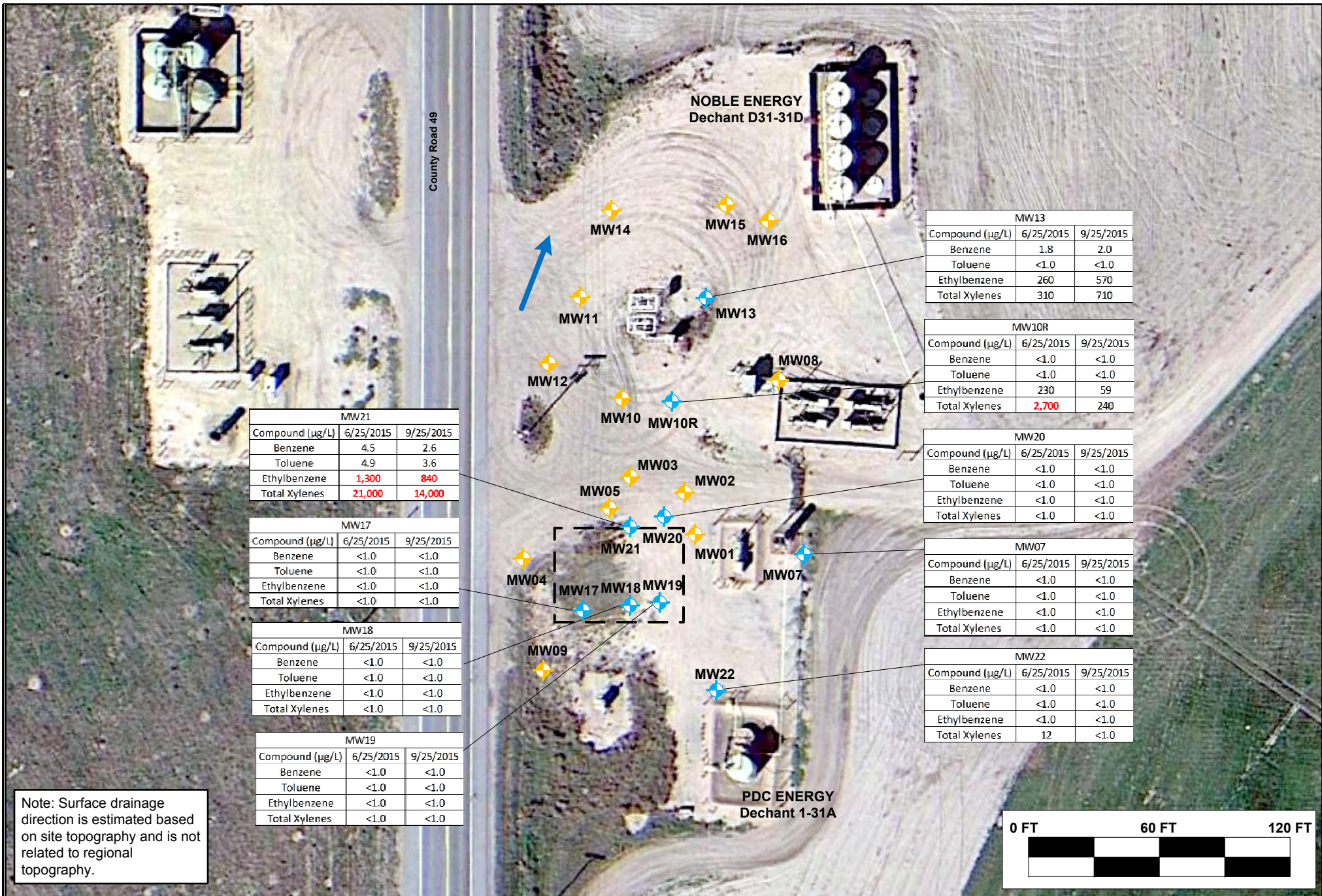
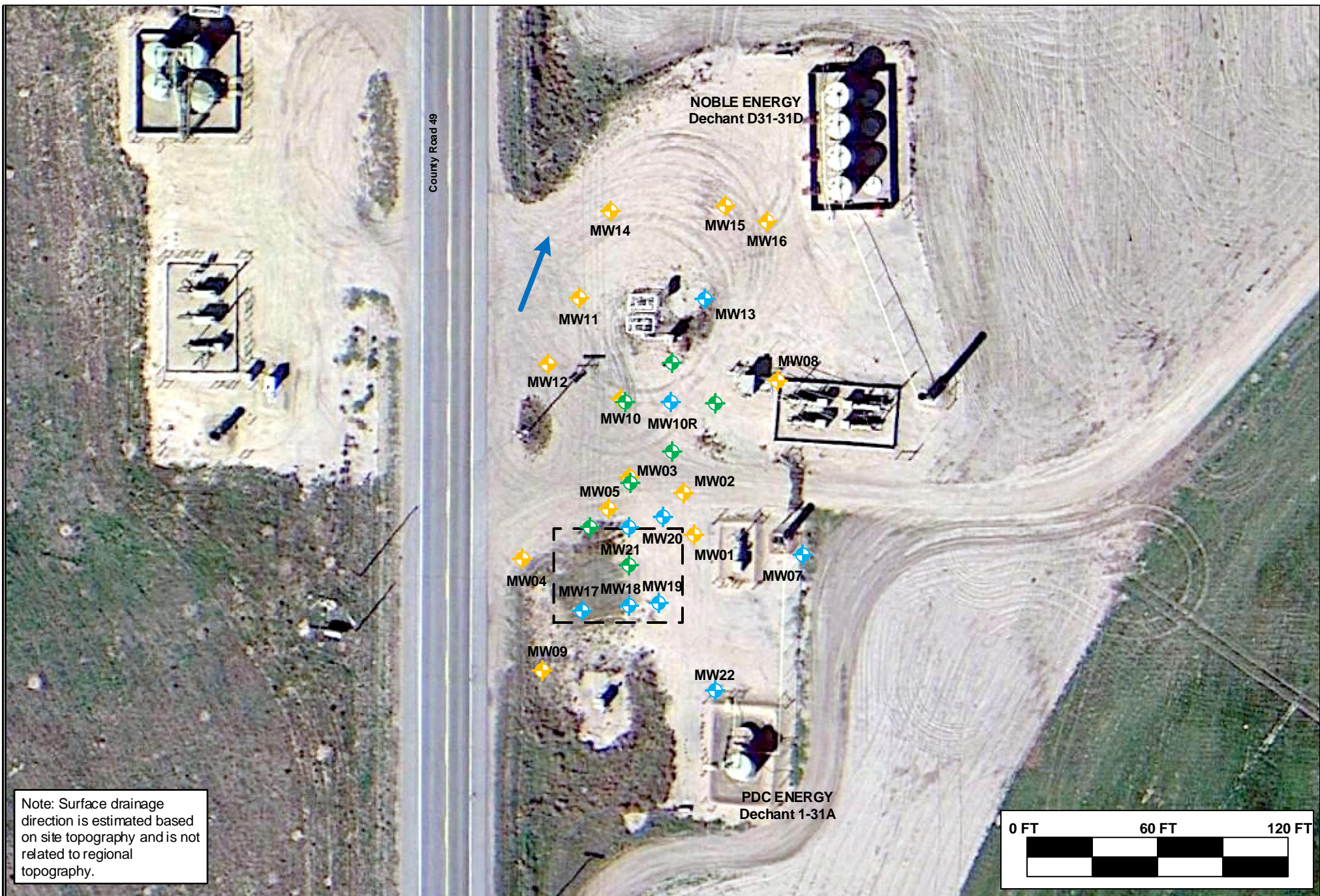


Figure 1

Site Location Map
Dechant 1-31A
SWSW S31 T3N R64W
Weld County, Colorado













DRAWN BY: CAW	Facility Diagram PDC Energy – DJ Basin Dechant 1-31A Tank Battery SWSW S31 T3N R64W Weld County, CO	 6899 Pecos St., Unit C Denver, CO 80221	LEGEND  Approximate Area of Excavation  Monitoring Well Location  Approximate Destroyed Monitoring Well Location  Proposed Monitoring Well Location  Groundwater Flow Direction	FIGURE 4 PROPOSED WELL LOCATION MAP
DATE: 11/2/2015				

TABLE 1
DECHANT 1-31A TANK BATTERY
GROUNDWATER ANALYTICAL RESULTS SUMMARY TABLE

Sample ID	Date Sampled	Benzene (µg/L)	Toluene (µg/L)	Ethylbenzene (µg/L)	Total Xylenes (µg/L)	Depth to Water (feet)
COGCC Table 910-1 Groundwater Standard (µg/L) ⁽¹⁾		5	560	700	1,400	
MW01	12/16/2009	<1.0	1.5	47	540	N/A
MW01	6/22/2010	Destroyed				
MW02	12/16/2009	62	1,300	610	5,600	N/A
MW02	6/22/2010	NS	NS	NS	NS	N/A
MW03	12/16/2009	440	6,000	960	12,000	N/A
MW03	6/22/2010	Destroyed				
MW04	12/16/2009	<1.0	13	240	3,000	N/A
MW04	6/22/2010	<1.0	<1.0	23	260	18.05
MW04	9/17/2010	<1.0	<1.0	10	81	17.41
MW04	12/9/2010	<1.0	<1.0	1.4	6.7	16.88
MW04	3/10/2011	Destroyed				
MW05	12/16/2009	140	1,400	960	12,000	N/A
MW05	6/22/2010	Destroyed				
MW07	12/16/2009	<1.0	<1.0	<1.0	<1.0	N/A
MW07	6/22/2010	<1.0	<1.0	<1.0	<1.0	21.45
MW07	9/17/2010	<1.0	<1.0	<1.0	<1.0	20.83
MW07	12/9/2010	<1.0	<1.0	<1.0	<1.0	20.32
MW07	3/10/2011	<1.0	<1.0	<1.0	<1.0	20.10
MW07	6/8/2011	<1.0	<1.0	<1.0	<1.0	20.00
MW07	9/26/2011	<1.0	<1.0	<1.0	<1.0	19.71
MW07	12/29/2011	NS	NS	NS	NS	N/A
MW07	3/7/2012	<1.0	<1.0	<1.0	<1.0	19.39
MW07	6/26/2012	<1.0	<1.0	<1.0	<1.0	18.55
MW07	9/20/2012	<1.0	<1.0	<1.0	<1.0	18.89
MW07	12/12/2012	<1.0	<1.0	<1.0	<1.0	18.56
MW07	6/21/2013	<1.0	<1.0	<1.0	<1.0	18.50
MW07	9/23/2013	<1.0	<1.0	<1.0	<1.0	18.71
MW07	12/18/2013	<1.0	<1.0	<1.0	<1.0	18.48
MW07	3/31/2014	<1.0	<1.0	<1.0	<1.0	18.28
MW07	6/17/2014	<1.0	<1.0	<1.0	<1.0	17.20
MW07	9/17/2014	<1.0	<1.0	<1.0	<1.0	16.62
MW07	12/2/2014	<1.0	<1.0	<1.0	<1.0	16.02
MW07	3/16/2015	<1.0	<1.0	<1.0	<1.0	15.23
MW07	6/25/2015	<1.0	<1.0	<1.0	<1.0	13.84

TABLE 1
DECHANT 1-31A TANK BATTERY
GROUNDWATER ANALYTICAL RESULTS SUMMARY TABLE

Sample ID	Date Sampled	Benzene (µg/L)	Toluene (µg/L)	Ethylbenzene (µg/L)	Total Xylenes (µg/L)	Depth to Water (feet)
COGCC Table 910-1 Groundwater Standard (µg/L) ⁽¹⁾		5	560	700	1,400	
MW07	9/25/2015	<1.0	<1.0	<1.0	<1.0	14.51
MW08	12/16/2009	<1.0	<1.0	<1.0	<1.0	N/A
MW08	6/22/2010	Destroyed				
MW09	12/16/2009	<1.0	<1.0	<1.0	<1.0	N/A
MW09	6/22/2010	<1.0	<1.0	<1.0	<1.0	17.62
MW09	9/17/2010	<1.0	<1.0	<1.0	<1.0	17.03
MW09	12/9/2010	<1.0	<1.0	<1.0	<1.0	16.51
MW09	3/10/2011	<1.0	<1.0	<1.0	<1.0	16.32
MW09	6/8/2011	<1.0	<1.0	<1.0	<1.0	15.15
MW09	9/26/2011	<1.0	<1.0	<1.0	<1.0	15.93
MW09	12/29/2011	<1.0	<1.0	<1.0	<1.0	15.65
MW09	3/7/2012	<1.0	<1.0	<1.0	<1.0	15.59
MW09	6/26/2012	<1.0	<1.0	<1.0	<1.0	14.73
MW09	9/20/2012	NS	NS	NS	NS	N/A
MW09	12/12/2012	<1.0	<1.0	<1.0	<1.0	14.83
MW09	6/21/2013	Destroyed				
MW10	12/16/2009	310	1,000	690	8,700	NM
MW10	6/22/2010	8.4	5.1	30	720	17.95
MW10	9/17/2010	55	<1.0	45	280	17.36
MW10	12/9/2010	34	<1.0	780	3,700	16.83
MW10	3/10/2011	12	<1.0	870	2,600	16.60
MW10	6/8/2011	<1.0	<1.0	28	140	16.70
MW10	9/26/2011	4.3	5.2	220	3,100	16.29
MW10	12/29/2011	NS	NS	NS	NS	NM
MW10	3/7/2012	27	12	700	5,300	15.89
MW10	6/26/2012	Destroyed				
MW10R	8/17/2012	5.8	2.3	460	10,000	NM
MW10R	9/20/2012	5.4	<1.0	440	7.5	17.90
MW10R	12/12/2012	5.8	<1.0	350	7,000	17.88
MW10R	6/21/2013	5.5	<1.0	330	7,200	17.25
MW10R	9/23/2013	4.4	<1.0	350	7,500	17.23
MW10R	12/18/2013	3.4	<1.0	73	6,600	15.69
MW10R	3/31/2014	8.8	<1.0	570	640	15.52

