"	"	"	"	

Summit Scientific

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

Project: Ursula 2
Project Number: [none]
Project Manager: Mark Longhurst

Reported:
11/04/15 07:57

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 1511028 - EPA 3550A

Blank (1511028-BLK1)

Prepared: 11/03/15 Analyzed: 11/04/15

C10-C28 (DRO) ND 50 mg/kg

Surrogate: o-Terphenyl 11.8 " 12.2 96.4 70-130

LCS (1511028-BS1)

Prepared: 11/03/15 Analyzed: 11/04/15

C10-C28 (DRO) 497 50 mg/kg 499 99.5 50-150

Surrogate: o-Terphenyl 11.8 " 12.2 96.7 70-130

Matrix Spike (1511028-MS1)

Source: 1511010-01

Prepared: 11/03/15 Analyzed: 11/04/15

C10-C28 (DRO) 537 50 mg/kg 462 124 89.4 50-150

Surrogate: o-Terphenyl 11.6 " 11.3 103 70-130

Matrix Spike Dup (1511028-MSD1)

Source: 1511010-01

Prepared: 11/03/15 Analyzed: 11/04/15

C10-C28 (DRO) 507 50 mg/kg 459 124 83.5 50-150 5.74 20

Surrogate: o-Terphenyl 11.0 " 11.2 98.2 70-130

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: Ursula 2
Project Number: [none]
Project Manager: Mark Longhurst

Reported:
11/04/15 07:57

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 1511027 - EPA 5030 Soil MS

Blank (1511027-BLK1)

Prepared & Analyzed: 11/03/15

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>0.0479</i>		<i>"</i>	<i>0.0396</i>		<i>121</i>	<i>23-173</i>			
<i>Surrogate: Toluene-d8</i>	<i>0.0392</i>		<i>"</i>	<i>0.0400</i>		<i>97.9</i>	<i>20-170</i>			
<i>Surrogate: 4-Bromofluorobenzene</i>	<i>0.0393</i>		<i>"</i>	<i>0.0400</i>		<i>98.2</i>	<i>21-167</i>			

LCS (1511027-BS1)

Prepared & Analyzed: 11/03/15

Naphthalene	ND	0.010	mg/kg				66-138			
Benzene	0.0770	0.0020	"	0.100		77.0	58-130			
Toluene	0.0863	0.0050	"	0.100		86.3	61-134			
Ethylbenzene	0.104	0.0050	"	0.0992		104	74-139			
m,p-Xylene	0.204	0.010	"	0.200		102	73-137			
o-Xylene	0.103	0.0050	"	0.0984		105	73-141			
Xylenes (total)	0.308	0.010	"				0-200			
Gasoline Range Hydrocarbons	2.70	0.50	"				30-150			
<i>Surrogate: 1,2-Dichloroethane-d4</i>	<i>0.0472</i>		<i>"</i>	<i>0.0396</i>		<i>119</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>0.0386</i>		<i>"</i>	<i>0.0400</i>		<i>96.6</i>	<i>21-167</i>			

Matrix Spike (1511027-MS1)

Source: 1511010-01

Prepared: 11/03/15 Analyzed: 11/04/15

Naphthalene	ND	0.010	mg/kg		ND		10-158			
Benzene	0.0775	0.0020	"	0.0956	ND	81.1	30-131			
Toluene	0.0857	0.0050	"	0.0956	ND	89.6	30-134			
Ethylbenzene	0.103	0.0050	"	0.0948	ND	108	22-153			
m,p-Xylene	0.202	0.010	"	0.191	ND	106	10-159			
o-Xylene	0.101	0.0050	"	0.0941	ND	107	31-151			
Xylenes (total)	0.303	0.010	"		0.00		30-160			
Gasoline Range Hydrocarbons	2.34	0.50	"		0.604		30-160			
<i>Surrogate: 1,2-Dichloroethane-d4</i>	<i>0.0468</i>		<i>"</i>	<i>0.0379</i>		<i>124</i>	<i>23-173</i>			
<i>Surrogate: Toluene-d8</i>	<i>0.0371</i>		<i>"</i>	<i>0.0382</i>		<i>97.0</i>	<i>20-170</i>			
<i>Surrogate: 4-Bromofluorobenzene</i>	<i>0.0364</i>		<i>"</i>	<i>0.0382</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: Ursula 2
Project Number: [none]
Project Manager: Mark Longhurst

Reported:
11/04/15 07:57

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 1511027 - EPA 5030 Soil MS

Matrix Spike Dup (1511027-MSD1)		Source: 1511010-01			Prepared: 11/03/15		Analyzed: 11/04/15			
Naphthalene	ND	0.010	mg/kg		ND		10-158			42
Benzene	0.0895	0.0020	"	0.113	ND	79.3	30-131	14.4		34
Toluene	0.101	0.0050	"	0.113	ND	89.1	30-134	15.9		30
Ethylbenzene	0.119	0.0050	"	0.112	ND	106	22-153	14.9		24
m,p-Xylene	0.234	0.010	"	0.225	ND	104	10-159	14.7		68
o-Xylene	0.118	0.0050	"	0.111	ND	106	31-151	15.9		38
Xylenes (total)	0.352	0.010	"		0.00		30-160	15.1		30
Gasoline Range Hydrocarbons	2.29	0.50	"		0.604		30-160	2.03		30
Surrogate: 1,2-Dichloroethane-d4	0.0575		"	0.0447		129	23-173			
Surrogate: Toluene-d8	0.0445		"	0.0451		98.5	20-170			
Surrogate: 4-Bromofluorobenzene	0.0432		"	0.0451		95.8	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: Ursula 2
Project Number: [none]
Project Manager: Mark Longhurst

Reported:
11/04/15 07:57

Notes and Definitions

S-02 The surrogate recovery for this sample cannot be accurately quantified due to interference from coeluting organic compounds present in the sample extract.

E The concentration indicated for this analyte is an estimated value above the calibration range of the instrument.

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

November 05, 2015

Mark Longhurst
PDC Energy
1775 Sherman St. STE. 3000
Denver, CO 80203
RE: Ursula 2

Enclosed are the results of analyses for samples received by Summit Scientific on 11/04/15 17:30. 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: Ursula 2
Project Number: [none]
Project Manager: Mark Longhurst

Reported:
11/05/15 15:59

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
CS04R2	1511028-01	Soil	11/04/15 11:05	11/04/15 17:30
CS05R	1511028-02	Soil	11/04/15 11:15	11/04/15 17:30
CS06R	1511028-03	Soil	11/04/15 11:25	11/04/15 17:30
CS07R	1511028-04	Soil	11/04/15 11:35	11/04/15 17:30

Summit Scientific

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

Project: Ursula 2
Project Number: [none]
Project Manager: Mark Longhurst

Reported:
11/05/15 15:59

CS04R2
1511028-01 (Soil)

Summit Scientific

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: 11/04/15 11:05

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
C10-C28 (DRO)	ND	50	mg/kg	1	1511045	11/04/15	11/04/15	8015M	

Date Sampled: 11/04/15 11:05

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: o-Terphenyl		117 %	70-130		"	"	"	"	

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: 11/04/15 11:05

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Naphthalene	0.12	0.010	mg/kg	1	1511043	11/04/15	11/04/15	EPA 8260B	
Benzene	ND	0.0020	"	"	"	"	"	"	
Toluene	ND	0.0050	"	"	"	"	"	"	
Ethylbenzene	0.028	0.0050	"	"	"	"	"	"	
Xylenes (total)	0.66	0.010	"	"	"	"	"	"	
Gasoline Range Hydrocarbons	250	5.0	"	10	"	"	11/04/15	"	

Date Sampled: 11/04/15 11:05

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 1,2-Dichloroethane-d4		109 %	23-173		"	"	11/04/15	"	
Surrogate: Toluene-d8		68.6 %	20-170		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		192 %	21-167		"	"	"	"	S-02

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: Ursula 2
Project Number: [none]
Project Manager: Mark Longhurst

Reported:
11/05/15 15:59

CS05R
1511028-02 (Soil)

Summit Scientific

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: 11/04/15 11:15

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
C10-C28 (DRO)	ND	50	mg/kg	1	1511045	11/04/15	11/04/15	8015M	

Date Sampled: 11/04/15 11:15

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: o-Terphenyl		118 %	70-130		"	"	"	"	

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: 11/04/15 11:15

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Naphthalene	0.037	0.010	mg/kg	1	1511043	11/04/15	11/04/15	EPA 8260B	
Benzene	ND	0.0020	"	"	"	"	"	"	
Toluene	ND	0.0050	"	"	"	"	"	"	
Ethylbenzene	ND	0.0050	"	"	"	"	"	"	
Xylenes (total)	0.12	0.010	"	"	"	"	"	"	
Gasoline Range Hydrocarbons	240	5.0	"	10	"	"	11/04/15	"	

Date Sampled: 11/04/15 11:15

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 1,2-Dichloroethane-d4		104 %	23-173		"	"	11/04/15	"	
Surrogate: Toluene-d8		70.3 %	20-170		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		215 %	21-167		"	"	"	"	S-02

Summit Scientific

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

Project: Ursula 2
Project Number: [none]
Project Manager: Mark Longhurst

Reported:
11/05/15 15:59

CS06R
1511028-03 (Soil)

Summit Scientific

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: 11/04/15 11:25

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
C10-C28 (DRO)	ND	50	mg/kg	1	1511045	11/04/15	11/04/15	8015M	

Date Sampled: 11/04/15 11:25

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: o-Terphenyl		115 %	70-130		"	"	"	"	

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: 11/04/15 11:25

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Naphthalene	0.060	0.010	mg/kg	1	1511043	11/04/15	11/04/15	EPA 8260B	
Benzene	ND	0.0020	"	"	"	"	"	"	
Toluene	ND	0.0050	"	"	"	"	"	"	
Ethylbenzene	0.012	0.0050	"	"	"	"	"	"	
Xylenes (total)	0.30	0.010	"	"	"	"	"	"	
Gasoline Range Hydrocarbons	250	5.0	"	10	"	"	11/04/15	"	

Date Sampled: 11/04/15 11:25

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 1,2-Dichloroethane-d4		107 %	23-173		"	"	11/04/15	"	
Surrogate: Toluene-d8		69.1 %	20-170		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		225 %	21-167		"	"	"	"	S-02

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: Ursula 2
Project Number: [none]
Project Manager: Mark Longhurst

Reported:
11/05/15 15:59

CS07R
1511028-04 (Soil)

Summit Scientific

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: 11/04/15 11:35

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
C10-C28 (DRO)	ND	50	mg/kg	1	1511045	11/04/15	11/04/15	8015M	

Date Sampled: 11/04/15 11:35

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: o-Terphenyl		114 %	70-130		"	"	"	"	

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: 11/04/15 11:35

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Naphthalene	0.034	0.010	mg/kg	1	1511043	11/04/15	11/04/15	EPA 8260B	
Benzene	ND	0.0020	"	"	"	"	"	"	
Toluene	ND	0.0050	"	"	"	"	"	"	
Ethylbenzene	ND	0.0050	"	"	"	"	"	"	
Xylenes (total)	0.14	0.010	"	"	"	"	"	"	
Gasoline Range Hydrocarbons	230	5.0	"	10	"	"	11/04/15	"	

Date Sampled: 11/04/15 11:35

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 1,2-Dichloroethane-d4		107 %	23-173		"	"	11/04/15	"	
Surrogate: Toluene-d8		74.3 %	20-170		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		212 %	21-167		"	"	"	"	S-02

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: Ursula 2
Project Number: [none]
Project Manager: Mark Longhurst

Reported:
11/05/15 15:59

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 1511045 - EPA 3550A

Blank (1511045-BLK1)

Prepared: 11/04/15 Analyzed: 11/05/15

C10-C28 (DRO)	ND	50	mg/kg
C28-C36 (ORO)	ND	50	"

Surrogate: o-Terphenyl	14.1	"	12.2	115	70-130
------------------------	------	---	------	-----	--------

LCS (1511045-BS1)

Prepared: 11/04/15 Analyzed: 11/05/15

C10-C28 (DRO)	484	50	mg/kg
Surrogate: o-Terphenyl	14.2	"	12.2

Surrogate: o-Terphenyl	14.2	"	12.2	117	70-130
------------------------	------	---	------	-----	--------

Matrix Spike (1511045-MS1)

Source: 1511028-01

Prepared: 11/04/15 Analyzed: 11/05/15

C10-C28 (DRO)	495	50	mg/kg
Surrogate: o-Terphenyl	12.9	"	11.3

Surrogate: o-Terphenyl	12.9	"	11.3	114	70-130
------------------------	------	---	------	-----	--------

Matrix Spike Dup (1511045-MSD1)

Source: 1511028-01

Prepared: 11/04/15 Analyzed: 11/05/15

C10-C28 (DRO)	510	50	mg/kg	460	47.0	101	50-150	2.97	20
Surrogate: o-Terphenyl	13.1	"	11.3	117	70-130				

Surrogate: o-Terphenyl	13.1	"	11.3	117	70-130
------------------------	------	---	------	-----	--------

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: Ursula 2
Project Number: [none]
Project Manager: Mark Longhurst

Reported:
11/05/15 15:59

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 1511043 - EPA 5030 Soil MS

Blank (1511043-BLK1)

Prepared: 11/04/15 Analyzed: 11/05/15

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>0.0499</i>		<i>"</i>	<i>0.0396</i>		<i>126</i>	<i>23-173</i>			
<i>Surrogate: Toluene-d8</i>	<i>0.0395</i>		<i>"</i>	<i>0.0400</i>		<i>98.7</i>	<i>20-170</i>			
<i>Surrogate: 4-Bromofluorobenzene</i>	<i>0.0384</i>		<i>"</i>	<i>0.0400</i>		<i>95.9</i>	<i>21-167</i>			

LCS (1511043-BS1)

Prepared: 11/04/15 Analyzed: 11/05/15

Naphthalene	ND	0.010	mg/kg				66-138			
Benzene	0.0815	0.0020	"	0.100		81.5	58-130			
Toluene	0.0904	0.0050	"	0.100		90.4	61-134			
Ethylbenzene	0.105	0.0050	"	0.0992		105	74-139			
m,p-Xylene	0.205	0.010	"	0.200		103	73-137			
o-Xylene	0.103	0.0050	"	0.0984		104	73-141			
Xylenes (total)	0.308	0.010	"				0-200			
Gasoline Range Hydrocarbons	2.74	0.50	"				30-150			
<i>Surrogate: 1,2-Dichloroethane-d4</i>	<i>0.0495</i>		<i>"</i>	<i>0.0396</i>		<i>125</i>	<i>23-173</i>			
<i>Surrogate: Toluene-d8</i>	<i>0.0399</i>		<i>"</i>	<i>0.0400</i>		<i>99.8</i>	<i>20-170</i>			
<i>Surrogate: 4-Bromofluorobenzene</i>	<i>0.0386</i>		<i>"</i>	<i>0.0400</i>		<i>96.4</i>	<i>21-167</i>			

Matrix Spike (1511043-MS1)

Source: 1511028-01

Prepared: 11/04/15 Analyzed: 11/05/15

Naphthalene	0.0112	0.010	mg/kg		0.123		10-158			
Benzene	0.0719	0.0020	"	0.0907	ND	79.2	30-131			
Toluene	0.0741	0.0050	"	0.0907	ND	81.7	30-134			
Ethylbenzene	0.0858	0.0050	"	0.0900	0.0281	64.1	22-153			
m,p-Xylene	0.184	0.010	"	0.181	0.646	NR	10-159			
o-Xylene	0.0974	0.0050	"	0.0893	0.0149	92.4	31-151			
Xylenes (total)	0.282	0.010	"		0.661		30-160			
Gasoline Range Hydrocarbons	56.3	0.50	"		247		30-160			
<i>Surrogate: 1,2-Dichloroethane-d4</i>	<i>0.0430</i>		<i>"</i>	<i>0.0359</i>		<i>120</i>	<i>23-173</i>			
<i>Surrogate: Toluene-d8</i>	<i>0.0522</i>		<i>"</i>	<i>0.0363</i>		<i>144</i>	<i>20-170</i>			
<i>Surrogate: 4-Bromofluorobenzene</i>	<i>0.0202</i>		<i>"</i>	<i>0.0363</i>		<i>55.6</i>	<i>21-167</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
1775 Sherman St. STE. 3000
Denver CO, 80203

Project: Ursula 2
Project Number: [none]
Project Manager: Mark Longhurst

Reported:
11/05/15 15:59

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 1511043 - EPA 5030 Soil MS

Matrix Spike Dup (1511043-MSD1)		Source: 1511028-01			Prepared: 11/04/15		Analyzed: 11/05/15			
Naphthalene	0.0145	0.010	mg/kg		0.123		10-158	25.5	42	
Benzene	0.0673	0.0020	"	0.0859	ND	78.4	30-131	6.58	34	
Toluene	0.0691	0.0050	"	0.0859	ND	80.5	30-134	6.95	30	
Ethylbenzene	0.0816	0.0050	"	0.0852	0.0281	62.8	22-153	5.03	24	
m,p-Xylene	0.193	0.010	"	0.171	0.646	NR	10-159	4.64	68	
o-Xylene	0.0930	0.0050	"	0.0845	0.0149	92.4	31-151	4.64	38	
Xylenes (total)	0.286	0.010	"		0.661		30-160	1.52	30	
Gasoline Range Hydrocarbons	66.8	0.50	"		247		30-160	17.0	30	
Surrogate: 1,2-Dichloroethane-d4	0.0405		"	0.0340		119	23-173			
Surrogate: Toluene-d8	0.0516		"	0.0344		150	20-170			
Surrogate: 4-Bromofluorobenzene	0.0154		"	0.0344		44.9	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: Ursula 2
Project Number: [none]
Project Manager: Mark Longhurst

Reported:
11/05/15 15:59

Notes and Definitions

S-02 The surrogate recovery for this sample cannot be accurately quantified due to interference from coeluting organic compounds present in the sample extract.

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

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.

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

Summit Scientific

741 Corporate Circle – Suite I ♦ Golden, Colorado 80401

303.277.9310 - laboratory ♦ 303.277.9531 - fax

November 07, 2015

Mark Longhurst
PDC Energy
1775 Sherman St. STE. 3000
Denver, CO 80203
RE: Ursula 2

Enclosed are the results of analyses for samples received by Summit Scientific on 11/05/15 17:00. 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: Ursula 2
Project Number: [none]
Project Manager: Mark Longhurst

Reported:
11/07/15 16:07

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
CS08	1511037-01	Soil	11/05/15 15:25	11/05/15 17:00
CS09	1511037-02	Soil	11/05/15 15:45	11/05/15 17:00

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.

Page 2 of 8



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

Project: Ursula 2
Project Number: [none]
Project Manager: Mark Longhurst

Reported:
11/07/15 16:07

CS08
1511037-01 (Soil)

Summit Scientific

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: 11/05/15 15:25

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
C10-C28 (DRO)	ND	50	mg/kg	1	1511051	11/05/15	11/05/15	8015M	

Date Sampled: 11/05/15 15:25

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: o-Terphenyl		110 %	70-130		"	"	"	"	

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: 11/05/15 15:25

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Naphthalene	0.14	0.010	mg/kg	1	1511050	11/05/15	11/05/15	EPA 8260B	
Benzene	ND	0.0020	"	"	"	"	"	"	
Toluene	ND	0.0050	"	"	"	"	"	"	
Ethylbenzene	0.090	0.0050	"	"	"	"	"	"	
Xylenes (total)	1.0	0.010	"	"	"	"	"	"	
Gasoline Range Hydrocarbons	200	5.0	"	10	"	"	11/05/15	"	

Date Sampled: 11/05/15 15:25

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 1,2-Dichloroethane-d4		120 %	23-173		"	"	11/05/15	"	
Surrogate: Toluene-d8		144 %	20-170		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		116 %	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: Ursula 2
Project Number: [none]
Project Manager: Mark Longhurst

Reported:
11/07/15 16:07

CS09
1511037-02 (Soil)

Summit Scientific

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: 11/05/15 15:45

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
C10-C28 (DRO)	150	50	mg/kg	1	1511051	11/05/15	11/05/15	8015M	

Date Sampled: 11/05/15 15:45

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: o-Terphenyl		101 %	70-130		"	"	"	"	

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: 11/05/15 15:45

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Naphthalene	2.7	0.10	mg/kg	10	1511050	11/05/15	11/05/15	EPA 8260B	
Benzene	0.21	0.0020	"	1	"	"	"	"	
Toluene	0.36	0.0050	"	"	"	"	"	"	
Ethylbenzene	1.1	0.050	"	10	"	"	11/05/15	"	
Xylenes (total)	0.31	0.010	"	1	"	"	11/05/15	"	
Gasoline Range Hydrocarbons	390	50	"	100	"	"	11/05/15	"	

Date Sampled: 11/05/15 15:45

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 1,2-Dichloroethane-d4		94.8 %	23-173		"	"	11/05/15	"	
Surrogate: Toluene-d8		119 %	20-170		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		110 %	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: Ursula 2
Project Number: [none]
Project Manager: Mark Longhurst

Reported:
11/07/15 16:07

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 1511051 - EPA 3550A

Blank (1511051-BLK1)

Prepared: 11/05/15 Analyzed: 11/06/15

C10-C28 (DRO)	ND	50	mg/kg
C28-C36 (ORO)	ND	50	"

Surrogate: o-Terphenyl	13.5	"	12.2	111	70-130
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LCS (1511051-BS1)

Prepared: 11/05/15 Analyzed: 11/06/15

C10-C28 (DRO)	497	50	mg/kg
C28-C36 (ORO)	ND	50	"

Surrogate: o-Terphenyl	13.6	"	12.2	111	70-130
------------------------	------	---	------	-----	--------

Matrix Spike (1511051-MS1)

Source: 1511037-01

Prepared: 11/05/15 Analyzed: 11/06/15

C10-C28 (DRO)	534	50	mg/kg
C28-C36 (ORO)	ND	50	"

Surrogate: o-Terphenyl	14.3	"	11.8	121	70-130
------------------------	------	---	------	-----	--------

Matrix Spike Dup (1511051-MSD1)

Source: 1511037-01

Prepared: 11/05/15 Analyzed: 11/06/15

C10-C28 (DRO)	492	50	mg/kg	472	43.0	95.3	50-150	8.15	20
C28-C36 (ORO)	ND	50	"	ND	43.0	95.3	50-150	8.15	20

Surrogate: o-Terphenyl	11.6	"	11.5	101	70-130
------------------------	------	---	------	-----	--------

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: Ursula 2
Project Number: [none]
Project Manager: Mark Longhurst

Reported:
11/07/15 16:07

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 1511050 - EPA 5030 Soil MS

Blank (1511050-BLK1)

Prepared: 11/05/15 Analyzed: 11/06/15

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	"							
Surrogate: 1,2-Dichloroethane-d4	0.0380		"	0.0396	95.8	23-173				
Surrogate: Toluene-d8	0.0376		"	0.0400	94.1	20-170				
Surrogate: 4-Bromofluorobenzene	0.0380		"	0.0400	95.0	21-167				

LCS (1511050-BS1)

Prepared: 11/05/15 Analyzed: 11/06/15

Naphthalene	ND	0.010	mg/kg				66-138			
Benzene	0.191	0.0020	"	0.175	109	58-130				
Toluene	0.180	0.0050	"	0.175	103	61-134				
Ethylbenzene	0.194	0.0050	"	0.174	112	74-139				
m,p-Xylene	0.368	0.010	"	0.349	105	73-137				
o-Xylene	0.185	0.0050	"	0.172	108	73-141				
Xylenes (total)	0.553	0.010	"			0-200				
Gasoline Range Hydrocarbons	4.30	0.50	"			30-150				
Surrogate: 1,2-Dichloroethane-d4	0.0405		"	0.0396	102	23-173				
Surrogate: Toluene-d8	0.0397		"	0.0400	99.2	20-170				
Surrogate: 4-Bromofluorobenzene	0.0385		"	0.0400	96.2	21-167				

Matrix Spike (1511050-MS1)

Source: 1511037-01

Prepared: 11/05/15 Analyzed: 11/06/15

Naphthalene	0.115	0.010	mg/kg		0.137		10-158			
Benzene	0.166	0.0020	"	0.161	ND	103	30-131			
Toluene	0.139	0.0050	"	0.161	ND	86.3	30-134			
Ethylbenzene	0.114	0.0050	"	0.160	0.0898	15.3	22-153			S-02
m,p-Xylene	0.804	0.010	"	0.322	1.04	NR	10-159			S-02
o-Xylene	0.174	0.0050	"	0.159	0.00555	106	31-151			
Xylenes (total)	0.978	0.010	"		1.05		30-160			
Gasoline Range Hydrocarbons	116	0.50	"		195		30-160			E
Surrogate: 1,2-Dichloroethane-d4	0.0357		"	0.0365	97.8	23-173				
Surrogate: Toluene-d8	0.0477		"	0.0369	129	20-170				
Surrogate: 4-Bromofluorobenzene	0.0247		"	0.0369	67.0	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: Ursula 2
Project Number: [none]
Project Manager: Mark Longhurst

Reported:
11/07/15 16:07

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 1511050 - EPA 5030 Soil MS

Matrix Spike Dup (1511050-MSD1)		Source: 1511037-01			Prepared: 11/05/15		Analyzed: 11/06/15			
Naphthalene	0.154	0.010	mg/kg		0.137		10-158	28.8	42	
Benzene	0.182	0.0020	"	0.171	ND	107	30-131	9.47	34	
Toluene	0.157	0.0050	"	0.171	ND	91.9	30-134	12.0	30	
Ethylbenzene	0.140	0.0050	"	0.170	0.0898	29.8	22-153	20.5	24	
m,p-Xylene	0.977	0.010	"	0.341	1.04	NR	10-159	19.4	68	S-02
o-Xylene	0.189	0.0050	"	0.168	0.00555	109	31-151	8.47	38	
Xylenes (total)	1.17	0.010	"		1.05		30-160	17.6	30	
Gasoline Range Hydrocarbons	126	0.50	"		195		30-160	8.86	30	E
Surrogate: 1,2-Dichloroethane-d4	0.0393		"	0.0387		102	23-173			
Surrogate: Toluene-d8	0.0518		"	0.0391		133	20-170			
Surrogate: 4-Bromofluorobenzene	0.0248		"	0.0391		63.5	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: Ursula 2
Project Number: [none]
Project Manager: Mark Longhurst

Reported:
11/07/15 16:07

Notes and Definitions

S-02 The surrogate recovery for this sample cannot be accurately quantified due to interference from coeluting organic compounds present in the sample extract.

E The concentration indicated for this analyte is an estimated value above the calibration range of the instrument.

