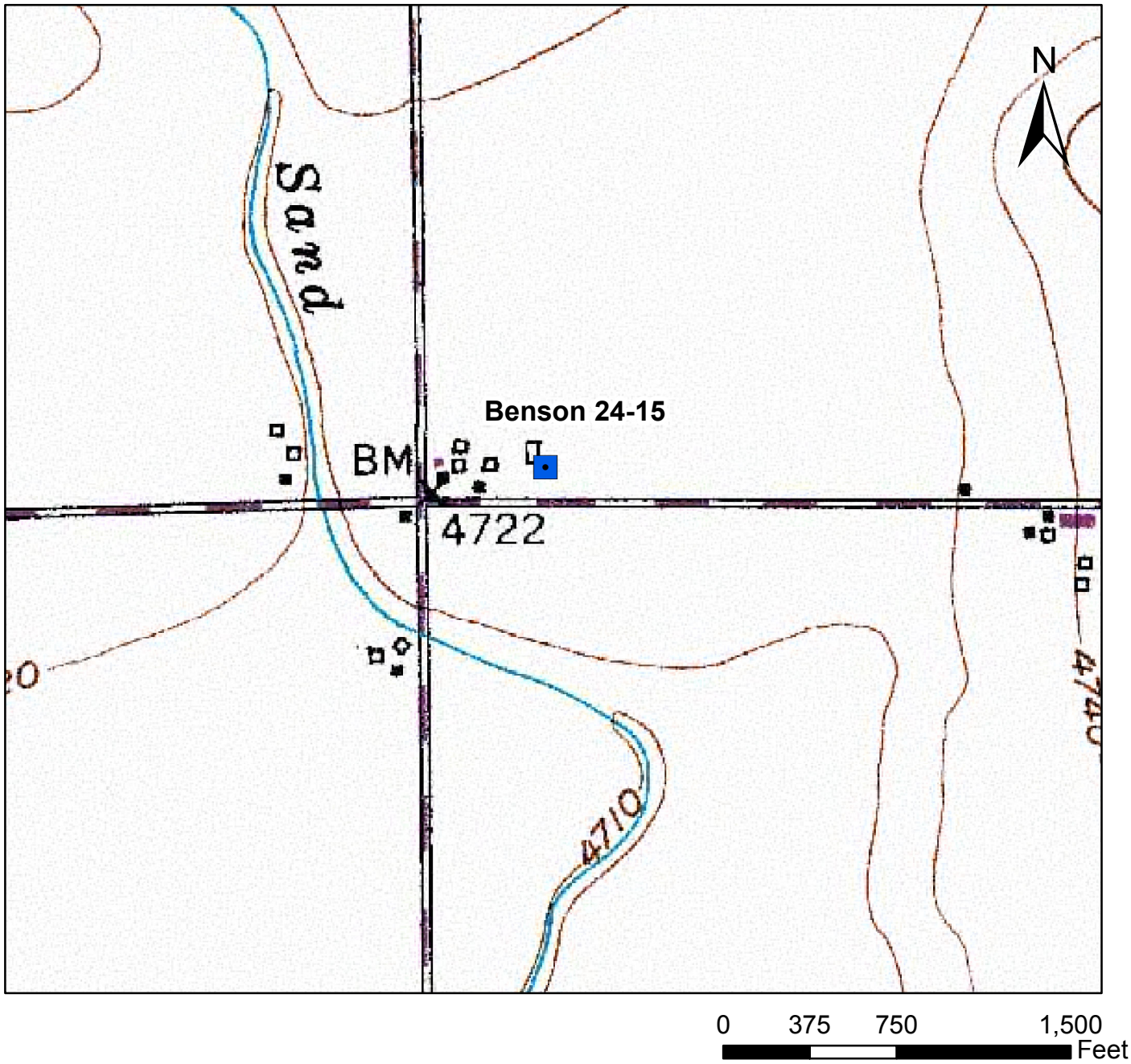
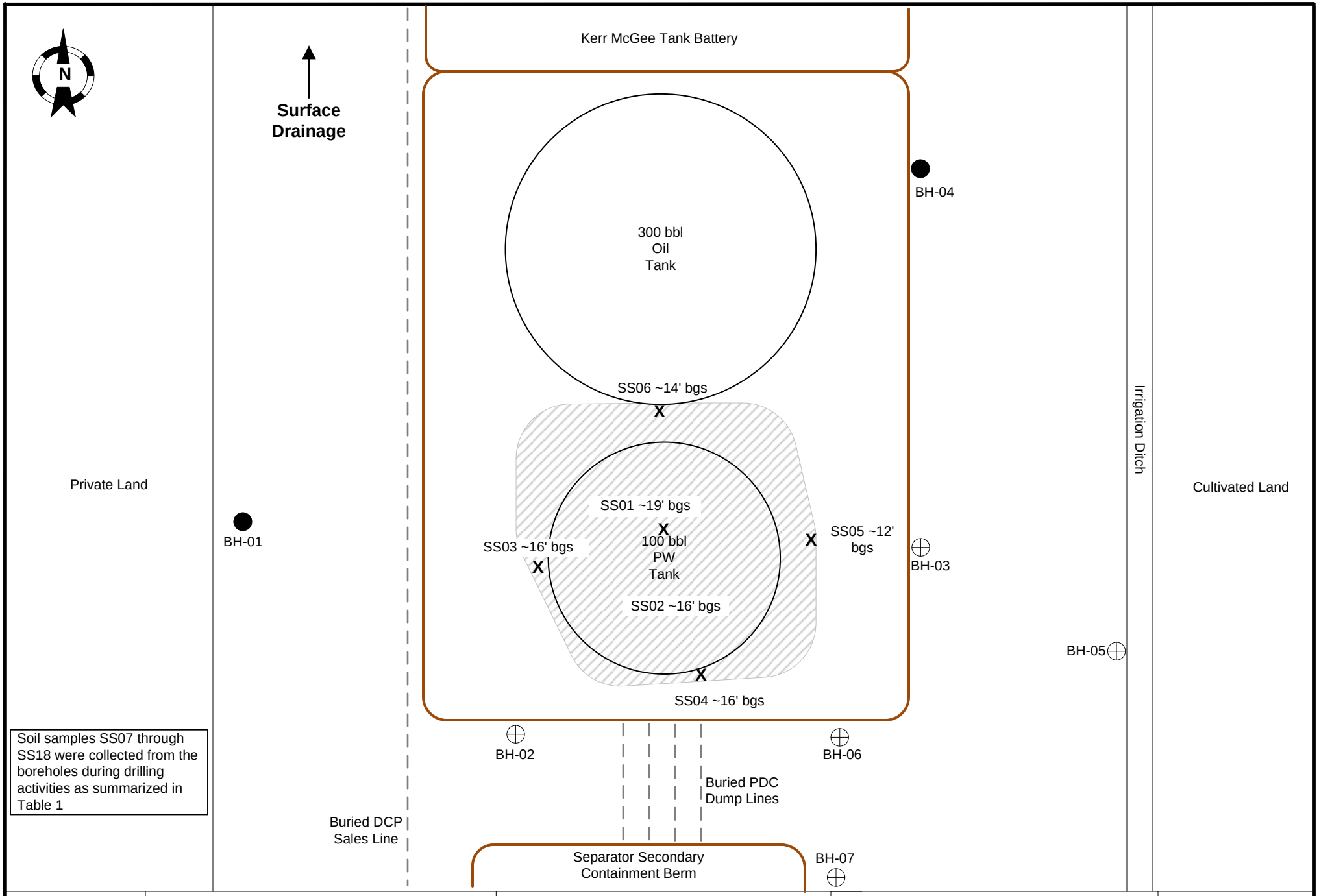