TABLE 1
DECHANT 1-31A TANK BATTERY
GROUNDWATER ANALYTICAL RESULTS SUMMARY TABLE

Sample ID	Date Sampled	Benzene (µg/L)	Toluene (µg/L)	Ethylbenzene (µg/L)	Total Xylenes (µg/L)	Depth to Water (feet)
COGCC Table 910-1 Groundwater Standard (µg/L) ⁽¹⁾		5	560	700	1,400	
MW10R	6/17/2014	4.2	<1.0	100	7,700	14.41
MW10R	9/17/2014	<1.0	<1.0	450	6,200	13.90
MW10R	12/2/2014	1.7	<1.0	1,000	13,000	13.23
MW10R	3/16/2015	<1.0	<1.0	550	7,900	12.46
MW10R	6/25/2015	<1.0	<1.0	230	2,700	11.09
MW10R	9/25/2015	<1.0	<1.0	59	240	11.86
MW11	1/18/2010	1.0	<1.0	4.9	<1.0	NM
MW11	6/22/2010	<1.0	<1.0	<1.0	<1.0	18.70
MW11	9/17/2010	<1.0	<1.0	<1.0	<1.0	18.16
MW11	12/9/2010	<1.0	<1.0	<1.0	<1.0	17.55
MW11	3/10/2011	Destroyed				
MW12	1/18/2010	<1.0	<1.0	<1.0	<1.0	NM
MW12	6/22/2010	<1.0	<1.0	<1.0	<1.0	18.85
MW12	9/17/2010	<1.0	<1.0	<1.0	<1.0	18.25
MW12	12/9/2010	<1.0	<1.0	<1.0	<1.0	17.69
MW12	3/10/2011	<1.0	<1.0	<1.0	<1.0	17.42
MW12	6/8/2011	<1.0	<1.0	<1.0	<1.0	17.33
MW12	9/26/2011	<1.0	<1.0	<1.0	<1.0	17.16
MW12	12/29/2011	NS	NS	NS	NS	NM
MW12	3/7/2012	<1.0	<1.0	<1.0	<1.0	16.74
MW12	6/26/2012	Destroyed				
MW13	1/18/2010	35	<1.0	230	73	NM
MW13	6/22/2010	5.1	<1.0	290	<1.0	18.56
MW13	9/17/2010	13	<1.0	160	<1.0	17.95
MW13	12/9/2010	4.4	<1.0	160	<1.0	17.42
MW13	3/10/2011	<1.0	<1.0	23	3.4	16.15
MW13	6/8/2011	<1.0	<1.0	110	<1.0	17.04
MW13	9/26/2011	2.1	<1.0	190	2.3	16.84
MW13	12/29/2011	<1.0	<1.0	190	<1.0	16.51
MW13	3/7/2012	<1.0	<1.0	150	<1.0	16.45
MW13	6/26/2012	<1.0	<1.0	150	13	15.64
MW13	9/20/2012	NS	NS	NS	NS	NM
MW13	12/12/2012	<1.0	<1.0	110	<1.0	15.70
MW13	6/21/2013	2.2	<1.0	110	160	15.61
MW13	9/23/2013	7.2	<1.0	290	1,100	15.75

TABLE 1
DECHANT 1-31A TANK BATTERY
GROUNDWATER ANALYTICAL RESULTS SUMMARY TABLE

Sample ID	Date Sampled	Benzene (µg/L)	Toluene (µg/L)	Ethylbenzene (µg/L)	Total Xylenes (µg/L)	Depth to Water (feet)
COGCC Table 910-1 Groundwater Standard (µg/L) ⁽¹⁾		5	560	700	1,400	
MW13	12/18/2013	1.6	<1.0	2.7	94	15.56
MW13	3/31/2014	<1.0	<1.0	<1.0	4.8	15.26
MW13	9/25/2015	2.00	<1.0	570	710	11.61
MW13	6/17/2014	3.5	<1.0	270	850	14.24
MW13	9/17/2014	<1.0	<1.0	190	120	13.43
MW13	12/2/2014	2.8	<1.0	610	280	13.09
MW13	3/16/2015	2.2	<1.0	530	210	12.31
MW13	6/25/2015	1.8	<1.0	260	310	10.91
MW13	9/25/2015	2.0	<1.0	570	710	10.91
MW14	1/18/2010	<1.0	<1.0	<1.0	<1.0	NM
MW14	6/22/2010	<1.0	<1.0	<1.0	<1.0	19.06
MW14	9/17/2010	3.9	<1.0	180	25	18.49
MW14	12/9/2010	<1.0	<1.0	3.8	<1.0	17.94
MW14	3/10/2011	1.2	<1.0	8.8	<1.0	17.64
MW14	6/8/2011	<1.0	<1.0	1.3	<1.0	17.69
MW14	9/26/2011	2.8	<1.0	150	3.0	17.37
MW14	12/29/2011	<1.0	<1.0	26	<1.0	17.03
MW14	3/7/2012	<1.0	<1.0	<1.0	<1.0	16.95
MW14	6/26/2012	Destroyed				
MW15	2/10/2010	240	<1.0	340	1,600	NM
MW15	6/22/2010	<1.0	<1.0	<1.0	<1.0	17.04
MW15	9/17/2010	Destroyed				
MW16	2/10/2010	44	<1.0	130	450	NM
MW16	6/22/2010	<1.0	<1.0	4.4	12	16.72
MW16	9/17/2010	Destroyed				
MW17	3/31/2014	<1.0	<1.0	<1.0	<1.0	13.68
MW17	6/17/2014	<1.0	<1.0	<1.0	<1.0	14.24
MW17	9/17/2014	<1.0	<1.0	<1.0	<1.0	12.04
MW17	12/2/2014	<1.0	<1.0	<1.0	6.6	11.42
MW17	3/16/2015	<1.0	<1.0	1.5	2.0	10.61
MW17	6/25/2015	<1.0	<1.0	<1.0	<1.0	9.55
MW17	9/25/2015	<1.0	<1.0	<1.0	<1.0	9.92
MW18	3/31/2014	<1.0	<1.0	<1.0	<1.0	14.00
MW18	6/17/2014	<1.0	<1.0	<1.0	<1.0	12.92
MW18	9/17/2014	<1.0	<1.0	<1.0	<1.0	12.40
MW18	12/2/2014	<1.0	<1.0	<1.0	<1.0	11.74
MW18	3/16/2015	<1.0	<1.0	<1.0	<1.0	10.95

TABLE 1
DECHANT 1-31A TANK BATTERY
GROUNDWATER ANALYTICAL RESULTS SUMMARY TABLE

Sample ID	Date Sampled	Benzene (µg/L)	Toluene (µg/L)	Ethylbenzene (µg/L)	Total Xylenes (µg/L)	Depth to Water (feet)
COGCC Table 910-1 Groundwater Standard (µg/L) ⁽¹⁾		5	560	700	1,400	
MW18	6/25/2015	<1.0	<1.0	<1.0	<1.0	9.23
MW18	9/25/2015	<1.0	<1.0	<1.0	<1.0	10.35
MW19	3/31/2014	<1.0	<1.0	<1.0	<1.0	14.37
MW19	6/17/2014	<1.0	<1.0	<1.0	<1.0	13.29
MW19	9/17/2014	<1.0	<1.0	<1.0	<1.0	12.75
MW19	12/2/2014	<1.0	<1.0	<1.0	<1.0	12.10
MW19	3/16/2015	<1.0	<1.0	<1.0	<1.0	11.31
MW19	6/25/2015	<1.0	<1.0	<1.0	<1.0	9.93
MW19	9/25/2015	<1.0	<1.0	<1.0	<1.0	10.63
MW20	3/31/2014	<1.0	<1.0	<1.0	46	14.85
MW20	6/17/2014	<1.0	<1.0	<1.0	2.5	13.73
MW20	9/17/2014	<1.0	<1.0	<1.0	<1.0	13.21
MW20	12/2/2014	<1.0	<1.0	<1.0	<1.0	12.55
MW20	3/16/2015	<1.0	<1.0	<1.0	<1.0	11.77
MW20	6/25/2015	<1.0	<1.0	<1.0	<1.0	10.39
MW20	9/25/2015	<1.0	<1.0	<1.0	<1.0	11.16
MW21	3/31/2014	<1.0	<1.0	250	1,000	14.56
MW21	6/17/2014	<1.0	<1.0	470	3,200	13.47
MW21	9/17/2014	<1.0	<1.0	380	3,400	12.97
MW21	12/2/2014	2.5	2.2	1,400	18,000	12.31
MW21	3/16/2015	3.3	3.7	1,700	26,000	11.52
MW21	6/25/2015	4.5	4.9	1,300	21,000	10.14
MW21	9/25/2015	2.6	3.6	840	14,000	10.92
MW22	3/31/2014	<1.0	<1.0	<1.0	<1.0	13.92
MW22	6/17/2014	<1.0	<1.0	<1.0	<1.0	12.82
MW22	9/17/2014	<1.0	<1.0	<1.0	<1.0	12.30
MW22	12/2/2014	<1.0	<1.0	<1.0	<1.0	11.62
MW22	3/16/2015	<1.0	<1.0	<1.0	12	10.83
MW22	6/25/2015	<1.0	<1.0	<1.0	12	9.46
MW22	9/25/2015	<1.0	<1.0	<1.0	<1.0	10.16

Notes:

1. Groundwater standards referenced from 2 CCR 404-1, Table 910-1, effective February 1, 2014.

COGCC = Colorado Oil and Gas Conservation Commission

µg/L = Micrograms per liter

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

NS = Not sampled

N/A = LT Environmental, Inc. field data not available

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

TABLE 2
DECHANT 1-31A TANK BATTERY
EFR / AS OPERATIONAL SUMMARY TABLE

Date	EFR Wells	Total EFR/AS Duration (hours)	Approximate Gallons Extracted	AS Wells	Air Injection Pressure (psi)
Third Quarter 2015					
7/8/2015	MW10R, MW18, MW20, MW21	6	15	MW10R, MW21	20
7/22/2015		6	0		20
8/5/2015		6	0		20
8/19/2015		6	0		20
9/2/2015		6	0		20
9/16/2015		6	60		20
Quarterly Totals		36	75		-

Notes:

EFR = Enhanced fluid recovery

AS = Air sparge

psi = Pounds per square inch

ATTACHMENT A

Summit Scientific

741 Corporate Circle – Suite I ♦ Golden, Colorado 80401

303.277.9310 - laboratory ♦ 303.277.9531 - fax

March 11, 2012

Brian Dodek
LT Environmental, Inc.
4600 West 60th Avenue
Arvada, CO 80003
RE: PDC - Dechant 1-31A

Enclosed are the results of analyses for samples received by Summit Scientific on 03/07/12 17:10. If you have any questions concerning this report, please feel free to contact me.

Sincerely,



Paul Shrewsbury For Ben Shrewsbury
President / Laboratory Director



LT Environmental, Inc.
4600 West 60th Avenue
Arvada CO, 80003

Project: PDC - Dechant 1-31A

Project Number: PDC 09028
Project Manager: Brian Dodek

Reported:
03/11/12 14:10

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
MW07	R203049-01	Water	03/07/12 13:30	03/07/12 17:10
MW09	R203049-02	Water	03/07/12 13:50	03/07/12 17:10
MW10	R203049-03	Water	03/07/12 13:10	03/07/12 17:10
MW12	R203049-04	Water	03/07/12 12:50	03/07/12 17:10
MW13	R203049-05	Water	03/07/12 12:40	03/07/12 17:10
MW14	R203049-06	Water	03/07/12 12:30	03/07/12 17:10

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.

LT Environmental, Inc.
4600 West 60th Avenue
Arvada CO, 80003

Project: PDC - Dechant 1-31A

Project Number: PDC 09028

Project Manager: Brian Dodek

Reported:

03/11/12 14:10

Summit Scientific

S₂
741 Corporate Circle Suite 1 ♦ Golden, Colorado 80401
303-277-9310 ♦ 303-277-9531 Fax

Client: LT Environmental, Inc.

Address: 4600 West 60th Avenue

City/State/Zip: Arvada, CO 80003

Phone: (303) 433-9788

Sampler Name: Dr. G. G. G.

Project Manager:

E-Mail:

Project Name: De

Project Number: 7

Project Manager: Brian Dodek

E-Mail:

Project Name: Dec/Jan 1-

Project Number: PDC 04029

Project Manager:
Brian Dodek

E-mail: bdodek@nyny.com

Project Name: Dec 2014 1-31A

Project Number: PDC 04029

Project Manager: Brian Dodek

E-Mail: bdodex@tenv.comProject Name: De/Ad 1-31A

Project Number: PDC 64028

Project Manager:
Brian Dodek

E-Mail: bdodek@nenv.comProject Name: De/In/4 1-31A

Project Number: PDC 64029

Project Manager: Brian Dodek

E-Mail: bdodex@tenv.com

Project Name: Deck and 1-31A

Project Number: PDC 04029

Project Manager: Brian Dodek

E-Mail: bdodek@nerv.comProject Name: Deck and 1-31A

Project Number: PDC 69029

[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.



LT Environmental, Inc.
4600 West 60th Avenue
Arvada CO, 80003

Project: PDC - Dechant 1-31A

Project Number: PDC 09028
Project Manager: Brian Dodek

Reported:
03/11/12 14:10

MW07
R203049-01 (Water)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **03/07/12 13:30**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Benzene	ND	1.0	ug/l	1	2030807	03/08/12	03/09/12	EPA 8260B	
Toluene	ND	1.0	"	"	"	"	"	"	
Ethylbenzene	ND	1.0	"	"	"	"	"	"	
Xylenes (total)	ND	1.0	"	"	"	"	"	"	

Date Sampled: **03/07/12 13:30**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 1,2-Dichloroethane-d4		109 %	57.9-139		"	"	"	"	
Surrogate: Toluene-d8		101 %	83.1-115		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		90.4 %	80.8-120		"	"	"	"	

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.



LT Environmental, Inc.
4600 West 60th Avenue
Arvada CO, 80003

Project: PDC - Dechant 1-31A
Project Number: PDC 09028
Project Manager: Brian Dodek

Reported:
03/11/12 14:10

MW09
R203049-02 (Water)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **03/07/12 13:50**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Benzene	ND	1.0		ug/l	1	2030807	03/08/12	03/09/12	EPA 8260B	
Toluene	ND	1.0		"	"	"	"	"	"	
Ethylbenzene	ND	1.0		"	"	"	"	"	"	
Xylenes (total)	ND	1.0		"	"	"	"	"	"	

Date Sampled: **03/07/12 13:50**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Surrogate: 1,2-Dichloroethane-d4		117 %		57.9-139		"	"	"	"	
Surrogate: Toluene-d8		99.5 %		83.1-115		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		99.9 %		80.8-120		"	"	"	"	

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.