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

November 10, 2015

Mark Longhurst
PDC Energy
1775 Sherman St. STE. 3000
Denver, CO 80203
RE: Ursula 2

Enclosed are the results of analyses for samples received by Summit Scientific on 11/09/15 07:50. 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: Ursula 2

Project Number: [none]
Project Manager: Mark Longhurst

Reported:
11/10/15 06:02

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
CS09-R	1511062-01	Soil	11/09/15 07:50	11/09/15 07:50

Summit Scientific

151106Z

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

Page 1 of 1

Client: PDC Energy

Address:

City/State/Zip: _____

Phone:

Fax:

Sampler Name:

Math P

Project Manager: Mark Longhurst

E-Mail: Mark.Longhurst@PDCE.com

Project Name: URSULA 2

Project Number:

[illegible]

www.s2scientific.com

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: Ursula 2
Project Number: [none]
Project Manager: Mark Longhurst

Reported:
11/10/15 06:02

CS09-R
1511062-01 (Soil)

Summit Scientific

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: 11/09/15 07:50

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
C10-C28 (DRO)	940	50	mg/kg	1	1511084	11/09/15	11/09/15	8015M	

Date Sampled: 11/09/15 07:50

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: o-Terphenyl		107 %	70-130		"	"	"	"	

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: 11/09/15 07:50

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Naphthalene	0.018	0.010	mg/kg	1	1511083	11/09/15	11/09/15	EPA 8260B	
Benzene	ND	0.0020	"	"	"	"	"	"	
Toluene	ND	0.0050	"	"	"	"	"	"	
Ethylbenzene	0.0086	0.0050	"	"	"	"	"	"	
Xylenes (total)	0.014	0.010	"	"	"	"	"	"	
Gasoline Range Hydrocarbons	150	5.0	"	10	"	"	11/09/15	"	

Date Sampled: 11/09/15 07:50

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 1,2-Dichloroethane-d4		109 %	23-173		"	"	11/09/15	"	
Surrogate: Toluene-d8		121 %	20-170		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		145 %	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: Ursula 2
Project Number: [none]
Project Manager: Mark Longhurst

Reported:
11/10/15 06:02

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 1511084 - EPA 3550A

Blank (1511084-BLK1)

Prepared & Analyzed: 11/09/15

C10-C28 (DRO)	ND	50	mg/kg
C28-C36 (ORO)	ND	50	"

Surrogate: o-Terphenyl	12.5	"	12.2	102	70-130
------------------------	------	---	------	-----	--------

LCS (1511084-BS1)

Prepared & Analyzed: 11/09/15

C10-C28 (DRO)	526	50	mg/kg	499	105	50-150
Surrogate: o-Terphenyl	12.9	"	12.2	106	70-130	

Matrix Spike (1511084-MS1)

Source: 1511065-03

Prepared & Analyzed: 11/09/15

C10-C28 (DRO)	493	50	mg/kg	482	41.9	93.7	50-150
Surrogate: o-Terphenyl	11.8	"	11.8	100	70-130		

Matrix Spike Dup (1511084-MSD1)

Source: 1511065-03

Prepared & Analyzed: 11/09/15

C10-C28 (DRO)	481	50	mg/kg	477	41.9	92.0	50-150	2.62	20
Surrogate: o-Terphenyl	11.6	"	11.7	99.4	70-130				

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: Ursula 2
Project Number: [none]
Project Manager: Mark Longhurst

Reported:
11/10/15 06:02

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 1511083 - EPA 5030 Soil MS

Blank (1511083-BLK1)

Prepared & Analyzed: 11/09/15

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>0.0456</i>		<i>"</i>	<i>0.0396</i>		<i>115</i>	<i>23-173</i>			
<i>Surrogate: Toluene-d8</i>	<i>0.0389</i>		<i>"</i>	<i>0.0400</i>		<i>97.2</i>	<i>20-170</i>			
<i>Surrogate: 4-Bromofluorobenzene</i>	<i>0.0394</i>		<i>"</i>	<i>0.0400</i>		<i>98.6</i>	<i>21-167</i>			

LCS (1511083-BS1)

Prepared & Analyzed: 11/09/15

Naphthalene	ND	0.010	mg/kg				66-138			
Benzene	0.0796	0.0020	"	0.100		79.6	58-130			
Toluene	0.0884	0.0050	"	0.100		88.4	61-134			
Ethylbenzene	0.105	0.0050	"	0.0992		106	74-139			
m,p-Xylene	0.204	0.010	"	0.200		102	73-137			
o-Xylene	0.102	0.0050	"	0.0984		104	73-141			
Xylenes (total)	0.306	0.010	"				0-200			
Gasoline Range Hydrocarbons	2.73	0.50	"				30-150			
<i>Surrogate: 1,2-Dichloroethane-d4</i>	<i>0.0455</i>		<i>"</i>	<i>0.0396</i>		<i>115</i>	<i>23-173</i>			
<i>Surrogate: Toluene-d8</i>	<i>0.0386</i>		<i>"</i>	<i>0.0400</i>		<i>96.6</i>	<i>20-170</i>			
<i>Surrogate: 4-Bromofluorobenzene</i>	<i>0.0379</i>		<i>"</i>	<i>0.0400</i>		<i>94.7</i>	<i>21-167</i>			

Matrix Spike (1511083-MS1)

Source: 1511065-03

Prepared & Analyzed: 11/09/15

Naphthalene	ND	0.010	mg/kg		ND		10-158			
Benzene	0.0762	0.0020	"	0.0933	ND	81.7	30-131			
Toluene	0.0871	0.0050	"	0.0933	0.00444	88.6	30-134			
Ethylbenzene	0.0999	0.0050	"	0.0925	ND	108	22-153			
m,p-Xylene	0.198	0.010	"	0.186	0.00801	102	10-159			
o-Xylene	0.0988	0.0050	"	0.0918	ND	108	31-151			
Xylenes (total)	0.297	0.010	"		0.00801		30-160			
Gasoline Range Hydrocarbons	2.53	0.50	"		0.257		30-160			
<i>Surrogate: 1,2-Dichloroethane-d4</i>	<i>0.0466</i>		<i>"</i>	<i>0.0369</i>		<i>126</i>	<i>23-173</i>			
<i>Surrogate: Toluene-d8</i>	<i>0.0362</i>		<i>"</i>	<i>0.0373</i>		<i>96.9</i>	<i>20-170</i>			
<i>Surrogate: 4-Bromofluorobenzene</i>	<i>0.0364</i>		<i>"</i>	<i>0.0373</i>		<i>97.6</i>	<i>21-167</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
1775 Sherman St. STE. 3000
Denver CO, 80203

Project: Ursula 2
Project Number: [none]
Project Manager: Mark Longhurst

Reported:
11/10/15 06:02

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 1511083 - EPA 5030 Soil MS

Matrix Spike Dup (1511083-MSD1)		Source: 1511065-03			Prepared & Analyzed: 11/09/15					
Naphthalene	ND	0.010	mg/kg		ND		10-158		42	
Benzene	0.0744	0.0020	"	0.0933	ND	79.7	30-131	2.49	34	
Toluene	0.0841	0.0050	"	0.0933	0.00444	85.4	30-134	3.56	30	
Ethylbenzene	0.0978	0.0050	"	0.0925	ND	106	22-153	2.09	24	
m,p-Xylene	0.194	0.010	"	0.186	0.00801	99.9	10-159	1.87	68	
o-Xylene	0.0981	0.0050	"	0.0918	ND	107	31-151	0.767	38	
Xylenes (total)	0.292	0.010	"		0.00801		30-160	1.50	30	
Gasoline Range Hydrocarbons	2.56	0.50	"		0.257		30-160	0.883	30	
Surrogate: 1,2-Dichloroethane-d4	0.0457		"	0.0369		124	23-173			
Surrogate: Toluene-d8	0.0359		"	0.0373		96.3	20-170			
Surrogate: 4-Bromofluorobenzene	0.0362		"	0.0373		97.0	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: Ursula 2
Project Number: [none]
Project Manager: Mark Longhurst

Reported:
11/10/15 06:02

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

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.

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

Summit Scientific

741 Corporate Circle – Suite I ♦ Golden, Colorado 80401

303.277.9310 - laboratory ♦ 303.277.9531 - fax

November 10, 2015

Mark Longhurst
PDC Energy
1775 Sherman St. STE. 3000
Denver, CO 80203
RE: Ursula 2

Enclosed are the results of analyses for samples received by Summit Scientific on 11/09/15 16:30. 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: Ursula 2
Project Number: [none]
Project Manager: Mark Longhurst

Reported:
11/10/15 06:56

SS06@5'
1511064-01 (Soil)

Summit Scientific

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: 11/09/15 08:55

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
C10-C28 (DRO)	320	50	mg/kg	1	1511084	11/09/15	11/09/15	8015M	
C28-C36 (ORO)	ND	50	"	"	"	"	"	"	

Date Sampled: 11/09/15 08:55

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: o-Terphenyl		99.0 %	70-130		"	"	"	"	

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: 11/09/15 08:55

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Naphthalene	0.93	0.10	mg/kg	10	1511083	11/09/15	11/09/15	EPA 8260B	
Benzene	ND	0.0020	"	1	"	"	"	"	
Toluene	ND	0.0050	"	"	"	"	11/09/15	"	
Ethylbenzene	0.021	0.0050	"	"	"	"	11/09/15	"	
Xylenes (total)	0.020	0.010	"	"	"	"	"	"	
Gasoline Range Hydrocarbons	460	5.0	"	10	"	"	11/09/15	"	

Date Sampled: 11/09/15 08:55

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 1,2-Dichloroethane-d4		114 %	23-173		"	"	11/09/15	"	
Surrogate: Toluene-d8		112 %	20-170		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		106 %	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: Ursula 2
Project Number: [none]
Project Manager: Mark Longhurst

Reported:
11/10/15 06:56

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 1511084 - EPA 3550A

Blank (1511084-BLK1)

Prepared & Analyzed: 11/09/15

C10-C28 (DRO)	ND	50	mg/kg
C28-C36 (ORO)	ND	50	"

Surrogate: o-Terphenyl	12.5	"	12.2	102	70-130
------------------------	------	---	------	-----	--------

LCS (1511084-BS1)

Prepared & Analyzed: 11/09/15

C10-C28 (DRO)	526	50	mg/kg	499	105	50-150
Surrogate: o-Terphenyl	12.9	"	12.2	106	70-130	

Matrix Spike (1511084-MS1)

Source: 1511065-03

Prepared & Analyzed: 11/09/15

C10-C28 (DRO)	493	50	mg/kg	482	41.9	93.7	50-150
Surrogate: o-Terphenyl	11.8	"	11.8	100	70-130		

Matrix Spike Dup (1511084-MSD1)

Source: 1511065-03

Prepared & Analyzed: 11/09/15

C10-C28 (DRO)	481	50	mg/kg	477	41.9	92.0	50-150	2.62	20
Surrogate: o-Terphenyl	11.6	"	11.7	99.4	70-130				

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: Ursula 2
Project Number: [none]
Project Manager: Mark Longhurst

Reported:
11/10/15 06:56

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 1511083 - EPA 5030 Soil MS

Blank (1511083-BLK1)

Prepared & Analyzed: 11/09/15

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	"							
Surrogate: 1,2-Dichloroethane-d4	0.0456		"	0.0396		115	23-173			
Surrogate: Toluene-d8	0.0389		"	0.0400		97.2	20-170			
Surrogate: 4-Bromofluorobenzene	0.0394		"	0.0400		98.6	21-167			

LCS (1511083-BS1)

Prepared & Analyzed: 11/09/15

Naphthalene	ND	0.010	mg/kg				66-138			
Benzene	0.0796	0.0020	"	0.100		79.6	58-130			
Toluene	0.0884	0.0050	"	0.100		88.4	61-134			
Ethylbenzene	0.105	0.0050	"	0.0992		106	74-139			
m,p-Xylene	0.204	0.010	"	0.200		102	73-137			
o-Xylene	0.102	0.0050	"	0.0984		104	73-141			
Xylenes (total)	0.306	0.010	"				0-200			
Gasoline Range Hydrocarbons	2.73	0.50	"				30-150			
Surrogate: 1,2-Dichloroethane-d4	0.0455		"	0.0396		115	23-173			
Surrogate: Toluene-d8	0.0386		"	0.0400		96.6	20-170			
Surrogate: 4-Bromofluorobenzene	0.0379		"	0.0400		94.7	21-167			

Matrix Spike (1511083-MS1)

Source: 1511065-03

Prepared & Analyzed: 11/09/15

Naphthalene	ND	0.010	mg/kg		ND		10-158			
Benzene	0.0762	0.0020	"	0.0933	ND	81.7	30-131			
Toluene	0.0871	0.0050	"	0.0933	0.00444	88.6	30-134			
Ethylbenzene	0.0999	0.0050	"	0.0925	ND	108	22-153			
m,p-Xylene	0.198	0.010	"	0.186	0.00801	102	10-159			
o-Xylene	0.0988	0.0050	"	0.0918	ND	108	31-151			
Xylenes (total)	0.297	0.010	"		0.00801		30-160			
Gasoline Range Hydrocarbons	2.53	0.50	"		0.257		30-160			
Surrogate: 1,2-Dichloroethane-d4	0.0466		"	0.0369		126	23-173			
Surrogate: Toluene-d8	0.0362		"	0.0373		96.9	20-170			
Surrogate: 4-Bromofluorobenzene	0.0364		"	0.0373		97.6	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: Ursula 2
Project Number: [none]
Project Manager: Mark Longhurst

Reported:
11/10/15 06:56

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 1511083 - EPA 5030 Soil MS

Matrix Spike Dup (1511083-MSD1)		Source: 1511065-03			Prepared & Analyzed: 11/09/15					
Naphthalene	ND	0.010	mg/kg		ND		10-158		42	
Benzene	0.0744	0.0020	"	0.0933	ND	79.7	30-131	2.49	34	
Toluene	0.0841	0.0050	"	0.0933	0.00444	85.4	30-134	3.56	30	
Ethylbenzene	0.0978	0.0050	"	0.0925	ND	106	22-153	2.09	24	
m,p-Xylene	0.194	0.010	"	0.186	0.00801	99.9	10-159	1.87	68	
o-Xylene	0.0981	0.0050	"	0.0918	ND	107	31-151	0.767	38	
Xylenes (total)	0.292	0.010	"		0.00801		30-160	1.50	30	
Gasoline Range Hydrocarbons	2.56	0.50	"		0.257		30-160	0.883	30	
Surrogate: 1,2-Dichloroethane-d4	0.0457		"	0.0369		124	23-173			
Surrogate: Toluene-d8	0.0359		"	0.0373		96.3	20-170			
Surrogate: 4-Bromofluorobenzene	0.0362		"	0.0373		97.0	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: Ursula 2
Project Number: [none]
Project Manager: Mark Longhurst

Reported:
11/10/15 06:56

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

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.

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

Summit Scientific

741 Corporate Circle – Suite I ♦ Golden, Colorado 80401

303.277.9310 - laboratory ♦ 303.277.9531 - fax

November 16, 2015

Mark Longhurst
PDC Energy
1775 Sherman St. STE. 3000
Denver, CO 80203
RE: Ursula 2

Enclosed are the results of analyses for samples received by Summit Scientific on 11/13/15 16:30. 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: Ursula 2
Project Number: [none]
Project Manager: Mark Longhurst

Reported:
11/16/15 10:04

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
GW-03	1511101-01	Water	11/13/15 09:35	11/13/15 16:30
SS07@6'	1511101-02	Soil	11/13/15 08:45	11/13/15 16:30
CS10	1511101-03	Soil	11/13/15 13:35	11/13/15 16:30
CS11	1511101-04	Soil	11/13/15 13:40	11/13/15 16:30
CS12	1511101-05	Soil	11/13/15 13:45	11/13/15 16:30
CS13	1511101-06	Soil	11/13/15 13:50	11/13/15 16:30

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.

Page 2 of 13



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

Project: Ursula 2
Project Number: [none]
Project Manager: Mark Longhurst

Reported:
11/16/15 10:04

GW-03
1511101-01 (Water)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: 11/13/15 09:35

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Benzene	21	1.0	ug/l	1	1511141	11/13/15	11/13/15	EPA 8260B	
Toluene	ND	1.0	"	"	"	"	"	"	
Ethylbenzene	260	1.0	"	"	"	"	"	"	
Xylenes (total)	3600	100	"	100	"	"	11/13/15	"	

Date Sampled: 11/13/15 09:35

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 1,2-Dichloroethane-d4		96.7 %	37-154		"	"	11/13/15	"	
Surrogate: Toluene-d8		61.2 %	45-149		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		225 %	45-146		"	"	"	"	S-02

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: Ursula 2
Project Number: [none]
Project Manager: Mark Longhurst

Reported:
11/16/15 10:04

SS07@6'
1511101-02 (Soil)

Summit Scientific

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: 11/13/15 08:45

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
C10-C28 (DRO)	ND	50	mg/kg	1	1511138	11/13/15	11/13/15	8015M	

Date Sampled: 11/13/15 08:45

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: o-Terphenyl		102 %	70-130		"	"	"	"	

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: 11/13/15 08:45

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Naphthalene	ND	0.010	mg/kg	1	1511137	11/13/15	11/13/15	EPA 8260B	
Benzene	ND	0.0020	"	"	"	"	"	"	
Toluene	ND	0.0050	"	"	"	"	"	"	
Ethylbenzene	ND	0.0050	"	"	"	"	"	"	
Xylenes (total)	ND	0.010	"	"	"	"	"	"	
Gasoline Range Hydrocarbons	0.92	0.50	"	"	"	"	"	"	

Date Sampled: 11/13/15 08:45

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 1,2-Dichloroethane-d4		113 %	23-173		"	"	"	"	
Surrogate: Toluene-d8		98.1 %	20-170		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		100 %	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: Ursula 2
Project Number: [none]
Project Manager: Mark Longhurst

Reported:
11/16/15 10:04

CS10
1511101-03 (Soil)

Summit Scientific

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: 11/13/15 13:35

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
C10-C28 (DRO)	ND	50	mg/kg	1	1511138	11/13/15	11/13/15	8015M	

Date Sampled: 11/13/15 13:35

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: o-Terphenyl		109 %	70-130		"	"	"	"	

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: 11/13/15 13:35

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Naphthalene	0.083	0.010	mg/kg	1	1511137	11/13/15	11/13/15	EPA 8260B	
Benzene	ND	0.0020	"	"	"	"	"	"	
Toluene	ND	0.0050	"	"	"	"	"	"	
Ethylbenzene	0.0078	0.0050	"	"	"	"	"	"	
Xylenes (total)	0.37	0.010	"	"	"	"	"	"	
Gasoline Range Hydrocarbons	120	5.0	"	10	"	"	"	"	

Date Sampled: 11/13/15 13:35

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 1,2-Dichloroethane-d4		114 %	23-173		"	"	"	"	
Surrogate: Toluene-d8		142 %	20-170		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		189 %	21-167		"	"	"	"	S-02

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: Ursula 2
Project Number: [none]
Project Manager: Mark Longhurst

Reported:
11/16/15 10:04

CS11
1511101-04 (Soil)

Summit Scientific

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: 11/13/15 13:40

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
C10-C28 (DRO)	75	50	mg/kg	1	1511138	11/13/15	11/13/15	8015M	

Date Sampled: 11/13/15 13:40

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: o-Terphenyl		107 %	70-130		"	"	"	"	

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: 11/13/15 13:40

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Naphthalene	0.097	0.010	mg/kg	1	1511137	11/13/15	11/13/15	EPA 8260B	
Benzene	ND	0.0020	"	"	"	"	"	"	
Toluene	ND	0.0050	"	"	"	"	"	"	
Ethylbenzene	0.010	0.0050	"	"	"	"	"	"	
Xylenes (total)	0.54	0.010	"	"	"	"	"	"	
Gasoline Range Hydrocarbons	120	5.0	"	10	"	"	"	"	

Date Sampled: 11/13/15 13:40

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 1,2-Dichloroethane-d4		120 %	23-173		"	"	"	"	
Surrogate: Toluene-d8		147 %	20-170		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		189 %	21-167		"	"	"	"	S-02

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: Ursula 2
Project Number: [none]
Project Manager: Mark Longhurst

Reported:
11/16/15 10:04

CS12
1511101-05 (Soil)

Summit Scientific

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: 11/13/15 13:45

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
C10-C28 (DRO)	ND	50	mg/kg	1	1511138	11/13/15	11/13/15	8015M	

Date Sampled: 11/13/15 13:45

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: o-Terphenyl		119 %	70-130		"	"	"	"	

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: 11/13/15 13:45

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Naphthalene	0.043	0.010	mg/kg	1	1511137	11/13/15	11/13/15	EPA 8260B	
Benzene	ND	0.0020	"	"	"	"	"	"	
Toluene	ND	0.0050	"	"	"	"	"	"	
Ethylbenzene	0.0062	0.0050	"	"	"	"	"	"	
Xylenes (total)	0.20	0.010	"	"	"	"	"	"	
Gasoline Range Hydrocarbons	91	5.0	"	10	"	"	"	"	

Date Sampled: 11/13/15 13:45

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 1,2-Dichloroethane-d4		96.5 %	23-173		"	"	"	"	
Surrogate: Toluene-d8		129 %	20-170		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		149 %	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: Ursula 2
Project Number: [none]
Project Manager: Mark Longhurst

Reported:
11/16/15 10:04

CS13
1511101-06 (Soil)

Summit Scientific

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: 11/13/15 13:50

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
C10-C28 (DRO)	ND	50	mg/kg	1	1511138	11/13/15	11/13/15	8015M	

Date Sampled: 11/13/15 13:50

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: o-Terphenyl		120 %	70-130		"	"	"	"	

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: 11/13/15 13:50

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Naphthalene	0.079	0.010	mg/kg	1	1511137	11/13/15	11/13/15	EPA 8260B	
Benzene	ND	0.0020	"	"	"	"	"	"	
Toluene	ND	0.0050	"	"	"	"	"	"	
Ethylbenzene	0.016	0.0050	"	"	"	"	"	"	
Xylenes (total)	0.37	0.010	"	"	"	"	"	"	
Gasoline Range Hydrocarbons	86	0.50	"	"	"	"	"	"	

Date Sampled: 11/13/15 13:50

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 1,2-Dichloroethane-d4		97.4 %	23-173		"	"	"	"	
Surrogate: Toluene-d8		121 %	20-170		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		147 %	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: Ursula 2
Project Number: [none]
Project Manager: Mark Longhurst

Reported:
11/16/15 10:04

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 1511138 - EPA 3550A

Blank (1511138-BLK1)

Prepared & Analyzed: 11/13/15

C10-C28 (DRO) ND 50 mg/kg

Surrogate: o-Terphenyl 12.8 " 12.2 105 70-130

LCS (1511138-BS1)

Prepared & Analyzed: 11/13/15

C10-C28 (DRO) 484 50 mg/kg 499 97.0 50-150

Surrogate: o-Terphenyl 12.3 " 12.2 100 70-130

Matrix Spike (1511138-MS1)

Source: 1511101-02

Prepared & Analyzed: 11/13/15

C10-C28 (DRO) 455 45 mg/kg 452 ND 101 50-150

Surrogate: o-Terphenyl 11.2 " 11.1 101 70-130

Matrix Spike Dup (1511138-MSD1)

Source: 1511101-02

Prepared & Analyzed: 11/13/15

C10-C28 (DRO) 457 50 mg/kg 456 ND 100 50-150 0.505 20

Surrogate: o-Terphenyl 11.3 " 11.2 101 70-130

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: Ursula 2
Project Number: [none]
Project Manager: Mark Longhurst

Reported:
11/16/15 10:04

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 1511137 - EPA 5030 Soil MS

Blank (1511137-BLK1)

Prepared & Analyzed: 11/13/15

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>0.0374</i>		<i>"</i>	<i>0.0396</i>		<i>94.3</i>	<i>23-173</i>			
<i>Surrogate: Toluene-d8</i>	<i>0.0381</i>		<i>"</i>	<i>0.0400</i>		<i>95.3</i>	<i>20-170</i>			
<i>Surrogate: 4-Bromofluorobenzene</i>	<i>0.0367</i>		<i>"</i>	<i>0.0400</i>		<i>91.7</i>	<i>21-167</i>			

LCS (1511137-BS1)

Prepared & Analyzed: 11/13/15

Naphthalene	ND	0.010	mg/kg				66-138			
Benzene	0.102	0.0020	"	0.100		102	58-130			
Toluene	0.0994	0.0050	"	0.100		99.4	61-134			
Ethylbenzene	0.114	0.0050	"	0.0992		115	74-139			
m,p-Xylene	0.216	0.010	"	0.200		108	73-137			
o-Xylene	0.104	0.0050	"	0.0984		106	73-141			
Xylenes (total)	0.320	0.010	"				0-200			
Gasoline Range Hydrocarbons	ND	0.50	"				30-150			
<i>Surrogate: 1,2-Dichloroethane-d4</i>	<i>0.0368</i>		<i>"</i>	<i>0.0396</i>		<i>93.0</i>	<i>23-173</i>			
<i>Surrogate: Toluene-d8</i>	<i>0.0386</i>		<i>"</i>	<i>0.0400</i>		<i>96.6</i>	<i>20-170</i>			
<i>Surrogate: 4-Bromofluorobenzene</i>	<i>0.0373</i>		<i>"</i>	<i>0.0400</i>		<i>93.2</i>	<i>21-167</i>			

Matrix Spike (1511137-MS1)

Source: 1511101-02

Prepared & Analyzed: 11/13/15

Naphthalene	ND	0.010	mg/kg		ND		10-158			
Benzene	0.104	0.0020	"	0.0982	ND	106	30-131			
Toluene	0.101	0.0050	"	0.0982	ND	102	30-134			
Ethylbenzene	0.113	0.0050	"	0.0974	ND	116	22-153			
m,p-Xylene	0.213	0.010	"	0.196	ND	108	10-159			
o-Xylene	0.103	0.0050	"	0.0967	ND	107	31-151			
Xylenes (total)	0.316	0.010	"		0.00		30-160			
Gasoline Range Hydrocarbons	ND	0.50	"		0.918		30-160			
<i>Surrogate: 1,2-Dichloroethane-d4</i>	<i>0.0390</i>		<i>"</i>	<i>0.0389</i>		<i>100</i>	<i>23-173</i>			
<i>Surrogate: Toluene-d8</i>	<i>0.0379</i>		<i>"</i>	<i>0.0393</i>		<i>96.5</i>	<i>20-170</i>			
<i>Surrogate: 4-Bromofluorobenzene</i>	<i>0.0368</i>		<i>"</i>	<i>0.0393</i>		<i>93.6</i>	<i>21-167</i>			

Summit Scientific

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

Project: Ursula 2
Project Number: [none]
Project Manager: Mark Longhurst

Reported:
11/16/15 10:04

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 1511137 - EPA 5030 Soil MS

Matrix Spike Dup (1511137-MSD1)				Source: 1511101-02		Prepared & Analyzed: 11/13/15				
Naphthalene	ND	0.010	mg/kg		ND		10-158		42	
Benzene	0.105	0.0020	"	0.0967	ND	109	30-131	1.29	34	
Toluene	0.102	0.0050	"	0.0967	ND	106	30-134	1.50	30	
Ethylbenzene	0.112	0.0050	"	0.0959	ND	116	22-153	1.48	24	
m,p-Xylene	0.212	0.010	"	0.193	ND	110	10-159	0.456	68	
o-Xylene	0.102	0.0050	"	0.0952	ND	108	31-151	0.735	38	
Xylenes (total)	0.314	0.010	"		0.00		30-160	0.547	30	
Gasoline Range Hydrocarbons	ND	0.50	"		0.918		30-160		30	
Surrogate: 1,2-Dichloroethane-d4	0.0393		"	0.0383		103	23-173			
Surrogate: Toluene-d8	0.0378		"	0.0387		97.8	20-170			
Surrogate: 4-Bromofluorobenzene	0.0358		"	0.0387		92.6	21-167			

Batch 1511141 - EPA 5030 Water MS

Blank (1511141-BLK1)				Prepared & Analyzed: 11/13/15						
Benzene	ND	1.0	ug/l							
Toluene	ND	1.0	"							
Ethylbenzene	ND	1.0	"							
Xylenes (total)	ND	1.0	"							
Surrogate: 1,2-Dichloroethane-d4	18.9		"	13.2		143	37-154			
Surrogate: Toluene-d8	13.0		"	13.3		97.5	45-149			
Surrogate: 4-Bromofluorobenzene	13.7		"	13.3		103	45-146			
LCS (1511141-BS1)				Prepared & Analyzed: 11/13/15						
Benzene	28.1	1.0	ug/l	33.3		84.4	51-132			
Toluene	30.4	1.0	"	33.3		91.1	51-138			
Ethylbenzene	34.5	1.0	"	33.1		104	58-146			
m,p-Xylene	67.9	2.0	"	66.5		102	57-144			
o-Xylene	34.4	1.0	"	32.8		105	53-146			
Surrogate: 1,2-Dichloroethane-d4	19.2		"	13.2		146	37-154			
Surrogate: Toluene-d8	13.1		"	13.3		98.0	45-149			
Surrogate: 4-Bromofluorobenzene	13.2		"	13.3		99.1	45-146			

Summit Scientific

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

Project: Ursula 2
Project Number: [none]
Project Manager: Mark Longhurst

Reported:
11/16/15 10:04

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 1511141 - EPA 5030 Water MS

Matrix Spike (1511141-MS1)		Source: 1511100-10			Prepared & Analyzed: 11/13/15						
Benzene	95.9	1.0	ug/l	33.3	51.2	134	34-141				
Toluene	117	1.0	"	33.3	58.6	174	27-151				QM-07
Ethylbenzene	44.5	1.0	"	33.1	5.91	117	29-160				
m,p-Xylene	142	2.0	"	66.5	46.5	144	20-166				
o-Xylene	54.2	1.0	"	32.8	13.0	126	33-159				
Surrogate: 1,2-Dichloroethane-d4	19.5		"	13.2		148	37-154				
Surrogate: Toluene-d8	13.6		"	13.3		102	45-149				
Surrogate: 4-Bromofluorobenzene	13.0		"	13.3		97.7	45-146				

Matrix Spike Dup (1511141-MSD1)		Source: 1511100-10			Prepared & Analyzed: 11/14/15						
Benzene	93.8	1.0	ug/l	33.3	51.2	128	34-141	2.18	32		
Toluene	113	1.0	"	33.3	58.6	164	27-151	2.96	25		QM-07
Ethylbenzene	45.3	1.0	"	33.1	5.91	119	29-160	1.76	50		
m,p-Xylene	145	2.0	"	66.5	46.5	148	20-166	1.97	36		
o-Xylene	55.0	1.0	"	32.8	13.0	128	33-159	1.48	26		
Surrogate: 1,2-Dichloroethane-d4	19.4		"	13.2		147	37-154				
Surrogate: Toluene-d8	13.3		"	13.3		99.8	45-149				
Surrogate: 4-Bromofluorobenzene	12.8		"	13.3		96.0	45-146				

Summit Scientific

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

Project: Ursula 2
Project Number: [none]
Project Manager: Mark Longhurst

Reported:
11/16/15 10:04

Notes and Definitions

S-02 The surrogate recovery for this sample cannot be accurately quantified due to interference from coeluting organic compounds present in the sample extract.

QM-07 The spike recovery was outside acceptance limits for the MS and/or MSD. The batch was accepted based on acceptable LCS/LCSD recovery.