Figure 1

Site Location Map
Benson 24-15
SESW S15 T6N R65W
Weld County, Colorado

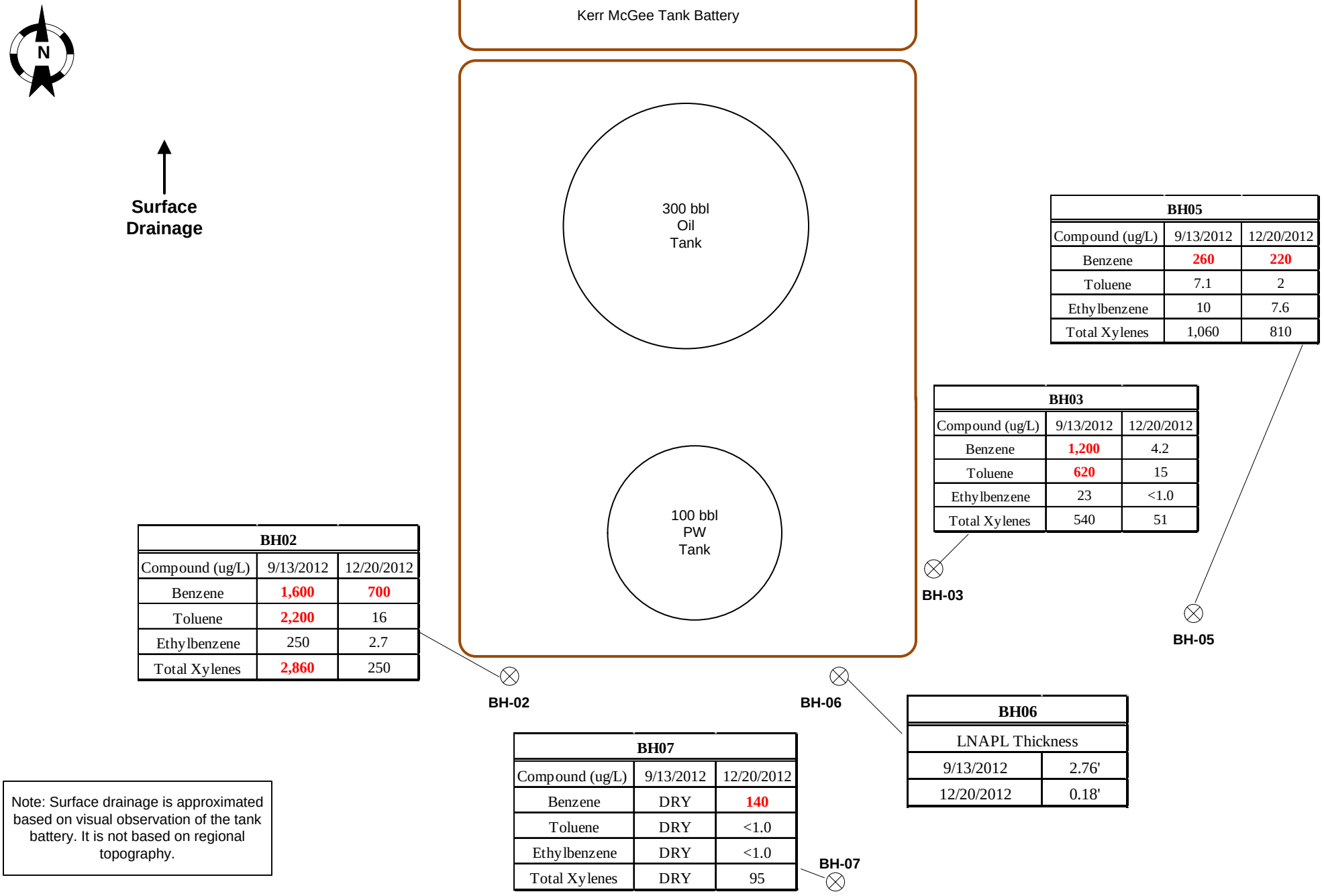
Drawn By: CAW
Date: 07/20/2012

Tasman Geosciences



Soil samples SS07 through SS18 were collected from the boreholes during drilling activities as summarized in Table 1

PROJECT NO:	**Facility Diagram** PDC Energy – DJ Basin Benson 24-15 SESW S15 T6N R65W Weld County, CO	Tasman Geosciences 5690 Webster Avenue Arvada CO 80002	LEGEND Earthen Berm Approximate Extent of Excavation X Soil Sample Location Temporary Monitoring Well Location Borehole Location	FIGURE 2 Not to Scale
DRAWN BY: BDH				
DATE: 10/18/12				



BH05		
Compound (ug/L)	9/13/2012	12/20/2012
Benzene	**260**	**220**
Toluene	7.1	2
Ethylbenzene	10	7.6
Total Xylenes	1,060	810

BH03		
Compound (ug/L)	9/13/2012	12/20/2012
Benzene	**1,200**	4.2
Toluene	**620**	15
Ethylbenzene	23	<1.0
Total Xylenes	540	51

BH02		
Compound (ug/L)	9/13/2012	12/20/2012
Benzene	**1,600**	**700**
Toluene	**2,200**	16
Ethylbenzene	250	2.7
Total Xylenes	**2,860**	250

BH06	
LNAPL Thickness	
9/13/2012	2.76'
12/20/2012	0.18'

BH07		
Compound (ug/L)	9/13/2012	12/20/2012
Benzene	DRY	**140**
Toluene	DRY	<1.0
Ethylbenzene	DRY	<1.0
Total Xylenes	DRY	95

Note: Surface drainage is approximated based on visual observation of the tank battery. It is not based on regional topography.

PROJECT NO:

DRAWN BY: CAW

DATE: 1/14/2013

Facility Diagram
PDC Energy – DJ Basin
Benson 24-15
SESW S15 T6N R65W
Weld County, CO

TASMAN GEOSCIENCES
6899 Pecos Street
Unit C
Denver, CO 80221

LEGEND
Earthen Berm
Temporary Monitoring Well

FIGURE 3
GROUNDWATER ANALYTICAL RESULTS

TABLE 1
BENSON 24-15
SOIL ANALYTICAL RESULTS SUMMARY TABLE

Sample ID	Date Sampled	Depth (Feet bgs)	PID Readings (ppm)	Benzene (mg/kg)	Toluene (mg/kg)	Ethylbenzne (mg/kg)	Total Xylenes (mg/kg)	Napthalene (mg/kg)	TPH [2] (mg/kg)
SS01	2/16/2011	19	134	ND	ND	ND	0.0182	ND	0.74
SS02	2/16/2011	16	731	NA	NA	NA	NA	NA	NA
SS03	2/16/2011	16	1054	**0.88**	7.6	2.8	30.8	0.66	**2,890**
SS04	2/16/2011	16	862	**4.3**	62	23	**184**	1.6	**6,600**
SS05	2/16/2011	12	1413	**3.9**	41	7.7	76	2.5	**28,400**
SS06	2/16/2011	14	1283	**0.82**	2.8	2.0	38.5	0.56	**1,041**
SS07	9/4/2012	20-23 (BH01)	0.0	<0.005	<0.005	<0.005	<0.01	<0.005	<50
SS08	9/4/2012	23-24 (BH01)	0.0	0.0075	<0.005	<0.005	<0.01	<0.005	<50
SS09	9/4/2012	22-24 (BH02)	0.6	<0.005	<0.005	<0.005	<0.01	<0.005	<50
SS10	9/4/2012	18-20 (BH03)	0.0	<0.005	<0.005	<0.005	<0.01	<0.005	<50
SS11	9/4/2012	16-18 (BH04)	0.0	<0.005	<0.005	<0.005	<0.01	<0.005	<50
SS12	9/4/2012	18-20 (BH04)	0.0	0.013	<0.005	<0.005	<0.01	<0.005	<50
SS13	9/4/2012	17-18 (BH05)	1,218	0.017	<0.005	0.027	1.4	0.41	**1,190**
SS14	9/4/2012	19-20 (BH05)	0.5	<0.005	<0.005	<0.005	<0.01	<0.005	<50
SS15	9/4/2012	17-18 (BH06)	1,259	0.063	0.028	0.12	11	0.38	**1,060**
SS16	9/4/2012	19-20 (BH06)	1.2	<0.005	<0.005	<0.005	0.013	<0.005	<50
SS17	9/4/2012	16.5-18 (BH07)	1,452	<0.005	<0.005	0.0	2	0.15	387
SS18	9/4/2012	19-20 (BH07)	0.0	0.025	<0.005	<0.005	<0.01	<0.005	<50
COGCC standards for Soil (mg/kg) [1]				**0.17**	**85**	**100**	**175**	**23**	**500**

Notes:

1). Standards for Soil are taken from 2 CCR 404-1, Table 910-1, effective April 1, 2009.

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

GRO - Gasoline range organics. DRO - Diesel range organics.

mg/kg= Milligrams per kilogram. bgs - Below ground surface.

ppm - Parts per million

Bold red values indicate an exceedance of the COGCC soil standards for the Site.

TABLE 2
BENSON 24-15
GROUNDWATER ANALYTICAL RESULTS SUMMARY TABLE

Sample ID	Date Sampled	Benzene (ug/L)	Toluene (ug/L)	Ethylbenzene (ug/L)	Total Xylenes (ug/L)	Depth to Water (feet)
BH02	9/13/2012	**1,600**	**2,200**	250	**2,860**	26.52
BH03	9/13/2012	**1,200**	**620**	23	540	23.09
BH05	9/13/2012	**260**	7.1	10	1,060	21.0
BH06	9/13/2012		LNAPL			NA (2)
COGCC standards for Groundwater (ug/L) (1)		**5**	**560**	**700**	**1,400**	

Notes:

1). The environmental cleanup standards for groundwater that are applicable to this site are the Colorado Oil and Gas Conservation Commission (COGCC) standards for contaminants in groundwater according to Table 910-1 of the COGCC 900 Series Rule for E&P Waste Management.

2). Depth to LNAPL was 19.24 feet. Groundwater was not encountered within the well.