LT Environmental, Inc.
4600 West 60th Avenue
Arvada CO, 80003

Project: PDC - Dechant 1-31A

Project Number: PDC 09028
Project Manager: Brian Dodek

Reported:
03/11/12 14:10

MW10
R203049-03 (Water)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **03/07/12 13:10**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Benzene	27	1.0	ug/l	1	2030807	03/08/12	03/09/12	EPA 8260B	
Toluene	12	1.0	"	"	"	"	"	"	
Ethylbenzene	700	100	"	100	"	"	03/09/12	"	
Xylenes (total)	5300	100	"	"	"	"	"	"	

Date Sampled: **03/07/12 13:10**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
<i>Surrogate: 1,2-Dichloroethane-d4</i>		114 %	57.9-139		"	"	03/09/12	"	
<i>Surrogate: Toluene-d8</i>		115 %	83.1-115		"	"	"	"	
<i>Surrogate: 4-Bromofluorobenzene</i>		98.6 %	80.8-120		"	"	"	"	

Summit Scientific

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LT Environmental, Inc.
4600 West 60th Avenue
Arvada CO, 80003

Project: PDC - Dechant 1-31A
Project Number: PDC 09028
Project Manager: Brian Dodek

Reported:
03/11/12 14:10

MW12
R203049-04 (Water)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

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

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Benzene	ND	1.0	ug/l	1	2030807	03/08/12	03/10/12	EPA 8260B	
Toluene	ND	1.0	"	"	"	"	"	"	
Ethylbenzene	ND	1.0	"	"	"	"	"	"	
Xylenes (total)	ND	1.0	"	"	"	"	"	"	

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

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Surrogate: 1,2-Dichloroethane-d4		109 %	57.9-139		"	"	"	"	
Surrogate: Toluene-d8		97.3 %	83.1-115		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		93.2 %	80.8-120		"	"	"	"	

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LT Environmental, Inc.
4600 West 60th Avenue
Arvada CO, 80003

Project: PDC - Dechant 1-31A

Project Number: PDC 09028
Project Manager: Brian Dodek

Reported:
03/11/12 14:10

MW13
R203049-05 (Water)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

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

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Benzene	ND	1.0		ug/l	1	2030807	03/08/12	03/10/12	EPA 8260B	
Toluene	ND	1.0		"	"	"	"	"	"	
Ethylbenzene	150	1.0		"	"	"	"	"	"	
Xylenes (total)	ND	1.0		"	"	"	"	"	"	

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

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Surrogate: 1,2-Dichloroethane-d4		116 %		57.9-139		"	"	"	"	
Surrogate: Toluene-d8		104 %		83.1-115		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		91.1 %		80.8-120		"	"	"	"	

Summit Scientific

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LT Environmental, Inc.
4600 West 60th Avenue
Arvada CO, 80003

Project: PDC - Dechant 1-31A
Project Number: PDC 09028
Project Manager: Brian Dodek

Reported:
03/11/12 14:10

MW14
R203049-06 (Water)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **03/07/12 12:30**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Benzene	ND	1.0		ug/l	1	2030807	03/08/12	03/10/12	EPA 8260B	
Toluene	ND	1.0		"	"	"	"	"	"	
Ethylbenzene	ND	1.0		"	"	"	"	"	"	
Xylenes (total)	ND	1.0		"	"	"	"	"	"	

Date Sampled: **03/07/12 12:30**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Surrogate: 1,2-Dichloroethane-d4		119 %		57.9-139		"	"	"	"	
Surrogate: Toluene-d8		97.9 %		83.1-115		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		92.0 %		80.8-120		"	"	"	"	

Summit Scientific

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LT Environmental, Inc.
4600 West 60th Avenue
Arvada CO, 80003

Project: PDC - Dechant 1-31A
Project Number: PDC 09028
Project Manager: Brian Dodek

Reported:
03/11/12 14:10

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 2030807 - EPA 5030 Water MS

Blank (2030807-BLK1)

Prepared & Analyzed: 03/08/12

Benzene	ND	1.0	ug/l							
Toluene	ND	1.0	"							
Ethylbenzene	ND	1.0	"							
Xylenes (total)	ND	1.0	"							
Surrogate: 1,2-Dichloroethane-d4	14.5		"	13.2	110	57.9-139				
Surrogate: Toluene-d8	12.5		"	13.3	94.0	83.1-115				
Surrogate: 4-Bromofluorobenzene	11.2		"	13.3	84.0	80.8-120				

LCS (2030807-BS1)

Prepared & Analyzed: 03/08/12

Benzene	25.8	1.0	ug/l	33.3	77.4	60.1-131		10.9		
Toluene	26.3	1.0	"	33.3	79.0	65.9-127		11.3		
Ethylbenzene	24.7	1.0	"	33.3	74.2	65.1-129		20		
m,p-Xylene	52.4	2.0	"	66.7	78.6	66.8-127		20		
o-Xylene	27.0	1.0	"	33.3	80.9	61.2-120		20		
Surrogate: 1,2-Dichloroethane-d4	14.1		"	13.2	107	57.9-139				
Surrogate: Toluene-d8	12.9		"	13.3	97.1	83.1-115				
Surrogate: 4-Bromofluorobenzene	12.7		"	13.3	95.4	80.8-120				

LCS Dup (2030807-BSD1)

Prepared & Analyzed: 03/08/12

Benzene	25.5	1.0	ug/l	33.3	76.6	60.1-131	1.01	10.9		
Toluene	26.3	1.0	"	33.3	78.9	65.9-127	0.190	11.3		
Ethylbenzene	24.8	1.0	"	33.3	74.4	65.1-129	0.283	20		
m,p-Xylene	52.6	2.0	"	66.7	79.0	66.8-127	0.438	20		
o-Xylene	27.1	1.0	"	33.3	81.4	61.2-120	0.555	20		
Surrogate: 1,2-Dichloroethane-d4	13.8		"	13.2	105	57.9-139				
Surrogate: Toluene-d8	13.6		"	13.3	102	83.1-115				
Surrogate: 4-Bromofluorobenzene	12.9		"	13.3	97.1	80.8-120				

Summit Scientific

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LT Environmental, Inc.
4600 West 60th Avenue
Arvada CO, 80003

Project: PDC - Dechant 1-31A
Project Number: PDC 09028
Project Manager: Brian Dodek

Reported:
03/11/12 14:10

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 2030807 - EPA 5030 Water MS

Matrix Spike (2030807-MS1)				Source: R203037-05		Prepared & Analyzed: 03/08/12				
Benzene	26.4	1.0	ug/l	33.3	ND	79.1	52.7-130		19.3	
Toluene	27.1	1.0	"	33.3	ND	81.2	57-127		18.7	
Ethylbenzene	24.1	1.0	"	33.3	ND	72.3	59.2-127		20	
m,p-Xylene	50.6	2.0	"	66.7	ND	75.9	53.2-132		20	
o-Xylene	26.1	1.0	"	33.3	ND	78.2	56.3-117		20	
Surrogate: 1,2-Dichloroethane-d4	16.0		"	13.2		121	57.9-139			
Surrogate: Toluene-d8	13.8		"	13.3		103	83.1-115			
Surrogate: 4-Bromofluorobenzene	11.3		"	13.3		85.0	80.8-120			
Matrix Spike Dup (2030807-MSD1)				Source: R203037-05		Prepared: 03/08/12 Analyzed: 03/09/12				
Benzene	26.4	1.0	ug/l	33.3	ND	79.2	52.7-130	0.152	19.3	
Toluene	27.1	1.0	"	33.3	ND	81.4	57-127	0.221	18.7	
Ethylbenzene	25.6	1.0	"	33.3	ND	76.8	59.2-127	5.99	20	
m,p-Xylene	53.1	2.0	"	66.7	ND	79.6	53.2-132	4.78	20	
o-Xylene	27.4	1.0	"	33.3	ND	82.1	56.3-117	4.90	20	
Surrogate: 1,2-Dichloroethane-d4	16.1		"	13.2		121	57.9-139			
Surrogate: Toluene-d8	13.6		"	13.3		102	83.1-115			
Surrogate: 4-Bromofluorobenzene	13.1		"	13.3		98.0	80.8-120			

Summit Scientific

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LT Environmental, Inc.
4600 West 60th Avenue
Arvada CO, 80003

Project: PDC - Dechant 1-31A

Project Number: PDC 09028
Project Manager: Brian Dodek

Reported:
03/11/12 14:10

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

June 28, 2013

Brandon Bruns
PDC Energy
1775 Sherman St. STE. 3000
Denver, CO 80203
RE: Dechant 1-31A

Enclosed are the results of analyses for samples received by Summit Scientific on 06/21/13 17:00. If you have any questions concerning this report, please feel free to contact me.

Sincerely,



Joseph J Egry IV
Laboratory Director

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

Project: Dechant 1-31A
Project Number: [none]
Project Manager: Brandon Bruns

Reported:
06/28/13 16:05

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
MW07	R306176-01	Water	06/21/13 12:45	06/21/13 17:00
MW10R	R306176-02	Water	06/21/13 12:50	06/21/13 17:00
MW13	R306176-03	Water	06/21/13 12:55	06/21/13 17:00

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

Project: Dechant 1-31A
Project Number: [none]
Project Manager: Brandon Bruns

Reported:
06/28/13 16:05

MW07
R306176-01 (Water)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **06/21/13 12:45**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Benzene	ND	1.0	ug/l	1	3062610	06/27/13	06/27/13	EPA 8260B	
Toluene	ND	1.0	"	"	"	"	"	"	
Ethylbenzene	ND	1.0	"	"	"	"	"	"	
Xylenes (total)	ND	1.0	"	"	"	"	"	"	

Date Sampled: **06/21/13 12:45**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Surrogate: 1,2-Dichloroethane-d4		102 %	37-154		"	"	"	"	
Surrogate: Toluene-d8		98.0 %	45-149		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		99.1 %	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: Dechant 1-31A
Project Number: [none]
Project Manager: Brandon Bruns

Reported:
06/28/13 16:05

MW10R
R306176-02 (Water)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **06/21/13 12:50**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Benzene	5.5	1.0	ug/l	1	3062610	06/27/13	06/27/13	EPA 8260B	
Toluene	ND	1.0	"	"	"	"	"	"	
Ethylbenzene	330	100	"	100	"	"	"	"	
Xylenes (total)	7200	100	"	"	"	"	"	"	

Date Sampled: **06/21/13 12:50**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 1,2-Dichloroethane-d4		101 %	37-154		"	"	"	"	
Surrogate: Toluene-d8		97.1 %	45-149		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		89.0 %	45-146		"	"	"	"	

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

Project: Dechant 1-31A
Project Number: [none]
Project Manager: Brandon Brunns

Reported:
06/28/13 16:05

MW13
R306176-03 (Water)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **06/21/13 12:55**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Benzene	2.2	1.0	ug/l	1	3062610	06/27/13	06/27/13	EPA 8260B	
Toluene	ND	1.0	"	"	"	"	"	"	
Ethylbenzene	110	1.0	"	"	"	"	"	"	
Xylenes (total)	160	1.0	"	"	"	"	"	"	

Date Sampled: **06/21/13 12:55**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 1,2-Dichloroethane-d4		99.7 %	37-154		"	"	"	"	
Surrogate: Toluene-d8		111 %	45-149		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		85.8 %	45-146		"	"	"	"	

Summit Scientific

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

Project: Dechant 1-31A
Project Number: [none]
Project Manager: Brandon Bruns

Reported:
06/28/13 16:05

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 3062610 - EPA 5030 Water MS

Blank (3062610-BLK1)

Prepared & Analyzed: 06/26/13

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		"	13.2		98.0	37-154			
Surrogate: Toluene-d8	12.9		"	13.3		96.7	45-149			
Surrogate: 4-Bromofluorobenzene	13.1		"	13.3		98.0	45-146			

Blank (3062610-BLK2)

Prepared & Analyzed: 06/26/13

Benzene	ND	1.0	ug/l							
Toluene	ND	1.0	"							
Ethylbenzene	ND	1.0	"							
Xylenes (total)	ND	1.0	"							
Surrogate: 1,2-Dichloroethane-d4	13.3		"	13.2		101	37-154			
Surrogate: Toluene-d8	13.3		"	13.3		99.6	45-149			
Surrogate: 4-Bromofluorobenzene	13.1		"	13.3		98.1	45-146			

LCS (3062610-BS1)

Prepared & Analyzed: 06/26/13

Benzene	27.2	1.0	ug/l	33.3		81.5	51-132			
Toluene	27.5	1.0	"	33.3		82.6	51-138			
Ethylbenzene	29.1	1.0	"	33.3		87.3	58-146			
m,p-Xylene	59.0	2.0	"	66.7		88.6	57-144			
o-Xylene	29.0	1.0	"	33.3		87.0	53-146			
Surrogate: 1,2-Dichloroethane-d4	13.3		"	13.2		100	37-154			
Surrogate: Toluene-d8	12.9		"	13.3		96.8	45-149			
Surrogate: 4-Bromofluorobenzene	13.0		"	13.3		97.3	45-146			

LCS Dup (3062610-BSD1)

Prepared & Analyzed: 06/26/13

Benzene	25.6	1.0	ug/l	33.3		77.0	51-132	5.68	17	
Toluene	26.5	1.0	"	33.3		79.4	51-138	3.93	17	
Ethylbenzene	26.5	1.0	"	33.3		79.6	58-146	9.21	16	
m,p-Xylene	54.3	2.0	"	66.7		81.4	57-144	8.36	16	
o-Xylene	26.3	1.0	"	33.3		78.9	53-146	9.73	15	
Surrogate: 1,2-Dichloroethane-d4	13.2		"	13.2		100	37-154			
Surrogate: Toluene-d8	13.2		"	13.3		99.2	45-149			
Surrogate: 4-Bromofluorobenzene	12.7		"	13.3		95.0	45-146			

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

Project: Dechant 1-31A
Project Number: [none]
Project Manager: Brandon Bruns

Reported:
06/28/13 16:05

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 3062610 - EPA 5030 Water MS

Matrix Spike (3062610-MS1)		Source: R306177-01			Prepared & Analyzed: 06/26/13					
Benzene	28.3	1.0	ug/l	33.3	ND	84.8	34-141			
Toluene	28.9	1.0	"	33.3	ND	86.6	27-151			
Ethylbenzene	36.4	1.0	"	33.3	8.03	85.2	29-160			
m,p-Xylene	95.5	2.0	"	66.7	44.4	76.7	20-166			
o-Xylene	32.9	1.0	"	33.3	4.44	85.4	33-159			
Surrogate: 1,2-Dichloroethane-d4	13.3		"	13.2		100	37-154			
Surrogate: Toluene-d8	13.0		"	13.3		97.7	45-149			
Surrogate: 4-Bromofluorobenzene	13.3		"	13.3		100	45-146			