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

November 17, 2015

Mark Longhurst
PDC Energy
1775 Sherman St. STE. 3000
Denver, CO 80203
RE: Ursula 2

Enclosed are the results of analyses for samples received by Summit Scientific on 11/16/15 18:00. 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: Ursula 2
Project Number: [none]
Project Manager: Mark Longhurst

Reported:
11/17/15 06:30

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
CS14	1511128-01	Soil	11/16/15 11:26	11/16/15 18:00
CS15	1511128-02	Soil	11/16/15 11:31	11/16/15 18:00
SS08@6'	1511128-03	Soil	11/16/15 14:31	11/16/15 18:00

Summit Scientific

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

Project: Ursula 2
Project Number: [none]
Project Manager: Mark Longhurst

Reported:
11/17/15 06:30

CS14
1511128-01 (Soil)

Summit Scientific

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: 11/16/15 11:26

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
C10-C28 (DRO)	ND	50	mg/kg	1	1511162	11/16/15	11/16/15	8015M	

Date Sampled: 11/16/15 11:26

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: o-Terphenyl		95.6 %	30-150		"	"	"	"	

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: 11/16/15 11:26

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Naphthalene	ND	0.010	mg/kg	1	1511161	11/16/15	11/16/15	EPA 8260B	
Benzene	ND	0.0020	"	"	"	"	"	"	
Toluene	ND	0.0050	"	"	"	"	"	"	
Ethylbenzene	ND	0.0050	"	"	"	"	"	"	
Xylenes (total)	ND	0.010	"	"	"	"	"	"	
Gasoline Range Hydrocarbons	19	0.50	"	"	"	"	"	"	

Date Sampled: 11/16/15 11:26

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 1,2-Dichloroethane-d4		104 %	23-173		"	"	"	"	
Surrogate: Toluene-d8		103 %	20-170		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		110 %	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: Ursula 2
Project Number: [none]
Project Manager: Mark Longhurst

Reported:
11/17/15 06:30

CS15
1511128-02 (Soil)

Summit Scientific

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: 11/16/15 11:31

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
C10-C28 (DRO)	ND	50	mg/kg	1	1511162	11/16/15	11/16/15	8015M	

Date Sampled: 11/16/15 11:31

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: o-Terphenyl		95.6 %	30-150		"	"	"	"	

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: 11/16/15 11:31

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Naphthalene	ND	0.010	mg/kg	1	1511161	11/16/15	11/16/15	EPA 8260B	
Benzene	ND	0.0020	"	"	"	"	"	"	
Toluene	ND	0.0050	"	"	"	"	"	"	
Ethylbenzene	ND	0.0050	"	"	"	"	"	"	
Xylenes (total)	ND	0.010	"	"	"	"	"	"	
Gasoline Range Hydrocarbons	36	0.50	"	"	"	"	"	"	

Date Sampled: 11/16/15 11:31

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 1,2-Dichloroethane-d4		102 %	23-173		"	"	"	"	
Surrogate: Toluene-d8		112 %	20-170		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		116 %	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: Ursula 2
Project Number: [none]
Project Manager: Mark Longhurst

Reported:
11/17/15 06:30

SS08@6'
1511128-03 (Soil)

Summit Scientific

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: 11/16/15 14:31

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
C10-C28 (DRO)	ND	50	mg/kg	1	1511162	11/16/15	11/17/15	8015M	

Date Sampled: 11/16/15 14:31

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

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: 11/16/15 14:31

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Naphthalene	ND	0.010	mg/kg	1	1511161	11/16/15	11/16/15	EPA 8260B	
Benzene	ND	0.0020	"	"	"	"	"	"	
Toluene	ND	0.0050	"	"	"	"	"	"	
Ethylbenzene	ND	0.0050	"	"	"	"	"	"	
Xylenes (total)	ND	0.010	"	"	"	"	"	"	
Gasoline Range Hydrocarbons	1.7	0.50	"	"	"	"	"	"	

Date Sampled: 11/16/15 14:31

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 1,2-Dichloroethane-d4		102 %	23-173		"	"	"	"	
Surrogate: Toluene-d8		95.5 %	20-170		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		92.9 %	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: Ursula 2
Project Number: [none]
Project Manager: Mark Longhurst

Reported:
11/17/15 06:30

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 1511162 - EPA 3550A

Blank (1511162-BLK1)

Prepared & Analyzed: 11/16/15

C10-C28 (DRO) ND 50 mg/kg

Surrogate: o-Terphenyl 12.2 " 12.2 100 30-150

LCS (1511162-BS1)

Prepared & Analyzed: 11/16/15

C10-C28 (DRO) 572 50 mg/kg 499 115 73-134

Surrogate: o-Terphenyl 12.5 " 12.2 103 30-150

Matrix Spike (1511162-MS1)

Source: 1511126-01

Prepared & Analyzed: 11/16/15

C10-C28 (DRO) 556 50 mg/kg 486 55.7 103 50-148

Surrogate: o-Terphenyl 12.1 " 11.9 101 30-150

Matrix Spike Dup (1511162-MSD1)

Source: 1511126-01

Prepared & Analyzed: 11/16/15

C10-C28 (DRO) 569 50 mg/kg 490 55.7 105 50-148 2.39 13

Surrogate: o-Terphenyl 12.3 " 12.0 103 30-150

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: Ursula 2
Project Number: [none]
Project Manager: Mark Longhurst

Reported:
11/17/15 06:30

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 1511161 - EPA 5030 Soil MS

Blank (1511161-BLK1)

Prepared & Analyzed: 11/16/15

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>0.0384</i>		<i>"</i>	<i>0.0396</i>		<i>97.0</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>0.0380</i>		<i>"</i>	<i>0.0400</i>		<i>95.0</i>	<i>21-167</i>			

LCS (1511161-BS1)

Prepared & Analyzed: 11/16/15

Naphthalene	ND	0.010	mg/kg				66-138			
Benzene	0.0987	0.0020	"	0.100		98.7	58-130			
Toluene	0.0906	0.0050	"	0.100		90.6	61-134			
Ethylbenzene	0.0958	0.0050	"	0.0992		96.6	74-139			
m,p-Xylene	0.180	0.010	"	0.200		90.0	73-137			
o-Xylene	0.0871	0.0050	"	0.0984		88.5	73-141			
Xylenes (total)	0.267	0.010	"				0-200			
Gasoline Range Hydrocarbons	1.91	0.50	"				30-150			
<i>Surrogate: 1,2-Dichloroethane-d4</i>	<i>0.0385</i>		<i>"</i>	<i>0.0396</i>		<i>97.3</i>	<i>23-173</i>			
<i>Surrogate: Toluene-d8</i>	<i>0.0407</i>		<i>"</i>	<i>0.0400</i>		<i>102</i>	<i>20-170</i>			
<i>Surrogate: 4-Bromofluorobenzene</i>	<i>0.0376</i>		<i>"</i>	<i>0.0400</i>		<i>93.9</i>	<i>21-167</i>			

Matrix Spike (1511161-MS1)

Source: 1511126-01

Prepared & Analyzed: 11/16/15

Naphthalene	ND	0.010	mg/kg		ND		10-158			
Benzene	0.0973	0.0020	"	0.0911	ND	107	30-131			
Toluene	0.0889	0.0050	"	0.0911	ND	97.6	30-134			
Ethylbenzene	0.0966	0.0050	"	0.0903	ND	107	22-153			
m,p-Xylene	0.182	0.010	"	0.182	ND	100	10-159			
o-Xylene	0.0884	0.0050	"	0.0896	ND	98.6	31-151			
Xylenes (total)	0.270	0.010	"		0.00		30-160			
Gasoline Range Hydrocarbons	ND	0.50	"		6.57		30-160			
<i>Surrogate: 1,2-Dichloroethane-d4</i>	<i>0.0363</i>		<i>"</i>	<i>0.0361</i>		<i>101</i>	<i>23-173</i>			
<i>Surrogate: Toluene-d8</i>	<i>0.0369</i>		<i>"</i>	<i>0.0364</i>		<i>101</i>	<i>20-170</i>			
<i>Surrogate: 4-Bromofluorobenzene</i>	<i>0.0348</i>		<i>"</i>	<i>0.0364</i>		<i>95.5</i>	<i>21-167</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
1775 Sherman St. STE. 3000
Denver CO, 80203

Project: Ursula 2
Project Number: [none]
Project Manager: Mark Longhurst

Reported:
11/17/15 06:30

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 1511161 - EPA 5030 Soil MS

Matrix Spike Dup (1511161-MSD1)		Source: 1511126-01			Prepared & Analyzed: 11/16/15					
Naphthalene	ND	0.010	mg/kg		ND		10-158		42	
Benzene	0.0964	0.0020	"	0.0899	ND	107	30-131	0.959	34	
Toluene	0.0896	0.0050	"	0.0899	ND	99.6	30-134	0.772	30	
Ethylbenzene	0.0999	0.0050	"	0.0892	ND	112	22-153	3.38	24	
m,p-Xylene	0.188	0.010	"	0.179	ND	105	10-159	3.48	68	
o-Xylene	0.0908	0.0050	"	0.0885	ND	103	31-151	2.67	38	
Xylenes (total)	0.279	0.010	"		0.00		30-160	3.22	30	
Gasoline Range Hydrocarbons	ND	0.50	"		6.57		30-160		30	
Surrogate: 1,2-Dichloroethane-d4	0.0365		"	0.0356		102	23-173			
Surrogate: Toluene-d8	0.0346		"	0.0360		96.3	20-170			
Surrogate: 4-Bromofluorobenzene	0.0336		"	0.0360		93.5	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: Ursula 2
Project Number: [none]
Project Manager: Mark Longhurst

Reported:
11/17/15 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

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.

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

Summit Scientific

741 Corporate Circle – Suite I ♦ Golden, Colorado 80401

303.277.9310 - laboratory ♦ 303.277.9531 - fax

November 18, 2015

Mark Longhurst
PDC Energy
1775 Sherman St. STE. 3000
Denver, CO 80203
RE: Ursula 2

Enclosed are the results of analyses for samples received by Summit Scientific on 11/17/15 17:45. 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: Ursula 2
Project Number: [none]
Project Manager: Mark Longhurst

Reported:
11/18/15 06:23

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
SS09@6'	1511142-01	Soil	11/17/15 15:40	11/17/15 17:45
SS10@6'	1511142-02	Soil	11/17/15 15:50	11/17/15 17:45

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.

Reported:
11/18/15 06:23

Summit Scientific 151142

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

Client: POC

Page 1 of 1

Address:

Project Manager: Mark Longhurst

City/State/Zip: _____

E-Mail: MARK.LONAN@PDC.E.COM

Phone:

Fay:

Project Name: URSULA

Sampler Name: M₂H P

Project Number:

[illegible]

www.s2scientific.com

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: Ursula 2
Project Number: [none]
Project Manager: Mark Longhurst

Reported:
11/18/15 06:23

SS09@6'
1511142-01 (Soil)

Summit Scientific

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: 11/17/15 15:40

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
C10-C28 (DRO)	ND	50	mg/kg	1	1511175	11/17/15	11/17/15	8015M	

Date Sampled: 11/17/15 15:40

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

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: 11/17/15 15:40

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Naphthalene	ND	0.010	mg/kg	1	1511174	11/17/15	11/17/15	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: 11/17/15 15:40

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 1,2-Dichloroethane-d4		118 %	23-173		"	"	"	"	
Surrogate: Toluene-d8		98.6 %	20-170		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		98.0 %	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: Ursula 2
Project Number: [none]
Project Manager: Mark Longhurst

Reported:
11/18/15 06:23

SS10@6'
1511142-02 (Soil)

Summit Scientific

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: 11/17/15 15:50

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
C10-C28 (DRO)	ND	50	mg/kg	1	1511175	11/17/15	11/17/15	8015M	

Date Sampled: 11/17/15 15:50

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: o-Terphenyl		98.2 %	30-150		"	"	"	"	

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: 11/17/15 15:50

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Naphthalene	ND	0.010	mg/kg	1	1511174	11/17/15	11/17/15	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: 11/17/15 15:50

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 1,2-Dichloroethane-d4		122 %	23-173		"	"	"	"	
Surrogate: Toluene-d8		98.4 %	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: Ursula 2
Project Number: [none]
Project Manager: Mark Longhurst

Reported:
11/18/15 06:23

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 1511175 - EPA 3550A

Blank (1511175-BLK1)

Prepared & Analyzed: 11/17/15

C10-C28 (DRO)	ND	50	mg/kg							
Surrogate: o-Terphenyl	12.0		"	12.2		98.0	30-150			

LCS (1511175-BS1)

Prepared & Analyzed: 11/17/15

C10-C28 (DRO)	556	50	mg/kg	499		111	73-134			
Surrogate: o-Terphenyl	12.1		"	12.2		99.6	30-150			

Matrix Spike (1511175-MS1)

Source: 1511140-01

Prepared & Analyzed: 11/17/15

C10-C28 (DRO)	461	50	mg/kg	455	35.5	93.5	50-148			
Surrogate: o-Terphenyl	10.9		"	11.1		98.3	30-150			

Matrix Spike Dup (1511175-MSD1)

Source: 1511140-01

Prepared & Analyzed: 11/17/15

C10-C28 (DRO)	480	50	mg/kg	468	35.5	95.0	50-148	4.02	13	
Surrogate: o-Terphenyl	11.4		"	11.4		99.5	30-150			

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: Ursula 2
Project Number: [none]
Project Manager: Mark Longhurst

Reported:
11/18/15 06:23

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 1511174 - EPA 5030 Soil MS

Blank (1511174-BLK1)

Prepared & Analyzed: 11/17/15

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>0.0375</i>		<i>"</i>	<i>0.0400</i>		<i>93.8</i>	<i>23-173</i>			
<i>Surrogate: Toluene-d8</i>	<i>0.0387</i>		<i>"</i>	<i>0.0400</i>		<i>96.8</i>	<i>20-170</i>			
<i>Surrogate: 4-Bromofluorobenzene</i>	<i>0.0380</i>		<i>"</i>	<i>0.0400</i>		<i>95.1</i>	<i>21-167</i>			

LCS (1511174-BS1)

Prepared & Analyzed: 11/17/15

Naphthalene	ND	0.010	mg/kg				66-138			
Benzene	0.0982	0.0020	"	0.100		98.2	58-130			
Toluene	0.0963	0.0050	"	0.100		96.3	61-134			
Ethylbenzene	0.108	0.0050	"	0.0992		109	74-139			
m,p-Xylene	0.205	0.010	"	0.200		103	73-137			
o-Xylene	0.0995	0.0050	"	0.0984		101	73-141			
Xylenes (total)	0.304	0.010	"				0-200			
Gasoline Range Hydrocarbons	2.17	0.50	"				30-150			
<i>Surrogate: 1,2-Dichloroethane-d4</i>	<i>0.0378</i>		<i>"</i>	<i>0.0400</i>		<i>94.6</i>	<i>23-173</i>			
<i>Surrogate: Toluene-d8</i>	<i>0.0393</i>		<i>"</i>	<i>0.0400</i>		<i>98.3</i>	<i>20-170</i>			
<i>Surrogate: 4-Bromofluorobenzene</i>	<i>0.0380</i>		<i>"</i>	<i>0.0400</i>		<i>94.9</i>	<i>21-167</i>			

Matrix Spike (1511174-MS1)

Source: 1511140-01

Prepared & Analyzed: 11/17/15

Naphthalene	ND	0.010	mg/kg		ND		10-158			
Benzene	0.0964	0.0020	"	0.0960	ND	100	30-131			
Toluene	0.0955	0.0050	"	0.0960	ND	99.5	30-134			
Ethylbenzene	0.107	0.0050	"	0.0952	ND	113	22-153			
m,p-Xylene	0.204	0.010	"	0.192	ND	106	10-159			
o-Xylene	0.0996	0.0050	"	0.0944	ND	105	31-151			
Xylenes (total)	0.303	0.010	"		0.00		30-160			
Gasoline Range Hydrocarbons	1.79	0.50	"		0.337		30-160			
<i>Surrogate: 1,2-Dichloroethane-d4</i>	<i>0.0382</i>		<i>"</i>	<i>0.0384</i>		<i>99.6</i>	<i>23-173</i>			
<i>Surrogate: Toluene-d8</i>	<i>0.0376</i>		<i>"</i>	<i>0.0384</i>		<i>97.9</i>	<i>20-170</i>			
<i>Surrogate: 4-Bromofluorobenzene</i>	<i>0.0365</i>		<i>"</i>	<i>0.0384</i>		<i>95.2</i>	<i>21-167</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
1775 Sherman St. STE. 3000
Denver CO, 80203

Project: Ursula 2
Project Number: [none]
Project Manager: Mark Longhurst

Reported:
11/18/15 06:23

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 1511174 - EPA 5030 Soil MS

Matrix Spike Dup (1511174-MSD1)			Source: 1511140-01		Prepared & Analyzed: 11/17/15					
Naphthalene	ND	0.010	mg/kg		ND		10-158		42	
Benzene	0.100	0.0020	"	0.0982	ND	102	30-131	4.05	34	
Toluene	0.0980	0.0050	"	0.0982	ND	99.8	30-134	2.66	30	
Ethylbenzene	0.113	0.0050	"	0.0974	ND	116	22-153	5.16	24	
m,p-Xylene	0.214	0.010	"	0.196	ND	109	10-159	4.81	68	
o-Xylene	0.105	0.0050	"	0.0967	ND	109	31-151	5.49	38	
Xylenes (total)	0.319	0.010	"		0.00		30-160	5.04	30	
Gasoline Range Hydrocarbons	1.76	0.50	"		0.337		30-160	1.86	30	
Surrogate: 1,2-Dichloroethane-d4	0.0394		"	0.0393		100	23-173			
Surrogate: Toluene-d8	0.0383		"	0.0393		97.6	20-170			
Surrogate: 4-Bromofluorobenzene	0.0375		"	0.0393		95.3	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: Ursula 2
Project Number: [none]
Project Manager: Mark Longhurst

Reported:
11/18/15 06:23

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

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.

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

Summit Scientific

741 Corporate Circle – Suite I ♦ Golden, Colorado 80401

303.277.9310 - laboratory ♦ 303.277.9531 - fax

November 19, 2015

Mark Longhurst
PDC Energy
1775 Sherman St. STE. 3000
Denver, CO 80203
RE: Ursula 2

Enclosed are the results of analyses for samples received by Summit Scientific on 11/18/15 17:31. 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: Ursula 2
Project Number: [none]
Project Manager: Mark Longhurst

Reported:
11/19/15 06:28

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
CS16	1511153-01	Soil	11/18/15 09:05	11/18/15 17:31
CS17	1511153-02	Soil	11/18/15 09:20	11/18/15 17:31
GW03-R	1511153-03	Water	11/18/15 13:05	11/18/15 17:31
GW04	1511153-04	Water	11/18/15 12:10	11/18/15 17:31

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: Ursula 2
Project Number: [none]
Project Manager: Mark Longhurst

Reported:
11/19/15 06:28

CS16
1511153-01 (Soil)

Summit Scientific

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: 11/18/15 09:05

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
C10-C28 (DRO)	ND	50	mg/kg	1	1511180	11/18/15	11/18/15	8015M	

Date Sampled: 11/18/15 09:05

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: 11/18/15 09:05

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Naphthalene	ND	0.010	mg/kg	1	1511181	11/18/15	11/18/15	EPA 8260B	
Benzene	ND	0.0020	"	"	"	"	"	"	
Toluene	ND	0.0050	"	"	"	"	"	"	
Ethylbenzene	ND	0.0050	"	"	"	"	"	"	
Xylenes (total)	ND	0.010	"	"	"	"	"	"	
Gasoline Range Hydrocarbons	11	0.50	"	"	"	"	"	"	

Date Sampled: 11/18/15 09:05

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 1,2-Dichloroethane-d4		93.5 %	23-173		"	"	"	"	
Surrogate: Toluene-d8		99.7 %	20-170		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		98.9 %	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: Ursula 2
Project Number: [none]
Project Manager: Mark Longhurst

Reported:
11/19/15 06:28

CS17
1511153-02 (Soil)

Summit Scientific

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: 11/18/15 09:20

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
C10-C28 (DRO)	ND	50	mg/kg	1	1511180	11/18/15	11/18/15	8015M	

Date Sampled: 11/18/15 09:20

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: o-Terphenyl		98.1 %	30-150		"	"	"	"	

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: 11/18/15 09:20

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Naphthalene	ND	0.010	mg/kg	1	1511181	11/18/15	11/18/15	EPA 8260B	
Benzene	ND	0.0020	"	"	"	"	"	"	
Toluene	ND	0.0050	"	"	"	"	"	"	
Ethylbenzene	ND	0.0050	"	"	"	"	"	"	
Xylenes (total)	ND	0.010	"	"	"	"	"	"	
Gasoline Range Hydrocarbons	6.4	0.50	"	"	"	"	"	"	

Date Sampled: 11/18/15 09:20

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 1,2-Dichloroethane-d4		93.7 %	23-173		"	"	"	"	
Surrogate: Toluene-d8		97.6 %	20-170		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		95.8 %	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: Ursula 2
Project Number: [none]
Project Manager: Mark Longhurst

Reported:
11/19/15 06:28

GW03-R
1511153-03 (Water)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: 11/18/15 13:05

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Benzene	ND	1.0	ug/l	1	1511183	11/18/15	11/18/15	EPA 8260B	
Toluene	ND	1.0	"	"	"	"	"	"	
Ethylbenzene	11	1.0	"	"	"	"	"	"	
Xylenes (total)	61	1.0	"	"	"	"	"	"	

Date Sampled: 11/18/15 13:05

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 1,2-Dichloroethane-d4		120 %	37-154		"	"	"	"	
Surrogate: Toluene-d8		110 %	45-149		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		98.6 %	45-146		"	"	"	"	

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: Ursula 2
Project Number: [none]
Project Manager: Mark Longhurst

Reported:
11/19/15 06:28

GW04
1511153-04 (Water)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: 11/18/15 12:10

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Benzene	ND	1.0		ug/l	1	1511183	11/18/15	11/18/15	EPA 8260B	
Toluene	ND	1.0		"	"	"	"	"	"	
Ethylbenzene	ND	1.0		"	"	"	"	"	"	
Xylenes (total)	2.6	1.0		"	"	"	"	"	"	

Date Sampled: 11/18/15 12:10

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Surrogate: 1,2-Dichloroethane-d4		118 %		37-154		"	"	"	"	
Surrogate: Toluene-d8		97.5 %		45-149		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		95.9 %		45-146		"	"	"	"	

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: Ursula 2
Project Number: [none]
Project Manager: Mark Longhurst

Reported:
11/19/15 06:28

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 1511180 - EPA 3550A

Blank (1511180-BLK1)

Prepared & Analyzed: 11/18/15

C10-C28 (DRO)	ND	50	mg/kg							
Surrogate: o-Terphenyl	12.8		"	12.2		105	30-150			

LCS (1511180-BS1)

Prepared & Analyzed: 11/18/15

C10-C28 (DRO)	511	50	mg/kg	499		102	73-134			
Surrogate: o-Terphenyl	12.5		"	12.2		102	30-150			

Matrix Spike (1511180-MS1)

Source: 1511150-01

Prepared & Analyzed: 11/18/15

C10-C28 (DRO)	512	50	mg/kg	495	ND	103	50-148			
Surrogate: o-Terphenyl	11.6		"	12.1		96.1	30-150			

Matrix Spike Dup (1511180-MSD1)

Source: 1511150-01

Prepared & Analyzed: 11/18/15

C10-C28 (DRO)	461	50	mg/kg	484	ND	95.1	50-148	10.5	13	
Surrogate: o-Terphenyl	11.5		"	11.8		97.0	30-150			

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: Ursula 2
Project Number: [none]
Project Manager: Mark Longhurst

Reported:
11/19/15 06:28

Volatile Organic Compounds by EPA Method 8260B - Quality Control
Summit Scientific

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

Batch 1511181 - EPA 5030 Soil MS

Blank (1511181-BLK1)

Prepared & Analyzed: 11/18/15

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>0.0374</i>		<i>"</i>	<i>0.0396</i>		<i>94.4</i>	<i>23-173</i>			
<i>Surrogate: Toluene-d8</i>	<i>0.0380</i>		<i>"</i>	<i>0.0400</i>		<i>94.9</i>	<i>20-170</i>			
<i>Surrogate: 4-Bromofluorobenzene</i>	<i>0.0376</i>		<i>"</i>	<i>0.0400</i>		<i>94.1</i>	<i>21-167</i>			

LCS (1511181-BS1)

Prepared & Analyzed: 11/18/15

Naphthalene	ND	0.010	mg/kg				66-138			
Benzene	0.104	0.0020	"	0.100		104	58-130			
Toluene	0.103	0.0050	"	0.100		103	61-134			
Ethylbenzene	0.114	0.0050	"	0.0992		115	74-139			
m,p-Xylene	0.218	0.010	"	0.200		109	73-137			
o-Xylene	0.104	0.0050	"	0.0984		106	73-141			
Xylenes (total)	0.322	0.010	"				0-200			
Gasoline Range Hydrocarbons	2.44	0.50	"				30-150			
<i>Surrogate: 1,2-Dichloroethane-d4</i>	<i>0.0370</i>		<i>"</i>	<i>0.0396</i>		<i>93.3</i>	<i>23-173</i>			
<i>Surrogate: Toluene-d8</i>	<i>0.0385</i>		<i>"</i>	<i>0.0400</i>		<i>96.2</i>	<i>20-170</i>			
<i>Surrogate: 4-Bromofluorobenzene</i>	<i>0.0375</i>		<i>"</i>	<i>0.0400</i>		<i>93.7</i>	<i>21-167</i>			

Matrix Spike (1511181-MS1)

Source: 1511151-01

Prepared & Analyzed: 11/18/15

Naphthalene	ND	0.010	mg/kg		ND		10-158			
Benzene	0.102	0.0020	"	0.0969	ND	105	30-131			
Toluene	0.100	0.0050	"	0.0969	ND	103	30-134			
Ethylbenzene	0.111	0.0050	"	0.0961	ND	116	22-153			
m,p-Xylene	0.209	0.010	"	0.193	ND	108	10-159			
o-Xylene	0.102	0.0050	"	0.0953	ND	107	31-151			
Xylenes (total)	0.311	0.010	"		0.00		30-160			
Gasoline Range Hydrocarbons	0.453	0.50	"		5.64		30-160			
<i>Surrogate: 1,2-Dichloroethane-d4</i>	<i>0.0367</i>		<i>"</i>	<i>0.0384</i>		<i>95.5</i>	<i>23-173</i>			
<i>Surrogate: Toluene-d8</i>	<i>0.0377</i>		<i>"</i>	<i>0.0388</i>		<i>97.3</i>	<i>20-170</i>			
<i>Surrogate: 4-Bromofluorobenzene</i>	<i>0.0358</i>		<i>"</i>	<i>0.0388</i>		<i>92.3</i>	<i>21-167</i>			

Summit Scientific

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

Project: Ursula 2
Project Number: [none]
Project Manager: Mark Longhurst

Reported:
11/19/15 06:28

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 1511181 - EPA 5030 Soil MS

Matrix Spike Dup (1511181-MSD1)

Source: 1511151-01

Prepared & Analyzed: 11/18/15

Naphthalene	ND	0.010	mg/kg		ND		10-158		42	
Benzene	0.101	0.0020	"	0.0973	ND	104	30-131	0.501	34	
Toluene	0.0996	0.0050	"	0.0973	ND	102	30-134	0.603	30	
Ethylbenzene	0.113	0.0050	"	0.0965	ND	117	22-153	1.50	24	
m,p-Xylene	0.214	0.010	"	0.194	ND	110	10-159	2.32	68	
o-Xylene	0.104	0.0050	"	0.0957	ND	109	31-151	1.94	38	
Xylenes (total)	0.318	0.010	"		0.00		30-160	2.19	30	
Gasoline Range Hydrocarbons	0.435	0.50	"		5.64		30-160	4.04	30	
Surrogate: 1,2-Dichloroethane-d4	0.0381		"	0.0385		98.9	23-173			
Surrogate: Toluene-d8	0.0374		"	0.0389		96.1	20-170			
Surrogate: 4-Bromofluorobenzene	0.0362		"	0.0389		93.0	21-167			

Batch 1511183 - EPA 5030 Water MS

Blank (1511183-BLK1)

Prepared & Analyzed: 11/18/15

Benzene	ND	1.0	ug/l							
Toluene	ND	1.0	"							
Ethylbenzene	ND	1.0	"							
Xylenes (total)	ND	1.0	"							
Surrogate: 1,2-Dichloroethane-d4	15.8		"	13.3		119	37-154			
Surrogate: Toluene-d8	13.1		"	13.3		98.4	45-149			
Surrogate: 4-Bromofluorobenzene	13.5		"	13.3		101	45-146			

LCS (1511183-BS1)

Prepared & Analyzed: 11/18/15

Benzene	28.3	1.0	ug/l	33.3		85.0	51-132			
Toluene	30.4	1.0	"	33.3		91.2	51-138			
Ethylbenzene	34.3	1.0	"	33.1		104	58-146			
m,p-Xylene	66.7	2.0	"	66.5		100	57-144			
o-Xylene	30.5	1.0	"	32.8		92.9	53-146			
Surrogate: 1,2-Dichloroethane-d4	16.1		"	13.3		121	37-154			
Surrogate: Toluene-d8	13.0		"	13.3		97.9	45-149			
Surrogate: 4-Bromofluorobenzene	13.0		"	13.3		97.7	45-146			