LNAPL - Light non-aqueous phase liquid.

Bold red values indicate an exceedance of the COGCC soil standards for the Site.

ug/L= Micrograms per liter.

ATTACHMENT A

Summit Scientific

741 Corporate Circle – Suite I ♦ Golden, Colorado 80401

303.277.9310 - laboratory ♦ 303.277.9531 - fax

July 10, 2012

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

RE: Benson 13,24-15

Enclosed are the results of analyses for samples received by Summit Scientific on 07/03/12 14:00. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Ben Shrewsbury
President / Laboratory Director

PDC Energy 1775 Sherman St. STE. 3000 Denver CO, 80203	Project: Benson 13,24-15 Project Number: [none] Project Manager: Brandon Bruns	**Reported:** 07/10/12 15:35

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
SS01	R207049-01	Soil	07/03/12 08:40	07/03/12 14:00
SS03	R207049-02	Soil	07/03/12 09:50	07/03/12 14:00
SS04	R207049-03	Soil	07/03/12 09:55	07/03/12 14:00
SS05	R207049-04	Soil	07/03/12 10:00	07/03/12 14:00
SS06	R207049-05	Soil	07/03/12 10:10	07/03/12 14:00

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.

S2

PDC Energy 1775 Sherman St. STE. 3000 Denver CO, 80203	Project: Benson 13,24-15 Project Number: [none] Project Manager: Brandon Bruns	**Reported:** 07/10/12 15:35

R207049

Summit Scientific
S2
741 Corporate Circle Suite I • Golden, Colorado 80401
303-277-9310 • 303-277-9531 Fax

Page 1 of 1

Client: PDC
Address: 1775 Sherman St. #3000
City/State/Zip: Denver, CO 80203
Phone: 303-860-5900
Fax: 303-860-5938
Sampler Name: Brian Humphrey
Project Manager: Brandon Bruns
E-Mail: bbruns@petd.com
Project Name: Benson 13,24-15
Project Number:

Sample Description	Date Sampled	Time Sampled	Number of Containers	HCl	HNO3	None	Other (Specify)	Groundwater	Soil	Air - Canister Serial #	Other (Specify)	8260 BTEX, Naphthalene, GRO	8015 ORO	Special Instructions
SS01	7/3/12	0840	2			X			X			X	X	Please cc bhumphrey@bsm-sgroup.com
SS03		0950												
SS04		0955												
SS05		1000												
SS06		1010												

Relinquished by: [signature] Date/Time: 7/3/12 - 1610
Received by: [signature] Date/Time: 7/3 14:40
Relinquished by: Date/Time:
Received by: Date/Time:
Relinquished by: Date/Time:
Received in Lab by: Date/Time:

Analyze For:

Notes:

Turn Around Time (Check): Same Day ☐ 24 Hours ☐ 48 Hours ☐ 72 Hours ☐ Standard ☒

Sample Integrity: Temperature Upon Receipt: 5.1 Intact: Yes No

www.s2scientific.com

PDC Energy 1775 Sherman St. STE. 3000 Denver CO, 80203	Project: Benson 13,24-15 Project Number: [none] Project Manager: Brandon Bruns	**Reported:** 07/10/12 15:35

SS01
R207049-01 (Soil)

Summit Scientific

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **07/03/12 08:40**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
C10-C28 (DRO)	ND	50	mg/kg	1	2070610	07/06/12	07/07/12	8015 Full Carbon Chain	

Date Sampled: **07/03/12 08:40**

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: **07/03/12 08:40**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Naphthalene	ND	0.0050	mg/kg	1	2070614	07/06/12	07/07/12	EPA 8260B	
Benzene	ND	0.0050	"	"	"	"	"	"	
Toluene	ND	0.0050	"	"	"	"	"	"	
Ethylbenzene	ND	0.0050	"	"	"	"	"	"	
m,p-Xylene	**0.011**	0.010	"	"	"	"	"	"	
o-Xylene	**0.0072**	0.0050	"	"	"	"	"	"	
Gasoline Range Hydrocarbons	**0.74**	0.50	"	"	"	"	"	"	

Date Sampled: **07/03/12 08:40**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 1,2-Dichloroethane-d4		*118 %*	*30-150*		"	"	"	"	
Surrogate: Toluene-d8		*94.6 %*	*30-150*		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		*105 %*	*30-150*		"	"	"	"	

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: Benson 13,24-15 Project Number: [none] Project Manager: Brandon Bruns	**Reported:** 07/10/12 15:35

SS03
R207049-02 (Soil)

Summit Scientific

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **07/03/12 09:50**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
C10-C28 (DRO)	**2300**	50	mg/kg	1	2070610	07/06/12	07/07/12	8015 Full Carbon Chain	

Date Sampled: **07/03/12 09:50**

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: **07/03/12 09:50**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Naphthalene	**0.66**	0.050	mg/kg	10	2070614	07/06/12	07/07/12	EPA 8260B	
Benzene	**0.88**	0.50	"	100	"	"	"	"	
Toluene	**7.6**	0.50	"	"	"	"	"	"	
Ethylbenzene	**2.8**	0.50	"	"	"	"	"	"	
m,p-Xylene	**24**	1.0	"	"	"	"	"	"	
o-Xylene	**6.8**	0.50	"	"	"	"	"	"	
Gasoline Range Hydrocarbons	**590**	50	"	"	"	"	"	"	

Date Sampled: **07/03/12 09:50**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 1,2-Dichloroethane-d4		*92.1 %*	*30-150*		"	"	"	"	
Surrogate: Toluene-d8		*137 %*	*30-150*		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		*120 %*	*30-150*		"	"	"	"	

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: Benson 13,24-15 Project Number: [none] Project Manager: Brandon Bruns	**Reported:** 07/10/12 15:35

SS04
R207049-03 (Soil)

Summit Scientific

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **07/03/12 09:55**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
C10-C28 (DRO)	**2600**	50	mg/kg	1	2070610	07/06/12	07/07/12	8015 Full Carbon Chain	

Date Sampled: **07/03/12 09:55**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: o-Terphenyl		*134 %*	*30-150*		"	"	"	"	

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **07/03/12 09:55**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Naphthalene	**1.6**	0.050	mg/kg	10	2070614	07/06/12	07/07/12	EPA 8260B	
Benzene	**4.3**	0.050	"	"	"	"	"	"	
Toluene	**62**	0.50	"	100	"	"	"	"	
Ethylbenzene	**23**	0.50	"	"	"	"	"	"	
m,p-Xylene	**140**	1.0	"	"	"	"	"	"	
o-Xylene	**44**	0.50	"	"	"	"	"	"	
Gasoline Range Hydrocarbons	**4000**	50	"	"	"	"	"	"	

Date Sampled: **07/03/12 09:55**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 1,2-Dichloroethane-d4		*94.8 %*	*30-150*		"	"	"	"	
Surrogate: Toluene-d8		*105 %*	*30-150*		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		*95.0 %*	*30-150*		"	"	"	"	

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: Benson 13,24-15 Project Number: [none] Project Manager: Brandon Bruns	**Reported:** 07/10/12 15:35

SS05
R207049-04 (Soil)

Summit Scientific

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **07/03/12 10:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
C10-C28 (DRO)	**3400**	50	mg/kg	1	2070610	07/06/12	07/07/12	8015 Full Carbon Chain	

Date Sampled: **07/03/12 10:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: o-Terphenyl		*148 %*	*30-150*		"	"	"	"	

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **07/03/12 10:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Naphthalene	**2.5**	0.050	mg/kg	10	2070614	07/06/12	07/07/12	EPA 8260B	
Benzene	**3.9**	0.050	"	"	"	"	"	"	
Toluene	**41**	0.50	"	100	"	"	"	"	
Ethylbenzene	**7.7**	0.50	"	"	"	"	"	"	
m,p-Xylene	**57**	1.0	"	"	"	"	"	"	
o-Xylene	**19**	0.50	"	"	"	"	"	"	
Gasoline Range Hydrocarbons	**25000**	50	"	"	"	"	"	"	

Date Sampled: **07/03/12 10:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 1,2-Dichloroethane-d4		*92.9 %*	*30-150*		"	"	"	"	
Surrogate: Toluene-d8		*102 %*	*30-150*		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		*110 %*	*30-150*		"	"	"	"	

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: Benson 13,24-15 Project Number: [none] Project Manager: Brandon Bruns	**Reported:** 07/10/12 15:35

SS06
R207049-05 (Soil)

Summit Scientific

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **07/03/12 10:10**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
C10-C28 (DRO)	**1000**	50	mg/kg	1	2070610	07/06/12	07/07/12	8015 Full Carbon Chain	