Matrix Spike (3062610-MS2)		Source: R306177-02			Prepared & Analyzed: 06/27/13					
Benzene	532	1.0	ug/l	33.3	82.4	NR	34-141			QM-4X
Toluene	29.5	1.0	"	33.3	ND	88.5	27-151			
Ethylbenzene	508	1.0	"	33.3	65.8	NR	29-160			
m,p-Xylene	536	2.0	"	66.7	405	196	20-166			QM-4X
o-Xylene	33.1	1.0	"	33.3	5.87	81.6	33-159			
Surrogate: 1,2-Dichloroethane-d4	13.8		"	13.2		104	37-154			
Surrogate: Toluene-d8	13.4		"	13.3		100	45-149			
Surrogate: 4-Bromofluorobenzene	12.8		"	13.3		95.8	45-146			

Matrix Spike Dup (3062610-MSD1)		Source: R306177-01			Prepared & Analyzed: 06/26/13					
Benzene	28.2	1.0	ug/l	33.3	ND	84.5	34-141	0.461	32	
Toluene	29.0	1.0	"	33.3	ND	87.1	27-151	0.518	25	
Ethylbenzene	30.3	1.0	"	33.3	8.03	66.8	29-160	18.4	50	
m,p-Xylene	78.0	2.0	"	66.7	44.4	50.4	20-166	20.2	36	
o-Xylene	32.1	1.0	"	33.3	4.44	82.9	33-159	2.56	26	
Surrogate: 1,2-Dichloroethane-d4	13.6		"	13.2		103	37-154			
Surrogate: Toluene-d8	13.1		"	13.3		98.4	45-149			
Surrogate: 4-Bromofluorobenzene	13.0		"	13.3		97.4	45-146			

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

Project: Dechant 1-31A
Project Number: [none]
Project Manager: Brandon Brunns

Reported:
06/28/13 16:05

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 3062610 - EPA 5030 Water MS

Matrix Spike Dup (3062610-MSD2)	Source: R306177-02			Prepared & Analyzed: 06/27/13						
Benzene	752	1.0	ug/l	33.3	82.4	NR	34-141	34.3	32	QM-4X
Toluene	29.0	1.0	"	33.3	ND	87.1	27-151	1.54	25	
Ethylbenzene	439	1.0	"	33.3	65.8	NR	29-160	14.7	50	QM-4X
m,p-Xylene	356	2.0	"	66.7	405	NR	20-166	40.3	36	QM-4X
o-Xylene	34.1	1.0	"	33.3	5.87	84.6	33-159	3.04	26	
Surrogate: 1,2-Dichloroethane-d4	13.2		"	13.2		100	37-154			
Surrogate: Toluene-d8	13.4		"	13.3		100	45-149			
Surrogate: 4-Bromofluorobenzene	12.8		"	13.3		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: Dechant 1-31A
Project Number: [none]
Project Manager: Brandon Bruns

Reported:
06/28/13 16:05

Notes and Definitions

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

September 26, 2013

Brandon Bruns
PDC Energy
1775 Sherman St. STE. 3000
Denver, CO 80203
RE: Dechant 1-31A

Enclosed are the results of analyses for samples received by Summit Scientific on 09/23/13 18:00. If you have any questions concerning this report, please feel free to contact me.

Sincerely,



Joseph J Egry IV
Laboratory Director

This report shall not be reproduced, except in its entirety, without the written approval of Summit Scientific. Test results relate only to samples analyzed.

Summit Scientific is the sole authority for authorizing edits or modifications to this document. Unauthorized modification of this report is strictly prohibited.



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

Project: Dechant 1-31A
Project Number: [none]
Project Manager: Brandon Bruns

Reported:
09/26/13 16:31

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
10R	R309172-01	Water	09/23/13 12:00	09/23/13 18:00
MW7	R309172-02	Water	09/23/13 12:00	09/23/13 18:00
MW13	R309172-03	Water	09/23/13 12:00	09/23/13 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.

R309172

Summit Scientific

52

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

Client: DC Tisman

Address: _____
Project Manager: Batandeh Zouni

City/State/Zip: _____ E-Mail: _____

Phone: _____ Fax: _____
Project Name: Deaumont -314

Sampler Name: Eric Siegel

Page / of

[illegible]

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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.

Regel IV



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

Project: Dechant 1-31A
Project Number: [none]
Project Manager: Brandon Bruns

Reported:
09/26/13 16:31

10R
R309172-01 (Water)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **09/23/13 12:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Benzene	4.4	1.0	ug/l	1	3092412	09/24/13	09/26/13	EPA 8260B	
Toluene	ND	1.0	"	"	"	"	"	"	
Ethylbenzene	350	100	"	100	"	"	09/26/13	"	
Xylenes (total)	7500	100	"	"	"	"	"	"	

Date Sampled: **09/23/13 12:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 1,2-Dichloroethane-d4		91.4 %	37-154		"	"	09/26/13	"	
Surrogate: Toluene-d8		108 %	45-149		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		90.4 %	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: Dechant 1-31A
Project Number: [none]
Project Manager: Brandon Bruns

Reported:
09/26/13 16:31

MW7
R309172-02 (Water)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **09/23/13 12:00**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Benzene	ND	1.0		ug/l	1	3092412	09/24/13	09/26/13	EPA 8260B	
Toluene	ND	1.0		"	"	"	"	"	"	
Ethylbenzene	ND	1.0		"	"	"	"	"	"	
Xylenes (total)	ND	1.0		"	"	"	"	"	"	

Date Sampled: **09/23/13 12:00**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Surrogate: 1,2-Dichloroethane-d4		95.4 %		37-154		"	"	"	"	
Surrogate: Toluene-d8		101 %		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: Dechant 1-31A
Project Number: [none]
Project Manager: Brandon Brunns

Reported:
09/26/13 16:31

MW13
R309172-03 (Water)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **09/23/13 12:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Benzene	7.2	1.0	ug/l	1	3092412	09/24/13	09/26/13	EPA 8260B	
Toluene	ND	1.0	"	"	"	"	"	"	
Ethylbenzene	290	1.0	"	"	"	"	"	"	
Xylenes (total)	1100	10	"	10	"	"	"	"	

Date Sampled: **09/23/13 12:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 1,2-Dichloroethane-d4		91.1 %	37-154		"	"	"	"	
Surrogate: Toluene-d8		102 %	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: Dechant 1-31A
Project Number: [none]
Project Manager: Brandon Bruns

Reported:
09/26/13 16:31

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 3092412 - EPA 5030 Water MS

Blank (3092412-BLK1)

Prepared: 09/24/13 Analyzed: 09/25/13

Benzene	ND	1.0	ug/l							
Toluene	ND	1.0	"							
Ethylbenzene	ND	1.0	"							
Xylenes (total)	ND	1.0	"							
Surrogate: 1,2-Dichloroethane-d4	14.2		"	13.2		107	37-154			
Surrogate: Toluene-d8	13.8		"	13.3		103	45-149			
Surrogate: 4-Bromofluorobenzene	14.6		"	13.3		110	45-146			

Blank (3092412-BLK2)

Prepared: 09/24/13 Analyzed: 09/25/13

Benzene	ND	1.0	ug/l							
Toluene	ND	1.0	"							
Ethylbenzene	ND	1.0	"							
Xylenes (total)	ND	1.0	"							
Surrogate: 1,2-Dichloroethane-d4	13.8		"	13.2		104	37-154			
Surrogate: Toluene-d8	13.5		"	13.3		101	45-149			
Surrogate: 4-Bromofluorobenzene	14.7		"	13.3		110	45-146			

LCS (3092412-BS1)

Prepared: 09/24/13 Analyzed: 09/25/13

Benzene	32.5	1.0	ug/l	33.3		97.6	51-132			
Toluene	39.1	1.0	"	33.3		117	51-138			
Ethylbenzene	41.5	1.0	"	33.3		124	58-146			
m,p-Xylene	76.4	2.0	"	66.7		115	57-144			
o-Xylene	40.2	1.0	"	33.3		121	53-146			
Surrogate: 1,2-Dichloroethane-d4	13.7		"	13.2		104	37-154			
Surrogate: Toluene-d8	13.6		"	13.3		102	45-149			
Surrogate: 4-Bromofluorobenzene	14.4		"	13.3		108	45-146			

LCS (3092412-BS2)

Prepared: 09/24/13 Analyzed: 09/25/13

Benzene	32.5	1.0	ug/l	33.3		97.4	51-132			
Toluene	39.0	1.0	"	33.3		117	51-138			
Ethylbenzene	41.3	1.0	"	33.3		124	58-146			
m,p-Xylene	76.0	2.0	"	66.7		114	57-144			
o-Xylene	40.5	1.0	"	33.3		122	53-146			
Surrogate: 1,2-Dichloroethane-d4	13.8		"	13.2		104	37-154			
Surrogate: Toluene-d8	13.6		"	13.3		102	45-149			
Surrogate: 4-Bromofluorobenzene	14.4		"	13.3		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: Dechant 1-31A
Project Number: [none]
Project Manager: Brandon Brunns

Reported:
09/26/13 16:31

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

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

Batch 3092412 - EPA 5030 Water MS

LCS Dup (3092412-BSD1)

Prepared: 09/24/13 Analyzed: 09/25/13

Benzene	32.9	1.0	ug/l	33.3	98.7	51-132	1.07	17	
Toluene	39.1	1.0	"	33.3	117	51-138	0.0512	17	
Ethylbenzene	41.6	1.0	"	33.3	125	58-146	0.289	16	
m,p-Xylene	76.5	2.0	"	66.7	115	57-144	0.183	16	
o-Xylene	40.5	1.0	"	33.3	122	53-146	0.768	15	
Surrogate: 1,2-Dichloroethane-d4	13.9		"	13.2	105	37-154			
Surrogate: Toluene-d8	13.6		"	13.3	102	45-149			
Surrogate: 4-Bromofluorobenzene	14.1		"	13.3	106	45-146			

LCS Dup (3092412-BSD2)

Prepared: 09/24/13 Analyzed: 09/25/13

Benzene	32.6	1.0	ug/l	33.3	97.7	51-132	0.307	17	
Toluene	39.7	1.0	"	33.3	119	51-138	1.81	17	
Ethylbenzene	41.5	1.0	"	33.3	125	58-146	0.652	16	
m,p-Xylene	76.9	2.0	"	66.7	115	57-144	1.11	16	
o-Xylene	40.6	1.0	"	33.3	122	53-146	0.197	15	
Surrogate: 1,2-Dichloroethane-d4	13.7		"	13.2	103	37-154			
Surrogate: Toluene-d8	13.8		"	13.3	103	45-149			
Surrogate: 4-Bromofluorobenzene	14.3		"	13.3	107	45-146			

Matrix Spike (3092412-MS1)

Source: R309169-03

Prepared: 09/24/13 Analyzed: 09/25/13

Benzene	32.6	1.0	ug/l	33.3	ND	98.0	34-141		
Toluene	39.2	1.0	"	33.3	ND	117	27-151		
Ethylbenzene	41.7	1.0	"	33.3	ND	125	29-160		
m,p-Xylene	76.8	2.0	"	66.7	ND	115	20-166		
o-Xylene	41.0	1.0	"	33.3	ND	123	33-159		
Surrogate: 1,2-Dichloroethane-d4	13.2		"	13.2	99.4	37-154			
Surrogate: Toluene-d8	13.5		"	13.3	101	45-149			
Surrogate: 4-Bromofluorobenzene	14.3		"	13.3	107	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: Dechant 1-31A
Project Number: [none]
Project Manager: Brandon Brunns

Reported:
09/26/13 16:31

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 3092412 - EPA 5030 Water MS

Matrix Spike (3092412-MS2)				Source: R309169-04		Prepared: 09/24/13		Analyzed: 09/25/13		
Benzene	32.2	1.0	ug/l	33.3	ND	96.7	34-141			
Toluene	38.7	1.0	"	33.3	ND	116	27-151			
Ethylbenzene	42.3	1.0	"	33.3	ND	127	29-160			
m,p-Xylene	77.9	2.0	"	66.7	ND	117	20-166			
o-Xylene	41.4	1.0	"	33.3	ND	124	33-159			
Surrogate: 1,2-Dichloroethane-d4	13.2		"	13.2		99.7	37-154			
Surrogate: Toluene-d8	13.4		"	13.3		100	45-149			
Surrogate: 4-Bromofluorobenzene	14.3		"	13.3		107	45-146			

Matrix Spike Dup (3092412-MSD1)				Source: R309169-03		Prepared: 09/24/13		Analyzed: 09/25/13		
Benzene	32.6	1.0	ug/l	33.3	ND	97.8	34-141	0.123	32	
Toluene	39.1	1.0	"	33.3	ND	117	27-151	0.230	25	
Ethylbenzene	42.4	1.0	"	33.3	ND	127	29-160	1.64	50	
m,p-Xylene	77.9	2.0	"	66.7	ND	117	20-166	1.40	36	
o-Xylene	41.1	1.0	"	33.3	ND	123	33-159	0.317	26	
Surrogate: 1,2-Dichloroethane-d4	12.8		"	13.2		96.6	37-154			
Surrogate: Toluene-d8	13.4		"	13.3		101	45-149			
Surrogate: 4-Bromofluorobenzene	14.2		"	13.3		106	45-146			

Matrix Spike Dup (3092412-MSD2)				Source: R309169-04		Prepared: 09/24/13		Analyzed: 09/25/13		
Benzene	33.4	1.0	ug/l	33.3	ND	100	34-141	3.65	32	
Toluene	40.2	1.0	"	33.3	ND	121	27-151	3.98	25	
Ethylbenzene	42.9	1.0	"	33.3	ND	129	29-160	1.46	50	
m,p-Xylene	78.6	2.0	"	66.7	ND	118	20-166	0.869	36	
o-Xylene	41.5	1.0	"	33.3	ND	124	33-159	0.193	26	
Surrogate: 1,2-Dichloroethane-d4	12.9		"	13.2		97.7	37-154			
Surrogate: Toluene-d8	13.7		"	13.3		103	45-149			
Surrogate: 4-Bromofluorobenzene	14.2		"	13.3		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: Dechant 1-31A
Project Number: [none]
Project Manager: Brandon Bruns

Reported:
09/26/13 16:31

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 read 'Daniel A. Bruns IV'.