Summit Scientific

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

Project: Ursula 2
Project Number: [none]
Project Manager: Mark Longhurst

Reported:
11/19/15 06:28

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 1511183 - EPA 5030 Water MS

Matrix Spike (1511183-MS1)		Source: 1511151-03			Prepared & Analyzed: 11/18/15					
Benzene	29.4	1.0	ug/l	33.3	ND	88.1	34-141			
Toluene	31.2	1.0	"	33.3	ND	93.7	27-151			
Ethylbenzene	35.4	1.0	"	33.1	ND	107	29-160			
m,p-Xylene	72.4	2.0	"	66.5	3.94	103	20-166			
o-Xylene	33.1	1.0	"	32.8	1.34	96.8	33-159			
Surrogate: 1,2-Dichloroethane-d4	16.1		"	13.3		121	37-154			
Surrogate: Toluene-d8	13.0		"	13.3		97.6	45-149			
Surrogate: 4-Bromofluorobenzene	12.8		"	13.3		96.3	45-146			
Matrix Spike Dup (1511183-MSD1)		Source: 1511151-03			Prepared & Analyzed: 11/18/15					
Benzene	29.0	1.0	ug/l	33.3	ND	87.1	34-141	1.16	32	
Toluene	30.9	1.0	"	33.3	ND	92.7	27-151	1.09	25	
Ethylbenzene	34.7	1.0	"	33.1	ND	105	29-160	1.88	50	
m,p-Xylene	70.2	2.0	"	66.5	3.94	99.5	20-166	3.17	36	
o-Xylene	32.3	1.0	"	32.8	1.34	94.5	33-159	2.32	26	
Surrogate: 1,2-Dichloroethane-d4	17.2		"	13.3		129	37-154			
Surrogate: Toluene-d8	12.8		"	13.3		96.2	45-149			
Surrogate: 4-Bromofluorobenzene	12.9		"	13.3		96.5	45-146			

Summit Scientific

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

Project: Ursula 2
Project Number: [none]
Project Manager: Mark Longhurst

Reported:
11/19/15 06:28

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

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

Summit Scientific

741 Corporate Circle – Suite I ♦ Golden, Colorado 80401

303.277.9310 - laboratory ♦ 303.277.9531 - fax

November 24, 2015

Mark Longhurst
PDC Energy
1775 Sherman St. STE. 3000
Denver, CO 80203
RE: Ursula 2

Enclosed are the results of analyses for samples received by Summit Scientific on 11/19/15 17:10. 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: Ursula 2
Project Number: [none]
Project Manager: Mark Longhurst

Reported:
11/24/15 09:09

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
SS11@5'	1511160-01	Soil	11/19/15 10:30	11/19/15 17:10
SS12@5'	1511160-02	Soil	11/19/15 15:34	11/19/15 17:10

Summit Scientific

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

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

Project: Ursula 2
Project Number: [none]
Project Manager: Mark Longhurst

Reported:
11/24/15 09:09

SS11@5'
1511160-01 (Soil)

Summit Scientific

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: 11/19/15 10:30

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
C10-C28 (DRO)	ND	50	mg/kg	1	1511193	11/19/15	11/19/15	8015M	

Date Sampled: 11/19/15 10:30

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: o-Terphenyl		95.7 %	30-150		"	"	"	"	

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: 11/19/15 10:30

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Naphthalene	ND	0.010	mg/kg	1	1511191	11/19/15	11/19/15	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: 11/19/15 10:30

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 1,2-Dichloroethane-d4		119 %	23-173		"	"	"	"	
Surrogate: Toluene-d8		98.2 %	20-170		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		96.5 %	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: Ursula 2
Project Number: [none]
Project Manager: Mark Longhurst

Reported:
11/24/15 09:09

SS12@5'
1511160-02 (Soil)

Summit Scientific

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: 11/19/15 15:34

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
C10-C28 (DRO)	ND	50	mg/kg	1	1511193	11/19/15	11/19/15	8015M	

Date Sampled: 11/19/15 15:34

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: o-Terphenyl		98.8 %	30-150		"	"	"	"	

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: 11/19/15 15:34

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Naphthalene	ND	0.010	mg/kg	1	1511191	11/19/15	11/19/15	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: 11/19/15 15:34

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 1,2-Dichloroethane-d4		123 %	23-173		"	"	"	"	
Surrogate: Toluene-d8		98.2 %	20-170		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		100 %	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: Ursula 2
Project Number: [none]
Project Manager: Mark Longhurst

Reported:
11/24/15 09:09

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 1511193 - EPA 3550A

Blank (1511193-BLK1)

Prepared & Analyzed: 11/19/15

C10-C28 (DRO)	ND	50	mg/kg							
Surrogate: o-Terphenyl	11.5		"	12.2		94.3	30-150			

LCS (1511193-BS1)

Prepared & Analyzed: 11/19/15

C10-C28 (DRO)	605	50	mg/kg	499		121	73-134			
Surrogate: o-Terphenyl	12.6		"	12.2		103	30-150			

Matrix Spike (1511193-MS1)

Source: 1511160-01

Prepared & Analyzed: 11/19/15

C10-C28 (DRO)	459	50	mg/kg	464	13.3	96.1	50-148			
Surrogate: o-Terphenyl	11.0		"	11.3		97.3	30-150			

Matrix Spike Dup (1511193-MSD1)

Source: 1511160-01

Prepared & Analyzed: 11/19/15

C10-C28 (DRO)	465	50	mg/kg	470	13.3	96.1	50-148	1.22	13	
Surrogate: o-Terphenyl	11.1		"	11.5		96.4	30-150			

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: Ursula 2
Project Number: [none]
Project Manager: Mark Longhurst

Reported:
11/24/15 09:09

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 1511191 - EPA 5030 Soil MS

Blank (1511191-BLK1)

Prepared: 11/19/15 Analyzed: 11/20/15

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>0.0419</i>		<i>"</i>	<i>0.0396</i>		<i>106</i>	<i>23-173</i>			
<i>Surrogate: Toluene-d8</i>	<i>0.0380</i>		<i>"</i>	<i>0.0400</i>		<i>94.9</i>	<i>20-170</i>			
<i>Surrogate: 4-Bromofluorobenzene</i>	<i>0.0389</i>		<i>"</i>	<i>0.0400</i>		<i>97.2</i>	<i>21-167</i>			

LCS (1511191-BS1)

Prepared: 11/19/15 Analyzed: 11/20/15

Naphthalene	0.159	0.010	mg/kg	0.150		106	66-138			
Benzene	0.136	0.0020	"	0.150		90.8	58-130			
Toluene	0.140	0.0050	"	0.150		93.5	61-134			
Ethylbenzene	0.147	0.0050	"	0.150		97.9	74-139			
m,p-Xylene	0.289	0.010	"	0.300		96.4	73-137			
o-Xylene	0.143	0.0050	"	0.150		95.4	73-141			
Xylenes (total)	0.432	0.010	"				0-200			
Gasoline Range Hydrocarbons	11.2	0.50	"				30-150			
<i>Surrogate: 1,2-Dichloroethane-d4</i>	<i>0.0408</i>		<i>"</i>	<i>0.0396</i>		<i>103</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>0.0412</i>		<i>"</i>	<i>0.0400</i>		<i>103</i>	<i>21-167</i>			

Matrix Spike (1511191-MS1)

Source: 1511159-01

Prepared: 11/19/15 Analyzed: 11/20/15

Naphthalene	0.150	0.010	mg/kg	0.144	ND	104	10-158			
Benzene	0.128	0.0020	"	0.144	ND	89.3	30-131			
Toluene	0.136	0.0050	"	0.144	ND	94.7	30-134			
Ethylbenzene	0.137	0.0050	"	0.144	ND	95.5	22-153			
m,p-Xylene	0.269	0.010	"	0.287	ND	93.4	10-159			
o-Xylene	0.133	0.0050	"	0.144	ND	92.3	31-151			
Xylenes (total)	0.401	0.010	"		0.00		30-160			
Gasoline Range Hydrocarbons	10.2	0.50	"		ND		30-160			
<i>Surrogate: 1,2-Dichloroethane-d4</i>	<i>0.0424</i>		<i>"</i>	<i>0.0379</i>		<i>112</i>	<i>23-173</i>			
<i>Surrogate: Toluene-d8</i>	<i>0.0389</i>		<i>"</i>	<i>0.0383</i>		<i>102</i>	<i>20-170</i>			
<i>Surrogate: 4-Bromofluorobenzene</i>	<i>0.0386</i>		<i>"</i>	<i>0.0383</i>		<i>101</i>	<i>21-167</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
1775 Sherman St. STE. 3000
Denver CO, 80203

Project: Ursula 2
Project Number: [none]
Project Manager: Mark Longhurst

Reported:
11/24/15 09:09

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 1511191 - EPA 5030 Soil MS

Matrix Spike Dup (1511191-MSD1)		Source: 1511159-01			Prepared: 11/19/15		Analyzed: 11/20/15			
Naphthalene	0.152	0.010	mg/kg	0.147	ND	104	10-158	1.82	42	
Benzene	0.133	0.0020	"	0.147	ND	90.5	30-131	3.51	34	
Toluene	0.141	0.0050	"	0.147	ND	95.7	30-134	3.26	30	
Ethylbenzene	0.144	0.0050	"	0.147	ND	97.9	22-153	4.61	24	
m,p-Xylene	0.284	0.010	"	0.294	ND	96.6	10-159	5.51	68	
o-Xylene	0.138	0.0050	"	0.147	ND	93.9	31-151	3.85	38	
Xylenes (total)	0.422	0.010	"		0.00		30-160	4.96	30	
Gasoline Range Hydrocarbons	10.7	0.50	"		ND		30-160	4.55	30	
Surrogate: 1,2-Dichloroethane-d4	0.0410		"	0.0387		106	23-173			
Surrogate: Toluene-d8	0.0397		"	0.0391		101	20-170			
Surrogate: 4-Bromofluorobenzene	0.0393		"	0.0391		100	21-167			

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

Project: Ursula 2
Project Number: [none]
Project Manager: Mark Longhurst

Reported:
11/24/15 09:09

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

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

Summit Scientific

741 Corporate Circle – Suite I ♦ Golden, Colorado 80401

303.277.9310 - laboratory ♦ 303.277.9531 - fax

November 23, 2015

Mark Longhurst
PDC Energy
1775 Sherman St. STE. 3000
Denver, CO 80203
RE: Ursula 2

Enclosed are the results of analyses for samples received by Summit Scientific on 11/22/15 16:00. 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: Ursula 2
Project Number: [none]
Project Manager: Mark Longhurst

Reported:
11/23/15 06:47

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
CS18	1511170-01	Soil	11/22/15 13:45	11/22/15 16:00
CS19	1511170-02	Soil	11/22/15 13:50	11/22/15 16:00
CS20	1511170-03	Soil	11/22/15 13:55	11/22/15 16:00
GW05	1511170-04	Water	11/22/15 14:00	11/22/15 16:00

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

Project: Ursula 2

Project Number: [none]
Project Manager: Mark Longhurst

Reported:
11/23/15 06:47

Summit Scientific

S₂

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

1511170

Page 1 of 1

Client: PDC Project Manager: Mark Longhurst
Address: E-Mail: mark.longhurst@PDC.com
City/State/Zip: Project Name: URSULA 2
Phone: Fax: Project Number:
Sampler Name: Mgt P

ID	Sample Description	Date Sampled	Time Sampled	# of containers	Preservative				Matrix				Analysis Requested				Special Instructions
					HCl	HNO ₃	None	Other (Specify)	Groundwater	Soil	Air-Canister #	Other (Specify)	LOTEX (800)	DRG (8015)	STE X		
1	CS18	11/22/15	13:45	1			X			X			X	X			
2	CS19		13:50	1			X			X			X	X			
3	CS20		13:55	1			X			X			X	X			
4	GW-05	11/22/15	14:00	3	X				X					X			
5																	
6																	
7																	
8																	
9																	
10																	

Relinquished by:	Date/Time: 11/22/15 16:00	Received by:	Date/Time: 11/22/15 16:00	Turn Around Time (Check) 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"/> Sample Integrity: Temperature Upon Receipt: 5-5 Intact: Yes No	Notes:
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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: Ursula 2
Project Number: [none]
Project Manager: Mark Longhurst

Reported:
11/23/15 06:47

CS18
1511170-01 (Soil)

Summit Scientific

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: 11/22/15 13:45

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
C10-C28 (DRO)	54	50	mg/kg	1	1511211	11/22/15	11/22/15	8015M	

Date Sampled: 11/22/15 13:45

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: o-Terphenyl		96.5 %	30-150		"	"	"	"	

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: 11/22/15 13:45

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Naphthalene	0.11	0.010	mg/kg	1	1511213	11/22/15	11/22/15	EPA 8260B	
Benzene	0.0030	0.0020	"	"	"	"	"	"	
Toluene	ND	0.0050	"	"	"	"	"	"	
Ethylbenzene	0.035	0.0050	"	"	"	"	"	"	
Xylenes (total)	0.14	0.010	"	"	"	"	"	"	
Gasoline Range Hydrocarbons	340	5.0	"	10	"	"	11/22/15	"	

Date Sampled: 11/22/15 13:45

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 1,2-Dichloroethane-d4		87.0 %	23-173		"	"	11/22/15	"	
Surrogate: Toluene-d8		147 %	20-170		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		104 %	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: Ursula 2
Project Number: [none]
Project Manager: Mark Longhurst

Reported:
11/23/15 06:47

CS19
1511170-02 (Soil)

Summit Scientific

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: 11/22/15 13:50

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
C10-C28 (DRO)	ND	50	mg/kg	1	1511211	11/22/15	11/22/15	8015M	

Date Sampled: 11/22/15 13:50

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: o-Terphenyl		98.8 %	30-150		"	"	"	"	

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: 11/22/15 13:50

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Naphthalene	0.018	0.010	mg/kg	1	1511213	11/22/15	11/22/15	EPA 8260B	
Benzene	ND	0.0020	"	"	"	"	"	"	
Toluene	ND	0.0050	"	"	"	"	"	"	
Ethylbenzene	ND	0.0050	"	"	"	"	"	"	
Xylenes (total)	0.011	0.010	"	"	"	"	"	"	
Gasoline Range Hydrocarbons	52	0.50	"	"	"	"	"	"	

Date Sampled: 11/22/15 13:50

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 1,2-Dichloroethane-d4		89.6 %	23-173		"	"	"	"	
Surrogate: Toluene-d8		112 %	20-170		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		130 %	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: Ursula 2
Project Number: [none]
Project Manager: Mark Longhurst

Reported:
11/23/15 06:47

CS20
1511170-03 (Soil)

Summit Scientific

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: 11/22/15 13:55

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
C10-C28 (DRO)	ND	50	mg/kg	1	1511211	11/22/15	11/22/15	8015M	

Date Sampled: 11/22/15 13:55

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

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: 11/22/15 13:55

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Naphthalene	0.021	0.010	mg/kg	1	1511213	11/22/15	11/22/15	EPA 8260B	
Benzene	ND	0.0020	"	"	"	"	"	"	
Toluene	ND	0.0050	"	"	"	"	"	"	
Ethylbenzene	0.0053	0.0050	"	"	"	"	"	"	
Xylenes (total)	0.019	0.010	"	"	"	"	"	"	
Gasoline Range Hydrocarbons	88	0.50	"	"	"	"	"	"	

Date Sampled: 11/22/15 13:55

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 1,2-Dichloroethane-d4		96.4 %	23-173		"	"	"	"	
Surrogate: Toluene-d8		130 %	20-170		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		162 %	21-167		"	"	"	"	

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

Project: Ursula 2
Project Number: [none]
Project Manager: Mark Longhurst

Reported:
11/23/15 06:47

GW05
1511170-04 (Water)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: 11/22/15 14:00

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Benzene	3.3	1.0	ug/l	1	1511212	11/22/15	11/22/15	EPA 8260B	
Toluene	ND	1.0	"	"	"	"	"	"	
Ethylbenzene	55	1.0	"	"	"	"	"	"	
Xylenes (total)	250	1.0	"	"	"	"	"	"	

Date Sampled: 11/22/15 14:00

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
<i>Surrogate: 1,2-Dichloroethane-d4</i>		85.8 %	37-154		"	"	"	"	
<i>Surrogate: Toluene-d8</i>		126 %	45-149		"	"	"	"	
<i>Surrogate: 4-Bromofluorobenzene</i>		94.1 %	45-146		"	"	"	"	

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

Project: Ursula 2
Project Number: [none]
Project Manager: Mark Longhurst

Reported:
11/23/15 06:47

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 1511211 - EPA 3550A

Blank (1511211-BLK1)

Prepared & Analyzed: 11/22/15

C10-C28 (DRO) ND 50 mg/kg

Surrogate: o-Terphenyl 11.8 " 12.2 96.6 30-150

LCS (1511211-BS1)

Prepared & Analyzed: 11/22/15

C10-C28 (DRO) 466 50 mg/kg 499 93.4 73-134

Surrogate: o-Terphenyl 11.8 " 12.2 97.0 30-150

Matrix Spike (1511211-MS1)

Source: 1511170-01

Prepared & Analyzed: 11/22/15

C10-C28 (DRO) 600 50 mg/kg 499 54.2 109 50-148

Surrogate: o-Terphenyl 12.7 " 12.2 104 30-150

Matrix Spike Dup (1511211-MSD1)

Source: 1511170-01

Prepared & Analyzed: 11/22/15

C10-C28 (DRO) 540 50 mg/kg 499 54.2 97.3 50-148 10.6 13

Surrogate: o-Terphenyl 11.7 " 12.2 95.7 30-150

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

Project: Ursula 2
Project Number: [none]
Project Manager: Mark Longhurst

Reported:
11/23/15 06:47

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 1511212 - EPA 5030 Water MS

Blank (1511212-BLK1)

Prepared & Analyzed: 11/22/15

Benzene	ND	1.0	ug/l							
Toluene	ND	1.0	"							
Ethylbenzene	ND	1.0	"							
Xylenes (total)	ND	1.0	"							
Surrogate: 1,2-Dichloroethane-d4	11.6		"	13.2		87.6	37-154			
Surrogate: Toluene-d8	12.5		"	13.3		94.1	45-149			
Surrogate: 4-Bromofluorobenzene	12.6		"	13.3		94.4	45-146			

LCS (1511212-BS1)

Prepared & Analyzed: 11/22/15

Benzene	33.7	1.0	ug/l	33.3		101	51-132			
Toluene	32.7	1.0	"	33.3		98.2	51-138			
Ethylbenzene	34.5	1.0	"	33.1		104	58-146			
m,p-Xylene	66.1	2.0	"	66.5		99.3	57-144			
o-Xylene	32.3	1.0	"	32.8		98.6	53-146			
Surrogate: 1,2-Dichloroethane-d4	12.0		"	13.2		91.3	37-154			
Surrogate: Toluene-d8	13.6		"	13.3		102	45-149			
Surrogate: 4-Bromofluorobenzene	12.3		"	13.3		92.3	45-146			

Matrix Spike (1511212-MS1)

Source: 1511170-04

Prepared & Analyzed: 11/22/15

Benzene	34.6	1.0	ug/l	33.3	3.29	94.0	34-141			
Toluene	31.4	1.0	"	33.3	ND	94.3	27-151			
Ethylbenzene	62.2	1.0	"	33.1	55.0	21.8	29-160			QM-07
m,p-Xylene	184	2.0	"	66.5	239	NR	20-166			QM-07
o-Xylene	37.1	1.0	"	32.8	7.79	89.4	33-159			
Surrogate: 1,2-Dichloroethane-d4	10.9		"	13.2		82.7	37-154			
Surrogate: Toluene-d8	16.4		"	13.3		123	45-149			
Surrogate: 4-Bromofluorobenzene	14.3		"	13.3		107	45-146			

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

Project: Ursula 2
Project Number: [none]
Project Manager: Mark Longhurst

Reported:
11/23/15 06:47

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 1511212 - EPA 5030 Water MS

Matrix Spike Dup (1511212-MSD1)				Source: 1511170-04		Prepared & Analyzed: 11/23/15				
Benzene	35.7	1.0	ug/l	33.3	3.29	97.4	34-141	3.21	32	
Toluene	33.2	1.0	"	33.3	ND	99.5	27-151	5.36	25	
Ethylbenzene	65.2	1.0	"	33.1	55.0	30.8	29-160	4.66	50	
m,p-Xylene	192	2.0	"	66.5	239	NR	20-166	3.79	36	QM-07
o-Xylene	39.5	1.0	"	32.8	7.79	96.6	33-159	6.14	26	
Surrogate: 1,2-Dichloroethane-d4	10.9		"	13.2		82.9	37-154			
Surrogate: Toluene-d8	14.2		"	13.3		107	45-149			
Surrogate: 4-Bromofluorobenzene	13.3		"	13.3		99.5	45-146			

Batch 1511213 - EPA 5030 Soil MS

Blank (1511213-BLK1)				Prepared & Analyzed: 11/22/15						
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	"							
Surrogate: 1,2-Dichloroethane-d4	0.0343		"	0.0396		86.5	23-173			
Surrogate: Toluene-d8	0.0378		"	0.0400		94.5	20-170			
Surrogate: 4-Bromofluorobenzene	0.0375		"	0.0400		93.8	21-167			
LCS (1511213-BS1)				Prepared & Analyzed: 11/22/15						
Naphthalene	ND	0.010	mg/kg				66-138			
Benzene	0.102	0.0020	"	0.100		102	58-130			
Toluene	0.101	0.0050	"	0.100		101	61-134			
Ethylbenzene	0.112	0.0050	"	0.0992		113	74-139			
m,p-Xylene	0.212	0.010	"	0.200		106	73-137			
o-Xylene	0.101	0.0050	"	0.0984		103	73-141			
Xylenes (total)	0.314	0.010	"				0-200			
Gasoline Range Hydrocarbons	2.06	0.50	"				30-150			
Surrogate: 1,2-Dichloroethane-d4	0.0349		"	0.0396		88.2	23-173			
Surrogate: Toluene-d8	0.0387		"	0.0400		96.8	20-170			
Surrogate: 4-Bromofluorobenzene	0.0373		"	0.0400		93.2	21-167			

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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: Ursula 2
Project Number: [none]
Project Manager: Mark Longhurst

Reported:
11/23/15 06:47

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 1511213 - EPA 5030 Soil MS

Matrix Spike (1511213-MS1)

Source: 1511170-02

Prepared: 11/22/15

Analyzed: 11/23/15

Naphthalene	0.00624	0.010	mg/kg		0.0181		10-158			
Benzene	0.102	0.0020	"	0.100	ND	102	30-131			
Toluene	0.0970	0.0050	"	0.100	ND	97.0	30-134			
Ethylbenzene	0.107	0.0050	"	0.0992	0.00396	104	22-153			
m,p-Xylene	0.206	0.010	"	0.200	0.0106	98.0	10-159			
o-Xylene	0.102	0.0050	"	0.0984	ND	104	31-151			
Xylenes (total)	0.308	0.010	"		0.0106		30-160			
Gasoline Range Hydrocarbons	76.4	0.50	"		52.2		30-160			
Surrogate: 1,2-Dichloroethane-d4	0.0384		"	0.0396		97.0	23-173			
Surrogate: Toluene-d8	0.0477		"	0.0400		119	20-170			
Surrogate: 4-Bromofluorobenzene	0.0593		"	0.0400		148	21-167			

Matrix Spike Dup (1511213-MSD1)

Source: 1511170-02

Prepared: 11/22/15

Analyzed: 11/23/15

Naphthalene	0.00624	0.010	mg/kg		0.0181		10-158	0.00	42	
Benzene	0.104	0.0020	"	0.100	ND	104	30-131	1.83	34	
Toluene	0.0990	0.0050	"	0.100	ND	99.0	30-134	1.96	30	
Ethylbenzene	0.111	0.0050	"	0.0992	0.00396	108	22-153	3.69	24	
m,p-Xylene	0.213	0.010	"	0.200	0.0106	101	10-159	3.28	68	
o-Xylene	0.106	0.0050	"	0.0984	ND	108	31-151	4.03	38	
Xylenes (total)	0.320	0.010	"		0.0106		30-160	3.53	30	
Gasoline Range Hydrocarbons	84.6	0.50	"		52.2		30-160	10.2	30	
Surrogate: 1,2-Dichloroethane-d4	0.0371		"	0.0396		93.6	23-173			
Surrogate: Toluene-d8	0.0499		"	0.0400		125	20-170			
Surrogate: 4-Bromofluorobenzene	0.0631		"	0.0400		158	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: Ursula 2
Project Number: [none]
Project Manager: Mark Longhurst

Reported:
11/23/15 06:47

Notes and Definitions

QM-07 The spike recovery was outside acceptance limits for the MS and/or MSD. The batch was accepted based on acceptable LCS/LCSD recovery.

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

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.