Date Sampled: **07/03/12 10:10**

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: **07/03/12 10:10**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Naphthalene	**0.56**	0.050	mg/kg	10	2070614	07/06/12	07/07/12	EPA 8260B	
Benzene	**0.82**	0.050	"	"	"	"	"	"	
Toluene	**2.8**	0.050	"	"	"	"	"	"	
Ethylbenzene	**2.0**	0.050	"	"	"	"	"	"	
m,p-Xylene	**30**	1.0	"	100	"	"	"	"	
o-Xylene	**8.5**	0.50	"	"	"	"	"	"	
Gasoline Range Hydrocarbons	**41**	5.0	"	10	"	"	"	"	

Date Sampled: **07/03/12 10:10**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 1,2-Dichloroethane-d4		*91.0 %*	*30-150*		"	"	"	"	
Surrogate: Toluene-d8		*120 %*	*30-150*		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		*139 %*	*30-150*		"	"	"	"	

PDC Energy 1775 Sherman St. STE. 3000 Denver CO, 80203	Project: Benson 13,24-15 Project Number: [none] Project Manager: Brandon Bruns	**Reported:** 07/10/12 15:35

Extractable Petroleum Hydrocarbons by 8015 - Quality Control

Summit Scientific

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 2070610 - EPA 3550A										
Blank (2070610-BLK1)				Prepared: 07/06/12	Analyzed: 07/07/12					
C10-C28 (DRO)	ND	50	mg/kg							
LCS (2070610-BS1)				Prepared: 07/06/12	Analyzed: 07/07/12					
C10-C28 (DRO)	541	50	mg/kg	501		108	79.3-126			
LCS Dup (2070610-BSD1)				Prepared: 07/06/12	Analyzed: 07/07/12					
C10-C28 (DRO)	534	50	mg/kg	501		107	79.3-126	1.34	11	
Matrix Spike (2070610-MS1)		**Source: R207027-01**		Prepared: 07/06/12	Analyzed: 07/07/12					
C10-C28 (DRO)	518	50	mg/kg	501	45.6	94.2	45.1-150			
Matrix Spike Dup (2070610-MSD1)		**Source: R207027-01**		Prepared: 07/06/12	Analyzed: 07/07/12					
C10-C28 (DRO)	458	50	mg/kg	501	45.6	82.4	45.1-150	12.2	25	

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.

Volatile Organic Compounds by EPA Method 8260B - Quality Control

Summit Scientific

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 2070614 - EPA 5030 Soil MS										
Blank (2070614-BLK1)				Prepared: 07/06/12 Analyzed: 07/07/12						
Naphthalene	ND	0.0050	mg/kg							
Benzene	ND	0.0050	"							
Toluene	ND	0.0050	"							
Ethylbenzene	ND	0.0050	"							
m,p-Xylene	ND	0.010	"							
o-Xylene	ND	0.0050	"							
Gasoline Range Hydrocarbons	ND	0.50	"							
Surrogate: 1,2-Dichloroethane-d4	*0.0375*		"	*0.0397*		*94.5*	*30-150*			
Surrogate: Toluene-d8	*0.0391*		"	*0.0400*		*97.6*	*30-150*			
Surrogate: 4-Bromofluorobenzene	*0.0382*		"	*0.0400*		*95.4*	*30-150*			
LCS (2070614-BS1)				Prepared: 07/06/12 Analyzed: 07/07/12						
Naphthalene	ND	0.0050	mg/kg				85.7-124			
Benzene	0.0921	0.0050	"	0.100		92.1	58.1-115			
Toluene	0.0962	0.0050	"	0.100		96.2	56.7-123			
Ethylbenzene	0.0982	0.0050	"	0.100		98.2	61.4-138			
m,p-Xylene	0.196	0.010	"	0.200		98.0	63.6-128			
o-Xylene	0.100	0.0050	"	0.100		100	62.6-134			
Surrogate: 1,2-Dichloroethane-d4	*0.0378*		"	*0.0397*		*95.1*	*30-150*			
Surrogate: Toluene-d8	*0.0389*		"	*0.0400*		*97.4*	*30-150*			
Surrogate: 4-Bromofluorobenzene	*0.0396*		"	*0.0400*		*98.9*	*30-150*			
LCS Dup (2070614-BSD1)				Prepared: 07/06/12 Analyzed: 07/07/12						
Naphthalene	ND	0.0050	mg/kg				85.7-124		12.6	
Benzene	0.0981	0.0050	"	0.100		98.1	58.1-115	6.34	20	
Toluene	0.102	0.0050	"	0.100		102	56.7-123	5.70	20	
Ethylbenzene	0.104	0.0050	"	0.100		104	61.4-138	5.30	12.2	
m,p-Xylene	0.206	0.010	"	0.200		103	63.6-128	4.84	13.2	
o-Xylene	0.105	0.0050	"	0.100		105	62.6-134	4.92	12.2	
Surrogate: 1,2-Dichloroethane-d4	*0.0384*		"	*0.0397*		*96.8*	*30-150*			
Surrogate: Toluene-d8	*0.0393*		"	*0.0400*		*98.2*	*30-150*			
Surrogate: 4-Bromofluorobenzene	*0.0385*		"	*0.0400*		*96.3*	*30-150*			

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.

S2

PDC Energy 1775 Sherman St. STE. 3000 Denver CO, 80203	Project: Benson 13,24-15 Project Number: [none] Project Manager: Brandon Bruns	**Reported:** 07/10/12 15:35

Volatile Organic Compounds by EPA Method 8260B - Quality Control

Summit Scientific

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 2070614 - EPA 5030 Soil MS										
Matrix Spike (2070614-MS1)		**Source: R207027-01**		Prepared: 07/06/12		Analyzed: 07/07/12				
Naphthalene	ND	0.0050	mg/kg		0.00		34-148			
Benzene	0.0790	0.0050	"	0.100	0.00	79.0	47.2-120			
Toluene	0.0809	0.0050	"	0.100	0.00	80.9	47.7-125			
Ethylbenzene	0.0792	0.0050	"	0.100	0.00	79.2	34.5-150			
m,p-Xylene	0.157	0.010	"	0.200	0.00	78.7	30-150			
o-Xylene	0.0792	0.0050	"	0.100	0.00	79.2	30-150			
Surrogate: 1,2-Dichloroethane-d4	*0.0425*		*"*	*0.0397*		*107*	*30-150*			
Surrogate: Toluene-d8	*0.0393*		*"*	*0.0400*		*98.2*	*30-150*			
Surrogate: 4-Bromofluorobenzene	*0.0400*		*"*	*0.0400*		*100*	*30-150*			
Matrix Spike Dup (2070614-MSD1)		**Source: R207027-01**		Prepared: 07/06/12		Analyzed: 07/07/12				
Naphthalene	ND	0.0050	mg/kg		0.00		34-148		23.9	
Benzene	0.0778	0.0050	"	0.100	0.00	77.8	47.2-120	1.65	15.1	
Toluene	0.0800	0.0050	"	0.100	0.00	80.0	47.7-125	1.19	16.8	
Ethylbenzene	0.0773	0.0050	"	0.100	0.00	77.3	34.5-150	2.49	10.1	
m,p-Xylene	0.155	0.010	"	0.200	0.00	77.7	30-150	1.19	17.2	
o-Xylene	0.0779	0.0050	"	0.100	0.00	77.9	30-150	1.60	15.2	
Surrogate: 1,2-Dichloroethane-d4	*0.0434*		*"*	*0.0397*		*109*	*30-150*			
Surrogate: Toluene-d8	*0.0394*		*"*	*0.0400*		*98.6*	*30-150*			
Surrogate: 4-Bromofluorobenzene	*0.0396*		*"*	*0.0400*		*99.0*	*30-150*			

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.

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

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.

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303.277.9310 - laboratory ♦ 303.277.9531 - fax

September 07, 2012

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

RE: Benson 24-15

Enclosed are the results of analyses for samples received by Summit Scientific on 09/06/12 10:15. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Joseph J Egry IV For Ben Shrewsbury
President / Laboratory Director

PDC Energy 1775 Sherman St. STE. 3000 Denver CO, 80203	Project: Benson 24-15 Project Number: [none] Project Manager: Brandon Bruns	**Reported:** 09/07/12 16:28

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
SS07	R209018-01	Soil	09/05/12 12:45	09/06/12 10:15
SS08	R209018-02	Soil	09/05/12 12:55	09/06/12 10:15
SS09	R209018-03	Soil	09/05/12 13:35	09/06/12 10:15
SS10	R209018-04	Soil	09/05/12 14:40	09/06/12 10:15
SS11	R209018-05	Soil	09/05/12 15:15	09/06/12 10:15
SS12	R209018-06	Soil	09/05/12 15:20	09/06/12 10:15
SS13	R209018-07	Soil	09/05/12 15:40	09/06/12 10:15
SS14	R209018-08	Soil	09/05/12 15:45	09/06/12 10:15
SS15	R209018-09	Soil	09/05/12 16:15	09/06/12 10:15
SS16	R209018-10	Soil	09/05/12 16:20	09/06/12 10:15
SS17	R209018-11	Soil	09/05/12 16:55	09/06/12 10:15
SS18	R209018-12	Soil	09/05/12 17:00	09/06/12 10:15

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.