Summit Scientific

741 Corporate Circle – Suite I ♦ Golden, Colorado 80401

303.277.9310 - laboratory ♦ 303.277.9531 - fax

December 23, 2013

Brandon Bruns
PDC Energy
1775 Sherman St. STE. 3000
Denver, CO 80203
RE: Dechant 1-31A

Enclosed are the results of analyses for samples received by Summit Scientific on 12/18/13 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 be 'BS' or 'Shrewsbury', with a long, sweeping horizontal line extending to the right.

Ben Shrewsbury
President / Laboratory Manager



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

Project: Dechant 1-31A
Project Number: [none]
Project Manager: Brandon Bruns

Reported:
12/23/13 18:21

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
MW07	R312118-01	Water	12/18/13 11:30	12/18/13 16:30
MW10R	R312118-02	Water	12/18/13 11:30	12/18/13 16:30
MW13	R312118-03	Water	12/18/13 11:30	12/18/13 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.

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

Project: Dechant 1-31A

Project Number: [none]
Project Manager: Brandon Bruns

Reported:
12/23/13 18:21

Summit Scientific

741 Corporate Circle Suite 1 • Golden, Colorado 80401
303-277-9310 • 303-374-5933 Fax

Client: Dr. Tasman Project Manager: Brandon Davis

Address: _____ E-Mail: _____

City/State/Zip: _____ Project Name: Rechant 1-31A

Phone: _____ Project Number: _____

Fax: _____

Sample Name: J. Barker

Page 1 of 1

Page 1 of 1

[illegible]

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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: Dechant 1-31A
Project Number: [none]
Project Manager: Brandon Bruns

Reported:
12/23/13 18:21

MW07
R312118-01 (Water)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: 12/18/13 11:30

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Benzene	ND	1.0		ug/l	1	3122007	12/20/13	12/21/13	EPA 8260B	
Toluene	ND	1.0		"	"	"	"	"	"	
Ethylbenzene	ND	1.0		"	"	"	"	"	"	
Xylenes (total)	ND	1.0		"	"	"	"	"	"	

Date Sampled: 12/18/13 11:30

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Surrogate: 1,2-Dichloroethane-d4		115 %		37-154		"	"	"	"	
Surrogate: Toluene-d8		97.1 %		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: Dechant 1-31A
Project Number: [none]
Project Manager: Brandon Bruns

Reported:
12/23/13 18:21

MW10R
R312118-02 (Water)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: 12/18/13 11:30

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Benzene	3.4	1.0		ug/l	1	3122007	12/20/13	12/21/13	EPA 8260B	
Toluene	ND	1.0		"	"	"	"	"	"	
Ethylbenzene	73	1.0		"	"	"	"	"	"	
Xylenes (total)	6600	100		"	100	"	"	"	"	

Date Sampled: 12/18/13 11:30

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Surrogate: 1,2-Dichloroethane-d4		109 %		37-154		"	"	"	"	
Surrogate: Toluene-d8		96.5 %		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: Dechant 1-31A
Project Number: [none]
Project Manager: Brandon Brunns

Reported:
12/23/13 18:21

MW13
R312118-03 (Water)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: 12/18/13 11:30

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Benzene	1.6	1.0		ug/l	1	3122007	12/20/13	12/21/13	EPA 8260B	
Toluene	ND	1.0		"	"	"	"	"	"	
Ethylbenzene	2.7	1.0		"	"	"	"	"	"	
Xylenes (total)	94	1.0		"	"	"	"	"	"	

Date Sampled: 12/18/13 11:30

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Surrogate: 1,2-Dichloroethane-d4		112 %		37-154		"	"	"	"	
Surrogate: Toluene-d8		98.0 %		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: Dechant 1-31A
Project Number: [none]
Project Manager: Brandon Bruns

Reported:
12/23/13 18:21

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 3122007 - EPA 5030 Water MS

Blank (3122007-BLK1)

Prepared: 12/20/13 Analyzed: 12/21/13

Benzene	ND	1.0	ug/l							
Toluene	ND	1.0	"							
Ethylbenzene	ND	1.0	"							
Xylenes (total)	ND	1.0	"							
Surrogate: 1,2-Dichloroethane-d4	14.7		"	13.2	111		37-154			
Surrogate: Toluene-d8	13.2		"	13.3	99.1		45-149			
Surrogate: 4-Bromofluorobenzene	13.6		"	13.3	102		45-146			

LCS (3122007-BS1)

Prepared: 12/20/13 Analyzed: 12/21/13

Benzene	32.9	1.0	ug/l	33.3	98.6		51-132			
Toluene	33.1	1.0	"	33.3	99.4		51-138			
Ethylbenzene	33.8	1.0	"	33.3	101		58-146			
m,p-Xylene	64.7	2.0	"	66.7	97.1		57-144			
o-Xylene	31.9	1.0	"	33.3	95.8		53-146			
Surrogate: 1,2-Dichloroethane-d4	14.8		"	13.2	112		37-154			
Surrogate: Toluene-d8	13.2		"	13.3	98.9		45-149			
Surrogate: 4-Bromofluorobenzene	13.4		"	13.3	101		45-146			

LCS (3122007-BS2)

Prepared: 12/20/13 Analyzed: 12/21/13

Benzene	32.2	1.0	ug/l	33.3	96.7		51-132			
Toluene	33.4	1.0	"	33.3	100		51-138			
Ethylbenzene	33.6	1.0	"	33.3	101		58-146			
m,p-Xylene	64.7	2.0	"	66.7	97.0		57-144			
o-Xylene	31.2	1.0	"	33.3	93.6		53-146			
Surrogate: 1,2-Dichloroethane-d4	15.0		"	13.2	113		37-154			
Surrogate: Toluene-d8	13.2		"	13.3	98.7		45-149			
Surrogate: 4-Bromofluorobenzene	13.1		"	13.3	98.4		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: Dechant 1-31A
Project Number: [none]
Project Manager: Brandon Bruns

Reported:
12/23/13 18:21

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 3122007 - EPA 5030 Water MS

Matrix Spike (3122007-MS1)		Source: R312119-01			Prepared: 12/20/13		Analyzed: 12/21/13			
Benzene	32.5	1.0	ug/l	33.3	1.52	92.9	34-141			
Toluene	32.9	1.0	"	33.3	ND	98.7	27-151			
Ethylbenzene	33.3	1.0	"	33.3	ND	99.9	29-160			
m,p-Xylene	64.2	2.0	"	66.7	1.08	94.7	20-166			
o-Xylene	30.8	1.0	"	33.3	ND	92.5	33-159			
Surrogate: 1,2-Dichloroethane-d4	14.5		"	13.2		110	37-154			
Surrogate: Toluene-d8	13.3		"	13.3		99.6	45-149			
Surrogate: 4-Bromofluorobenzene	13.4		"	13.3		101	45-146			
Matrix Spike (3122007-MS2)		Source: R312119-02			Prepared: 12/20/13		Analyzed: 12/21/13			
Benzene	673	1.0	ug/l	33.3	552	363	34-141			QM-07
Toluene	34.7	1.0	"	33.3	ND	104	27-151			
Ethylbenzene	34.8	1.0	"	33.3	1.42	100	29-160			
m,p-Xylene	124	2.0	"	66.7	102	32.4	20-166			
o-Xylene	37.6	1.0	"	33.3	7.95	88.9	33-159			
Surrogate: 1,2-Dichloroethane-d4	15.0		"	13.2		113	37-154			
Surrogate: Toluene-d8	13.6		"	13.3		102	45-149			
Surrogate: 4-Bromofluorobenzene	13.4		"	13.3		100	45-146			
Matrix Spike Dup (3122007-MSD1)		Source: R312119-01			Prepared: 12/20/13		Analyzed: 12/21/13			
Benzene	32.4	1.0	ug/l	33.3	1.52	92.6	34-141	0.277	32	
Toluene	32.6	1.0	"	33.3	ND	97.7	27-151	1.01	25	
Ethylbenzene	34.0	1.0	"	33.3	ND	102	29-160	1.96	50	
m,p-Xylene	66.1	2.0	"	66.7	1.08	97.6	20-166	2.91	36	
o-Xylene	31.7	1.0	"	33.3	ND	95.2	33-159	2.91	26	
Surrogate: 1,2-Dichloroethane-d4	15.5		"	13.2		117	37-154			
Surrogate: Toluene-d8	13.2		"	13.3		98.9	45-149			
Surrogate: 4-Bromofluorobenzene	13.7		"	13.3		103	45-146			

Summit Scientific

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

Project: Dechant 1-31A
Project Number: [none]
Project Manager: Brandon Bruns

Reported:
12/23/13 18:21

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 3122007 - EPA 5030 Water MS

Matrix Spike Dup (3122007-MSD2)		Source: R312119-02			Prepared: 12/20/13		Analyzed: 12/21/13			
Benzene	604	1.0	ug/l	33.3	552	157	34-141	10.7	32	QM-07
Toluene	32.9	1.0	"	33.3	ND	98.8	27-151	5.18	25	
Ethylbenzene	34.7	1.0	"	33.3	1.42	99.8	29-160	0.345	50	
m,p-Xylene	124	2.0	"	66.7	102	32.8	20-166	0.194	36	
o-Xylene	36.6	1.0	"	33.3	7.95	85.9	33-159	2.67	26	
Surrogate: 1,2-Dichloroethane-d4		15.5	"	13.2		117	37-154			
Surrogate: Toluene-d8		13.3	"	13.3		99.9	45-149			
Surrogate: 4-Bromofluorobenzene		13.7	"	13.3		103	45-146			

Summit Scientific

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

Project: Dechant 1-31A
Project Number: [none]
Project Manager: Brandon Bruns

Reported:
12/23/13 18:21

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

741 Corporate Circle – Suite I ♦ Golden, Colorado 80401

303.277.9310 - laboratory ♦ 303.277.9531 - fax

April 09, 2014

Brandon Bruns
PDC Energy
1775 Sherman St. STE. 3000
Denver, CO 80203
RE: Dechant 1-31A

Enclosed are the results of analyses for samples received by Summit Scientific on 03/31/14 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 be 'BS' or 'Shrewsbury', written in a cursive style.

Ben Shrewsbury
President / Laboratory Manager



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

Project: Dechant 1-31A
Project Number: [none]
Project Manager: Brandon Bruns

Reported:
04/09/14 23:07

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
MW07	1404003-01	Water	03/31/14 13:10	03/31/14 17:25
MW10R	1404003-02	Water	03/31/14 13:20	03/31/14 17:25
MW13	1404003-03	Water	03/31/14 13:30	03/31/14 17:25
MW17	1404003-04	Water	03/31/14 13:40	03/31/14 17:25
MW18	1404003-05	Water	03/31/14 13:50	03/31/14 17:25
MW19	1404003-06	Water	03/31/14 14:00	03/31/14 17:25
MW20	1404003-07	Water	03/31/14 14:10	03/31/14 17:25
MW21	1404003-08	Water	03/31/14 14:20	03/31/14 17:25
MW22	1404003-09	Water	03/31/14 14:30	03/31/14 17:25

Summit Scientific

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

Project: Dechant 1-31A
Project Number: [none]
Project Manager: Brandon Bruns

Reported:
04/09/14 23:07

Summit Scientific
1404003
Page 1 of 1

Client: PDC Energy
Address: 1775 Sherman St. STE. 3000
City/State/Zip: Denver CO 80203
Phone: (303) 733-9100
Fax: (303) 733-9101

Project Manager: Brandon Bruns
Field #: 1404003
Project Name: Dechant 1-31A
Project Number: [none]

Sample Description	Date Sampled	Time Sampled	Number of Containers	Preservative	Matrix	Analyte For:	Special Instructions
MW07	3/31/14	1310	3	X	None	None	
MW10R	3/31/14	1320	1	X	None	None	
MW13	3/31/14	1330	1	X	None	None	
MW17	3/31/14	1340	1	X	None	None	
MW18	3/31/14	1350	1	X	None	None	
MW19	3/31/14	1400	1	X	None	None	
MW20	3/31/14	1410	1	X	None	None	
MW21	3/31/14	1420	1	X	None	None	
MW22	3/31/14	1430	1	X	None	None	

Submitted by: [Signature]
Date: 3/31/14
Time: 17:20
Location: [Signature]
Date: 3/31/14
Time: 17:20
Location: [Signature]

Turn Around Time (Weeks)
Sample by: 71 hours
Standard: 71 hours
Sample by: 71 hours
Standard: 71 hours

Sample Integrity:
Temperature Dev. Range: 7.5
Intact: Yes ☒ No ☐

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.

[Signature]



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

Project: Dechant 1-31A
Project Number: [none]
Project Manager: Brandon Bruns

Reported:
04/09/14 23:07

MW07
1404003-01 (Water)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **03/31/14 13:10**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Benzene	ND	1.0		ug/l	1	1404033	04/04/14	04/05/14	EPA 8260B	
Toluene	ND	1.0		"	"	"	"	"	"	
Ethylbenzene	ND	1.0		"	"	"	"	"	"	
Xylenes (total)	ND	1.0		"	"	"	"	"	"	

Date Sampled: **03/31/14 13:10**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Surrogate: 1,2-Dichloroethane-d4		103 %		37-154		"	"	"	"	
Surrogate: Toluene-d8		98.1 %		45-149		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		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: Dechant 1-31A
Project Number: [none]
Project Manager: Brandon Bruns

Reported:
04/09/14 23:07

MW10R
1404003-02 (Water)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **03/31/14 13:20**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Benzene	8.8	1.0		ug/l	1	1404033	04/04/14	04/05/14	EPA 8260B	
Toluene	ND	1.0		"	"	"	"	"	"	
Ethylbenzene	570	100		"	100	"	"	04/05/14	"	
Xylenes (total)	640	1.0		"	1	"	"	04/05/14	"	

Date Sampled: **03/31/14 13:20**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Surrogate: 1,2-Dichloroethane-d4		103 %		37-154		"	"	"	"	
Surrogate: Toluene-d8		116 %		45-149		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		98.3 %		45-146		"	"	"	"	

Summit Scientific

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

Project: Dechant 1-31A
Project Number: [none]
Project Manager: Brandon Bruns

Reported:
04/09/14 23:07

MW13
1404003-03 (Water)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **03/31/14 13:30**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Benzene	ND	1.0		ug/l	1	1404033	04/04/14	04/05/14	EPA 8260B	
Toluene	ND	1.0		"	"	"	"	"	"	
Ethylbenzene	ND	1.0		"	"	"	"	"	"	
Xylenes (total)	4.8	1.0		"	"	"	"	"	"	

Date Sampled: **03/31/14 13:30**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Surrogate: 1,2-Dichloroethane-d4		106 %		37-154		"	"	"	"	
Surrogate: Toluene-d8		99.0 %		45-149		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		102 %		45-146		"	"	"	"	