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

Summit Scientific

741 Corporate Circle – Suite I ♦ Golden, Colorado 80401

303.277.9310 - laboratory ♦ 303.277.9531 - fax

November 29, 2015

Mark Longhurst
PDC Energy
1775 Sherman St. STE. 3000
Denver, CO 80203
RE: Ursula 2

Enclosed are the results of analyses for samples received by Summit Scientific on 11/25/15 12:50. 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: Ursula 2
Project Number: [none]
Project Manager: Mark Longhurst

Reported:
11/29/15 19:36

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
CS21	1511199-01	Soil	11/25/15 08:30	11/25/15 12:50
CS22	1511199-02	Soil	11/25/15 08:35	11/25/15 12:50
CS23	1511199-03	Soil	11/25/15 08:40	11/25/15 12:50
CS24	1511199-04	Soil	11/25/15 08:45	11/25/15 12:50

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: Ursula 2
Project Number: [none]
Project Manager: Mark Longhurst

Reported:
11/29/15 19:36

CS21
1511199-01 (Soil)

Summit Scientific

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: 11/25/15 08:30

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
C10-C28 (DRO)	ND	50	mg/kg	1	1511243	11/25/15	11/25/15	8015M	

Date Sampled: 11/25/15 08:30

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: o-Terphenyl		94.0 %	30-150		"	"	"	"	

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: 11/25/15 08:30

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Naphthalene	ND	0.010	mg/kg	1	1511246	11/25/15	11/25/15	EPA 8260B	
Benzene	ND	0.0020	"	"	"	"	"	"	
Toluene	ND	0.0050	"	"	"	"	"	"	
Ethylbenzene	ND	0.0050	"	"	"	"	"	"	
Xylenes (total)	0.015	0.010	"	"	"	"	"	"	
Gasoline Range Hydrocarbons	100	0.50	"	"	"	"	"	"	

Date Sampled: 11/25/15 08:30

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 1,2-Dichloroethane-d4		91.5 %	23-173		"	"	"	"	
Surrogate: Toluene-d8		121 %	20-170		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		151 %	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: Ursula 2
Project Number: [none]
Project Manager: Mark Longhurst

Reported:
11/29/15 19:36

CS22
1511199-02 (Soil)

Summit Scientific

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: 11/25/15 08:35

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
C10-C28 (DRO)	53	50	mg/kg	1	1511243	11/25/15	11/25/15	8015M	

Date Sampled: 11/25/15 08:35

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: o-Terphenyl		97.7 %	30-150		"	"	"	"	

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: 11/25/15 08:35

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Naphthalene	ND	0.010	mg/kg	1	1511246	11/25/15	11/25/15	EPA 8260B	
Benzene	ND	0.0020	"	"	"	"	"	"	
Toluene	ND	0.0050	"	"	"	"	"	"	
Ethylbenzene	ND	0.0050	"	"	"	"	"	"	
Xylenes (total)	ND	0.010	"	"	"	"	"	"	
Gasoline Range Hydrocarbons	81	0.50	"	"	"	"	"	"	

Date Sampled: 11/25/15 08:35

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 1,2-Dichloroethane-d4		91.7 %	23-173		"	"	"	"	
Surrogate: Toluene-d8		116 %	20-170		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		152 %	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: Ursula 2
Project Number: [none]
Project Manager: Mark Longhurst

Reported:
11/29/15 19:36

CS23
1511199-03 (Soil)

Summit Scientific

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: 11/25/15 08:40

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
C10-C28 (DRO)	ND	50	mg/kg	1	1511243	11/25/15	11/25/15	8015M	

Date Sampled: 11/25/15 08:40

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: o-Terphenyl		92.9 %	30-150		"	"	"	"	

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: 11/25/15 08:40

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Naphthalene	ND	0.010	mg/kg	1	1511246	11/25/15	11/25/15	EPA 8260B	
Benzene	ND	0.0020	"	"	"	"	"	"	
Toluene	ND	0.0050	"	"	"	"	"	"	
Ethylbenzene	ND	0.0050	"	"	"	"	"	"	
Xylenes (total)	0.019	0.010	"	"	"	"	"	"	
Gasoline Range Hydrocarbons	50	0.50	"	"	"	"	"	"	

Date Sampled: 11/25/15 08:40

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 1,2-Dichloroethane-d4		94.2 %	23-173		"	"	"	"	
Surrogate: Toluene-d8		108 %	20-170		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		126 %	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: Ursula 2
Project Number: [none]
Project Manager: Mark Longhurst

Reported:
11/29/15 19:36

CS24
1511199-04 (Soil)

Summit Scientific

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: 11/25/15 08:45

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
C10-C28 (DRO)	ND	50	mg/kg	1	1511243	11/25/15	11/25/15	8015M	

Date Sampled: 11/25/15 08:45

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: o-Terphenyl		93.0 %	30-150		"	"	"	"	

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: 11/25/15 08:45

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Naphthalene	ND	0.010	mg/kg	1	1511246	11/25/15	11/25/15	EPA 8260B	
Benzene	ND	0.0020	"	"	"	"	"	"	
Toluene	ND	0.0050	"	"	"	"	"	"	
Ethylbenzene	0.0057	0.0050	"	"	"	"	"	"	
Xylenes (total)	0.019	0.010	"	"	"	"	"	"	
Gasoline Range Hydrocarbons	50	0.50	"	"	"	"	"	"	

Date Sampled: 11/25/15 08:45

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 1,2-Dichloroethane-d4		89.6 %	23-173		"	"	"	"	
Surrogate: Toluene-d8		106 %	20-170		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		130 %	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: Ursula 2
Project Number: [none]
Project Manager: Mark Longhurst

Reported:
11/29/15 19:36

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 1511243 - EPA 3550A

Blank (1511243-BLK1)

Prepared & Analyzed: 11/25/15

C10-C28 (DRO)	ND	50	mg/kg							
Surrogate: o-Terphenyl	11.6		"	12.2		94.7	30-150			

LCS (1511243-BS1)

Prepared & Analyzed: 11/25/15

C10-C28 (DRO)	522	50	mg/kg	499		105	73-134			
Surrogate: o-Terphenyl	12.3		"	12.2		101	30-150			

Matrix Spike (1511243-MS1)

Source: 1511195-01

Prepared & Analyzed: 11/25/15

C10-C28 (DRO)	444	50	mg/kg	457	27.9	91.1	50-148			
Surrogate: o-Terphenyl	10.8		"	11.2		97.1	30-150			

Matrix Spike Dup (1511243-MSD1)

Source: 1511195-01

Prepared & Analyzed: 11/25/15

C10-C28 (DRO)	490	50	mg/kg	459	27.9	101	50-148	9.82	13	
Surrogate: o-Terphenyl	11.6		"	11.2		103	30-150			

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: Ursula 2
Project Number: [none]
Project Manager: Mark Longhurst

Reported:
11/29/15 19:36

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 1511246 - EPA 5030 Soil MS

Blank (1511246-BLK1)

Prepared & Analyzed: 11/25/15

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>0.0348</i>		<i>"</i>	<i>0.0396</i>		<i>87.9</i>	<i>23-173</i>			
<i>Surrogate: Toluene-d8</i>	<i>0.0370</i>		<i>"</i>	<i>0.0400</i>		<i>92.6</i>	<i>20-170</i>			
<i>Surrogate: 4-Bromofluorobenzene</i>	<i>0.0367</i>		<i>"</i>	<i>0.0400</i>		<i>91.6</i>	<i>21-167</i>			

LCS (1511246-BS1)

Prepared & Analyzed: 11/25/15

Naphthalene	ND	0.010	mg/kg				66-138			
Benzene	0.0917	0.0020	"	0.100		91.7	58-130			
Toluene	0.0897	0.0050	"	0.100		89.7	61-134			
Ethylbenzene	0.108	0.0050	"	0.0992		109	74-139			
m,p-Xylene	0.205	0.010	"	0.200		103	73-137			
o-Xylene	0.0991	0.0050	"	0.0984		101	73-141			
Xylenes (total)	0.304	0.010	"				0-200			
Gasoline Range Hydrocarbons	2.23	0.50	"				30-150			
<i>Surrogate: 1,2-Dichloroethane-d4</i>	<i>0.0333</i>		<i>"</i>	<i>0.0396</i>		<i>84.0</i>	<i>23-173</i>			
<i>Surrogate: Toluene-d8</i>	<i>0.0366</i>		<i>"</i>	<i>0.0400</i>		<i>91.6</i>	<i>20-170</i>			
<i>Surrogate: 4-Bromofluorobenzene</i>	<i>0.0368</i>		<i>"</i>	<i>0.0400</i>		<i>91.9</i>	<i>21-167</i>			

Matrix Spike (1511246-MS1)

Source: 1511195-01

Prepared & Analyzed: 11/25/15

Naphthalene	ND	0.010	mg/kg		ND		10-158			
Benzene	0.0954	0.0020	"	0.100	ND	95.4	30-131			
Toluene	0.0943	0.0050	"	0.100	ND	94.3	30-134			
Ethylbenzene	0.109	0.0050	"	0.0992	ND	110	22-153			
m,p-Xylene	0.207	0.010	"	0.200	ND	104	10-159			
o-Xylene	0.0994	0.0050	"	0.0984	ND	101	31-151			
Xylenes (total)	0.307	0.010	"		0.00		30-160			
Gasoline Range Hydrocarbons	2.30	0.50	"		ND		30-160			
<i>Surrogate: 1,2-Dichloroethane-d4</i>	<i>0.0346</i>		<i>"</i>	<i>0.0396</i>		<i>87.4</i>	<i>23-173</i>			
<i>Surrogate: Toluene-d8</i>	<i>0.0376</i>		<i>"</i>	<i>0.0400</i>		<i>94.1</i>	<i>20-170</i>			
<i>Surrogate: 4-Bromofluorobenzene</i>	<i>0.0369</i>		<i>"</i>	<i>0.0400</i>		<i>92.3</i>	<i>21-167</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
1775 Sherman St. STE. 3000
Denver CO, 80203

Project: Ursula 2
Project Number: [none]
Project Manager: Mark Longhurst

Reported:
11/29/15 19:36

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 1511246 - EPA 5030 Soil MS

Matrix Spike Dup (1511246-MSD1)		Source: 1511195-01			Prepared & Analyzed: 11/25/15					
Naphthalene	ND	0.010	mg/kg		ND		10-158		42	
Benzene	0.103	0.0020	"	0.100	ND	103	30-131	7.62	34	
Toluene	0.0963	0.0050	"	0.100	ND	96.3	30-134	2.08	30	
Ethylbenzene	0.110	0.0050	"	0.0992	ND	111	22-153	0.850	24	
m,p-Xylene	0.210	0.010	"	0.200	ND	105	10-159	1.44	68	
o-Xylene	0.101	0.0050	"	0.0984	ND	103	31-151	2.00	38	
Xylenes (total)	0.312	0.010	"		0.00		30-160	1.62	30	
Gasoline Range Hydrocarbons	2.36	0.50	"		ND		30-160	2.70	30	
Surrogate: 1,2-Dichloroethane-d4	0.0372		"	0.0396		93.9	23-173			
Surrogate: Toluene-d8	0.0383		"	0.0400		95.8	20-170			
Surrogate: 4-Bromofluorobenzene	0.0357		"	0.0400		89.2	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: Ursula 2
Project Number: [none]
Project Manager: Mark Longhurst

Reported:
11/29/15 19:36

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

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.

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

Summit Scientific

741 Corporate Circle – Suite I ♦ Golden, Colorado 80401

303.277.9310 - laboratory ♦ 303.277.9531 - fax

December 02, 2015

Mark Longhurst
PDC Energy
1775 Sherman St. STE. 3000
Denver, CO 80203
RE: Ursula 2

Enclosed are the results of analyses for samples received by Summit Scientific on 12/01/15 17:40. 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: Ursula 2
Project Number: [none]
Project Manager: Mark Longhurst

Reported:
12/02/15 06:42

GW06
1512002-01 (Water)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: 12/01/15 07:45

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Benzene	ND	1.0	ug/l	1	1512008	12/01/15	12/01/15	EPA 8260B	
Toluene	ND	1.0	"	"	"	"	"	"	
Ethylbenzene	42	1.0	"	"	"	"	"	"	
Xylenes (total)	8.2	1.0	"	"	"	"	"	"	

Date Sampled: 12/01/15 07:45

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 1,2-Dichloroethane-d4		91.4 %	37-154		"	"	"	"	
Surrogate: Toluene-d8		110 %	45-149		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		113 %	45-146		"	"	"	"	

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: Ursula 2
Project Number: [none]
Project Manager: Mark Longhurst

Reported:
12/02/15 06:42

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 1512008 - EPA 5030 Water MS

Blank (1512008-BLK1)

Prepared & Analyzed: 12/01/15

Benzene	ND	1.0	ug/l							
Toluene	ND	1.0	"							
Ethylbenzene	ND	1.0	"							
Xylenes (total)	ND	1.0	"							
Surrogate: 1,2-Dichloroethane-d4	12.2		"	13.3		91.7	37-154			
Surrogate: Toluene-d8	12.7		"	13.3		95.1	45-149			
Surrogate: 4-Bromofluorobenzene	12.4		"	13.3		92.8	45-146			

LCS (1512008-BS1)

Prepared & Analyzed: 12/01/15

Benzene	33.3	1.0	ug/l	33.3		99.8	51-132			
Toluene	32.3	1.0	"	33.3		96.8	51-138			
Ethylbenzene	35.2	1.0	"	33.1		106	58-146			
m,p-Xylene	67.5	2.0	"	66.5		101	57-144			
o-Xylene	33.4	1.0	"	32.8		102	53-146			
Surrogate: 1,2-Dichloroethane-d4	11.3		"	13.3		84.8	37-154			
Surrogate: Toluene-d8	12.9		"	13.3		97.1	45-149			
Surrogate: 4-Bromofluorobenzene	12.4		"	13.3		93.2	45-146			

Matrix Spike (1512008-MS1)

Source: 1511206-21

Prepared & Analyzed: 12/01/15

Benzene	33.5	1.0	ug/l	33.3	ND	101	34-141			
Toluene	32.3	1.0	"	33.3	ND	96.8	27-151			
Ethylbenzene	35.5	1.0	"	33.1	ND	107	29-160			
m,p-Xylene	68.2	2.0	"	66.5	ND	103	20-166			
o-Xylene	33.4	1.0	"	32.8	ND	102	33-159			
Surrogate: 1,2-Dichloroethane-d4	12.0		"	13.3		89.8	37-154			
Surrogate: Toluene-d8	12.8		"	13.3		96.4	45-149			
Surrogate: 4-Bromofluorobenzene	12.3		"	13.3		92.6	45-146			

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: Ursula 2
Project Number: [none]
Project Manager: Mark Longhurst

Reported:
12/02/15 06:42

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 1512008 - EPA 5030 Water MS

Matrix Spike Dup (1512008-MSD1)	Source: 1511206-21			Prepared & Analyzed: 12/01/15						
Benzene	33.9	1.0	ug/l	33.3	ND	102	34-141	1.25	32	
Toluene	33.0	1.0	"	33.3	ND	98.9	27-151	2.12	25	
Ethylbenzene	36.8	1.0	"	33.1	ND	111	29-160	3.68	50	
m,p-Xylene	70.5	2.0	"	66.5	ND	106	20-166	3.32	36	
o-Xylene	35.1	1.0	"	32.8	ND	107	33-159	5.02	26	
Surrogate: 1,2-Dichloroethane-d4	11.8		"	13.3		88.1	37-154			
Surrogate: Toluene-d8	12.7		"	13.3		95.3	45-149			
Surrogate: 4-Bromofluorobenzene	11.9		"	13.3		89.1	45-146			

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: Ursula 2
Project Number: [none]
Project Manager: Mark Longhurst

Reported:
12/02/15 06:42

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

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.

Summit Scientific

741 Corporate Circle – Suite I ♦ Golden, Colorado 80401

303.277.9310 - laboratory ♦ 303.277.9531 - fax

December 03, 2015

Christine Wasko
PDC Energy
1775 Sherman St. STE. 3000
Denver, CO 80203
RE: Ursula 2

Enclosed are the results of analyses for samples received by Summit Scientific on 12/02/15 17:00. 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: Ursula 2
Project Number: [none]
Project Manager: Christine Wasko

Reported:
12/03/15 07:05

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
CS25	1512011-01	Soil	12/02/15 07:45	12/02/15 17:00
CS26	1512011-02	Soil	12/02/15 07:55	12/02/15 17:00
CS27	1512011-03	Soil	12/02/15 11:05	12/02/15 17:00
CS28	1512011-04	Soil	12/02/15 11:15	12/02/15 17:00

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.



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

Project: Ursula 2
Project Number: [none]
Project Manager: Christine Wasko

Reported:
12/03/15 07:05

CS25
1512011-01 (Soil)

Summit Scientific

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: 12/02/15 07:45

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
C10-C28 (DRO)	69	50	mg/kg	1	1512023	12/02/15	12/02/15	8015M	

Date Sampled: 12/02/15 07:45

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

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: 12/02/15 07:45

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Naphthalene	0.25	0.010	mg/kg	1	1512022	12/02/15	12/02/15	EPA 8260B	
Benzene	ND	0.0020	"	"	"	"	"	"	
Toluene	ND	0.0050	"	"	"	"	"	"	
Ethylbenzene	0.073	0.0050	"	"	"	"	"	"	
Xylenes (total)	0.096	0.010	"	"	"	"	"	"	
Gasoline Range Hydrocarbons	250	5.0	"	10	"	"	12/02/15	"	

Date Sampled: 12/02/15 07:45

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 1,2-Dichloroethane-d4		90.0 %	23-173		"	"	12/02/15	"	
Surrogate: Toluene-d8		160 %	20-170		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		99.0 %	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: Ursula 2
Project Number: [none]
Project Manager: Christine Wasko

Reported:
12/03/15 07:05

CS26
1512011-02 (Soil)

Summit Scientific

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: 12/02/15 07:55

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
C10-C28 (DRO)	50	50	mg/kg	1	1512023	12/02/15	12/02/15	8015M	

Date Sampled: 12/02/15 07:55

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: o-Terphenyl		93.8 %	30-150		"	"	"	"	

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: 12/02/15 07:55

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Naphthalene	0.068	0.010	mg/kg	1	1512022	12/02/15	12/02/15	EPA 8260B	
Benzene	ND	0.0020	"	"	"	"	"	"	
Toluene	ND	0.0050	"	"	"	"	"	"	
Ethylbenzene	0.0051	0.0050	"	"	"	"	"	"	
Xylenes (total)	0.050	0.010	"	"	"	"	"	"	
Gasoline Range Hydrocarbons	710	5.0	"	10	"	"	12/02/15	"	

Date Sampled: 12/02/15 07:55

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 1,2-Dichloroethane-d4		84.9 %	23-173		"	"	12/02/15	"	
Surrogate: Toluene-d8		134 %	20-170		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		132 %	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: Ursula 2
Project Number: [none]
Project Manager: Christine Wasko

Reported:
12/03/15 07:05

CS27
1512011-03 (Soil)

Summit Scientific

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: 12/02/15 11:05

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
C10-C28 (DRO)	ND	50	mg/kg	1	1512023	12/02/15	12/02/15	8015M	

Date Sampled: 12/02/15 11:05

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

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: 12/02/15 11:05

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Naphthalene	0.050	0.010	mg/kg	1	1512022	12/02/15	12/02/15	EPA 8260B	
Benzene	ND	0.0020	"	"	"	"	"	"	
Toluene	ND	0.0050	"	"	"	"	"	"	
Ethylbenzene	0.014	0.0050	"	"	"	"	"	"	
Xylenes (total)	0.026	0.010	"	"	"	"	"	"	
Gasoline Range Hydrocarbons	290	5.0	"	10	"	"	12/02/15	"	

Date Sampled: 12/02/15 11:05

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 1,2-Dichloroethane-d4		88.0 %	23-173		"	"	12/02/15	"	
Surrogate: Toluene-d8		117 %	20-170		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		149 %	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: Ursula 2
Project Number: [none]
Project Manager: Christine Wasko

Reported:
12/03/15 07:05

CS28
1512011-04 (Soil)

Summit Scientific

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: 12/02/15 11:15

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
C10-C28 (DRO)	ND	50	mg/kg	1	1512023	12/02/15	12/02/15	8015M	

Date Sampled: 12/02/15 11:15

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: o-Terphenyl		95.2 %	30-150		"	"	"	"	

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: 12/02/15 11:15

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Naphthalene	0.27	0.010	mg/kg	1	1512022	12/02/15	12/02/15	EPA 8260B	
Benzene	ND	0.0020	"	"	"	"	"	"	
Toluene	ND	0.0050	"	"	"	"	"	"	
Ethylbenzene	0.084	0.0050	"	"	"	"	"	"	
Xylenes (total)	0.062	0.010	"	"	"	"	"	"	
Gasoline Range Hydrocarbons	85	0.50	"	"	"	"	"	"	

Date Sampled: 12/02/15 11:15

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 1,2-Dichloroethane-d4		87.9 %	23-173		"	"	"	"	
Surrogate: Toluene-d8		116 %	20-170		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		135 %	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: Ursula 2
Project Number: [none]
Project Manager: Christine Wasko

Reported:
12/03/15 07:05

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 1512023 - EPA 3550A

Blank (1512023-BLK1)

Prepared & Analyzed: 12/02/15

C10-C28 (DRO)	ND	50	mg/kg							
Surrogate: o-Terphenyl	12.0		"	12.5		95.9	30-150			

LCS (1512023-BS1)

Prepared & Analyzed: 12/02/15

C10-C28 (DRO)	466	50	mg/kg	499		93.3	73-134			
Surrogate: o-Terphenyl	12.2		"	12.5		97.3	30-150			

Matrix Spike (1512023-MS1)

Source: 1512011-01

Prepared & Analyzed: 12/02/15

C10-C28 (DRO)	503	50	mg/kg	480	69.1	90.5	50-148			
Surrogate: o-Terphenyl	11.6		"	12.0		96.4	30-150			

Matrix Spike Dup (1512023-MSD1)

Source: 1512011-01

Prepared & Analyzed: 12/02/15

C10-C28 (DRO)	501	50	mg/kg	474	69.1	91.0	50-148	0.534	13	
Surrogate: o-Terphenyl	11.3		"	11.9		95.3	30-150			

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: Ursula 2
Project Number: [none]
Project Manager: Christine Wasko

Reported:
12/03/15 07:05

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 1512022 - EPA 5030 Soil MS

Blank (1512022-BLK1)

Prepared & Analyzed: 12/02/15

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	"						
Surrogate: 1,2-Dichloroethane-d4	0.0434		"	0.0400		109	23-173		
Surrogate: Toluene-d8	0.0386		"	0.0400		96.6	20-170		
Surrogate: 4-Bromofluorobenzene	0.0399		"	0.0400		99.7	21-167		

LCS (1512022-BS1)

Prepared & Analyzed: 12/02/15

Naphthalene	ND	0.010	mg/kg				66-138		
Benzene	0.0890	0.0020	"	0.100		89.0	58-130		
Toluene	0.0970	0.0050	"	0.100		97.0	61-134		
Ethylbenzene	0.110	0.0050	"	0.0992		111	74-139		
m,p-Xylene	0.213	0.010	"	0.200		107	73-137		
o-Xylene	0.0992	0.0050	"	0.0984		101	73-141		
Xylenes (total)	0.312	0.010	"				0-200		
Gasoline Range Hydrocarbons	2.90	0.50	"				30-150		
Surrogate: 1,2-Dichloroethane-d4	0.0453		"	0.0400		113	23-173		
Surrogate: Toluene-d8	0.0386		"	0.0400		96.6	20-170		
Surrogate: 4-Bromofluorobenzene	0.0374		"	0.0400		93.4	21-167		

Matrix Spike (1512022-MS1)

Source: 1512011-01

Prepared & Analyzed: 12/02/15

Naphthalene	0.403	0.010	mg/kg		0.252		10-158		
Benzene	0.0816	0.0020	"	0.0917	ND	88.9	30-131		
Toluene	0.0817	0.0050	"	0.0917	ND	89.0	30-134		
Ethylbenzene	0.228	0.0050	"	0.0910	0.0726	170	22-153		
m,p-Xylene	0.269	0.010	"	0.183	0.0960	94.4	10-159		QM-07
o-Xylene	0.0924	0.0050	"	0.0903	ND	102	31-151		
Xylenes (total)	0.361	0.010	"		0.0960		30-160		
Gasoline Range Hydrocarbons	57.3	0.50	"		253		30-160		
Surrogate: 1,2-Dichloroethane-d4	0.0410		"	0.0367		112	23-173		
Surrogate: Toluene-d8	0.0432		"	0.0367		118	20-170		
Surrogate: 4-Bromofluorobenzene	0.0569		"	0.0367		155	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: Ursula 2
Project Number: [none]
Project Manager: Christine Wasko

Reported:
12/03/15 07:05

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 1512022 - EPA 5030 Soil MS

Matrix Spike Dup (1512022-MSD1)		Source: 1512011-01			Prepared & Analyzed: 12/02/15						
Naphthalene	0.220	0.010	mg/kg		0.252		10-158	58.6	42		QM-07
Benzene	0.0795	0.0020	"	0.0887	ND	89.6	30-131	2.62	34		
Toluene	0.0797	0.0050	"	0.0887	ND	89.9	30-134	2.45	30		
Ethylbenzene	0.176	0.0050	"	0.0879	0.0726	118	22-153	25.5	24		QM-07
m,p-Xylene	0.233	0.010	"	0.177	0.0960	77.7	10-159	14.1	68		
o-Xylene	0.0917	0.0050	"	0.0872	ND	105	31-151	0.841	38		
Xylenes (total)	0.325	0.010	"		0.0960		30-160	10.5	30		
Gasoline Range Hydrocarbons	45.1	0.50	"		253		30-160	23.9	30		
Surrogate: 1,2-Dichloroethane-d4	0.0402		"	0.0355		113	23-173				
Surrogate: Toluene-d8	0.0406		"	0.0355		114	20-170				
Surrogate: 4-Bromofluorobenzene	0.0520		"	0.0355		147	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: Ursula 2
Project Number: [none]
Project Manager: Christine Wasko

Reported:
12/03/15 07:05

Notes and Definitions

QM-07 The spike recovery was outside acceptance limits for the MS and/or MSD. The batch was accepted based on acceptable LCS/LCSD recovery.

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

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.

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

Summit Scientific

741 Corporate Circle – Suite I ♦ Golden, Colorado 80401

303.277.9310 - laboratory ♦ 303.277.9531 - fax

December 08, 2015

Mark Longhurst
PDC Energy
1775 Sherman St. STE. 3000
Denver, CO 80203
RE: Ursula 2

Enclosed are the results of analyses for samples received by Summit Scientific on 12/07/15 17:45. 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: Ursula 2
Project Number: [none]
Project Manager: Mark Longhurst

Reported:
12/08/15 06:29

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
SS13@5'	1512044-01	Soil	12/07/15 10:00	12/07/15 17:45
SS14@5'	1512044-02	Soil	12/07/15 13:40	12/07/15 17:45
SS15@5'	1512044-03	Soil	12/07/15 13:45	12/07/15 17:45
SS16@5'	1512044-04	Soil	12/07/15 14:05	12/07/15 17:45
SS17@5'	1512044-05	Soil	12/07/15 15:30	12/07/15 17:45

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.

Page 2 of 11



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

Project: Ursula 2
Project Number: [none]
Project Manager: Mark Longhurst

Reported:
12/08/15 06:29

SS13@5'
1512044-01 (Soil)

Summit Scientific

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: 12/07/15 10:00

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
C10-C28 (DRO)	ND	50	mg/kg	1	1512061	12/07/15	12/07/15	8015M	

Date Sampled: 12/07/15 10:00

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: o-Terphenyl		92.7 %	30-150		"	"	"	"	

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: 12/07/15 10:00

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Naphthalene	ND	0.010	mg/kg	1	1512060	12/07/15	12/07/15	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: 12/07/15 10:00

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 1,2-Dichloroethane-d4		84.1 %	23-173		"	"	"	"	
Surrogate: Toluene-d8		93.7 %	20-170		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		91.2 %	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: Ursula 2
Project Number: [none]
Project Manager: Mark Longhurst

Reported:
12/08/15 06:29

SS14@5'
1512044-02 (Soil)

Summit Scientific

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: 12/07/15 13:40

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
C10-C28 (DRO)	100	50	mg/kg	1	1512061	12/07/15	12/07/15	8015M	

Date Sampled: 12/07/15 13:40

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: o-Terphenyl		96.0 %	30-150		"	"	"	"	

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: 12/07/15 13:40

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Naphthalene	ND	0.010	mg/kg	1	1512060	12/07/15	12/07/15	EPA 8260B	
Benzene	ND	0.0020	"	"	"	"	"	"	
Toluene	ND	0.0050	"	"	"	"	"	"	
Ethylbenzene	ND	0.0050	"	"	"	"	"	"	
Xylenes (total)	ND	0.010	"	"	"	"	"	"	
Gasoline Range Hydrocarbons	8.7	0.50	"	"	"	"	"	"	

Date Sampled: 12/07/15 13:40

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 1,2-Dichloroethane-d4		85.4 %	23-173		"	"	"	"	
Surrogate: Toluene-d8		96.1 %	20-170		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		90.2 %	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: Ursula 2
Project Number: [none]
Project Manager: Mark Longhurst

Reported:
12/08/15 06:29

SS15@5'
1512044-03 (Soil)

Summit Scientific

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: 12/07/15 13:45

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
C10-C28 (DRO)	780	50	mg/kg	1	1512061	12/07/15	12/07/15	8015M	

Date Sampled: 12/07/15 13:45

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: o-Terphenyl		94.8 %	30-150		"	"	"	"	

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: 12/07/15 13:45

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Naphthalene	0.091	0.010	mg/kg	1	1512060	12/07/15	12/07/15	EPA 8260B	
Benzene	ND	0.0020	"	"	"	"	"	"	
Toluene	ND	0.0050	"	"	"	"	12/07/15	"	
Ethylbenzene	0.016	0.0050	"	"	"	"	12/07/15	"	
Xylenes (total)	ND	0.010	"	"	"	"	"	"	
Gasoline Range Hydrocarbons	540	50	"	100	"	"	12/07/15	"	

Date Sampled: 12/07/15 13:45

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 1,2-Dichloroethane-d4		83.2 %	23-173		"	"	12/07/15	"	
Surrogate: Toluene-d8		122 %	20-170		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		96.1 %	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: Ursula 2
Project Number: [none]
Project Manager: Mark Longhurst

Reported:
12/08/15 06:29

SS16@5'
1512044-04 (Soil)

Summit Scientific

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: 12/07/15 14:05

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
C10-C28 (DRO)	ND	50	mg/kg	1	1512061	12/07/15	12/07/15	8015M	

Date Sampled: 12/07/15 14:05

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: o-Terphenyl		91.7 %	30-150		"	"	"	"	

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: 12/07/15 14:05

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Naphthalene	ND	0.010	mg/kg	1	1512060	12/07/15	12/07/15	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: 12/07/15 14:05

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 1,2-Dichloroethane-d4		82.6 %	23-173		"	"	"	"	
Surrogate: Toluene-d8		93.7 %	20-170		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		89.8 %	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: Ursula 2
Project Number: [none]
Project Manager: Mark Longhurst

Reported:
12/08/15 06:29

SS17@5'
1512044-05 (Soil)

Summit Scientific

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: 12/07/15 15:30

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
C10-C28 (DRO)	1700	50	mg/kg	1	1512061	12/07/15	12/07/15	8015M	

Date Sampled: 12/07/15 15:30

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: o-Terphenyl		95.5 %	30-150		"	"	"	"	

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: 12/07/15 15:30

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Naphthalene	3.8	1.0	mg/kg	100	1512060	12/07/15	12/08/15	EPA 8260B	
Benzene	0.092	0.0020	"	1	"	"	"	"	
Toluene	ND	0.0050	"	"	"	"	12/07/15	"	
Ethylbenzene	2.3	0.50	"	100	"	"	12/08/15	"	
Xylenes (total)	1.5	0.010	"	1	"	"	"	"	
Gasoline Range Hydrocarbons	240	50	"	100	"	"	12/07/15	"	

Date Sampled: 12/07/15 15:30

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 1,2-Dichloroethane-d4		78.4 %	23-173		"	"	12/08/15	"	
Surrogate: Toluene-d8		117 %	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: Ursula 2
Project Number: [none]
Project Manager: Mark Longhurst

Reported:
12/08/15 06:29

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 1512061 - EPA 3550A

Blank (1512061-BLK1)

Prepared & Analyzed: 12/07/15

C10-C28 (DRO) ND 50 mg/kg

Surrogate: o-Terphenyl 14.0 " 12.5 112 30-150

LCS (1512061-BS1)

Prepared & Analyzed: 12/07/15

C10-C28 (DRO) 478 50 mg/kg 499 95.8 73-134

Surrogate: o-Terphenyl 12.5 " 12.5 100 30-150

Matrix Spike (1512061-MS1)

Source: 1512043-01

Prepared & Analyzed: 12/07/15

C10-C28 (DRO) 457 50 mg/kg 465 25.3 93.0 50-148

Surrogate: o-Terphenyl 11.3 " 11.6 96.7 30-150

Matrix Spike Dup (1512061-MSD1)