R209018.1

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303-277-9310 ♦ 303-277-9531 Fax

Page 1 of 2

Client: PDC Energy
Address: 1775 Sherman St #3000
City/State/Zip: Denver, CO 80203
Phone:
Sampler Name: Brian Humphrey
Project Manager: Brandon Bruns
E-Mail: Brandon.Bruns@pdce.com
Project Name: Benson 24-15
Project Number:
Fax:

Sample Description	Date Sampled	Time Sampled	Number of Containers	Preservative: HCl	HNO3	None	Other (Specify)	Matrix: Groundwater	Soil	Air - Canister Serial #	Other (Specify)	Analyze For: 8260 Gas Ex + Naph Naphthalene	8015 DRO	Special Instructions
SS07	9/6/12	1245	1			X			X			X	X	Note cc. bhumphrey@pdce.com
SS08		1255												bruns@pdce.com
SS09		1335												
SS10		1440												
SS11		1515												
SS12		1520												
SS13		1540												
SS14		1545												
SS15		1615												
SS16		1620												

Relinquished by: [signature] Date/Time: 9/6/12 - 0830 Received by: [signature] Date/Time: 9/6/12 1917

Relinquished by: Date/Time: Received by: Date/Time:

Relinquished by: Date/Time: Received in Lab by: Date/Time:

Turn Around Time (Check): Same Day [ ] 24 Hours [ ] 48 Hours [ ] 72 Hours [ ] Standard [X]

Sample Integrity: Temperature Upon Receipt: 5.3 Intact: Yes No

Notes:

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S2

PDC Energy 1775 Sherman St. STE. 3000 Denver CO, 80203	Project: Benson 24-15 Project Number: [none] Project Manager: Brandon Bruns	**Reported:** 09/07/12 16:28

R2090182

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S2
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303-277-9310 ♦ 303-277-9531 Fax

Page 2 of 2

Client: PDC Energy
Address: 1775 Sherman St #3000
City/State/Zip: Denver, CO 80203
Phone:
Fax:
Sampler Name: Brian Humphrey
Project Manager: Brandon Bruns
E-Mail: brandon.bruns@pdce.com
Project Name: Benson 24-15
Project Number:

Sample Description	Date Sampled	Time Sampled	Number of Containers	HCl	HNO_3	None	Other (Specify)	Groundwater	Soil	Air - Canister Serial #	Other (Specify)	8260 Gas Exp Naphthalene	8015 DRO	Analyze For:	Special Instructions
SS17	9/5/12	1655	1			X			X			X	X		please cc bhumphrey@
SS18	9/4/12	1700	1			X			X			X	X		bruns@pdce.com

Relinquished by: [signature] Date/Time: 9/6/12 - 0830 Received by: Date/Time: 9/6/12 10:15
Relinquished by: Date/Time: Received by: Date/Time:
Relinquished by: Date/Time: Received in Lab by: Date/Time:

Turn Around Time (Check): Same Day ☐ 24 Hours ☐ 48 Hours ☐ 72 Hours ☐ Standard ☒

Sample Integrity: Temperature Upon Receipt: 5.3 Intact: Yes No

Notes:

www.s2scientific.com

PDC Energy 1775 Sherman St. STE. 3000 Denver CO, 80203	Project: Benson 24-15 Project Number: [none] Project Manager: Brandon Bruns	**Reported:** 09/07/12 16:28

SS07
R209018-01 (Soil)

Summit Scientific

Total Petroleum Hydrocarbons by 8015

Date Sampled: **09/05/12 12:45**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
C10-C28 (DRO)	ND	50	mg/kg	1	2090606	09/06/12	09/07/12	8015 DRO	

Date Sampled: **09/05/12 12:45**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: o-Terphenyl		*77.9 %*	*30-150*		"	"	"	"	

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **09/05/12 12:45**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Naphthalene	ND	0.0050	mg/kg	1	2090604	09/06/12	09/07/12	EPA 8260B	
Benzene	ND	0.0050	"	"	"	"	"	"	
Toluene	ND	0.0050	"	"	"	"	"	"	
Ethylbenzene	ND	0.0050	"	"	"	"	"	"	
Xylenes (total)	ND	0.010	"	"	"	"	"	"	
Gasoline Range Hydrocarbons	ND	0.50	"	"	"	"	"	"	

Date Sampled: **09/05/12 12:45**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 1,2-Dichloroethane-d4		*97.6 %*	*30-150*		"	"	"	"	
Surrogate: Toluene-d8		*96.2 %*	*30-150*		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		*95.3 %*	*30-150*		"	"	"	"	

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: Benson 24-15 Project Number: [none] Project Manager: Brandon Bruns	**Reported:** 09/07/12 16:28

SS08
R209018-02 (Soil)

Summit Scientific

Total Petroleum Hydrocarbons by 8015

Date Sampled: **09/05/12 12:55**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
C10-C28 (DRO)	ND	50	mg/kg	1	2090606	09/06/12	09/07/12	8015 DRO	

Date Sampled: **09/05/12 12:55**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: o-Terphenyl		*85.6 %*	*30-150*		"	"	"	"	

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **09/05/12 12:55**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Naphthalene	ND	0.0050	mg/kg	1	2090604	09/06/12	09/07/12	EPA 8260B	
Benzene	**0.0075**	0.0050	"	"	"	"	"	"	
Toluene	ND	0.0050	"	"	"	"	"	"	
Ethylbenzene	ND	0.0050	"	"	"	"	"	"	
Xylenes (total)	ND	0.010	"	"	"	"	"	"	
Gasoline Range Hydrocarbons	ND	0.50	"	"	"	"	"	"	

Date Sampled: **09/05/12 12:55**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 1,2-Dichloroethane-d4		*105 %*	*30-150*		"	"	"	"	
Surrogate: Toluene-d8		*95.6 %*	*30-150*		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		*98.7 %*	*30-150*		"	"	"	"	

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: Benson 24-15 Project Number: [none] Project Manager: Brandon Bruns	**Reported:** 09/07/12 16:28

SS09
R209018-03 (Soil)

Summit Scientific

Total Petroleum Hydrocarbons by 8015

Date Sampled: **09/05/12 13:35**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
C10-C28 (DRO)	ND	50	mg/kg	1	2090606	09/06/12	09/07/12	8015 DRO	

Date Sampled: **09/05/12 13:35**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: o-Terphenyl		*96.2 %*	*30-150*		"	"	"	"	

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **09/05/12 13:35**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Naphthalene	ND	0.0050	mg/kg	1	2090604	09/06/12	09/07/12	EPA 8260B	
Benzene	ND	0.0050	"	"	"	"	"	"	
Toluene	ND	0.0050	"	"	"	"	"	"	
Ethylbenzene	ND	0.0050	"	"	"	"	"	"	
Xylenes (total)	ND	0.010	"	"	"	"	"	"	
Gasoline Range Hydrocarbons	ND	0.50	"	"	"	"	"	"	

Date Sampled: **09/05/12 13:35**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 1,2-Dichloroethane-d4		*101 %*	*30-150*		"	"	"	"	
Surrogate: Toluene-d8		*95.6 %*	*30-150*		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		*97.2 %*	*30-150*		"	"	"	"	

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: Benson 24-15 Project Number: [none] Project Manager: Brandon Bruns	**Reported:** 09/07/12 16:28

SS10
R209018-04 (Soil)

Summit Scientific

Total Petroleum Hydrocarbons by 8015

Date Sampled: **09/05/12 14:40**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
C10-C28 (DRO)	ND	50	mg/kg	1	2090606	09/06/12	09/07/12	8015 DRO	

Date Sampled: **09/05/12 14:40**

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: **09/05/12 14:40**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Naphthalene	ND	0.0050	mg/kg	1	2090604	09/06/12	09/07/12	EPA 8260B	
Benzene	ND	0.0050	"	"	"	"	"	"	
Toluene	ND	0.0050	"	"	"	"	"	"	
Ethylbenzene	ND	0.0050	"	"	"	"	"	"	
Xylenes (total)	ND	0.010	"	"	"	"	"	"	
Gasoline Range Hydrocarbons	ND	0.50	"	"	"	"	"	"	

Date Sampled: **09/05/12 14:40**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 1,2-Dichloroethane-d4		*100 %*	*30-150*		"	"	"	"	
Surrogate: Toluene-d8		*96.2 %*	*30-150*		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		*96.2 %*	*30-150*		"	"	"	"	

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.