Summit Scientific

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

Project: Dechant 1-31A
Project Number: [none]
Project Manager: Brandon Brunns

Reported:
04/09/14 23:07

MW17
1404003-04 (Water)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **03/31/14 13:40**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Benzene	ND	1.0	ug/l	1	1404033	04/04/14	04/05/14	EPA 8260B	
Toluene	ND	1.0	"	"	"	"	"	"	
Ethylbenzene	ND	1.0	"	"	"	"	"	"	
Xylenes (total)	ND	1.0	"	"	"	"	"	"	

Date Sampled: **03/31/14 13:40**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Surrogate: 1,2-Dichloroethane-d4		106 %	37-154		"	"	"	"	
Surrogate: Toluene-d8		98.4 %	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: Dechant 1-31A
Project Number: [none]
Project Manager: Brandon Bruns

Reported:
04/09/14 23:07

MW18
1404003-05 (Water)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **03/31/14 13:50**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Benzene	ND	1.0		ug/l	1	1404033	04/04/14	04/05/14	EPA 8260B	
Toluene	ND	1.0		"	"	"	"	"	"	
Ethylbenzene	ND	1.0		"	"	"	"	"	"	
Xylenes (total)	ND	1.0		"	"	"	"	"	"	

Date Sampled: **03/31/14 13:50**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Surrogate: 1,2-Dichloroethane-d4		110 %		37-154		"	"	"	"	
Surrogate: Toluene-d8		97.9 %		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: Dechant 1-31A
Project Number: [none]
Project Manager: Brandon Brunns

Reported:
04/09/14 23:07

MW19
1404003-06 (Water)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **03/31/14 14:00**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Benzene	ND	1.0	ug/l	1	1404033	04/04/14	04/05/14	EPA 8260B	
Toluene	ND	1.0	"	"	"	"	"	"	
Ethylbenzene	ND	1.0	"	"	"	"	"	"	
Xylenes (total)	ND	1.0	"	"	"	"	"	"	

Date Sampled: **03/31/14 14:00**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Surrogate: 1,2-Dichloroethane-d4		107 %	37-154		"	"	"	"	
Surrogate: Toluene-d8		99.3 %	45-149		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		105 %	45-146		"	"	"	"	

Summit Scientific

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

Project: Dechant 1-31A
Project Number: [none]
Project Manager: Brandon Brunns

Reported:
04/09/14 23:07

MW20
1404003-07 (Water)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **03/31/14 14:10**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Benzene	ND	1.0		ug/l	1	1404033	04/04/14	04/05/14	EPA 8260B	
Toluene	ND	1.0		"	"	"	"	"	"	
Ethylbenzene	ND	1.0		"	"	"	"	"	"	
Xylenes (total)	46	1.0		"	"	"	"	"	"	

Date Sampled: **03/31/14 14:10**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Surrogate: 1,2-Dichloroethane-d4		104 %		37-154		"	"	"	"	
Surrogate: Toluene-d8		101 %		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: Dechant 1-31A
Project Number: [none]
Project Manager: Brandon Bruns

Reported:
04/09/14 23:07

MW21
1404003-08 (Water)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **03/31/14 14:20**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Benzene	ND	1.0		ug/l	1	1404033	04/04/14	04/05/14	EPA 8260B	
Toluene	ND	1.0		"	"	"	"	"	"	
Ethylbenzene	250	1.0		"	"	"	"	"	"	
Xylenes (total)	1000	1.0		"	"	"	"	"	"	

Date Sampled: **03/31/14 14:20**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Surrogate: 1,2-Dichloroethane-d4		105 %		37-154		"	"	"	"	
Surrogate: Toluene-d8		113 %		45-149		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		99.3 %		45-146		"	"	"	"	

Summit Scientific

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

Project: Dechant 1-31A
Project Number: [none]
Project Manager: Brandon Brunns

Reported:
04/09/14 23:07

MW22
1404003-09 (Water)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **03/31/14 14:30**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Benzene	ND	1.0	ug/l	1	1404033	04/04/14	04/05/14	EPA 8260B	
Toluene	ND	1.0	"	"	"	"	"	"	
Ethylbenzene	ND	1.0	"	"	"	"	"	"	
Xylenes (total)	ND	1.0	"	"	"	"	"	"	

Date Sampled: **03/31/14 14:30**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Surrogate: 1,2-Dichloroethane-d4		99.5 %	37-154		"	"	"	"	
Surrogate: Toluene-d8		95.9 %	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: Dechant 1-31A
Project Number: [none]
Project Manager: Brandon Bruns

Reported:
04/09/14 23:07

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 1404033 - EPA 5030 Water MS

Blank (1404033-BLK1)

Prepared: 04/04/14 Analyzed: 04/05/14

Benzene	ND	1.0	ug/l							
Toluene	ND	1.0	"							
Ethylbenzene	ND	1.0	"							
Xylenes (total)	ND	1.0	"							
Surrogate: 1,2-Dichloroethane-d4	13.9		"	13.2		105	37-154			
Surrogate: Toluene-d8	13.2		"	13.3		99.4	45-149			
Surrogate: 4-Bromofluorobenzene	13.9		"	13.3		104	45-146			

LCS (1404033-BS1)

Prepared: 04/04/14 Analyzed: 04/05/14

Benzene	28.9	1.0	ug/l	33.2		86.9	51-132			
Toluene	30.7	1.0	"	33.3		92.0	51-138			
Ethylbenzene	32.5	1.0	"	33.1		98.3	58-146			
m,p-Xylene	67.7	2.0	"	66.7		102	57-144			
o-Xylene	33.5	1.0	"	32.9		102	53-146			
Surrogate: 1,2-Dichloroethane-d4	13.5		"	13.2		102	37-154			
Surrogate: Toluene-d8	13.3		"	13.3		99.5	45-149			
Surrogate: 4-Bromofluorobenzene	13.2		"	13.3		98.6	45-146			

Matrix Spike (1404033-MS1)

Source: 1404002-04

Prepared: 04/04/14 Analyzed: 04/06/14

Benzene	29.0	1.0	ug/l	33.2	ND	87.1	34-141			
Toluene	31.0	1.0	"	33.3	ND	92.9	27-151			
Ethylbenzene	33.9	1.0	"	33.1	ND	103	29-160			
m,p-Xylene	71.9	2.0	"	66.7	ND	108	20-166			
o-Xylene	35.3	1.0	"	32.9	ND	107	33-159			
Surrogate: 1,2-Dichloroethane-d4	14.1		"	13.2		107	37-154			
Surrogate: Toluene-d8	13.2		"	13.3		99.0	45-149			
Surrogate: 4-Bromofluorobenzene	13.5		"	13.3		101	45-146			

Summit Scientific

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

Project: Dechant 1-31A
Project Number: [none]
Project Manager: Brandon Bruns

Reported:
04/09/14 23:07

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 1404033 - EPA 5030 Water MS

Matrix Spike Dup (1404033-MSD1)		Source: 1404002-04			Prepared: 04/04/14		Analyzed: 04/06/14			
Benzene	29.1	1.0	ug/l	33.2	ND	87.6	34-141	0.586	32	
Toluene	31.1	1.0	"	33.3	ND	93.2	27-151	0.322	25	
Ethylbenzene	33.4	1.0	"	33.1	ND	101	29-160	1.37	50	
m,p-Xylene	70.1	2.0	"	66.7	ND	105	20-166	2.54	36	
o-Xylene	34.2	1.0	"	32.9	ND	104	33-159	3.25	26	
Surrogate: 1,2-Dichloroethane-d4	15.1		"	13.2		114	37-154			
Surrogate: Toluene-d8	13.0		"	13.3		97.9	45-149			
Surrogate: 4-Bromofluorobenzene	13.4		"	13.3		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: Dechant 1-31A
Project Number: [none]
Project Manager: Brandon Bruns

Reported:
04/09/14 23:07

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 'JMM'.

Summit Scientific

741 Corporate Circle – Suite I ♦ Golden, Colorado 80401

303.277.9310 - laboratory ♦ 303.277.9531 - fax

June 25, 2014

Brandon Bruns
PDC Energy
1775 Sherman St. STE. 3000
Denver, CO 80203
RE: Dechant 1-31A

Enclosed are the results of analyses for samples received by Summit Scientific on 06/18/14 17:35. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

A handwritten signature in black ink, appearing to be 'BS' or 'Shrewsbury', written in a cursive style.

Ben Shrewsbury
President / Laboratory Manager



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

Project: Dechant 1-31A
Project Number: [none]
Project Manager: Brandon Bruns

Reported:
06/25/14 17:34

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
MW07	1406132-01	Water	06/17/14 18:20	06/18/14 17:35
MW10R	1406132-02	Water	06/17/14 18:10	06/18/14 17:35
MW13	1406132-03	Water	06/17/14 18:00	06/18/14 17:35
MW17	1406132-04	Water	06/17/14 17:50	06/18/14 17:35
MW18	1406132-05	Water	06/17/14 17:40	06/18/14 17:35
MW19	1406132-06	Water	06/17/14 17:30	06/18/14 17:35
MW20	1406132-07	Water	06/17/14 17:20	06/18/14 17:35
MW21	1406132-08	Water	06/17/14 17:10	06/18/14 17:35
MW22	1406132-09	Water	06/17/14 17:00	06/18/14 17:35

Summit Scientific

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

Project: Dechant 1-31A

Project Number: [none]
Project Manager: Brandon Bruns

Reported:
06/25/14 17:34

Summit Scientific

741 Corporate Circle Suite 1 • Golden, Colorado 80401
303-277-9310 • 303-374-9933 Fax

Client: PDC Energy
Address: _____
City/State/Zip: _____
Phone: _____ Fax: _____
Sample Name: Kevin Carter
Project Manager: Brandon Bruns
E-Mail: brandon.brun@PDC.com
Project Name: Dechant 1-31A
Project Number: _____

Page 1 of 1

Sample Description	Date Sampled	Time Sampled	Number of Containers	Preservative				Matrix		Analyze For:	Special Instructions
				HCl	HNO ₃	Other (Specify)	Groundwater	Soil	Air - Canister Serial #		
MW 07	6/19/14	18:20	3	X							
MW 10B	6/19/14	18:10	3	X							
MW 13	6/17/14	18:00	3	X							
MW 17	6/17/14	17:50	3	X							
MW 19	6/17/14	17:40	3	X							
MW 19	6/17/14	17:30	3	X							
MW 20	6/17/14	17:20	3	X							
MW 21	6/17/14	17:10	3	X							
MW 22	6/17/14	17:00	3	X							

Relinquished by: <u>Kevin Carter</u>	Date/Time: <u>6/19/14 18:20</u>	Received by: <u>[Signature]</u>	Date/Time: <u>6/19/14 18:20</u>	Turn Around Time (Check): Same Day <input type="checkbox"/> 24 Hours <input type="checkbox"/> 48 Hours <input checked="" type="checkbox"/> 72 Hours <input type="checkbox"/> Standard <input type="checkbox"/>	Notes:
Relinquished by:	Date/Time:	Received by:	Date/Time:		
Relinquished by:	Date/Time:	Received in Lab by:	Date/Time:	Sample Integrity: Temperature upon Receipt: <u>3°C</u> Intact: <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	

www.summitscientific.com

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

Project: Dechant 1-31A
Project Number: [none]
Project Manager: Brandon Brunns

Reported:
06/25/14 17:34

MW07
1406132-01 (Water)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **06/17/14 18:20**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Benzene	ND	1.0		ug/l	1	1406181	06/23/14	06/23/14	EPA 8260B	
Toluene	ND	1.0		"	"	"	"	"	"	
Ethylbenzene	ND	1.0		"	"	"	"	"	"	
Xylenes (total)	ND	1.0		"	"	"	"	"	"	

Date Sampled: **06/17/14 18:20**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Surrogate: 1,2-Dichloroethane-d4		111 %		37-154		"	"	"	"	
Surrogate: Toluene-d8		98.5 %		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: Dechant 1-31A
Project Number: [none]
Project Manager: Brandon Brunns

Reported:
06/25/14 17:34

MW10R
1406132-02 (Water)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **06/17/14 18:10**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Benzene	4.2	1.0		ug/l	1	1406181	06/23/14	06/23/14	EPA 8260B	
Toluene	ND	1.0		"	"	"	"	"	"	
Ethylbenzene	100	1.0		"	"	"	"	"	"	
Xylenes (total)	7700	100		"	100	"	"	"	"	

Date Sampled: **06/17/14 18:10**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Surrogate: 1,2-Dichloroethane-d4		108 %		37-154		"	"	"	"	
Surrogate: Toluene-d8		99.5 %		45-149		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		99.6 %		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: Dechant 1-31A
Project Number: [none]
Project Manager: Brandon Brunns

Reported:
06/25/14 17:34

MW13
1406132-03 (Water)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **06/17/14 18:00**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Benzene	3.5	1.0		ug/l	1	1406181	06/23/14	06/23/14	EPA 8260B	
Toluene	ND	1.0		"	"	"	"	"	"	
Ethylbenzene	270	1.0		"	"	"	"	"	"	
Xylenes (total)	850	10		"	10	"	"	"	"	

Date Sampled: **06/17/14 18:00**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Surrogate: 1,2-Dichloroethane-d4		108 %		37-154		"	"	"	"	
Surrogate: Toluene-d8		98.6 %		45-149		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		91.4 %		45-146		"	"	"	"	

Summit Scientific

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

Project: Dechant 1-31A
Project Number: [none]
Project Manager: Brandon Brunns

Reported:
06/25/14 17:34

MW17
1406132-04 (Water)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **06/17/14 17:50**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Benzene	ND	1.0	ug/l	1	1406181	06/24/14	06/24/14	EPA 8260B	
Toluene	ND	1.0	"	"	"	"	"	"	
Ethylbenzene	ND	1.0	"	"	"	"	"	"	
Xylenes (total)	ND	1.0	"	"	"	"	"	"	

Date Sampled: **06/17/14 17:50**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Surrogate: 1,2-Dichloroethane-d4		111 %	37-154		"	"	"	"	
Surrogate: Toluene-d8		98.4 %	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: Dechant 1-31A
Project Number: [none]
Project Manager: Brandon Brunns

Reported:
06/25/14 17:34

MW18
1406132-05 (Water)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **06/17/14 17:40**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Benzene	ND	1.0		ug/l	1	1406181	06/24/14	06/24/14	EPA 8260B	
Toluene	ND	1.0		"	"	"	"	"	"	
Ethylbenzene	ND	1.0		"	"	"	"	"	"	
Xylenes (total)	ND	1.0		"	"	"	"	"	"	