Source: 1512043-01

Prepared & Analyzed: 12/07/15

C10-C28 (DRO) 474 50 mg/kg 490 25.3 91.4 50-148 3.50 13

Surrogate: o-Terphenyl 11.8 " 12.3 96.1 30-150

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: Ursula 2
Project Number: [none]
Project Manager: Mark Longhurst

Reported:
12/08/15 06:29

Volatile Organic Compounds by EPA Method 8260B - Quality Control
Summit Scientific

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

Batch 1512060 - EPA 5030 Soil MS

Blank (1512060-BLK1)

Prepared & Analyzed: 12/07/15

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>0.0319</i>		<i>"</i>	<i>0.0400</i>		<i>79.7</i>	<i>23-173</i>			
<i>Surrogate: Toluene-d8</i>	<i>0.0370</i>		<i>"</i>	<i>0.0400</i>		<i>92.5</i>	<i>20-170</i>			
<i>Surrogate: 4-Bromofluorobenzene</i>	<i>0.0354</i>		<i>"</i>	<i>0.0400</i>		<i>88.6</i>	<i>21-167</i>			

LCS (1512060-BS1)

Prepared & Analyzed: 12/07/15

Naphthalene	ND	0.010	mg/kg				66-138			
Benzene	0.0858	0.0020	"	0.100		85.8	58-130			
Toluene	0.0868	0.0050	"	0.100		86.8	61-134			
Ethylbenzene	0.0981	0.0050	"	0.0992		89.9	74-139			
m,p-Xylene	0.187	0.010	"	0.200		93.5	73-137			
o-Xylene	0.0910	0.0050	"	0.0984		92.4	73-141			
Xylenes (total)	0.278	0.010	"				0-200			
Gasoline Range Hydrocarbons	1.91	0.50	"				30-150			
<i>Surrogate: 1,2-Dichloroethane-d4</i>	<i>0.0311</i>		<i>"</i>	<i>0.0400</i>		<i>77.8</i>	<i>23-173</i>			
<i>Surrogate: Toluene-d8</i>	<i>0.0387</i>		<i>"</i>	<i>0.0400</i>		<i>96.8</i>	<i>20-170</i>			
<i>Surrogate: 4-Bromofluorobenzene</i>	<i>0.0364</i>		<i>"</i>	<i>0.0400</i>		<i>91.0</i>	<i>21-167</i>			

Matrix Spike (1512060-MS1)

Source: 1512043-01

Prepared & Analyzed: 12/07/15

Naphthalene	ND	0.010	mg/kg		ND		10-158			
Benzene	0.0886	0.0020	"	0.0969	ND	91.4	30-131			
Toluene	0.0879	0.0050	"	0.0969	ND	90.7	30-134			
Ethylbenzene	0.102	0.0050	"	0.0961	ND	106	22-153			
m,p-Xylene	0.196	0.010	"	0.193	ND	101	10-159			
o-Xylene	0.0951	0.0050	"	0.0953	ND	99.8	31-151			
Xylenes (total)	0.291	0.010	"		0.00		30-160			
Gasoline Range Hydrocarbons	2.11	0.50	"		ND		30-160			
<i>Surrogate: 1,2-Dichloroethane-d4</i>	<i>0.0311</i>		<i>"</i>	<i>0.0388</i>		<i>80.2</i>	<i>23-173</i>			
<i>Surrogate: Toluene-d8</i>	<i>0.0365</i>		<i>"</i>	<i>0.0388</i>		<i>94.2</i>	<i>20-170</i>			
<i>Surrogate: 4-Bromofluorobenzene</i>	<i>0.0355</i>		<i>"</i>	<i>0.0388</i>		<i>91.5</i>	<i>21-167</i>			

Summit Scientific

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

Project: Ursula 2
Project Number: [none]
Project Manager: Mark Longhurst

Reported:
12/08/15 06:29

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 1512060 - EPA 5030 Soil MS

Matrix Spike Dup (1512060-MSD1)		Source: 1512043-01			Prepared & Analyzed: 12/07/15					
Naphthalene	ND	0.010	mg/kg		ND		10-158		42	
Benzene	0.0923	0.0020	"	0.0969	ND	95.2	30-131	4.11	34	
Toluene	0.0926	0.0050	"	0.0969	ND	95.6	30-134	5.28	30	
Ethylbenzene	0.104	0.0050	"	0.0961	ND	109	22-153	2.28	24	
m,p-Xylene	0.198	0.010	"	0.193	ND	103	10-159	1.48	68	
o-Xylene	0.0965	0.0050	"	0.0953	ND	101	31-151	1.43	38	
Xylenes (total)	0.295	0.010	"		0.00		30-160	1.46	30	
Gasoline Range Hydrocarbons	2.19	0.50	"		ND		30-160	3.84	30	
Surrogate: 1,2-Dichloroethane-d4	0.0322		"	0.0388		82.9	23-173			
Surrogate: Toluene-d8	0.0379		"	0.0388		97.7	20-170			
Surrogate: 4-Bromofluorobenzene	0.0349		"	0.0388		90.1	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: Ursula 2
Project Number: [none]
Project Manager: Mark Longhurst

Reported:
12/08/15 06:29

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

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

Summit Scientific

741 Corporate Circle – Suite I ♦ Golden, Colorado 80401

303.277.9310 - laboratory ♦ 303.277.9531 - fax

December 09, 2015

Mark Longhurst
PDC Energy
1775 Sherman St. STE. 3000
Denver, CO 80203
RE: Ursula 2

Enclosed are the results of analyses for samples received by Summit Scientific on 12/08/15 17:45. 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, flowing script.

Paul Shrewsbury
President



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

Project: Ursula 2
Project Number: [none]
Project Manager: Mark Longhurst

Reported:
12/09/15 06:51

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
SS18@5'	1512063-01	Soil	12/08/15 11:00	12/08/15 17:45
SS19@5'	1512063-02	Soil	12/08/15 10:25	12/08/15 17:45
SS20@5'	1512063-03	Soil	12/08/15 10:20	12/08/15 17:45

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: Ursula 2
Project Number: [none]
Project Manager: Mark Longhurst

Reported:
12/09/15 06:51

SS18@5'
1512063-01 (Soil)

Summit Scientific

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: 12/08/15 11:00

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
C10-C28 (DRO)	760	50	mg/kg	1	1512078	12/08/15	12/08/15	8015M	

Date Sampled: 12/08/15 11:00

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: o-Terphenyl		96.3 %	30-150		"	"	"	"	

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: 12/08/15 11:00

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Naphthalene	0.13	0.010	mg/kg	1	1512077	12/08/15	12/08/15	EPA 8260B	
Benzene	0.034	0.0020	"	"	"	"	"	"	
Toluene	ND	0.0050	"	"	"	"	12/08/15	"	
Ethylbenzene	0.11	0.0050	"	"	"	"	12/08/15	"	
Xylenes (total)	ND	0.010	"	"	"	"	"	"	
Gasoline Range Hydrocarbons	530	50	"	100	"	"	12/08/15	"	

Date Sampled: 12/08/15 11:00

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 1,2-Dichloroethane-d4		96.8 %	23-173		"	"	12/08/15	"	
Surrogate: Toluene-d8		156 %	20-170		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		109 %	21-167		"	"	"	"	

Summit Scientific

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

Project: Ursula 2
Project Number: [none]
Project Manager: Mark Longhurst

Reported:
12/09/15 06:51

SS19@5'
1512063-02 (Soil)

Summit Scientific

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: 12/08/15 10:25

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
C10-C28 (DRO)	ND	50	mg/kg	1	1512078	12/08/15	12/08/15	8015M	

Date Sampled: 12/08/15 10:25

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: o-Terphenyl		93.7 %	30-150		"	"	"	"	

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: 12/08/15 10:25

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Naphthalene	ND	0.010	mg/kg	1	1512077	12/08/15	12/08/15	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: 12/08/15 10:25

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		104 %	21-167		"	"	"	"	

Summit Scientific

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

Project: Ursula 2
Project Number: [none]
Project Manager: Mark Longhurst

Reported:
12/09/15 06:51

SS20@5'
1512063-03 (Soil)

Summit Scientific

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: 12/08/15 10:20

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
C10-C28 (DRO)	ND	50	mg/kg	1	1512078	12/08/15	12/08/15	8015M	

Date Sampled: 12/08/15 10:20

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: o-Terphenyl		100 %	30-150		"	"	"	"	

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: 12/08/15 10:20

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Naphthalene	ND	0.010	mg/kg	1	1512077	12/08/15	12/08/15	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: 12/08/15 10:20

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 1,2-Dichloroethane-d4		105 %	23-173		"	"	"	"	
Surrogate: Toluene-d8		99.9 %	20-170		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		104 %	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: Ursula 2
Project Number: [none]
Project Manager: Mark Longhurst

Reported:
12/09/15 06:51

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 1512078 - EPA 3550A

Blank (1512078-BLK1)

Prepared & Analyzed: 12/08/15

C10-C28 (DRO) ND 50 mg/kg

Surrogate: o-Terphenyl 12.4 " 12.5 98.9 30-150

LCS (1512078-BS1)

Prepared & Analyzed: 12/08/15

C10-C28 (DRO) 552 50 mg/kg 499 111 73-134

Surrogate: o-Terphenyl 13.2 " 12.5 105 30-150

Matrix Spike (1512078-MS1)

Source: 1512063-02

Prepared & Analyzed: 12/08/15

C10-C28 (DRO) 502 50 mg/kg 488 34.0 95.9 50-148

Surrogate: o-Terphenyl 11.9 " 12.2 97.0 30-150

Matrix Spike Dup (1512078-MSD1)

Source: 1512063-02

Prepared & Analyzed: 12/08/15

C10-C28 (DRO) 500 50 mg/kg 492 34.0 94.8 50-148 0.386 13

Surrogate: o-Terphenyl 11.8 " 12.3 95.9 30-150

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: Ursula 2
Project Number: [none]
Project Manager: Mark Longhurst

Reported:
12/09/15 06:51

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 1512077 - EPA 5030 Soil MS

Blank (1512077-BLK1)

Prepared & Analyzed: 12/08/15

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>0.0391</i>		<i>"</i>	<i>0.0400</i>		<i>97.6</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>0.0408</i>		<i>"</i>	<i>0.0400</i>		<i>102</i>	<i>21-167</i>			

LCS (1512077-BS1)

Prepared & Analyzed: 12/08/15

Naphthalene	ND	0.010	mg/kg				66-138			
Benzene	0.0782	0.0020	"	0.100		78.2	58-130			
Toluene	0.0822	0.0050	"	0.100		82.2	61-134			
Ethylbenzene	0.0964	0.0050	"	0.0992		97.1	74-139			
m,p-Xylene	0.184	0.010	"	0.200		92.4	73-137			
o-Xylene	0.0884	0.0050	"	0.0984		89.8	73-141			
Xylenes (total)	0.273	0.010	"				0-200			
Gasoline Range Hydrocarbons	2.22	0.50	"				30-150			
<i>Surrogate: 1,2-Dichloroethane-d4</i>	<i>0.0405</i>		<i>"</i>	<i>0.0400</i>		<i>101</i>	<i>23-173</i>			
<i>Surrogate: Toluene-d8</i>	<i>0.0394</i>		<i>"</i>	<i>0.0400</i>		<i>98.6</i>	<i>20-170</i>			
<i>Surrogate: 4-Bromofluorobenzene</i>	<i>0.0382</i>		<i>"</i>	<i>0.0400</i>		<i>95.5</i>	<i>21-167</i>			

Matrix Spike (1512077-MS1)

Source: 1512063-03

Prepared & Analyzed: 12/08/15

Naphthalene	ND	0.010	mg/kg		ND		10-158			
Benzene	0.0764	0.0020	"	0.0975	ND	78.4	30-131			
Toluene	0.0804	0.0050	"	0.0975	ND	82.5	30-134			
Ethylbenzene	0.0962	0.0050	"	0.0967	ND	99.5	22-153			
m,p-Xylene	0.185	0.010	"	0.195	ND	94.9	10-159			
o-Xylene	0.0886	0.0050	"	0.0959	ND	92.4	31-151			
Xylenes (total)	0.273	0.010	"		0.00		30-160			
Gasoline Range Hydrocarbons	2.17	0.50	"		ND		30-160			
<i>Surrogate: 1,2-Dichloroethane-d4</i>	<i>0.0398</i>		<i>"</i>	<i>0.0390</i>		<i>102</i>	<i>23-173</i>			
<i>Surrogate: Toluene-d8</i>	<i>0.0380</i>		<i>"</i>	<i>0.0390</i>		<i>97.4</i>	<i>20-170</i>			
<i>Surrogate: 4-Bromofluorobenzene</i>	<i>0.0380</i>		<i>"</i>	<i>0.0390</i>		<i>97.3</i>	<i>21-167</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
1775 Sherman St. STE. 3000
Denver CO, 80203

Project: Ursula 2
Project Number: [none]
Project Manager: Mark Longhurst

Reported:
12/09/15 06:51

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 1512077 - EPA 5030 Soil MS

Matrix Spike Dup (1512077-MSD1)		Source: 1512063-03			Prepared & Analyzed: 12/08/15					
Naphthalene	ND	0.010	mg/kg		ND		10-158		42	
Benzene	0.0737	0.0020	"	0.0945	ND	78.0	30-131	3.65	34	
Toluene	0.0781	0.0050	"	0.0945	ND	82.6	30-134	2.93	30	
Ethylbenzene	0.0931	0.0050	"	0.0938	ND	99.3	22-153	3.25	24	
m,p-Xylene	0.180	0.010	"	0.189	ND	95.5	10-159	2.44	68	
o-Xylene	0.0857	0.0050	"	0.0930	ND	92.2	31-151	3.34	38	
Xylenes (total)	0.266	0.010	"		0.00		30-160	2.73	30	
Gasoline Range Hydrocarbons	2.06	0.50	"		ND		30-160	5.08	30	
Surrogate: 1,2-Dichloroethane-d4	0.0390		"	0.0378		103	23-173			
Surrogate: Toluene-d8	0.0369		"	0.0378		97.5	20-170			
Surrogate: 4-Bromofluorobenzene	0.0376		"	0.0378		99.4	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: Ursula 2
Project Number: [none]
Project Manager: Mark Longhurst

Reported:
12/09/15 06:51

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

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.

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

Summit Scientific

741 Corporate Circle – Suite I ♦ Golden, Colorado 80401

303.277.9310 - laboratory ♦ 303.277.9531 - fax

December 10, 2015

Mark Longhurst
PDC Energy
1775 Sherman St. STE. 3000
Denver, CO 80203
RE: Ursula 2

Enclosed are the results of analyses for samples received by Summit Scientific on 12/09/15 17:25. 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: Ursula 2
Project Number: [none]
Project Manager: Mark Longhurst

Reported:
12/10/15 06:38

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
SS21@5'	1512078-01	Soil	12/09/15 08:45	12/09/15 17:25
GW07	1512078-02	Water	12/09/15 08:15	12/09/15 17:25

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: Ursula 2
Project Number: [none]
Project Manager: Mark Longhurst

Reported:
12/10/15 06:38

Summit Scientific 15/2078

S₂

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

Page 1 of 1

Client: PDC Project Manager: Mark Longhurst
Address: E-Mail: mark.longhurst@pdc.com
City/State/Zip: Project Name: URSULA 2
Phone: Fax: Project Number:
Sampler Name: M.H. P

ID	Sample Description	Date Sampled	Time Sampled	# of containers	Preservative				Matrix			Analysis Requested				Special Instructions
					HCl	HNO ₃	None	Other (Specify)	Groundwater	Soil	Air-Canister #	Other (Specify)	GBEN	DEO	BTEX	
1	SS21ES	12/9/15	8:45	1												
2	GW07		8:15	3	X				X			X	X		X	
3																
4																
5																
6																
7																
8																
9																
10																

Relinquished by:	Date/Time: 12/9/15 17:00	Received by:	Date/Time: 12/9/15 1700	Turn Around Time (Check)	Notes:
				Same Day <input checked="" type="checkbox"/> 72 hours <input type="checkbox"/>	on ice
				24 hours <input type="checkbox"/> Standard <input type="checkbox"/>	
				48 hours <input type="checkbox"/>	
Relinquished by:	Date/Time: 12/9/15 1725	Received by:	Date/Time: 12-9-15 1725	Sample Integrity: 5.5°C	
Relinquished by:	Date/Time:	Received by:	Date/Time:	Temperature Upon Receipt: <input checked="" type="radio"/> Yes <input type="radio"/> No	

www.s2scientific.com

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: Ursula 2
Project Number: [none]
Project Manager: Mark Longhurst

Reported:
12/10/15 06:38

SS21@5'
1512078-01 (Soil)

Summit Scientific

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: 12/09/15 08:45

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
C10-C28 (DRO)	ND	50	mg/kg	1	1512090	12/09/15	12/09/15	8015M	

Date Sampled: 12/09/15 08:45

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: o-Terphenyl		95.3 %	30-150		"	"	"	"	

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: 12/09/15 08:45

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Naphthalene	ND	0.010	mg/kg	1	1512089	12/09/15	12/09/15	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: 12/09/15 08:45

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 1,2-Dichloroethane-d4		101 %	23-173		"	"	"	"	
Surrogate: Toluene-d8		98.6 %	20-170		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		100 %	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: Ursula 2
Project Number: [none]
Project Manager: Mark Longhurst

Reported:
12/10/15 06:38

GW07
1512078-02 (Water)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: 12/09/15 08:15

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Benzene	ND	1.0	ug/l	1	1512086	12/09/15	12/09/15	EPA 8260B	
Toluene	ND	1.0	"	"	"	"	"	"	
Ethylbenzene	1.3	1.0	"	"	"	"	"	"	
Xylenes (total)	3.2	1.0	"	"	"	"	"	"	

Date Sampled: 12/09/15 08:15

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 1,2-Dichloroethane-d4		84.9 %	37-154		"	"	"	"	
Surrogate: Toluene-d8		99.4 %	45-149		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		92.6 %	45-146		"	"	"	"	

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: Ursula 2
Project Number: [none]
Project Manager: Mark Longhurst

Reported:
12/10/15 06:38

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 1512090 - EPA 3550A

Blank (1512090-BLK1)

Prepared & Analyzed: 12/09/15

C10-C28 (DRO)	ND	50	mg/kg							
Surrogate: o-Terphenyl	11.8		"	12.5		94.0	30-150			

LCS (1512090-BS1)

Prepared & Analyzed: 12/09/15

C10-C28 (DRO)	485	50	mg/kg	499		97.3	73-134			
Surrogate: o-Terphenyl	11.8		"	12.5		94.7	30-150			

Matrix Spike (1512090-MS1)

Source: 1512078-01

Prepared & Analyzed: 12/09/15

C10-C28 (DRO)	509	50	mg/kg	459	24.1	106	50-148			
Surrogate: o-Terphenyl	11.7		"	11.5		102	30-150			

Matrix Spike Dup (1512090-MSD1)

Source: 1512078-01

Prepared & Analyzed: 12/09/15

C10-C28 (DRO)	484	50	mg/kg	470	24.1	97.9	50-148	5.10	13	
Surrogate: o-Terphenyl	11.2		"	11.8		95.3	30-150			

Summit Scientific

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

Project: Ursula 2
Project Number: [none]
Project Manager: Mark Longhurst

Reported:
12/10/15 06:38

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 1512086 - EPA 5030 Water MS

Blank (1512086-BLK1)

Prepared & Analyzed: 12/09/15

Benzene	ND	1.0	ug/l							
Toluene	ND	1.0	"							
Ethylbenzene	ND	1.0	"							
Xylenes (total)	ND	1.0	"							
Surrogate: 1,2-Dichloroethane-d4	13.0		"	13.3		97.4	37-154			
Surrogate: Toluene-d8	12.9		"	13.3		96.5	45-149			
Surrogate: 4-Bromofluorobenzene	13.0		"	13.3		97.5	45-146			

LCS (1512086-BS1)

Prepared & Analyzed: 12/09/15

Benzene	28.5	1.0	ug/l	50.0		57.0	51-132			
Toluene	29.9	1.0	"	50.0		59.8	51-138			
Ethylbenzene	32.6	1.0	"	50.0		65.2	58-146			
m,p-Xylene	62.4	2.0	"	100		62.4	57-144			
o-Xylene	30.4	1.0	"	50.0		60.8	53-146			
Surrogate: 1,2-Dichloroethane-d4	14.4		"	13.3		108	37-154			
Surrogate: Toluene-d8	13.3		"	13.3		99.9	45-149			
Surrogate: 4-Bromofluorobenzene	12.7		"	13.3		95.6	45-146			

Matrix Spike (1512086-MS1)

Source: 1512077-01

Prepared & Analyzed: 12/09/15

Benzene	30.5	1.0	ug/l	50.0	ND	61.0	34-141			
Toluene	32.0	1.0	"	50.0	ND	63.9	27-151			
Ethylbenzene	34.3	1.0	"	50.0	ND	68.7	29-160			
m,p-Xylene	64.9	2.0	"	100	ND	64.9	20-166			
o-Xylene	31.8	1.0	"	50.0	ND	63.6	33-159			
Surrogate: 1,2-Dichloroethane-d4	13.6		"	13.3		102	37-154			
Surrogate: Toluene-d8	13.5		"	13.3		101	45-149			
Surrogate: 4-Bromofluorobenzene	12.3		"	13.3		92.3	45-146			

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: Ursula 2
Project Number: [none]
Project Manager: Mark Longhurst

Reported:
12/10/15 06:38

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 1512086 - EPA 5030 Water MS

Matrix Spike Dup (1512086-MSD1)			Source: 1512077-01		Prepared & Analyzed: 12/09/15					
Benzene	29.0	1.0	ug/l	50.0	ND	58.0	34-141	4.98	32	
Toluene	30.5	1.0	"	50.0	ND	61.0	27-151	4.67	25	
Ethylbenzene	34.0	1.0	"	50.0	ND	68.0	29-160	1.02	50	
m,p-Xylene	64.8	2.0	"	100	ND	64.8	20-166	0.0617	36	
o-Xylene	31.4	1.0	"	50.0	ND	62.9	33-159	1.14	26	
Surrogate: 1,2-Dichloroethane-d4	13.8		"	13.3		104	37-154			
Surrogate: Toluene-d8	13.2		"	13.3		99.0	45-149			
Surrogate: 4-Bromofluorobenzene	12.5		"	13.3		94.1	45-146			

Batch 1512089 - EPA 5030 Soil MS

Blank (1512089-BLK1)			Prepared & Analyzed: 12/09/15							
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	"							
Surrogate: 1,2-Dichloroethane-d4	0.0394		"	0.0400		98.6	23-173			
Surrogate: Toluene-d8	0.0398		"	0.0400		99.6	20-170			
Surrogate: 4-Bromofluorobenzene	0.0400		"	0.0400		99.9	21-167			

LCS (1512089-BS1)			Prepared & Analyzed: 12/09/15							
Naphthalene	ND	0.010	mg/kg							
Benzene	0.0783	0.0020	"	0.100		78.3	58-130			
Toluene	0.0827	0.0050	"	0.100		82.7	61-134			
Ethylbenzene	0.0988	0.0050	"	0.0992		99.6	74-139			
m,p-Xylene	0.190	0.010	"	0.200		95.4	73-137			
o-Xylene	0.0911	0.0050	"	0.0984		92.6	73-141			
Xylenes (total)	0.281	0.010	"				0-200			
Gasoline Range Hydrocarbons	2.20	0.50	"				30-150			
Surrogate: 1,2-Dichloroethane-d4	0.0397		"	0.0400		99.2	23-173			
Surrogate: Toluene-d8	0.0396		"	0.0400		99.1	20-170			
Surrogate: 4-Bromofluorobenzene	0.0396		"	0.0400		98.9	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: Ursula 2
Project Number: [none]
Project Manager: Mark Longhurst

Reported:
12/10/15 06:38

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 1512089 - EPA 5030 Soil MS

Matrix Spike (1512089-MS1)

Source: 1512078-01

Prepared & Analyzed: 12/09/15

Naphthalene	ND	0.010	mg/kg		ND		10-158		
Benzene	0.0767	0.0020	"	0.0977	ND	78.5	30-131		
Toluene	0.0816	0.0050	"	0.0977	ND	83.6	30-134		
Ethylbenzene	0.0961	0.0050	"	0.0969	ND	99.2	22-153		
m,p-Xylene	0.185	0.010	"	0.195	ND	94.8	10-159		
o-Xylene	0.0887	0.0050	"	0.0961	ND	92.3	31-151		
Xylenes (total)	0.273	0.010	"		0.00		30-160		
Gasoline Range Hydrocarbons	2.17	0.50	"		ND		30-160		
Surrogate: 1,2-Dichloroethane-d4	0.0394		"	0.0391		101	23-173		
Surrogate: Toluene-d8	0.0387		"	0.0391		99.2	20-170		
Surrogate: 4-Bromofluorobenzene	0.0386		"	0.0391		98.8	21-167		

Matrix Spike Dup (1512089-MSD1)

Source: 1512078-01

Prepared & Analyzed: 12/09/15

Naphthalene	ND	0.010	mg/kg		ND		10-158		42
Benzene	0.0755	0.0020	"	0.0982	ND	76.9	30-131	1.57	34
Toluene	0.0810	0.0050	"	0.0982	ND	82.4	30-134	0.822	30
Ethylbenzene	0.0953	0.0050	"	0.0974	ND	97.8	22-153	0.855	24
m,p-Xylene	0.183	0.010	"	0.196	ND	93.4	10-159	0.898	68
o-Xylene	0.0890	0.0050	"	0.0967	ND	92.1	31-151	0.290	38
Xylenes (total)	0.272	0.010	"		0.00		30-160	0.511	30
Gasoline Range Hydrocarbons	2.18	0.50	"		ND		30-160	0.593	30
Surrogate: 1,2-Dichloroethane-d4	0.0393		"	0.0393		99.9	23-173		
Surrogate: Toluene-d8	0.0383		"	0.0393		97.3	20-170		
Surrogate: 4-Bromofluorobenzene	0.0379		"	0.0393		96.5	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: Ursula 2
Project Number: [none]
Project Manager: Mark Longhurst

Reported:
12/10/15 06:38

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

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.