SS11
R209018-05 (Soil)

Summit Scientific

Total Petroleum Hydrocarbons by 8015

Date Sampled: **09/05/12 15:15**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
C10-C28 (DRO)	ND	50	mg/kg	1	2090606	09/06/12	09/07/12	8015 DRO	

Date Sampled: **09/05/12 15:15**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: o-Terphenyl		*99.6 %*	*30-150*		"	"	"	"	

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **09/05/12 15:15**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Naphthalene	ND	0.0050	mg/kg	1	2090604	09/06/12	09/07/12	EPA 8260B	
Benzene	ND	0.0050	"	"	"	"	"	"	
Toluene	ND	0.0050	"	"	"	"	"	"	
Ethylbenzene	ND	0.0050	"	"	"	"	"	"	
Xylenes (total)	ND	0.010	"	"	"	"	"	"	
Gasoline Range Hydrocarbons	ND	0.50	"	"	"	"	"	"	

Date Sampled: **09/05/12 15:15**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 1,2-Dichloroethane-d4		*101 %*	*30-150*		"	"	"	"	
Surrogate: Toluene-d8		*97.1 %*	*30-150*		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		*97.4 %*	*30-150*		"	"	"	"	

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: Benson 24-15 Project Number: [none] Project Manager: Brandon Bruns	**Reported:** 09/07/12 16:28

SS12
R209018-06 (Soil)

Summit Scientific

Total Petroleum Hydrocarbons by 8015

Date Sampled: **09/05/12 15:20**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
C10-C28 (DRO)	ND	50	mg/kg	1	2090606	09/06/12	09/07/12	8015 DRO	

Date Sampled: **09/05/12 15:20**

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: **09/05/12 15:20**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Naphthalene	ND	0.0050	mg/kg	1	2090604	09/06/12	09/07/12	EPA 8260B	
Benzene	**0.013**	0.0050	"	"	"	"	"	"	
Toluene	ND	0.0050	"	"	"	"	"	"	
Ethylbenzene	ND	0.0050	"	"	"	"	"	"	
Xylenes (total)	ND	0.010	"	"	"	"	"	"	
Gasoline Range Hydrocarbons	ND	0.50	"	"	"	"	"	"	

Date Sampled: **09/05/12 15:20**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 1,2-Dichloroethane-d4		*106 %*	*30-150*		"	"	"	"	
Surrogate: Toluene-d8		*96.7 %*	*30-150*		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		*98.9 %*	*30-150*		"	"	"	"	

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: Benson 24-15 Project Number: [none] Project Manager: Brandon Bruns	**Reported:** 09/07/12 16:28

SS13
R209018-07 (Soil)

Summit Scientific

Total Petroleum Hydrocarbons by 8015

Date Sampled: **09/05/12 15:40**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
C10-C28 (DRO)	**890**	50	mg/kg	1	2090606	09/06/12	09/07/12	8015 DRO	

Date Sampled: **09/05/12 15:40**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: o-Terphenyl		*77.8 %*	*30-150*		"	"	"	"	

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **09/05/12 15:40**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Naphthalene	**0.41**	0.0050	mg/kg	1	2090604	09/06/12	09/07/12	EPA 8260B	
Benzene	**0.017**	0.0050	"	"	"	"	"	"	
Toluene	ND	0.0050	"	"	"	"	"	"	
Ethylbenzene	**0.027**	0.0050	"	"	"	"	"	"	
Xylenes (total)	**1.4**	0.10	"	10	"	"	"	"	
Gasoline Range Hydrocarbons	**300**	5.0	"	"	"	"	"	"	

Date Sampled: **09/05/12 15:40**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 1,2-Dichloroethane-d4		*88.7 %*	*30-150*		"	"	"	"	
Surrogate: Toluene-d8		*121 %*	*30-150*		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		*108 %*	*30-150*		"	"	"	"	

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: Benson 24-15 Project Number: [none] Project Manager: Brandon Bruns	**Reported:** 09/07/12 16:28

SS14
R209018-08 (Soil)

Summit Scientific

Total Petroleum Hydrocarbons by 8015

Date Sampled: **09/05/12 15:45**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
C10-C28 (DRO)	ND	50	mg/kg	1	2090606	09/06/12	09/07/12	8015 DRO	

Date Sampled: **09/05/12 15:45**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: o-Terphenyl		*96.8 %*	*30-150*		"	"	"	"	

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **09/05/12 15:45**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Naphthalene	ND	0.0050	mg/kg	1	2090604	09/06/12	09/07/12	EPA 8260B	
Benzene	ND	0.0050	"	"	"	"	"	"	
Toluene	ND	0.0050	"	"	"	"	"	"	
Ethylbenzene	ND	0.0050	"	"	"	"	"	"	
Xylenes (total)	ND	0.010	"	"	"	"	"	"	
Gasoline Range Hydrocarbons	ND	0.50	"	"	"	"	"	"	

Date Sampled: **09/05/12 15:45**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 1,2-Dichloroethane-d4		*97.0 %*	*30-150*		"	"	"	"	
Surrogate: Toluene-d8		*95.3 %*	*30-150*		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		*96.7 %*	*30-150*		"	"	"	"	

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: Benson 24-15 Project Number: [none] Project Manager: Brandon Bruns	**Reported:** 09/07/12 16:28

SS15
R209018-09 (Soil)

Summit Scientific

Total Petroleum Hydrocarbons by 8015

Date Sampled: **09/05/12 16:15**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
C10-C28 (DRO)	**560**	50	mg/kg	1	2090606	09/06/12	09/07/12	8015 DRO	

Date Sampled: **09/05/12 16:15**

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: **09/05/12 16:15**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Naphthalene	**0.38**	0.0050	mg/kg	1	2090604	09/06/12	09/07/12	EPA 8260B	
Benzene	**0.063**	0.0050	"	"	"	"	"	"	
Toluene	**0.028**	0.0050	"	"	"	"	"	"	
Ethylbenzene	**0.12**	0.0050	"	"	"	"	"	"	
Xylenes (total)	**11**	0.10	"	10	"	"	"	"	
Gasoline Range Hydrocarbons	**500**	5.0	"	"	"	"	"	"	

Date Sampled: **09/05/12 16:15**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 1,2-Dichloroethane-d4		*92.4 %*	*30-150*		"	"	"	"	
Surrogate: Toluene-d8		*160 %*	*30-150*		"	"	"	"	*S-02*
Surrogate: 4-Bromofluorobenzene		*131 %*	*30-150*		"	"	"	"	

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: Benson 24-15 Project Number: [none] Project Manager: Brandon Bruns	**Reported:** 09/07/12 16:28

SS16
R209018-10 (Soil)

Summit Scientific

Total Petroleum Hydrocarbons by 8015

Date Sampled: **09/05/12 16:20**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
C10-C28 (DRO)	ND	50	mg/kg	1	2090606	09/06/12	09/07/12	8015 DRO	

Date Sampled: **09/05/12 16:20**

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: **09/05/12 16:20**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Naphthalene	ND	0.0050	mg/kg	1	2090604	09/06/12	09/07/12	EPA 8260B	
Benzene	ND	0.0050	"	"	"	"	"	"	
Toluene	ND	0.0050	"	"	"	"	"	"	
Ethylbenzene	ND	0.0050	"	"	"	"	"	"	
Xylenes (total)	**0.013**	0.010	"	"	"	"	"	"	
Gasoline Range Hydrocarbons	ND	0.50	"	"	"	"	"	"	

Date Sampled: **09/05/12 16:20**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 1,2-Dichloroethane-d4		*101 %*	*30-150*		"	"	"	"	
Surrogate: Toluene-d8		*98.4 %*	*30-150*		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		*96.5 %*	*30-150*		"	"	"	"	

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: Benson 24-15 Project Number: [none] Project Manager: Brandon Bruns	**Reported:** 09/07/12 16:28

SS17
R209018-11 (Soil)

Summit Scientific

Total Petroleum Hydrocarbons by 8015

Date Sampled: **09/05/12 16:55**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
C10-C28 (DRO)	**290**	50	mg/kg	1	2090606	09/06/12	09/07/12	8015 DRO	

Date Sampled: **09/05/12 16:55**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: o-Terphenyl		*104 %*	*30-150*		"	"	"	"	

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **09/05/12 16:55**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Naphthalene	**0.15**	0.0050	mg/kg	1	2090604	09/06/12	09/07/12	EPA 8260B	
Benzene	ND	0.0050	"	"	"	"	"	"	
Toluene	ND	0.0050	"	"	"	"	"	"	
Ethylbenzene	**0.034**	0.0050	"	"	"	"	"	"	
Xylenes (total)	**2.0**	0.010	"	"	"	"	"	"	
Gasoline Range Hydrocarbons	**97**	5.0	"	10	"	"	"	"	

Date Sampled: **09/05/12 16:55**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 1,2-Dichloroethane-d4		*95.1 %*	*30-150*		"	"	"	"	
Surrogate: Toluene-d8		*148 %*	*30-150*		"	"	"	"	*S-02*
Surrogate: 4-Bromofluorobenzene		*168 %*	*30-150*		"	"	"	"	*S-02*