Date Sampled: **06/17/14 17:40**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Surrogate: 1,2-Dichloroethane-d4		112 %		37-154		"	"	"	"	
Surrogate: Toluene-d8		98.9 %		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: Dechant 1-31A
Project Number: [none]
Project Manager: Brandon Brunns

Reported:
06/25/14 17:34

MW19
1406132-06 (Water)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **06/17/14 17:30**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Benzene	ND	1.0	ug/l	1	1406181	06/24/14	06/24/14	EPA 8260B	
Toluene	ND	1.0	"	"	"	"	"	"	
Ethylbenzene	ND	1.0	"	"	"	"	"	"	
Xylenes (total)	ND	1.0	"	"	"	"	"	"	

Date Sampled: **06/17/14 17:30**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Surrogate: 1,2-Dichloroethane-d4		111 %	37-154		"	"	"	"	
Surrogate: Toluene-d8		98.8 %	45-149		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		103 %	45-146		"	"	"	"	

Summit Scientific

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

Project: Dechant 1-31A
Project Number: [none]
Project Manager: Brandon Bruns

Reported:
06/25/14 17:34

MW20
1406132-07 (Water)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **06/17/14 17:20**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Benzene	ND	1.0		ug/l	1	1406181	06/24/14	06/24/14	EPA 8260B	
Toluene	ND	1.0		"	"	"	"	"	"	
Ethylbenzene	ND	1.0		"	"	"	"	"	"	
Xylenes (total)	2.5	1.0		"	"	"	"	"	"	

Date Sampled: **06/17/14 17:20**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Surrogate: 1,2-Dichloroethane-d4		112 %		37-154		"	"	"	"	
Surrogate: Toluene-d8		97.7 %		45-149		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		100 %		45-146		"	"	"	"	

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

Project: Dechant 1-31A
Project Number: [none]
Project Manager: Brandon Brunns

Reported:
06/25/14 17:34

MW21
1406132-08 (Water)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **06/17/14 17:10**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Benzene	ND	1.0		ug/l	1	1406181	06/24/14	06/24/14	EPA 8260B	
Toluene	ND	1.0		"	"	"	"	"	"	
Ethylbenzene	470	10		"	10	"	"	"	"	
Xylenes (total)	3200	10		"	"	"	"	"	"	

Date Sampled: **06/17/14 17:10**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Surrogate: 1,2-Dichloroethane-d4		109 %		37-154		"	"	"	"	
Surrogate: Toluene-d8		99.0 %		45-149		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		95.1 %		45-146		"	"	"	"	

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

Project: Dechant 1-31A
Project Number: [none]
Project Manager: Brandon Brunns

Reported:
06/25/14 17:34

MW22
1406132-09 (Water)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **06/17/14 17:00**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Benzene	ND	1.0	ug/l	1	1406181	06/24/14	06/24/14	EPA 8260B	
Toluene	ND	1.0	"	"	"	"	"	"	
Ethylbenzene	ND	1.0	"	"	"	"	"	"	
Xylenes (total)	ND	1.0	"	"	"	"	"	"	

Date Sampled: **06/17/14 17:00**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Surrogate: 1,2-Dichloroethane-d4		110 %	37-154		"	"	"	"	
Surrogate: Toluene-d8		99.3 %	45-149		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		101 %	45-146		"	"	"	"	

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

Project: Dechant 1-31A
Project Number: [none]
Project Manager: Brandon Bruns

Reported:
06/25/14 17:34

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 1406181 - EPA 5030 Water MS

Blank (1406181-BLK1)

Prepared & Analyzed: 06/23/14

Benzene	ND	1.0	ug/l							
Toluene	ND	1.0	"							
Ethylbenzene	ND	1.0	"							
Xylenes (total)	ND	1.0	"							
Surrogate: 1,2-Dichloroethane-d4	14.5		"	13.2	109	37-154				
Surrogate: Toluene-d8	13.2		"	13.3	98.8	45-149				
Surrogate: 4-Bromofluorobenzene	13.4		"	13.3	101	45-146				

LCS (1406181-BS1)

Prepared & Analyzed: 06/23/14

Benzene	40.7	1.0	ug/l	33.3	122	51-132				
Toluene	39.2	1.0	"	33.3	118	51-138				
Ethylbenzene	40.7	1.0	"	33.1	123	58-146				
m,p-Xylene	78.3	2.0	"	66.5	118	57-144				
o-Xylene	39.0	1.0	"	32.8	119	53-146				
Surrogate: 1,2-Dichloroethane-d4	15.2		"	13.2	115	37-154				
Surrogate: Toluene-d8	13.4		"	13.3	100	45-149				
Surrogate: 4-Bromofluorobenzene	13.1		"	13.3	98.0	45-146				

LCS (1406181-BS2)

Prepared & Analyzed: 06/23/14

Benzene	40.2	1.0	ug/l	33.3	121	51-132				
Toluene	38.6	1.0	"	33.3	116	51-138				
Ethylbenzene	40.6	1.0	"	33.1	123	58-146				
m,p-Xylene	78.4	2.0	"	66.5	118	57-144				
o-Xylene	39.0	1.0	"	32.8	119	53-146				
Surrogate: 1,2-Dichloroethane-d4	14.9		"	13.2	112	37-154				
Surrogate: Toluene-d8	13.5		"	13.3	101	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: Dechant 1-31A
Project Number: [none]
Project Manager: Brandon Bruns

Reported:
06/25/14 17:34

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 1406181 - EPA 5030 Water MS

Matrix Spike (1406181-MS1)		Source: 1406132-01			Prepared & Analyzed: 06/23/14					
Benzene	41.2	1.0	ug/l	33.3	ND	124	34-141			
Toluene	39.4	1.0	"	33.3	ND	118	27-151			
Ethylbenzene	41.2	1.0	"	33.1	ND	125	29-160			
m,p-Xylene	79.4	2.0	"	66.5	ND	119	20-166			
o-Xylene	39.4	1.0	"	32.8	ND	120	33-159			
Surrogate: 1,2-Dichloroethane-d4	14.7		"	13.2		111	37-154			
Surrogate: Toluene-d8	13.4		"	13.3		101	45-149			
Surrogate: 4-Bromofluorobenzene	13.0		"	13.3		97.2	45-146			

Matrix Spike (1406181-MS2)		Source: 1406132-01			Prepared & Analyzed: 06/23/14					
Benzene	41.3	1.0	ug/l	33.3	ND	124	34-141			
Toluene	39.4	1.0	"	33.3	ND	118	27-151			
Ethylbenzene	41.0	1.0	"	33.1	ND	124	29-160			
m,p-Xylene	79.0	2.0	"	66.5	ND	119	20-166			
o-Xylene	39.5	1.0	"	32.8	ND	120	33-159			
Surrogate: 1,2-Dichloroethane-d4	15.1		"	13.2		114	37-154			
Surrogate: Toluene-d8	13.4		"	13.3		101	45-149			
Surrogate: 4-Bromofluorobenzene	13.0		"	13.3		97.5	45-146			

Matrix Spike Dup (1406181-MSD1)		Source: 1406132-01			Prepared & Analyzed: 06/23/14					
Benzene	41.5	1.0	ug/l	33.3	ND	124	34-141	0.653	32	
Toluene	39.3	1.0	"	33.3	ND	118	27-151	0.178	25	
Ethylbenzene	41.3	1.0	"	33.1	ND	125	29-160	0.267	50	
m,p-Xylene	79.7	2.0	"	66.5	ND	120	20-166	0.327	36	
o-Xylene	39.8	1.0	"	32.8	ND	121	33-159	1.01	26	
Surrogate: 1,2-Dichloroethane-d4	15.0		"	13.2		113	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: Dechant 1-31A
Project Number: [none]
Project Manager: Brandon Bruns

Reported:
06/25/14 17:34

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 1406181 - EPA 5030 Water MS

Matrix Spike Dup (1406181-MSD2)	Source: 1406132-01			Prepared & Analyzed: 06/23/14						
Benzene	41.2	1.0	ug/l	33.3	ND	123	34-141	0.267	32	
Toluene	39.0	1.0	"	33.3	ND	117	27-151	0.893	25	
Ethylbenzene	41.2	1.0	"	33.1	ND	125	29-160	0.413	50	
m,p-Xylene	79.5	2.0	"	66.5	ND	119	20-166	0.593	36	
o-Xylene	39.6	1.0	"	32.8	ND	121	33-159	0.202	26	
Surrogate: 1,2-Dichloroethane-d4	14.9		"	13.2		113	37-154			
Surrogate: Toluene-d8	13.4		"	13.3		100	45-149			
Surrogate: 4-Bromofluorobenzene	13.0		"	13.3		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: Dechant 1-31A
Project Number: [none]
Project Manager: Brandon Bruns

Reported:
06/25/14 17:34

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 'JMM'.

Summit Scientific

741 Corporate Circle – Suite I ♦ Golden, Colorado 80401

303.277.9310 - laboratory ♦ 303.277.9531 - fax

September 22, 2014

Brandon Bruns
PDC Energy
1775 Sherman St. STE. 3000
Denver, CO 80203
RE: Dechant 1-31A

Enclosed are the results of analyses for samples received by Summit Scientific on 09/17/14 16:42. 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 For Ben Shrewsbury
President / Laboratory Manager



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

Project: Dechant 1-31A
Project Number: [none]
Project Manager: Brandon Bruns

Reported:
09/22/14 07:21

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
MW22	1409100-01	Water	09/17/14 10:20	09/17/14 16:42
MW07	1409100-02	Water	09/17/14 10:30	09/17/14 16:42
MW19	1409100-03	Water	09/17/14 10:40	09/17/14 16:42
MW18	1409100-04	Water	09/17/14 10:50	09/17/14 16:42
MW17	1409100-05	Water	09/17/14 11:00	09/17/14 16:42
MW20	1409100-06	Water	09/17/14 11:10	09/17/14 16:42
MW21	1409100-07	Water	09/17/14 11:20	09/17/14 16:42
MW10R	1409100-08	Water	09/17/14 11:30	09/17/14 16:42
MW13	1409100-09	Water	09/17/14 11:40	09/17/14 16:42

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: Dechant 1-31A
Project Number: [none]
Project Manager: Brandon Bruns

Reported:
09/22/14 07:21

Summit Scientific

1409100

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

Page 1 of 1

Client: PDC Energy

Address: 6899 Pecos St Unit C

Project Manager: Brandon Bruns

City/State/Zip: Denver, CO 80221

E-Mail: bbruns@petd.com

Phone: 303 487 1225 Fax:

Project Name: DECHANT 1-31A

Sampler Name: Andrew T. Bruns

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)				
MW22	9/17	1020	3	X											
MW07		1030													
MW19		1040													
MW18		1050													
MW17		1100													
MW20		1110													
MW21		1120													
MW10K		1130													
MW13		1140													

Relinquished by:	Date/Time: 9/17/14 1630	Received by:	Date/Time: 9-17-14	Turn Around Time (Check) Same Day <input type="checkbox"/> 72 Hours <input type="checkbox"/> 24 Hours <input type="checkbox"/> Standard <input checked="" type="checkbox"/> 48 Hours <input type="checkbox"/>	Notes:
Relinquished by:	Date/Time:	Received by:	Date/Time:	Sample Integrity: Temperature Upon Receipt: 4.4 Intact: Yes 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: Dechant 1-31A
Project Number: [none]
Project Manager: Brandon Brunns

Reported:
09/22/14 07:21

MW22
1409100-01 (Water)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **09/17/14 10:20**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Benzene	ND	1.0	ug/l	1	1409152	09/18/14	09/18/14	EPA 8260B	
Toluene	ND	1.0	"	"	"	"	"	"	
Ethylbenzene	ND	1.0	"	"	"	"	"	"	
Xylenes (total)	ND	1.0	"	"	"	"	"	"	

Date Sampled: **09/17/14 10:20**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: 1,2-Dichloroethane-d4		86.3 %	37-154		"	"	"	"	
Surrogate: Toluene-d8		98.5 %	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: Dechant 1-31A
Project Number: [none]
Project Manager: Brandon Brunns

Reported:
09/22/14 07:21

MW07
1409100-02 (Water)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **09/17/14 10:30**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Benzene	ND	1.0	ug/l	1	1409152	09/18/14	09/18/14	EPA 8260B	
Toluene	ND	1.0	"	"	"	"	"	"	
Ethylbenzene	ND	1.0	"	"	"	"	"	"	
Xylenes (total)	ND	1.0	"	"	"	"	"	"	

Date Sampled: **09/17/14 10:30**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Surrogate: 1,2-Dichloroethane-d4		86.2 %	37-154		"	"	"	"	
Surrogate: Toluene-d8		97.1 %	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: Dechant 1-31A
Project Number: [none]
Project Manager: Brandon Brunns

Reported:
09/22/14 07:21

MW19
1409100-03 (Water)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **09/17/14 10:40**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Benzene	ND	1.0	ug/l	1	1409152	09/19/14	09/19/14	EPA 8260B	
Toluene	ND	1.0	"	"	"	"	"	"	
Ethylbenzene	ND	1.0	"	"	"	"	"	"	
Xylenes (total)	ND	1.0	"	"	"	"	"	"	

Date Sampled: **09/17/14 10:40**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Surrogate: 1,2-Dichloroethane-d4		86.4 %	37-154		"	"	"	"	
Surrogate: Toluene-d8		98.2 %	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: Dechant 1-31A
Project Number: [none]
Project Manager: Brandon Brunns

Reported:
09/22/14 07:21

MW18
1409100-04 (Water)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **09/17/14 10:50**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Benzene	ND	1.0	ug/l	1	1409152	09/19/14	09/19/14	EPA 8260B	
Toluene	ND	1.0	"	"	"	"	"	"	
Ethylbenzene	ND	1.0	"	"	"	"	"	"	
Xylenes (total)	ND	1.0	"	"	"	"	"	"	

Date Sampled: **09/17/14 10:50**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Surrogate: 1,2-Dichloroethane-d4		88.6 %	37-154		"	"	"	"	
Surrogate: Toluene-d8		97.7 %	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: Dechant 1-31A
Project Number: [none]
Project Manager: Brandon Brunns

Reported:
09/22/14 07:21

MW17
1409100-05 (Water)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **09/17/14 11:00**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Benzene	ND	1.0	ug/l	1	1409152	09/19/14	09/19/14	EPA 8260B	
Toluene	ND	1.0	"	"	"	"	"	"	
Ethylbenzene	ND	1.0	"	"	"	"	"	"	
Xylenes (total)	ND	1.0	"	"	"	"	"	"	