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

Summit Scientific

741 Corporate Circle – Suite I ♦ Golden, Colorado 80401

303.277.9310 - laboratory ♦ 303.277.9531 - fax

December 11, 2015

Mark Longhurst
PDC Energy
1775 Sherman St. STE. 3000
Denver, CO 80203
RE: Ursula 2

Enclosed are the results of analyses for samples received by Summit Scientific on 12/10/15 18:15. 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: Ursula 2
Project Number: [none]
Project Manager: Mark Longhurst

Reported:
12/11/15 06:00

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
SS22@5'	1512089-01	Soil	12/10/15 09:45	12/10/15 18:15
SS23@5'	1512089-02	Soil	12/10/15 09:50	12/10/15 18:15

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: Ursula 2
Project Number: [none]
Project Manager: Mark Longhurst

Reported:
12/11/15 06:00

Summit Scientific *15/2087*

S₂

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

Page 1 of 1

Client: PDC Project Manager: Mark Longhurst
Address: _____ E-Mail: Mark.Longhurst@PDC.E-Com
City/State/Zip: _____
Phone: _____ Fax: _____ Project Name: URSULA 2
Sampler Name: Matt P Project Number: _____

ID	Sample Description	Date Sampled	Time Sampled	# of containers	Preservative				Matrix				Analysis Requested				Special Instructions
					HCl	HNO ₃	None	Other (Specify)	Groundwater	Soil	Air-Canister #	Other (Specify)	6815A (250)	6815B (250)	6815C (250)	6815D (250)	
1	SS22e5	12/10/15	9:45	1			X			X				X	X		
2	SS23e5		9:50	1			X			X				X	X		
3																	
4																	
5																	
6																	
7																	
8																	
9																	
10																	

Relinquished by: <u>[Signature]</u>	Date/Time: <u>12/10/15 17:00</u>	Received by: <u>[Signature]</u>	Date/Time: <u>12-10-15 16:00</u>	Turn Around Time (Check) Same Day <input checked="" type="checkbox"/> 72 hours 24 hours <input type="checkbox"/> Standard 48 hours <input type="checkbox"/>	Notes:
Relinquished by: <u>[Signature]</u>	Date/Time: <u>12-10-15 18:15</u>	Received by:	Date/Time:	Sample Integrity: Temperature Upon Receipt: <u>6.2</u> Intact: <input checked="" type="radio"/> Yes <input type="radio"/> No	
Relinquished by:	Date/Time:	Received by:	Date/Time:		

www.s2scientific.com

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: Ursula 2
Project Number: [none]
Project Manager: Mark Longhurst

Reported:
12/11/15 06:00

SS22@5'
1512089-01 (Soil)

Summit Scientific

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: 12/10/15 09:45

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
C10-C28 (DRO)	330	50	mg/kg	1	1512099	12/10/15	12/10/15	8015M	

Date Sampled: 12/10/15 09:45

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: o-Terphenyl		112 %	30-150		"	"	"	"	

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: 12/10/15 09:45

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Naphthalene	0.86	0.010	mg/kg	1	1512100	12/10/15	12/10/15	EPA 8260B	
Benzene	4.1	0.20	"	100	"	"	12/10/15	"	
Toluene	1.3	0.50	"	"	"	"	"	"	
Ethylbenzene	25	0.50	"	"	"	"	"	"	
Xylenes (total)	160	1.0	"	"	"	"	12/10/15	"	
Gasoline Range Hydrocarbons	4600	50	"	"	"	"	12/10/15	"	

Date Sampled: 12/10/15 09:45

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 1,2-Dichloroethane-d4		122 %	23-173		"	"	12/10/15	"	
Surrogate: Toluene-d8		138 %	20-170		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		168 %	21-167		"	"	"	"	S-02

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: Ursula 2
Project Number: [none]
Project Manager: Mark Longhurst

Reported:
12/11/15 06:00

SS23@5'
1512089-02 (Soil)

Summit Scientific

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: 12/10/15 09:50

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
C10-C28 (DRO)	140	50	mg/kg	1	1512099	12/10/15	12/10/15	8015M	

Date Sampled: 12/10/15 09:50

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: o-Terphenyl		114 %	30-150		"	"	"	"	

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: 12/10/15 09:50

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Naphthalene	0.94	0.010	mg/kg	1	1512100	12/10/15	12/10/15	EPA 8260B	
Benzene	0.084	0.0020	"	"	"	"	"	"	
Toluene	ND	0.0050	"	"	"	"	12/10/15	"	
Ethylbenzene	2.0	0.50	"	100	"	"	"	"	
Xylenes (total)	0.93	0.010	"	1	"	"	12/10/15	"	
Gasoline Range Hydrocarbons	990	50	"	100	"	"	12/10/15	"	

Date Sampled: 12/10/15 09:50

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 1,2-Dichloroethane-d4		84.4 %	23-173		"	"	12/10/15	"	
Surrogate: Toluene-d8		117 %	20-170		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		112 %	21-167		"	"	"	"	

Summit Scientific

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

Project: Ursula 2
Project Number: [none]
Project Manager: Mark Longhurst

Reported:
12/11/15 06:00

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 1512099 - EPA 3550A

Blank (1512099-BLK1)

Prepared & Analyzed: 12/10/15

C10-C28 (DRO) ND 50 mg/kg

Surrogate: o-Terphenyl 12.3 " 12.5 98.5 30-150

LCS (1512099-BS1)

Prepared & Analyzed: 12/10/15

C10-C28 (DRO) 491 50 mg/kg 499 98.5 73-134

Surrogate: o-Terphenyl 11.7 " 12.5 94.0 30-150

Matrix Spike (1512099-MS1)

Source: 1512083-01

Prepared & Analyzed: 12/10/15

C10-C28 (DRO) 1940 50 mg/kg 485 3040 NR 50-148 QM-4X

Surrogate: o-Terphenyl 12.4 " 12.2 102 30-150

Matrix Spike Dup (1512099-MSD1)

Source: 1512083-01

Prepared & Analyzed: 12/10/15

C10-C28 (DRO) 2960 50 mg/kg 484 3040 NR 50-148 41.8 13 QM-4X

Surrogate: o-Terphenyl 13.4 " 12.1 110 30-150

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: Ursula 2
Project Number: [none]
Project Manager: Mark Longhurst

Reported:
12/11/15 06:00

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 1512100 - EPA 5030 Soil MS

Blank (1512100-BLK1)

Prepared & Analyzed: 12/10/15

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>0.0381</i>		<i>"</i>	<i>0.0400</i>		<i>95.3</i>	<i>23-173</i>			
<i>Surrogate: Toluene-d8</i>	<i>0.0394</i>		<i>"</i>	<i>0.0400</i>		<i>98.4</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>			

LCS (1512100-BS1)

Prepared & Analyzed: 12/10/15

Naphthalene	ND	0.010	mg/kg				66-138			
Benzene	0.0762	0.0020	"	0.100		76.2	58-130			
Toluene	0.0805	0.0050	"	0.100		80.5	61-134			
Ethylbenzene	0.0972	0.0050	"	0.0992		98.0	74-139			
m,p-Xylene	0.188	0.010	"	0.200		94.4	73-137			
o-Xylene	0.0908	0.0050	"	0.0984		92.3	73-141			
Xylenes (total)	0.279	0.010	"				0-200			
Gasoline Range Hydrocarbons	2.22	0.50	"				30-150			
<i>Surrogate: 1,2-Dichloroethane-d4</i>	<i>0.0387</i>		<i>"</i>	<i>0.0400</i>		<i>96.8</i>	<i>23-173</i>			
<i>Surrogate: Toluene-d8</i>	<i>0.0385</i>		<i>"</i>	<i>0.0400</i>		<i>96.3</i>	<i>20-170</i>			
<i>Surrogate: 4-Bromofluorobenzene</i>	<i>0.0391</i>		<i>"</i>	<i>0.0400</i>		<i>97.7</i>	<i>21-167</i>			

Matrix Spike (1512100-MS1)

Source: 1512053-01

Prepared & Analyzed: 12/10/15

Naphthalene	ND	0.010	mg/kg		ND		10-158			
Benzene	0.0708	0.0020	"	0.0931	ND	76.1	30-131			
Toluene	0.0764	0.0050	"	0.0931	ND	82.0	30-134			
Ethylbenzene	0.0907	0.0050	"	0.0924	ND	98.2	22-153			
m,p-Xylene	0.173	0.010	"	0.186	ND	92.9	10-159			
o-Xylene	0.0846	0.0050	"	0.0916	ND	92.3	31-151			
Xylenes (total)	0.257	0.010	"		0.00		30-160			
Gasoline Range Hydrocarbons	2.04	0.50	"		ND		30-160			
<i>Surrogate: 1,2-Dichloroethane-d4</i>	<i>0.0370</i>		<i>"</i>	<i>0.0372</i>		<i>99.4</i>	<i>23-173</i>			
<i>Surrogate: Toluene-d8</i>	<i>0.0358</i>		<i>"</i>	<i>0.0372</i>		<i>96.2</i>	<i>20-170</i>			
<i>Surrogate: 4-Bromofluorobenzene</i>	<i>0.0358</i>		<i>"</i>	<i>0.0372</i>		<i>96.2</i>	<i>21-167</i>			

Summit Scientific

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

Project: Ursula 2
Project Number: [none]
Project Manager: Mark Longhurst

Reported:
12/11/15 06:00

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 1512100 - EPA 5030 Soil MS

Matrix Spike Dup (1512100-MSD1)		Source: 1512053-01			Prepared & Analyzed: 12/10/15					
Naphthalene	ND	0.010	mg/kg		ND		10-158		42	
Benzene	0.0722	0.0020	"	0.0940	ND	76.8	30-131	1.92	34	
Toluene	0.0772	0.0050	"	0.0940	ND	82.1	30-134	1.05	30	
Ethylbenzene	0.0921	0.0050	"	0.0932	ND	98.8	22-153	1.52	24	
m,p-Xylene	0.175	0.010	"	0.188	ND	93.5	10-159	1.60	68	
o-Xylene	0.0845	0.0050	"	0.0925	ND	91.3	31-151	0.127	38	
Xylenes (total)	0.260	0.010	"		0.00		30-160	1.03	30	
Gasoline Range Hydrocarbons	2.04	0.50	"		ND		30-160	0.0803	30	
Surrogate: 1,2-Dichloroethane-d4	0.0375		"	0.0376		99.7	23-173			
Surrogate: Toluene-d8	0.0363		"	0.0376		96.5	20-170			
Surrogate: 4-Bromofluorobenzene	0.0370		"	0.0376		98.6	21-167			

Summit Scientific

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

Project: Ursula 2
Project Number: [none]
Project Manager: Mark Longhurst

Reported:
12/11/15 06:00

Notes and Definitions

S-02 The surrogate recovery for this sample cannot be accurately quantified due to interference from coeluting organic compounds present in the sample extract.

QM-4X The spike recovery was outside of QC acceptance limits for the MS and/or MSD due to analyte concentration at 4 times or greater the spike concentration. The QC batch was accepted based on LCS and/or LCSD recoveries within the acceptance limits.

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

December 13, 2015

Mark Longhurst
PDC Energy
1775 Sherman St. STE. 3000
Denver, CO 80203
RE: Ursula 2

Enclosed are the results of analyses for samples received by Summit Scientific on 12/11/15 17:00. 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: Ursula 2
Project Number: [none]
Project Manager: Mark Longhurst

Reported:
12/13/15 20:17

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
SS24@5'	1512101-01	Soil	12/11/15 08:35	12/11/15 17:00
SS25@5'	1512101-02	Soil	12/11/15 11:15	12/11/15 17:00
SS26@5'	1512101-03	Soil	12/11/15 12:45	12/11/15 17:00
SS27@5'	1512101-04	Soil	12/11/15 12:05	12/11/15 17:00

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.



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

Project: Ursula 2
Project Number: [none]
Project Manager: Mark Longhurst

Reported:
12/13/15 20:17

SS24@5'
1512101-01 (Soil)

Summit Scientific

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: 12/11/15 08:35

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
C10-C28 (DRO)	ND	50	mg/kg	1	1512114	12/11/15	12/11/15	8015M	

Date Sampled: 12/11/15 08:35

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: o-Terphenyl		94.9 %	30-150		"	"	"	"	

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: 12/11/15 08:35

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Naphthalene	0.072	0.010	mg/kg	1	1512113	12/11/15	12/11/15	EPA 8260B	
Benzene	0.041	0.0020	"	"	"	"	"	"	
Toluene	ND	0.0050	"	"	"	"	"	"	
Ethylbenzene	0.041	0.0050	"	"	"	"	"	"	
Xylenes (total)	0.18	0.010	"	"	"	"	"	"	
Gasoline Range Hydrocarbons	2.6	0.50	"	"	"	"	"	"	

Date Sampled: 12/11/15 08:35

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 1,2-Dichloroethane-d4		82.5 %	23-173		"	"	"	"	
Surrogate: Toluene-d8		92.6 %	20-170		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		89.7 %	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: Ursula 2
Project Number: [none]
Project Manager: Mark Longhurst

Reported:
12/13/15 20:17

SS25@5'
1512101-02 (Soil)

Summit Scientific

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: 12/11/15 11:15

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
C10-C28 (DRO)	510	50	mg/kg	1	1512114	12/11/15	12/11/15	8015M	

Date Sampled: 12/11/15 11:15

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: o-Terphenyl		93.6 %	30-150		"	"	"	"	

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: 12/11/15 11:15

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Naphthalene	2.2	1.0	mg/kg	100	1512113	12/11/15	12/11/15	EPA 8260B	
Benzene	0.47	0.0020	"	1	"	"	"	"	
Toluene	1.3	0.50	"	100	"	"	"	"	
Ethylbenzene	3.9	0.50	"	"	"	"	"	"	
Xylenes (total)	77	1.0	"	"	"	"	"	"	
Gasoline Range Hydrocarbons	2500	50	"	"	"	"	"	"	

Date Sampled: 12/11/15 11:15

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 1,2-Dichloroethane-d4		85.4 %	23-173		"	"	"	"	
Surrogate: Toluene-d8		107 %	20-170		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		112 %	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: Ursula 2
Project Number: [none]
Project Manager: Mark Longhurst

Reported:
12/13/15 20:17

SS26@5'
1512101-03 (Soil)

Summit Scientific

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: 12/11/15 12:45

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
C10-C28 (DRO)	ND	50	mg/kg	1	1512114	12/11/15	12/11/15	8015M	

Date Sampled: 12/11/15 12:45

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: o-Terphenyl		93.9 %	30-150		"	"	"	"	

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: 12/11/15 12:45

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Naphthalene	ND	0.010	mg/kg	1	1512113	12/11/15	12/11/15	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: 12/11/15 12:45

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 1,2-Dichloroethane-d4		81.8 %	23-173		"	"	"	"	
Surrogate: Toluene-d8		91.4 %	20-170		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		90.1 %	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: Ursula 2
Project Number: [none]
Project Manager: Mark Longhurst

Reported:
12/13/15 20:17

SS27@5'
1512101-04 (Soil)

Summit Scientific

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: 12/11/15 12:05

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
C10-C28 (DRO)	ND	50	mg/kg	1	1512114	12/11/15	12/11/15	8015M	

Date Sampled: 12/11/15 12:05

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: o-Terphenyl		93.6 %	30-150		"	"	"	"	

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: 12/11/15 12:05

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Naphthalene	ND	0.010	mg/kg	1	1512113	12/11/15	12/11/15	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: 12/11/15 12:05

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 1,2-Dichloroethane-d4		87.2 %	23-173		"	"	"	"	
Surrogate: Toluene-d8		94.9 %	20-170		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		89.5 %	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: Ursula 2
Project Number: [none]
Project Manager: Mark Longhurst

Reported:
12/13/15 20:17

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 1512114 - EPA 3550A

Blank (1512114-BLK1)

Prepared & Analyzed: 12/11/15

C10-C28 (DRO)	ND	50	mg/kg							
Surrogate: o-Terphenyl	11.8		"	12.5		94.3	30-150			

LCS (1512114-BS1)

Prepared & Analyzed: 12/11/15

C10-C28 (DRO)	476	50	mg/kg	499		95.4	73-134			
Surrogate: o-Terphenyl	11.8		"	12.5		94.4	30-150			

Matrix Spike (1512114-MS1)

Source: 1512101-04

Prepared & Analyzed: 12/11/15

C10-C28 (DRO)	436	50	mg/kg	446	29.4	91.3	50-148			
Surrogate: o-Terphenyl	10.6		"	11.2		95.2	30-150			

Matrix Spike Dup (1512114-MSD1)

Source: 1512101-04

Prepared & Analyzed: 12/11/15

C10-C28 (DRO)	432	50	mg/kg	448	29.4	89.9	50-148	0.891	13	
Surrogate: o-Terphenyl	10.6		"	11.2		94.2	30-150			

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: Ursula 2
Project Number: [none]
Project Manager: Mark Longhurst

Reported:
12/13/15 20:17

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 1512113 - EPA 5030 Soil MS

LCS (1512113-BS1)

Prepared & Analyzed: 12/11/15

Naphthalene	ND	0.010	mg/kg				66-138			
Benzene	0.0941	0.0020	"	0.100		94.1	58-130			
Toluene	0.0928	0.0050	"	0.100		92.8	61-134			
Ethylbenzene	0.105	0.0050	"	0.0992		106	74-139			
m,p-Xylene	0.203	0.010	"	0.200		102	73-137			
o-Xylene	0.0994	0.0050	"	0.0984		101	73-141			
Xylenes (total)	0.303	0.010	"				0-200			
Gasoline Range Hydrocarbons	2.17	0.50	"				30-150			
Surrogate: 1,2-Dichloroethane-d4	0.0328		"	0.0400		82.1	23-173			
Surrogate: Toluene-d8	0.0374		"	0.0400		93.5	20-170			
Surrogate: 4-Bromofluorobenzene	0.0357		"	0.0400		89.2	21-167			

Matrix Spike (1512113-MS1)

Source: 1512101-04

Prepared & Analyzed: 12/11/15

Naphthalene	ND	0.010	mg/kg		ND		10-158			
Benzene	0.0864	0.0020	"	0.0923	ND	93.7	30-131			
Toluene	0.0866	0.0050	"	0.0923	ND	93.8	30-134			
Ethylbenzene	0.0992	0.0050	"	0.0915	ND	108	22-153			
m,p-Xylene	0.194	0.010	"	0.184	ND	105	10-159			
o-Xylene	0.0944	0.0050	"	0.0908	ND	104	31-151			
Xylenes (total)	0.288	0.010	"		0.00		30-160			
Gasoline Range Hydrocarbons	2.09	0.50	"		ND		30-160			
Surrogate: 1,2-Dichloroethane-d4	0.0301		"	0.0369		81.4	23-173			
Surrogate: Toluene-d8	0.0339		"	0.0369		91.9	20-170			
Surrogate: 4-Bromofluorobenzene	0.0329		"	0.0369		89.2	21-167			

Matrix Spike Dup (1512113-MSD1)

Source: 1512101-04

Prepared & Analyzed: 12/11/15

Naphthalene	ND	0.010	mg/kg		ND		10-158		42	
Benzene	0.0901	0.0020	"	0.0969	ND	93.0	30-131	4.18	34	
Toluene	0.0934	0.0050	"	0.0969	ND	96.4	30-134	7.56	30	
Ethylbenzene	0.105	0.0050	"	0.0961	ND	110	22-153	6.08	24	
m,p-Xylene	0.206	0.010	"	0.193	ND	106	10-159	5.87	68	
o-Xylene	0.0993	0.0050	"	0.0953	ND	104	31-151	5.00	38	
Xylenes (total)	0.305	0.010	"		0.00		30-160	5.58	30	
Gasoline Range Hydrocarbons	2.19	0.50	"		ND		30-160	4.51	30	
Surrogate: 1,2-Dichloroethane-d4	0.0308		"	0.0388		79.3	23-173			
Surrogate: Toluene-d8	0.0355		"	0.0388		91.5	20-170			
Surrogate: 4-Bromofluorobenzene	0.0345		"	0.0388		88.9	21-167			

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Page 8 of 9



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

Project: Ursula 2
Project Number: [none]
Project Manager: Mark Longhurst

Reported:
12/13/15 20:17

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

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

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Summit Scientific

741 Corporate Circle – Suite I ♦ Golden, Colorado 80401

303.277.9310 - laboratory ♦ 303.277.9531 - fax

December 16, 2015

Mark Longhurst
PDC Energy
1775 Sherman St. STE. 3000
Denver, CO 80203
RE: Ursula 2

Enclosed are the results of analyses for samples received by Summit Scientific on 12/14/15 18:12. 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: Ursula 2
Project Number: [none]
Project Manager: Mark Longhurst

Reported:
12/16/15 10:26

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
SS28@5	1512118-01	Soil	12/14/15 08:30	12/14/15 18:12
SS29@5	1512118-02	Soil	12/14/15 11:40	12/14/15 18:12
SS30@5	1512118-03	Soil	12/14/15 11:55	12/14/15 18:12
SS31@5	1512118-04	Soil	12/14/15 14:05	12/14/15 18:12
CS29	1512118-05	Soil	12/14/15 15:45	12/14/15 18:12
CS09-R(2)	1512118-06	Soil	12/14/15 15:50	12/14/15 18:12
CS26-R	1512118-07	Soil	12/14/15 16:00	12/14/15 18:12

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

Project: Ursula 2
Project Number: [none]
Project Manager: Mark Longhurst

Reported:
12/16/15 10:26

SS28@5
1512118-01 (Soil)

Summit Scientific

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: 12/14/15 08:30

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
C10-C28 (DRO)	ND	50	mg/kg	1	1512136	12/14/15	12/14/15	8015M	

Date Sampled: 12/14/15 08:30

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: o-Terphenyl		93.1 %	30-150		"	"	"	"	

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: 12/14/15 08:30

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Naphthalene	ND	0.010	mg/kg	1	1512135	12/14/15	12/14/15	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: 12/14/15 08:30

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 1,2-Dichloroethane-d4		86.0 %	23-173		"	"	"	"	
Surrogate: Toluene-d8		94.0 %	20-170		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		92.8 %	21-167		"	"	"	"	

Summit Scientific

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

Project: Ursula 2
Project Number: [none]
Project Manager: Mark Longhurst

Reported:
12/16/15 10:26

SS29@5
1512118-02 (Soil)

Summit Scientific

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: 12/14/15 11:40

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
C10-C28 (DRO)	ND	50	mg/kg	1	1512136	12/14/15	12/14/15	8015M	

Date Sampled: 12/14/15 11:40

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: o-Terphenyl		91.8 %	30-150		"	"	"	"	

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: 12/14/15 11:40

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Naphthalene	ND	0.010	mg/kg	1	1512135	12/14/15	12/14/15	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: 12/14/15 11:40

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 1,2-Dichloroethane-d4		82.1 %	23-173		"	"	"	"	
Surrogate: Toluene-d8		92.5 %	20-170		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		92.2 %	21-167		"	"	"	"	

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

Project: Ursula 2
Project Number: [none]
Project Manager: Mark Longhurst

Reported:
12/16/15 10:26

SS30@5
1512118-03 (Soil)

Summit Scientific

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: 12/14/15 11:55

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
C10-C28 (DRO)	350	50	mg/kg	1	1512136	12/14/15	12/14/15	8015M	

Date Sampled: 12/14/15 11:55

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: o-Terphenyl		94.2 %	30-150		"	"	"	"	

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: 12/14/15 11:55

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Naphthalene	4.0	1.0	mg/kg	100	1512135	12/14/15	12/14/15	EPA 8260B	
Benzene	2.4	0.20	"	"	"	"	"	"	
Toluene	1.3	0.50	"	"	"	"	12/14/15	"	
Ethylbenzene	9.2	0.50	"	"	"	"	12/14/15	"	
Xylenes (total)	55	1.0	"	"	"	"	"	"	
Gasoline Range Hydrocarbons	3800	50	"	"	"	"	12/14/15	"	

Date Sampled: 12/14/15 11:55

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 1,2-Dichloroethane-d4		90.1 %	23-173		"	"	12/14/15	"	
Surrogate: Toluene-d8		116 %	20-170		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		120 %	21-167		"	"	"	"	

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

Project: Ursula 2
Project Number: [none]
Project Manager: Mark Longhurst

Reported:
12/16/15 10:26

SS31@5
1512118-04 (Soil)

Summit Scientific

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: 12/14/15 14:05

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
C10-C28 (DRO)	ND	50	mg/kg	1	1512136	12/14/15	12/14/15	8015M	

Date Sampled: 12/14/15 14:05

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: o-Terphenyl		99.3 %	30-150		"	"	"	"	

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: 12/14/15 14:05

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Naphthalene	ND	0.010	mg/kg	1	1512135	12/14/15	12/14/15	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: 12/14/15 14:05

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 1,2-Dichloroethane-d4		102 %	23-173		"	"	"	"	
Surrogate: Toluene-d8		98.4 %	20-170		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		92.6 %	21-167		"	"	"	"	

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

Project: Ursula 2
Project Number: [none]
Project Manager: Mark Longhurst

Reported:
12/16/15 10:26

CS29
1512118-05 (Soil)

Summit Scientific

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: 12/14/15 15:45

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
C10-C28 (DRO)	ND	50	mg/kg	1	1512136	12/14/15	12/14/15	8015M	

Date Sampled: 12/14/15 15:45

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: o-Terphenyl		91.2 %	30-150		"	"	"	"	

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: 12/14/15 15:45

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Naphthalene	ND	0.010	mg/kg	1	1512135	12/14/15	12/15/15	EPA 8260B	
Benzene	ND	0.0020	"	"	"	"	"	"	
Toluene	ND	0.0050	"	"	"	"	"	"	
Ethylbenzene	ND	0.0050	"	"	"	"	"	"	
Xylenes (total)	ND	0.010	"	"	"	"	"	"	
Gasoline Range Hydrocarbons	77	0.50	"	"	"	"	"	"	

Date Sampled: 12/14/15 15:45

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 1,2-Dichloroethane-d4		79.4 %	23-173		"	"	"	"	
Surrogate: Toluene-d8		109 %	20-170		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		136 %	21-167		"	"	"	"	

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

Project: Ursula 2
Project Number: [none]
Project Manager: Mark Longhurst

Reported:
12/16/15 10:26

CS09-R(2)
1512118-06 (Soil)

Summit Scientific

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: 12/14/15 15:50

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
C10-C28 (DRO)	ND	50	mg/kg	1	1512136	12/14/15	12/14/15	8015M	

Date Sampled: 12/14/15 15:50

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: o-Terphenyl		92.7 %	30-150		"	"	"	"	

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: 12/14/15 15:50

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Naphthalene	ND	0.010	mg/kg	1	1512135	12/14/15	12/15/15	EPA 8260B	
Benzene	ND	0.0020	"	"	"	"	"	"	
Toluene	ND	0.0050	"	"	"	"	12/14/15	"	
Ethylbenzene	ND	0.0050	"	"	"	"	12/15/15	"	
Xylenes (total)	ND	0.010	"	"	"	"	"	"	
Gasoline Range Hydrocarbons	49	0.50	"	"	"	"	"	"	

Date Sampled: 12/14/15 15:50

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 1,2-Dichloroethane-d4		90.0 %	23-173		"	"	"	"	
Surrogate: Toluene-d8		112 %	20-170		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		128 %	21-167		"	"	"	"	

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

Project: Ursula 2
Project Number: [none]
Project Manager: Mark Longhurst

Reported:
12/16/15 10:26

CS26-R
1512118-07 (Soil)

Summit Scientific

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: 12/14/15 16:00

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
C10-C28 (DRO)	51	50	mg/kg	1	1512136	12/14/15	12/15/15	8015M	

Date Sampled: 12/14/15 16:00

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

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: 12/14/15 16:00

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Naphthalene	ND	0.010	mg/kg	1	1512135	12/14/15	12/15/15	EPA 8260B	
Benzene	ND	0.0020	"	"	"	"	"	"	
Toluene	ND	0.0050	"	"	"	"	12/14/15	"	
Ethylbenzene	ND	0.0050	"	"	"	"	12/15/15	"	
Xylenes (total)	ND	0.010	"	"	"	"	"	"	
Gasoline Range Hydrocarbons	56	0.50	"	"	"	"	"	"	

Date Sampled: 12/14/15 16:00

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 1,2-Dichloroethane-d4		94.0 %	23-173		"	"	"	"	
Surrogate: Toluene-d8		110 %	20-170		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		143 %	21-167		"	"	"	"	

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

Project: Ursula 2
Project Number: [none]
Project Manager: Mark Longhurst

Reported:
12/16/15 10:26

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 1512136 - EPA 3550A

Blank (1512136-BLK1)

Prepared & Analyzed: 12/14/15

C10-C28 (DRO)	ND	50	mg/kg							
Surrogate: o-Terphenyl	12.1		"	12.5		96.6	30-150			

LCS (1512136-BS1)

Prepared & Analyzed: 12/14/15

C10-C28 (DRO)	472	50	mg/kg	499		94.5	73-134			
Surrogate: o-Terphenyl	12.1		"	12.5		96.7	30-150			

Matrix Spike (1512136-MS1)

Source: 1512118-01

Prepared & Analyzed: 12/14/15

C10-C28 (DRO)	466	50	mg/kg	472	25.9	93.3	50-148			
Surrogate: o-Terphenyl	11.3		"	11.8		95.8	30-150			

Matrix Spike Dup (1512136-MSD1)

Source: 1512118-01

Prepared & Analyzed: 12/14/15

C10-C28 (DRO)	478	50	mg/kg	472	25.9	95.8	50-148	2.49	13	
Surrogate: o-Terphenyl	11.8		"	11.8		99.6	30-150			

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

Project: Ursula 2
Project Number: [none]
Project Manager: Mark Longhurst

Reported:
12/16/15 10:26

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 1512135 - EPA 5030 Soil MS

Blank (1512135-BLK1)

Prepared & Analyzed: 12/14/15

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>0.0327</i>		<i>"</i>	<i>0.0400</i>		<i>81.7</i>	<i>23-173</i>			
<i>Surrogate: Toluene-d8</i>	<i>0.0374</i>		<i>"</i>	<i>0.0400</i>		<i>93.4</i>	<i>20-170</i>			
<i>Surrogate: 4-Bromofluorobenzene</i>	<i>0.0370</i>		<i>"</i>	<i>0.0400</i>		<i>92.4</i>	<i>21-167</i>			

LCS (1512135-BS1)

Prepared & Analyzed: 12/14/15

Naphthalene	ND	0.010	mg/kg				66-138			
Benzene	0.0875	0.0020	"	0.100		87.5	58-130			
Toluene	0.0778	0.0050	"	0.100		77.8	61-134			
Ethylbenzene	0.0953	0.0050	"	0.0992		96.0	74-139			
m,p-Xylene	0.185	0.010	"	0.200		92.6	73-137			
o-Xylene	0.0884	0.0050	"	0.0984		89.8	73-141			
Xylenes (total)	0.273	0.010	"				0-200			
Gasoline Range Hydrocarbons	1.95	0.50	"				30-150			
<i>Surrogate: 1,2-Dichloroethane-d4</i>	<i>0.0326</i>		<i>"</i>	<i>0.0400</i>		<i>81.4</i>	<i>23-173</i>			
<i>Surrogate: Toluene-d8</i>	<i>0.0344</i>		<i>"</i>	<i>0.0400</i>		<i>86.1</i>	<i>20-170</i>			
<i>Surrogate: 4-Bromofluorobenzene</i>	<i>0.0364</i>		<i>"</i>	<i>0.0400</i>		<i>91.0</i>	<i>21-167</i>			

Matrix Spike (1512135-MS1)

Source: 1512118-01

Prepared & Analyzed: 12/14/15

Naphthalene	ND	0.010	mg/kg		ND		10-158			
Benzene	0.0864	0.0020	"	0.0960	ND	90.1	30-131			
Toluene	0.0887	0.0050	"	0.0960	ND	92.4	30-134			
Ethylbenzene	0.101	0.0050	"	0.0952	ND	106	22-153			
m,p-Xylene	0.197	0.010	"	0.192	ND	103	10-159			
o-Xylene	0.0930	0.0050	"	0.0944	ND	98.5	31-151			
Xylenes (total)	0.290	0.010	"		0.00		30-160			
Gasoline Range Hydrocarbons	2.07	0.50	"		ND		30-160			
<i>Surrogate: 1,2-Dichloroethane-d4</i>	<i>0.0311</i>		<i>"</i>	<i>0.0384</i>		<i>80.9</i>	<i>23-173</i>			
<i>Surrogate: Toluene-d8</i>	<i>0.0357</i>		<i>"</i>	<i>0.0384</i>		<i>92.9</i>	<i>20-170</i>			
<i>Surrogate: 4-Bromofluorobenzene</i>	<i>0.0346</i>		<i>"</i>	<i>0.0384</i>		<i>90.1</i>	<i>21-167</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
1775 Sherman St. STE. 3000
Denver CO, 80203

Project: Ursula 2
Project Number: [none]
Project Manager: Mark Longhurst

Reported:
12/16/15 10:26

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 1512135 - EPA 5030 Soil MS

Matrix Spike Dup (1512135-MSD1)			Source: 1512118-01		Prepared & Analyzed: 12/14/15					
Naphthalene	ND	0.010	mg/kg		ND		10-158		42	
Benzene	0.0954	0.0020	"	0.0954	ND	100	30-131	9.85	34	
Toluene	0.0896	0.0050	"	0.0954	ND	93.9	30-134	1.07	30	
Ethylbenzene	0.104	0.0050	"	0.0947	ND	110	22-153	3.57	24	
m,p-Xylene	0.204	0.010	"	0.190	ND	107	10-159	3.72	68	
o-Xylene	0.0978	0.0050	"	0.0939	ND	104	31-151	4.99	38	
Xylenes (total)	0.302	0.010	"		0.00		30-160	4.13	30	
Gasoline Range Hydrocarbons	2.14	0.50	"		ND		30-160	3.34	30	
Surrogate: 1,2-Dichloroethane-d4	0.0334		"	0.0382		87.6	23-173			
Surrogate: Toluene-d8	0.0356		"	0.0382		93.3	20-170			
Surrogate: 4-Bromofluorobenzene	0.0337		"	0.0382		88.3	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: Ursula 2
Project Number: [none]
Project Manager: Mark Longhurst

Reported:
12/16/15 10:26

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

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.