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: Benson 24-15 Project Number: [none] Project Manager: Brandon Bruns	**Reported:** 09/07/12 16:28

SS18
R209018-12 (Soil)

Summit Scientific

Total Petroleum Hydrocarbons by 8015

Date Sampled: **09/05/12 17:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
C10-C28 (DRO)	ND	50	mg/kg	1	2090606	09/06/12	09/07/12	8015 DRO	

Date Sampled: **09/05/12 17:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: o-Terphenyl		*98.6 %*	*30-150*		"	"	"	"	

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **09/05/12 17:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Naphthalene	ND	0.0050	mg/kg	1	2090604	09/06/12	09/07/12	EPA 8260B	
Benzene	**0.025**	0.0050	"	"	"	"	"	"	
Toluene	ND	0.0050	"	"	"	"	"	"	
Ethylbenzene	ND	0.0050	"	"	"	"	"	"	
Xylenes (total)	ND	0.010	"	"	"	"	"	"	
Gasoline Range Hydrocarbons	ND	0.50	"	"	"	"	"	"	

Date Sampled: **09/05/12 17:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 1,2-Dichloroethane-d4		*100 %*	*30-150*		"	"	"	"	
Surrogate: Toluene-d8		*93.8 %*	*30-150*		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		*97.0 %*	*30-150*		"	"	"	"	

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: Benson 24-15 Project Number: [none] Project Manager: Brandon Bruns	**Reported:** 09/07/12 16:28

Total Petroleum Hydrocarbons by 8015 - Quality Control

Summit Scientific

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 2090606 - EPA 3550A										
Blank (2090606-BLK1)				Prepared & Analyzed: 09/06/12						
C10-C28 (DRO)	ND	50	mg/kg							
LCS (2090606-BS1)				Prepared: 09/06/12		Analyzed: 09/07/12				
C10-C28 (DRO)	511	50	mg/kg	501		102	77-133			
LCS Dup (2090606-BSD1)				Prepared: 09/06/12		Analyzed: 09/07/12				
C10-C28 (DRO)	497	50	mg/kg	501		99.2	77-133	2.68	11	
Matrix Spike (2090606-MS1)		**Source: R209023-01**		Prepared: 09/06/12		Analyzed: 09/07/12				**QM-07**
C10-C28 (DRO)	402	50	mg/kg	495	185	43.8	68-141			
Matrix Spike Dup (2090606-MSD1)		**Source: R209023-01**		Prepared: 09/06/12		Analyzed: 09/07/12				**QM-07**
C10-C28 (DRO)	401	50	mg/kg	485	185	44.5	68-141	0.227	25	

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.

Volatile Organic Compounds by EPA Method 8260B - Quality Control

Summit Scientific

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 2090604 - EPA 5030 Soil MS										
Blank (2090604-BLK1)				Prepared: 09/06/12	Analyzed: 09/07/12					
Naphthalene	ND	0.0050	mg/kg							
Benzene	ND	0.0050	"							
Toluene	ND	0.0050	"							
Ethylbenzene	ND	0.0050	"							
Xylenes (total)	ND	0.010	"							
Gasoline Range Hydrocarbons	ND	0.50	"							
Surrogate: 1,2-Dichloroethane-d4	*0.0398*		"	*0.0397*		*100*	*30-150*			
Surrogate: Toluene-d8	*0.0424*		"	*0.0400*		*106*	*30-150*			
Surrogate: 4-Bromofluorobenzene	*0.0390*		"	*0.0400*		*97.6*	*30-150*			
LCS (2090604-BS1)				Prepared: 09/06/12	Analyzed: 09/07/12					
Naphthalene	ND	0.0050	mg/kg				64-139			
Benzene	0.105	0.0050	"	0.100		105	58-126			
Toluene	0.108	0.0050	"	0.100		108	60-132			
Ethylbenzene	0.115	0.0050	"	0.100		115	74-138			
m,p-Xylene	0.231	0.010	"	0.200		116	72-135			
o-Xylene	0.117	0.0050	"	0.100		117	73-139			
Surrogate: 1,2-Dichloroethane-d4	*0.0364*		"	*0.0397*		*91.6*	*30-150*			
Surrogate: Toluene-d8	*0.0390*		"	*0.0400*		*97.6*	*30-150*			
Surrogate: 4-Bromofluorobenzene	*0.0386*		"	*0.0400*		*96.4*	*30-150*			
LCS Dup (2090604-BSD1)				Prepared: 09/06/12	Analyzed: 09/07/12					
Naphthalene	ND	0.0050	mg/kg				64-139		12	
Benzene	0.102	0.0050	"	0.100		102	58-126	2.35	13	
Toluene	0.103	0.0050	"	0.100		103	60-132	4.70	14	
Ethylbenzene	0.111	0.0050	"	0.100		111	74-138	3.75	13	
m,p-Xylene	0.224	0.010	"	0.200		112	72-135	3.05	14	
o-Xylene	0.113	0.0050	"	0.100		113	73-139	3.70	13	
Surrogate: 1,2-Dichloroethane-d4	*0.0361*		"	*0.0397*		*90.8*	*30-150*			
Surrogate: Toluene-d8	*0.0391*		"	*0.0400*		*97.8*	*30-150*			
Surrogate: 4-Bromofluorobenzene	*0.0370*		"	*0.0400*		*92.6*	*30-150*			

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PDC Energy 1775 Sherman St. STE. 3000 Denver CO, 80203	Project: Benson 24-15 Project Number: [none] Project Manager: Brandon Bruns	**Reported:** 09/07/12 16:28

Volatile Organic Compounds by EPA Method 8260B - Quality Control

Summit Scientific

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 2090604 - EPA 5030 Soil MS										
Matrix Spike (2090604-MS1)		**Source: R209018-01**		Prepared: 09/06/12		Analyzed: 09/07/12				
Naphthalene	ND	0.0050	mg/kg		ND		15-161			
Benzene	0.0966	0.0050	"	0.0996	0.00	97.0	33-127			
Toluene	0.0986	0.0050	"	0.0996	0.00	99.0	32-131			
Ethylbenzene	0.0992	0.0050	"	0.0996	0.00	99.6	24-153			
m,p-Xylene	0.201	0.010	"	0.199	0.00	101	12-157			
o-Xylene	0.103	0.0050	"	0.0996	0.00	104	35-149			
Surrogate: 1,2-Dichloroethane-d4	*0.0416*		*"*	*0.0395*		*105*	*30-150*			
Surrogate: Toluene-d8	*0.0402*		*"*	*0.0398*		*101*	*30-150*			
Surrogate: 4-Bromofluorobenzene	*0.0382*		*"*	*0.0398*		*95.8*	*30-150*			
Matrix Spike Dup (2090604-MSD1)		**Source: R209018-01**		Prepared: 09/06/12		Analyzed: 09/07/12				
Naphthalene	ND	0.0050	mg/kg		ND		15-161		44	
Benzene	0.0922	0.0050	"	0.0994	0.00	92.8	33-127	4.63	33	
Toluene	0.0969	0.0050	"	0.0994	0.00	97.5	32-131	1.73	31	
Ethylbenzene	0.0998	0.0050	"	0.0994	0.00	100	24-153	0.581	23	
m,p-Xylene	0.206	0.010	"	0.199	0.00	104	12-157	2.43	67	
o-Xylene	0.104	0.0050	"	0.0994	0.00	104	35-149	0.262	38	
Surrogate: 1,2-Dichloroethane-d4	*0.0388*		*"*	*0.0395*		*98.3*	*30-150*			
Surrogate: Toluene-d8	*0.0389*		*"*	*0.0398*		*97.7*	*30-150*			
Surrogate: 4-Bromofluorobenzene	*0.0386*		*"*	*0.0398*		*97.2*	*30-150*			

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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

September 19, 2012

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

RE: Benson 24-15

Enclosed are the results of analyses for samples received by Summit Scientific on 09/13/12 17:52. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Joseph J Egry IV For Ben Shrewsbury
President / Laboratory Director

PDC Energy 1775 Sherman St. STE. 3000 Denver CO, 80203	Project: Benson 24-15 Project Number: [none] Project Manager: Brandon Bruns	**Reported:** 09/19/12 14:30

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
BH02	R209087-01	Water	09/13/12 12:45	09/13/12 17:52
BH03	R209087-02	Water	09/13/12 12:55	09/13/12 17:52
BH05	R209087-03	Water	09/13/12 12:50	09/13/12 17:52

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.

S2

PDC Energy 1775 Sherman St. STE. 3000 Denver CO, 80203	Project: Benson 24-15 Project Number: [none] Project Manager: Brandon Bruns	**Reported:** 09/19/12 14:30

R209087

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S2
741 Corporate Circle Suite I • Golden, Colorado 80401
303-277-9310 • 303-374-5933 Fax

Page 1 of 1

Client: PDC Energy
Address: 1775 Sherman St Suite 2000
City/State/Zip: Denver CO
Phone:
Fax:
Sampler Name: Christopher Skow
Project Manager: Brandon Bruns
E-Mail: brandon.bruns@pdcenergy.com
Project Name: Benson 24-15
Project Number:

Sample Description	Date Sampled	Time Sampled	Number of Containers	Preservative: HCl	HNO3	None	Other (Specify)	Matrix: Groundwater	Soil	Air - Canister Serial #	Other (Specify)	Analyze For:	Special Instructions
BH02	9/18/12	1245	1	X				X					
BH03		1255	2										
BH06		1250	2										

Notes:

Turn Around Time (Check): Same Day / 24 Hours / 48 Hours / 72 Hours / Standard

Sample Integrity: Temperature Upon Receipt: 4°C; Intact: Yes / No

Relinquished by:	Date/Time:	Received by:	Date/Time:	Received in Lab by:	Date/Time:
[signature]	9/18/12 1752	[signature]	9/19/12	[signature]	9/19/12

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PDC Energy 1775 Sherman St. STE. 3000 Denver CO, 80203	Project: Benson 24-15 Project Number: [none] Project Manager: Brandon Bruns	**Reported:** 09/19/12 14:30

BH02
R209087-01 (Water)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **09/13/12 12:45**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Benzene	**1600**	100	ug/l	100	2091715	09/17/12	09/18/12	EPA 8260B	
Toluene	**2200**	100	"	"	"	"	"	"	
Ethylbenzene	**250**	100	"	"	"	"	"	"	
m,p-Xylene	**2300**	200	"	"	"	"	"	"	
o-Xylene	**560**	100	"	"	"	"	"	"	
Naphthalene	**26**	1.0	"	1	"	"	"	"	

Date Sampled: **09/13/12 12:45**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 1,2-Dichloroethane-d4		*93.9 %*	*49.7-150*		"	"	"	"	
Surrogate: Toluene-d8		*98.7 %*	*51-150*		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		*95.0 %*	*50.1-150*		"	"	"	"	

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: Benson 24-15 Project Number: [none] Project Manager: Brandon Bruns	**Reported:** 09/19/12 14:30

BH03

R209087-02 (Water)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **09/13/12 12:55**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Benzene	**1200**	100	ug/l	100	2091715	09/17/12	09/18/12	EPA 8260B	
Toluene	**620**	100	"	"	"	"	"	"	
Ethylbenzene	**23**	1.0	"	1	"	"	"	"	
m,p-Xylene	**400**	200	"	100	"	"	"	"	
o-Xylene	**140**	100	"	"	"	"	"	"	
Naphthalene	**4.2**	1.0	"	1	"	"	"	"	

Date Sampled: **09/13/12 12:55**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 1,2-Dichloroethane-d4		*90.6 %*	*49.7-150*		"	"	"	"	
Surrogate: Toluene-d8		*100 %*	*51-150*		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		*96.2 %*	*50.1-150*		"	"	"	"	

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: Benson 24-15 Project Number: [none] Project Manager: Brandon Bruns	**Reported:** 09/19/12 14:30

BH05

R209087-03 (Water)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **09/13/12 12:50**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Benzene	**260**	1.0	ug/l	1	2091715	09/17/12	09/18/12	EPA 8260B	
Toluene	**7.1**	1.0	"	"	"	"	"	"	
Ethylbenzene	**10**	1.0	"	"	"	"	"	"	
m,p-Xylene	**650**	200	"	100	"	"	"	"	
o-Xylene	**410**	100	"	"	"	"	"	"	
Naphthalene	**25**	1.0	"	1	"	"	"	"	

Date Sampled: **09/13/12 12:50**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 1,2-Dichloroethane-d4		*91.9 %*	*49.7-150*		"	"	"	"	
Surrogate: Toluene-d8		*98.7 %*	*51-150*		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		*97.7 %*	*50.1-150*		"	"	"	"	

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: Benson 24-15 Project Number: [none] Project Manager: Brandon Bruns	**Reported:** 09/19/12 14:30

Volatile Organic Compounds by EPA Method 8260B - Quality Control

Summit Scientific

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 2091715 - EPA 5030 Water MS										
Blank (2091715-BLK1)				Prepared & Analyzed: 09/17/12						
Benzene	ND	1.0	ug/l							
Toluene	ND	1.0	"							
Ethylbenzene	ND	1.0	"							
m,p-Xylene	ND	2.0	"							
o-Xylene	ND	1.0	"							
Naphthalene	ND	1.0	"							
Surrogate: 1,2-Dichloroethane-d4	*11.6*		*"*	*13.2*		*88.0*	*49.7-150*			
Surrogate: Toluene-d8	*13.0*		*"*	*13.3*		*97.4*	*51-150*			
Surrogate: 4-Bromofluorobenzene	*13.4*		*"*	*13.3*		*100*	*50.1-150*			
LCS (2091715-BS1)				Prepared & Analyzed: 09/17/12						
Benzene	32.8	1.0	ug/l	33.3		98.4	51-132			
Toluene	35.6	1.0	"	33.3		107	51-138			
Ethylbenzene	35.9	1.0	"	33.3		108	58-146			
m,p-Xylene	70.0	2.0	"	66.7		105	57-144			
o-Xylene	35.5	1.0	"	33.3		106	53-146			
Naphthalene	ND	1.0	"				76-128			
Surrogate: 1,2-Dichloroethane-d4	*11.5*		*"*	*13.2*		*86.8*	*49.7-150*			
Surrogate: Toluene-d8	*13.0*		*"*	*13.3*		*97.4*	*51-150*			
Surrogate: 4-Bromofluorobenzene	*12.5*		*"*	*13.3*		*93.9*	*50.1-150*			
LCS Dup (2091715-BSD1)				Prepared & Analyzed: 09/17/12						
Benzene	35.3	1.0	ug/l	33.3		106	51-132	7.43	17	
Toluene	38.4	1.0	"	33.3		115	51-138	7.73	17	
Ethylbenzene	40.2	1.0	"	33.3		120	58-146	11.3	16	
m,p-Xylene	74.9	2.0	"	66.7		112	57-144	6.76	16	
o-Xylene	36.6	1.0	"	33.3		110	53-146	3.22	15	
Naphthalene	ND	1.0	"				76-128		10	
Surrogate: 1,2-Dichloroethane-d4	*12.0*		*"*	*13.2*		*90.6*	*49.7-150*			
Surrogate: Toluene-d8	*13.6*		*"*	*13.3*		*102*	*51-150*			
Surrogate: 4-Bromofluorobenzene	*12.8*		*"*	*13.3*		*96.1*	*50.1-150*			

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: Benson 24-15 Project Number: [none] Project Manager: Brandon Bruns	**Reported:** 09/19/12 14:30

Volatile Organic Compounds by EPA Method 8260B - Quality Control

Summit Scientific

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 2091715 - EPA 5030 Water MS										
Matrix Spike (2091715-MS1)		**Source: R209095-01**		Prepared & Analyzed: 09/17/12						
Benzene	35.4	1.0	ug/l	33.3	ND	106	34-141			
Toluene	36.6	1.0	"	33.3	ND	110	27-151			
Ethylbenzene	38.5	1.0	"	33.3	ND	116	29-160			
m,p-Xylene	74.7	2.0	"	66.7	ND	112	20-166			
o-Xylene	36.7	1.0	"	33.3	ND	110	33-159			
Naphthalene	ND	1.0	"		ND		73-132			
Surrogate: 1,2-Dichloroethane-d4	*11.6*		*"*	*13.2*		*87.8*	*49.7-150*			
Surrogate: Toluene-d8	*12.9*		*"*	*13.3*		*96.6*	*51-150*			
Surrogate: 4-Bromofluorobenzene	*11.7*		*"*	*13.3*		*87.6*	*50.1-150*			
Matrix Spike Dup (2091715-MSD1)		**Source: R209095-01**		Prepared & Analyzed: 09/17/12						
Benzene	34.5	1.0	ug/l	33.3	ND	103	34-141	2.60	32	
Toluene	39.2	1.0	"	33.3	ND	118	27-151	6.67	25	
Ethylbenzene	36.6	1.0	"	33.3	ND	110	29-160	5.03	50	
m,p-Xylene	72.4	2.0	"	66.7	ND	109	20-166	3.17	36	
o-Xylene	37.0	1.0	"	33.3	ND	111	33-159	0.949	26	
Naphthalene	ND	1.0	"		ND		73-132		23	
Surrogate: 1,2-Dichloroethane-d4	*11.6*		*"*	*13.2*		*87.9*	*49.7-150*			
Surrogate: Toluene-d8	*14.7*		*"*	*13.3*		*110*	*51-150*			
Surrogate: 4-Bromofluorobenzene	*12.1*		*"*	*13.3*		*91.1*	*50.1-150*			

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.

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