Summit Scientific

741 Corporate Circle – Suite I ♦ Golden, Colorado 80401

303.277.9310 - laboratory ♦ 303.277.9531 - fax

December 17, 2015

Mark Longhurst
PDC Energy
1775 Sherman St. STE. 3000
Denver, CO 80203
RE: Ursula 2

Enclosed are the results of analyses for samples received by Summit Scientific on 12/16/15 17:45. 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: Ursula 2
Project Number: [none]
Project Manager: Mark Longhurst

Reported:
12/17/15 06:09

GW08
1512135-01 (Water)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: 12/16/15 09:00

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Benzene	ND	1.0	ug/l	1	1512149	12/16/15	12/16/15	EPA 8260B	
Toluene	ND	1.0	"	"	"	"	"	"	
Ethylbenzene	10	1.0	"	"	"	"	"	"	
Xylenes (total)	130	1.0	"	"	"	"	"	"	

Date Sampled: 12/16/15 09:00

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 1,2-Dichloroethane-d4		88.5 %	37-154		"	"	"	"	
Surrogate: Toluene-d8		97.4 %	45-149		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		92.0 %	45-146		"	"	"	"	

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: Ursula 2
Project Number: [none]
Project Manager: Mark Longhurst

Reported:
12/17/15 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 1512149 - EPA 5030 Water MS

Blank (1512149-BLK1)

Prepared & Analyzed: 12/16/15

Benzene	ND	1.0	ug/l							
Toluene	ND	1.0	"							
Ethylbenzene	ND	1.0	"							
Xylenes (total)	ND	1.0	"							
Surrogate: 1,2-Dichloroethane-d4	11.6		"	13.3		86.9	37-154			
Surrogate: Toluene-d8	12.2		"	13.3		91.5	45-149			
Surrogate: 4-Bromofluorobenzene	12.1		"	13.3		90.8	45-146			

LCS (1512149-BS1)

Prepared & Analyzed: 12/16/15

Benzene	32.6	1.0	ug/l	33.3		97.7	51-132			
Toluene	32.2	1.0	"	33.3		96.7	51-138			
Ethylbenzene	36.6	1.0	"	33.1		111	58-146			
m,p-Xylene	70.6	2.0	"	66.5		106	57-144			
o-Xylene	34.1	1.0	"	32.8		104	53-146			
Surrogate: 1,2-Dichloroethane-d4	11.8		"	13.3		88.2	37-154			
Surrogate: Toluene-d8	12.6		"	13.3		94.1	45-149			
Surrogate: 4-Bromofluorobenzene	12.1		"	13.3		90.8	45-146			

Matrix Spike (1512149-MS1)

Source: 1512103-01

Prepared & Analyzed: 12/16/15

Benzene	53.2	1.0	ug/l	33.3		160	34-141			
Toluene	31.6	1.0	"	33.3		94.9	27-151			
Ethylbenzene	38.1	1.0	"	33.1		115	29-160			
m,p-Xylene	73.4	2.0	"	66.5		110	20-166			
o-Xylene	35.2	1.0	"	32.8		107	33-159			
Surrogate: 1,2-Dichloroethane-d4	12.2		"	13.3		91.7	37-154			
Surrogate: Toluene-d8	12.0		"	13.3		89.8	45-149			
Surrogate: 4-Bromofluorobenzene	12.2		"	13.3		91.4	45-146			

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: Ursula 2
Project Number: [none]
Project Manager: Mark Longhurst

Reported:
12/17/15 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 1512149 - EPA 5030 Water MS

Matrix Spike Dup (1512149-MSD1)	Source: 1512103-01			Prepared & Analyzed: 12/16/15						
Benzene	52.0	1.0	ug/l	33.3	156	34-141	2.34	32		
Toluene	31.8	1.0	"	33.3	95.3	27-151	0.442	25		
Ethylbenzene	39.2	1.0	"	33.1	118	29-160	2.85	50		
m,p-Xylene	74.7	2.0	"	66.5	112	20-166	1.74	36		
o-Xylene	35.5	1.0	"	32.8	108	33-159	0.792	26		
Surrogate: 1,2-Dichloroethane-d4	11.6		"	13.3	87.4	37-154				
Surrogate: Toluene-d8	11.8		"	13.3	88.7	45-149				
Surrogate: 4-Bromofluorobenzene	12.5		"	13.3	94.0	45-146				

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: Ursula 2
Project Number: [none]
Project Manager: Mark Longhurst

Reported:
12/17/15 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

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

Summit Scientific

741 Corporate Circle – Suite I ♦ Golden, Colorado 80401

303.277.9310 - laboratory ♦ 303.277.9531 - fax

February 17, 2016

Mark Longhurst
PDC Energy
1775 Sherman St. STE. 3000
Denver, CO 80203
RE: Ursula 2

Enclosed are the results of analyses for samples received by Summit Scientific on 02/15/16 17:00. 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: Ursula 2
Project Number: [none]
Project Manager: Mark Longhurst

Reported:
02/17/16 15:32

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
BH15	1602107-01	Water	02/15/16 14:40	02/15/16 17:00
BH16	1602107-02	Water	02/15/16 14:27	02/15/16 17:00
BH17	1602107-03	Water	02/15/16 14:22	02/15/16 17:00
BH18	1602107-04	Water	02/15/16 14:35	02/15/16 17:00
BH19	1602107-05	Water	02/15/16 14:32	02/15/16 17:00
BH20	1602107-06	Water	02/15/16 14:48	02/15/16 17:00
BH21	1602107-07	Water	02/15/16 14:45	02/15/16 17:00

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.



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

Project: Ursula 2
Project Number: [none]
Project Manager: Mark Longhurst

Reported:
02/17/16 15:32

741 Corporate Circle Suite 1 Golden, Colorado 80401
303-277-9310 303-277-9531 Fax

Client: PDC

Page 1 of 1

Address:

City/State/Zip:

Phone: Fax:

Sampler Name: M&H P.

Project Manager: Mark Longhurst

E-Mail: mark.longhurst@PDC.com

Project Name: URSULA 2

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)	
BH15	2/15/16	14:40	3									
BH16		14:42		X						X	BTEX (S260)	
BH17		14:43										
BH18		14:45										
BH19		14:47										
BH20		14:48										
BH21		14:49										

Relinquished by: <i>[Signature]</i>	Date/Time: 2/15/16 17:00	Received by: <i>[Signature]</i>	Date/Time: 2/15/16 17:00	Turn Around Time (Check)	Notes:
Relinquished by: <i>[Signature]</i>	Date/Time: 2/15/16 17:45	Received by:	Date/Time:	Same Day <input type="checkbox"/> 72 Hours <input checked="" type="checkbox"/> Standard <input checked="" type="checkbox"/> 24 Hours <input type="checkbox"/> 48 Hours <input type="checkbox"/>	on ice
Relinquished by:	Date/Time:	Received in Lab by:	Date/Time:	Sample Integrity: Temperature Upon Receipt: 5.6°C	
				Intact: Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	

www.s2scientific.com



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

Project: Ursula 2
Project Number: [none]
Project Manager: Mark Longhurst

Reported:
02/17/16 15:32

BH15
1602107-01 (Water)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: 02/15/16 14:40

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Benzene	520	100	ug/l	100	1602149	02/16/16	02/16/16	EPA 8260B	
Toluene	ND	1.0	"	1	"	"	02/17/16	"	
Ethylbenzene	1200	100	"	100	"	"	02/16/16	"	
Xylenes (total)	620	1.0	"	1	"	"	02/17/16	"	

Date Sampled: 02/15/16 14:40

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 1,2-Dichloroethane-d4		93.8 %	37-154		"	"	"	"	
Surrogate: Toluene-d8		95.5 %	45-149		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		112 %	45-146		"	"	"	"	

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: Ursula 2
Project Number: [none]
Project Manager: Mark Longhurst

Reported:
02/17/16 15:32

BH16
1602107-02 (Water)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **02/15/16 14:27**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Benzene	ND	1.0	ug/l	1	1602149	02/16/16	02/17/16	EPA 8260B	
Toluene	ND	1.0	"	"	"	"	"	"	
Ethylbenzene	ND	1.0	"	"	"	"	"	"	
Xylenes (total)	ND	1.0	"	"	"	"	"	"	

Date Sampled: **02/15/16 14:27**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 1,2-Dichloroethane-d4		105 %	37-154		"	"	"	"	
Surrogate: Toluene-d8		96.3 %	45-149		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		97.3 %	45-146		"	"	"	"	

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: Ursula 2
Project Number: [none]
Project Manager: Mark Longhurst

Reported:
02/17/16 15:32

BH17
1602107-03 (Water)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **02/15/16 14:22**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Benzene	ND	1.0	ug/l	1	1602149	02/16/16	02/17/16	EPA 8260B	
Toluene	ND	1.0	"	"	"	"	"	"	
Ethylbenzene	ND	1.0	"	"	"	"	"	"	
Xylenes (total)	ND	1.0	"	"	"	"	"	"	

Date Sampled: **02/15/16 14:22**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 1,2-Dichloroethane-d4		97.4 %	37-154		"	"	"	"	
Surrogate: Toluene-d8		93.8 %	45-149		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		105 %	45-146		"	"	"	"	

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: Ursula 2
Project Number: [none]
Project Manager: Mark Longhurst

Reported:
02/17/16 15:32

BH18
1602107-04 (Water)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **02/15/16 14:35**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Benzene	100	1.0	ug/l	1	1602149	02/16/16	02/17/16	EPA 8260B	
Toluene	44	1.0	"	"	"	"	"	"	
Ethylbenzene	140	1.0	"	"	"	"	"	"	
Xylenes (total)	4200	1.0	"	"	"	"	"	"	

Date Sampled: **02/15/16 14:35**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
<i>Surrogate: 1,2-Dichloroethane-d4</i>		104 %	37-154		"	"	"	"	
<i>Surrogate: Toluene-d8</i>		98.9 %	45-149		"	"	"	"	
<i>Surrogate: 4-Bromofluorobenzene</i>		106 %	45-146		"	"	"	"	

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: Ursula 2
Project Number: [none]
Project Manager: Mark Longhurst

Reported:
02/17/16 15:32

BH19
1602107-05 (Water)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: 02/15/16 14:32

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Benzene	320	100	ug/l	100	1602149	02/16/16	02/16/16	EPA 8260B	
Toluene	210	1.0	"	1	"	"	02/17/16	"	
Ethylbenzene	250	1.0	"	"	"	"	"	"	
Xylenes (total)	3000	1.0	"	"	"	"	"	"	

Date Sampled: 02/15/16 14:32

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
<i>Surrogate: 1,2-Dichloroethane-d4</i>		103 %	37-154		"	"	"	"	
<i>Surrogate: Toluene-d8</i>		94.9 %	45-149		"	"	"	"	
<i>Surrogate: 4-Bromofluorobenzene</i>		100 %	45-146		"	"	"	"	

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: Ursula 2
Project Number: [none]
Project Manager: Mark Longhurst

Reported:
02/17/16 15:32

BH20
1602107-06 (Water)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **02/15/16 14:48**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Benzene	1100	100	ug/l	100	1602149	02/16/16	02/16/16	EPA 8260B	
Toluene	45	1.0	"	1	"	"	02/17/16	"	
Ethylbenzene	340	100	"	100	"	"	02/16/16	"	
Xylenes (total)	2600	1.0	"	1	"	"	02/17/16	"	

Date Sampled: **02/15/16 14:48**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
<i>Surrogate: 1,2-Dichloroethane-d4</i>		90.4 %	37-154		"	"	"	"	
<i>Surrogate: Toluene-d8</i>		94.5 %	45-149		"	"	"	"	
<i>Surrogate: 4-Bromofluorobenzene</i>		100 %	45-146		"	"	"	"	

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: Ursula 2
Project Number: [none]
Project Manager: Mark Longhurst

Reported:
02/17/16 15:32

BH21
1602107-07 (Water)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: 02/15/16 14:45

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Benzene	34	1.0	ug/l	1	1602149	02/16/16	02/17/16	EPA 8260B	
Toluene	ND	1.0	"	"	"	"	"	"	
Ethylbenzene	1.7	1.0	"	"	"	"	"	"	
Xylenes (total)	7.1	1.0	"	"	"	"	"	"	

Date Sampled: 02/15/16 14:45

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 1,2-Dichloroethane-d4		98.7 %	37-154		"	"	"	"	
Surrogate: Toluene-d8		95.3 %	45-149		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		98.3 %	45-146		"	"	"	"	

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: Ursula 2
Project Number: [none]
Project Manager: Mark Longhurst

Reported:
02/17/16 15:32

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 1602149 - EPA 5030 Water MS

Blank (1602149-BLK1)

Prepared & Analyzed: 02/16/16

Benzene	ND	1.0	ug/l							
Toluene	ND	1.0	"							
Ethylbenzene	ND	1.0	"							
Xylenes (total)	ND	1.0	"							
Surrogate: 1,2-Dichloroethane-d4	14.0		"	13.3		105	37-154			
Surrogate: Toluene-d8	13.2		"	13.3		99.2	45-149			
Surrogate: 4-Bromofluorobenzene	13.4		"	13.3		100	45-146			

LCS (1602149-BS1)

Prepared & Analyzed: 02/16/16

Benzene	31.1	1.0	ug/l	33.3		93.2	51-132			
Toluene	35.0	1.0	"	33.3		105	51-138			
Ethylbenzene	38.6	1.0	"	33.1		117	58-146			
m,p-Xylene	76.3	2.0	"	66.5		115	57-144			
o-Xylene	34.6	1.0	"	32.7		106	53-146			
Surrogate: 1,2-Dichloroethane-d4	14.3		"	13.3		107	37-154			
Surrogate: Toluene-d8	13.3		"	13.3		99.5	45-149			
Surrogate: 4-Bromofluorobenzene	12.8		"	13.3		95.6	45-146			

Matrix Spike (1602149-MS1)

Source: 1602109-03

Prepared & Analyzed: 02/16/16

Benzene	31.4	1.0	ug/l	33.3	ND	94.2	34-141			
Toluene	34.4	1.0	"	33.3	ND	103	27-151			
Ethylbenzene	59.0	1.0	"	33.1	42.1	51.2	29-160			
m,p-Xylene	146	2.0	"	66.5	150	NR	20-166			QM-07
o-Xylene	95.8	1.0	"	32.7	128	NR	33-159			QM-07
Surrogate: 1,2-Dichloroethane-d4	12.8		"	13.3		96.2	37-154			
Surrogate: Toluene-d8	13.0		"	13.3		97.2	45-149			
Surrogate: 4-Bromofluorobenzene	12.8		"	13.3		96.2	45-146			

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: Ursula 2
Project Number: [none]
Project Manager: Mark Longhurst

Reported:
02/17/16 15:32

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 1602149 - EPA 5030 Water MS

Matrix Spike Dup (1602149-MSD1)		Source: 1602109-03			Prepared & Analyzed: 02/16/16					
Benzene	31.7	1.0	ug/l	33.3	ND	95.2	34-141	1.08	32	
Toluene	35.8	1.0	"	33.3	ND	107	27-151	3.93	25	
Ethylbenzene	59.5	1.0	"	33.1	42.1	52.6	29-160	0.776	50	
m,p-Xylene	147	2.0	"	66.5	150	NR	20-166	1.00	36	QM-07
o-Xylene	98.6	1.0	"	32.7	128	NR	33-159	2.89	26	QM-07
Surrogate: 1,2-Dichloroethane-d4	13.4		"	13.3		101	37-154			
Surrogate: Toluene-d8	13.4		"	13.3		101	45-149			
Surrogate: 4-Bromofluorobenzene	13.1		"	13.3		98.3	45-146			

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: Ursula 2
Project Number: [none]
Project Manager: Mark Longhurst

Reported:
02/17/16 15:32

Notes and Definitions

QM-07 The spike recovery was outside acceptance limits for the MS and/or MSD. The batch was accepted based on acceptable LCS/LCSD recovery.

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

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.

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

Summit Scientific

741 Corporate Circle – Suite I ♦ Golden, Colorado 80401

303.277.9310 - laboratory ♦ 303.277.9531 - fax

February 19, 2016

Mark Longhurst
PDC Energy
1775 Sherman St. STE. 3000
Denver, CO 80203
RE: Ursula 2

Enclosed are the results of analyses for samples received by Summit Scientific on 02/18/16 17:45. 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: Ursula 2
Project Number: [none]
Project Manager: Mark Longhurst

Reported:
02/19/16 11:01

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
BH22	1602145-01	Water	02/18/16 13:40	02/18/16 17:45
BH23	1602145-02	Water	02/18/16 13:45	02/18/16 17:45
BH24	1602145-03	Water	02/18/16 13:55	02/18/16 17:45
BH25	1602145-04	Water	02/18/16 15:00	02/18/16 17:45
BH26	1602145-05	Water	02/18/16 15:05	02/18/16 17:45
BH27	1602145-06	Water	02/18/16 15:10	02/18/16 17:45
BH28	1602145-07	Water	02/18/16 15:15	02/18/16 17:45
BH29	1602145-08	Water	02/18/16 15:20	02/18/16 17:45
BH30	1602145-09	Water	02/18/16 13:50	02/18/16 17:45

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: Ursula 2
Project Number: [none]
Project Manager: Mark Longhurst

Reported:
02/19/16 11:01

BH22
1602145-01 (Water)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **02/18/16 13:40**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Benzene	ND	1.0	ug/l	1	1602187	02/19/16	02/19/16	EPA 8260B	
Toluene	ND	1.0	"	"	"	"	"	"	
Ethylbenzene	ND	1.0	"	"	"	"	"	"	
Xylenes (total)	ND	1.0	"	"	"	"	"	"	

Date Sampled: **02/18/16 13:40**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 1,2-Dichloroethane-d4		110 %	37-154		"	"	"	"	
Surrogate: Toluene-d8		94.9 %	45-149		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		98.9 %	45-146		"	"	"	"	

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: Ursula 2
Project Number: [none]
Project Manager: Mark Longhurst

Reported:
02/19/16 11:01

BH23
1602145-02 (Water)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **02/18/16 13:45**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Benzene	ND	1.0	ug/l	1	1602187	02/19/16	02/19/16	EPA 8260B	
Toluene	ND	1.0	"	"	"	"	"	"	
Ethylbenzene	ND	1.0	"	"	"	"	"	"	
Xylenes (total)	ND	1.0	"	"	"	"	"	"	

Date Sampled: **02/18/16 13:45**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Surrogate: 1,2-Dichloroethane-d4		106 %	37-154		"	"	"	"	
Surrogate: Toluene-d8		91.1 %	45-149		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		102 %	45-146		"	"	"	"	

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: Ursula 2
Project Number: [none]
Project Manager: Mark Longhurst

Reported:
02/19/16 11:01

BH24
1602145-03 (Water)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **02/18/16 13:55**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Benzene	ND	1.0	ug/l	1	1602187	02/19/16	02/19/16	EPA 8260B	
Toluene	ND	1.0	"	"	"	"	"	"	
Ethylbenzene	ND	1.0	"	"	"	"	"	"	
Xylenes (total)	ND	1.0	"	"	"	"	"	"	

Date Sampled: **02/18/16 13:55**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Surrogate: 1,2-Dichloroethane-d4		164 %	37-154		"	"	"	"	S-07
Surrogate: Toluene-d8		70.5 %	45-149		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		108 %	45-146		"	"	"	"	

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: Ursula 2
Project Number: [none]
Project Manager: Mark Longhurst

Reported:
02/19/16 11:01

BH25
1602145-04 (Water)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **02/18/16 15:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Benzene	ND	1.0	ug/l	1	1602187	02/19/16	02/19/16	EPA 8260B	
Toluene	ND	1.0	"	"	"	"	"	"	
Ethylbenzene	ND	1.0	"	"	"	"	"	"	
Xylenes (total)	ND	1.0	"	"	"	"	"	"	

Date Sampled: **02/18/16 15:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 1,2-Dichloroethane-d4		118 %	37-154		"	"	"	"	
Surrogate: Toluene-d8		93.8 %	45-149		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		104 %	45-146		"	"	"	"	

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: Ursula 2
Project Number: [none]
Project Manager: Mark Longhurst

Reported:
02/19/16 11:01

BH26
1602145-05 (Water)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **02/18/16 15:05**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Benzene	ND	1.0	ug/l	1	1602187	02/19/16	02/19/16	EPA 8260B	
Toluene	ND	1.0	"	"	"	"	"	"	
Ethylbenzene	ND	1.0	"	"	"	"	"	"	
Xylenes (total)	ND	1.0	"	"	"	"	"	"	

Date Sampled: **02/18/16 15:05**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 1,2-Dichloroethane-d4		108 %	37-154		"	"	"	"	
Surrogate: Toluene-d8		101 %	45-149		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		96.7 %	45-146		"	"	"	"	

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: Ursula 2
Project Number: [none]
Project Manager: Mark Longhurst

Reported:
02/19/16 11:01

BH27
1602145-06 (Water)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **02/18/16 15:10**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Benzene	ND	1.0	ug/l	1	1602187	02/19/16	02/19/16	EPA 8260B	
Toluene	ND	1.0	"	"	"	"	"	"	
Ethylbenzene	ND	1.0	"	"	"	"	"	"	
Xylenes (total)	ND	1.0	"	"	"	"	"	"	

Date Sampled: **02/18/16 15:10**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Surrogate: 1,2-Dichloroethane-d4		148 %	37-154		"	"	"	"	
Surrogate: Toluene-d8		77.6 %	45-149		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		100 %	45-146		"	"	"	"	

Summit Scientific

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

Project: Ursula 2
Project Number: [none]
Project Manager: Mark Longhurst

Reported:
02/19/16 11:01

BH28
1602145-07 (Water)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **02/18/16 15:15**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Benzene	ND	1.0		ug/l	1	1602187	02/19/16	02/19/16	EPA 8260B	
Toluene	ND	1.0		"	"	"	"	"	"	
Ethylbenzene	ND	1.0		"	"	"	"	"	"	
Xylenes (total)	ND	1.0		"	"	"	"	"	"	

Date Sampled: **02/18/16 15:15**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Surrogate: 1,2-Dichloroethane-d4		99.6 %		37-154		"	"	"	"	
Surrogate: Toluene-d8		87.5 %		45-149		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		100 %		45-146		"	"	"	"	

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: Ursula 2
Project Number: [none]
Project Manager: Mark Longhurst

Reported:
02/19/16 11:01

BH29
1602145-08 (Water)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: 02/18/16 15:20

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Benzene	ND	1.0	ug/l	1	1602187	02/19/16	02/19/16	EPA 8260B	
Toluene	ND	1.0	"	"	"	"	"	"	
Ethylbenzene	ND	1.0	"	"	"	"	"	"	
Xylenes (total)	ND	1.0	"	"	"	"	"	"	

Date Sampled: 02/18/16 15:20

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 1,2-Dichloroethane-d4		103 %	37-154		"	"	"	"	
Surrogate: Toluene-d8		81.0 %	45-149		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		113 %	45-146		"	"	"	"	

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: Ursula 2
Project Number: [none]
Project Manager: Mark Longhurst

Reported:
02/19/16 11:01

BH30
1602145-09 (Water)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **02/18/16 13:50**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Benzene	ND	1.0	ug/l	1	1602187	02/19/16	02/19/16	EPA 8260B	
Toluene	ND	1.0	"	"	"	"	"	"	
Ethylbenzene	ND	1.0	"	"	"	"	"	"	
Xylenes (total)	ND	1.0	"	"	"	"	"	"	

Date Sampled: **02/18/16 13:50**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Surrogate: 1,2-Dichloroethane-d4		75.5 %	37-154		"	"	"	"	
Surrogate: Toluene-d8		74.1 %	45-149		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		87.8 %	45-146		"	"	"	"	

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: Ursula 2
Project Number: [none]
Project Manager: Mark Longhurst

Reported:
02/19/16 11:01

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 1602187 - EPA 5030 Water MS

Blank (1602187-BLK1)

Prepared & Analyzed: 02/19/16

Benzene	ND	1.0	ug/l							
Toluene	ND	1.0	"							
Ethylbenzene	ND	1.0	"							
Xylenes (total)	ND	1.0	"							
Surrogate: 1,2-Dichloroethane-d4	13.1		"	13.3	98.3	37-154				
Surrogate: Toluene-d8	12.7		"	13.3	95.2	45-149				
Surrogate: 4-Bromofluorobenzene	13.9		"	13.3	104	45-146				

LCS (1602187-BS1)

Prepared & Analyzed: 02/19/16

Benzene	23.7	1.0	ug/l	33.3	71.1	51-132				
Toluene	24.3	1.0	"	33.3	73.0	51-138				
Ethylbenzene	32.2	1.0	"	33.1	97.5	58-146				
m,p-Xylene	67.8	2.0	"	66.5	102	57-144				
o-Xylene	35.0	1.0	"	32.7	107	53-146				
Surrogate: 1,2-Dichloroethane-d4	13.2		"	13.3	99.2	37-154				
Surrogate: Toluene-d8	12.5		"	13.3	93.8	45-149				
Surrogate: 4-Bromofluorobenzene	13.0		"	13.3	97.2	45-146				

Matrix Spike (1602187-MS1)

Source: 1602145-01

Prepared & Analyzed: 02/19/16

Benzene	23.7	1.0	ug/l	33.3	ND	71.2	34-141			
Toluene	24.2	1.0	"	33.3	ND	72.6	27-151			
Ethylbenzene	32.3	1.0	"	33.1	ND	97.7	29-160			
m,p-Xylene	67.6	2.0	"	66.5	ND	102	20-166			
o-Xylene	35.1	1.0	"	32.7	ND	107	33-159			
Surrogate: 1,2-Dichloroethane-d4	14.0		"	13.3	105	37-154				
Surrogate: Toluene-d8	12.4		"	13.3	93.2	45-149				
Surrogate: 4-Bromofluorobenzene	13.2		"	13.3	98.9	45-146				

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: Ursula 2
Project Number: [none]
Project Manager: Mark Longhurst

Reported:
02/19/16 11:01

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 1602187 - EPA 5030 Water MS

Matrix Spike Dup (1602187-MSD1)		Source: 1602145-01			Prepared & Analyzed: 02/19/16					
Benzene	24.0	1.0	ug/l	33.3	ND	71.9	34-141	1.01	32	
Toluene	24.0	1.0	"	33.3	ND	71.9	27-151	0.955	25	
Ethylbenzene	32.4	1.0	"	33.1	ND	97.9	29-160	0.155	50	
m,p-Xylene	68.3	2.0	"	66.5	ND	103	20-166	1.12	36	
o-Xylene	35.4	1.0	"	32.7	ND	108	33-159	0.879	26	
Surrogate: 1,2-Dichloroethane-d4	14.9		"	13.3		112	37-154			
Surrogate: Toluene-d8	12.3		"	13.3		92.0	45-149			
Surrogate: 4-Bromofluorobenzene	13.8		"	13.3		103	45-146			

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: Ursula 2
Project Number: [none]
Project Manager: Mark Longhurst

Reported:
02/19/16 11:01

Notes and Definitions

S-07 The surrogate recovery was outside acceptance limits indicating a potential high bias. The sample did not exhibit concentrations above reporting level for analytes represented by this surrogate. Data quality is not affected.

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

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