Date Sampled: **09/17/14 11:00**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Surrogate: 1,2-Dichloroethane-d4		89.2 %	37-154		"	"	"	"	
Surrogate: Toluene-d8		97.5 %	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: Dechant 1-31A
Project Number: [none]
Project Manager: Brandon Brunns

Reported:
09/22/14 07:21

MW20
1409100-06 (Water)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **09/17/14 11:10**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Benzene	ND	1.0		ug/l	1	1409152	09/19/14	09/19/14	EPA 8260B	
Toluene	ND	1.0		"	"	"	"	"	"	
Ethylbenzene	ND	1.0		"	"	"	"	"	"	
Xylenes (total)	ND	1.0		"	"	"	"	"	"	

Date Sampled: **09/17/14 11:10**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Surrogate: 1,2-Dichloroethane-d4		88.1 %		37-154		"	"	"	"	
Surrogate: Toluene-d8		97.4 %		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: Dechant 1-31A
Project Number: [none]
Project Manager: Brandon Brunns

Reported:
09/22/14 07:21

MW21
1409100-07 (Water)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **09/17/14 11:20**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Benzene	ND	1.0	ug/l	1	1409152	09/19/14	09/19/14	EPA 8260B	
Toluene	ND	1.0	"	"	"	"	"	"	
Ethylbenzene	380	100	"	100	"	"	"	"	
Xylenes (total)	3400	100	"	"	"	"	"	"	

Date Sampled: **09/17/14 11:20**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: 1,2-Dichloroethane-d4		84.6 %	37-154		"	"	"	"	
Surrogate: Toluene-d8		99.7 %	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: Dechant 1-31A
Project Number: [none]
Project Manager: Brandon Brunns

Reported:
09/22/14 07:21

MW10R
1409100-08 (Water)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **09/17/14 11:30**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Benzene	ND	1.0	ug/l	1	1409152	09/19/14	09/19/14	EPA 8260B	
Toluene	ND	1.0	"	"	"	"	"	"	
Ethylbenzene	450	100	"	100	"	"	"	"	
Xylenes (total)	6200	100	"	"	"	"	"	"	

Date Sampled: **09/17/14 11:30**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: 1,2-Dichloroethane-d4		83.4 %	37-154		"	"	"	"	
Surrogate: Toluene-d8		99.0 %	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: Dechant 1-31A
Project Number: [none]
Project Manager: Brandon Brunns

Reported:
09/22/14 07:21

MW13
1409100-09 (Water)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **09/17/14 11:40**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Benzene	ND	1.0		ug/l	1	1409152	09/19/14	09/19/14	EPA 8260B	
Toluene	ND	1.0		"	"	"	"	"	"	
Ethylbenzene	190	10		"	10	"	"	"	"	
Xylenes (total)	120	10		"	"	"	"	"	"	

Date Sampled: **09/17/14 11:40**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Surrogate: 1,2-Dichloroethane-d4		87.0 %		37-154		"	"	"	"	
Surrogate: Toluene-d8		98.9 %		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: Dechant 1-31A
Project Number: [none]
Project Manager: Brandon Bruns

Reported:
09/22/14 07:21

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 1409152 - EPA 5030 Water MS

Blank (1409152-BLK1)

Prepared & Analyzed: 09/18/14

Benzene	ND	1.0	ug/l							
Toluene	ND	1.0	"							
Ethylbenzene	ND	1.0	"							
Xylenes (total)	ND	1.0	"							
Surrogate: 1,2-Dichloroethane-d4	11.5		"	13.2		87.2	37-154			
Surrogate: Toluene-d8	13.0		"	13.3		97.6	45-149			
Surrogate: 4-Bromofluorobenzene	14.0		"	13.3		105	45-146			

LCS (1409152-BS1)

Prepared & Analyzed: 09/18/14

Benzene	42.8	1.0	ug/l	33.3		128	51-132			
Toluene	41.8	1.0	"	33.3		125	51-138			
Ethylbenzene	43.4	1.0	"	33.1		131	58-146			
m,p-Xylene	83.9	2.0	"	66.5		126	57-144			
o-Xylene	41.8	1.0	"	32.8		128	53-146			
Surrogate: 1,2-Dichloroethane-d4	11.7		"	13.2		88.3	37-154			
Surrogate: Toluene-d8	13.4		"	13.3		100	45-149			
Surrogate: 4-Bromofluorobenzene	13.4		"	13.3		101	45-146			

Matrix Spike (1409152-MS1)

Source: 1409100-01

Prepared & Analyzed: 09/18/14

Benzene	42.6	1.0	ug/l	33.3	ND	128	34-141			
Toluene	41.7	1.0	"	33.3	ND	125	27-151			
Ethylbenzene	42.8	1.0	"	33.1	ND	129	29-160			
m,p-Xylene	84.0	2.0	"	66.5	ND	126	20-166			
o-Xylene	41.7	1.0	"	32.8	ND	127	33-159			
Surrogate: 1,2-Dichloroethane-d4	11.8		"	13.2		89.4	37-154			
Surrogate: Toluene-d8	13.5		"	13.3		101	45-149			
Surrogate: 4-Bromofluorobenzene	13.4		"	13.3		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: Dechant 1-31A
Project Number: [none]
Project Manager: Brandon Bruns

Reported:
09/22/14 07:21

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 1409152 - EPA 5030 Water MS

Matrix Spike Dup (1409152-MSD1)		Source: 1409100-01			Prepared & Analyzed: 09/18/14					
Benzene	42.8	1.0	ug/l	33.3	ND	129	34-141	0.656	32	
Toluene	41.7	1.0	"	33.3	ND	125	27-151	0.0240	25	
Ethylbenzene	43.0	1.0	"	33.1	ND	130	29-160	0.560	50	
m,p-Xylene	83.4	2.0	"	66.5	ND	125	20-166	0.669	36	
o-Xylene	41.5	1.0	"	32.8	ND	126	33-159	0.625	26	
Surrogate: 1,2-Dichloroethane-d4	11.7		"	13.2		88.2	37-154			
Surrogate: Toluene-d8	13.6		"	13.3		102	45-149			
Surrogate: 4-Bromofluorobenzene	13.3		"	13.3		99.5	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: Dechant 1-31A
Project Number: [none]
Project Manager: Brandon Bruns

Reported:
09/22/14 07:21

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 J ♦ Golden, Colorado 80401

303.277.9310 - laboratory ♦ 303.374.5933 - fax

December 09, 2014

Brandon Bruns
PDC Energy
1775 Sherman St. STE. 3000
Denver, CO 80203
RE: Dechant 1-31A

Enclosed are the results of analyses for samples received by Summit Scientific on 12/02/14 17:15. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

A handwritten signature in black ink, appearing to read "Joseph J. Egry IV". The signature is fluid and cursive, with a small "IV" superscripted at the end.

Joseph J Egry IV For Paul Shrewsbury
President

This report shall not be reproduced, except in its entirety, without the written approval of Summit Scientific. Test results relate only to samples analyzed.

Summit Scientific is the sole authority for authorizing edits or modifications to this document. Unauthorized modification of this report is strictly prohibited.



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

Project: Dechant 1-31A
Project Number: [none]
Project Manager: Brandon Bruns

Reported:
12/09/14 09:54

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
MW07	1412007-01	Water	12/02/14 10:45	12/02/14 17:15
MW13	1412007-02	Water	12/02/14 10:50	12/02/14 17:15
MW10R	1412007-03	Water	12/02/14 10:55	12/02/14 17:15
MW17	1412007-04	Water	12/02/14 11:00	12/02/14 17:15
MW18	1412007-05	Water	12/02/14 11:05	12/02/14 17:15
MW19	1412007-06	Water	12/02/14 11:10	12/02/14 17:15
MW20	1412007-07	Water	12/02/14 11:15	12/02/14 17:15
MW21	1412007-08	Water	12/02/14 11:20	12/02/14 17:15
MW22	1412007-09	Water	12/02/14 11:25	12/02/14 17:15

Summit Scientific

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Joseph J Egry IV For Paul Shrewsbury, President

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

Project: Dechant 1-31A

Project Number: [none]
Project Manager: Brandon Bruns

Reported:
12/09/14 09:54

Summit Scientific 1412007

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

Client: PDC Energy
Address:
City/State/Zip:
Phone: Fax:
Sampler Name: Jason Saecker

Page 1 of 1

Project Manager: Brandon Bruins
E-Mail: Brandon.Bruins@PDXE.com
Project Name: Dechant 1-31A
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)	BTEX (2260)															
MW07	12/2/14	10:45	3	X				X			X																
MW13	12/2/14	10:50	3	X				X			X																
MW10R	12/2/14	10:55	3	X				X			X																
MW17	12/2/14	10:00	3	X				X			X																
MW12	12/2/14	11:05	3	X				X			X																
MW19	12/2/14	11:10	3	X				X			X																
MW20	12/2/14	11:15	3	X				X			X																
MW21	12/2/14	11:20	3	X				X			X																
MW22	12/2/14	11:25	3	X				X			X																
Relinquished by: <i>[Signature]</i>				Date/Time: 12/2/14 1600				Received by: <i>[Signature]</i>				Date/Time: 12/3/14 1715				Turn Around Time (Check)										Notes:	
Relinquished by:				Date/Time:				Received by:				Date/Time:				Same Day <input type="checkbox"/> 72 Hours <input type="checkbox"/> 24 Hours <input type="checkbox"/> Standard <input checked="" type="checkbox"/> 48 Hours <input type="checkbox"/>											
Relinquished by:				Date/Time:				Received in Lab by:				Date/Time:				Sample Integrity: Temperature Upon Receipt: 5.4°C											

Soil samples reported on a wet-weight basis unless otherwise indicated on results page.

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.

Carol E. Gray¹⁰

Joseph J Egry IV For Paul Shrewsbury, President



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

Project: Dechant 1-31A
Project Number: [none]
Project Manager: Brandon Bruns

Reported:
12/09/14 09:54

Sample Receipt Checklist

S2 Work Order: 1412007

Client: PDC

Client Project ID: Dechant 1-31A

Shipped Via: Pick Up

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

Airbill #: _____

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

Cooler ID	<u>1</u>				
Temp (°C)	<u>5.4</u>				

Thermometer ID: 61857155-K

	Yes	No	N/A	Comments (if any)
If samples require cooling, was the temperature just above 0°C to ≤ 6°C ⁽¹⁾ ?	<input checked="" type="checkbox"/>			
NOTE: If samples are delivered the same day of sampling, this requirement is waived provided that there is evidence that cooling has begun.				
Were all samples received intact ⁽¹⁾ ?	<input checked="" type="checkbox"/>			
Was adequate sample volume provided ⁽¹⁾ ?	<input checked="" type="checkbox"/>			
If custody seals are present, are they intact ⁽¹⁾ ?			<input checked="" type="checkbox"/>	
Are short holding time analytes or samples with HTs due within 48 hours present?		<input checked="" type="checkbox"/>		
Is a chain-of-custody (COC) form present and filled out completely ⁽¹⁾ ?	<input checked="" type="checkbox"/>			
Does the COC agree with the number and type of sample bottles received ⁽¹⁾ ?	<input checked="" type="checkbox"/>			
Do the sample IDs on the bottle labels match the COC ⁽¹⁾ ?	<input checked="" type="checkbox"/>			
Is the COC properly relinquished by the client w/ date and time recorded ⁽¹⁾ ?	<input checked="" type="checkbox"/>			
For volatiles in water – is there headspace present? If yes, contact client and note in narrative.		<input checked="" type="checkbox"/>		
Are samples preserved that require preservation (excluding cooling) ⁽¹⁾ ?	<input checked="" type="checkbox"/>			HCl
Note the type of preservative in the Comments column – HCl, H2SO4, NaOH, etc.				
If samples are acid preserved for metals, is the pH ≤ 2 ⁽¹⁾ ?			<input checked="" type="checkbox"/>	
Record the pH in Comments.				
If dissolved metals are requested, were samples field filtered?			<input checked="" type="checkbox"/>	
Additional Comments (if any):				
⁽¹⁾ If NO, then contact the client before proceeding with analysis and note in case narrative.				

Joseph J Egry IV
Custodian Printed Name

Joseph J Egry IV
Signature or Initials of Custodian

12/3/14
Date/Time

Soil samples reported on a wet-weight basis unless otherwise indicated on results page.

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.

Joseph J Egry IV

Joseph J Egry IV For Paul Shrewsbury, President



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

Project: Dechant 1-31A
Project Number: [none]
Project Manager: Brandon Bruns

Reported:
12/09/14 09:54

MW07
1412007-01 (Water)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **12/02/14 10:45**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Benzene	ND	1.0	ug/l	1	1412030	12/03/14	12/04/14 00:58	EPA 8260B	
Toluene	ND	1.0	"	"	"	"	"	"	
Ethylbenzene	ND	1.0	"	"	"	"	"	"	
Xylenes (total)	ND	1.0	"	"	"	"	"	"	

Date Sampled: **12/02/14 10:45**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 1,2-Dichloroethane-d4	110 %	37-154			"	"	"	"	
Surrogate: Toluene-d8	95.6 %	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.

Joseph J Egry IV For Paul Shrewsbury, President



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

Project: Dechant 1-31A
Project Number: [none]
Project Manager: Brandon Bruns

Reported:
12/09/14 09:54

MW13
1412007-02 (Water)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **12/02/14 10:50**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Benzene	2.8	1.0	ug/l	1	1412030	12/04/14	12/04/14 03:24	EPA 8260B	
Toluene	ND	1.0	"	"	"	"	"	"	
Ethylbenzene	610	10	"	10	"	"	"	"	
Xylenes (total)	280	1.0	"	1	"	"	"	"	

Date Sampled: **12/02/14 10:50**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 1,2-Dichloroethane-d4	108 %	37-154			"	"	"	"	
Surrogate: Toluene-d8	97.3 %	45-149			"	"	"	"	
Surrogate: 4-Bromofluorobenzene	91.2 %	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.

Joseph J Egry IV For Paul Shrewsbury, President



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

Project: Dechant 1-31A
Project Number: [none]
Project Manager: Brandon Bruns

Reported:
12/09/14 09:54

MW10R
1412007-03 (Water)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: 12/02/14 10:55

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Benzene	1.7	1.0	ug/l	1	1412030	12/04/14	12/04/14 05:34	EPA 8260B	
Toluene	ND	1.0	"	"	"	"	"	"	
Ethylbenzene	1000	100	"	100	"	"	"	"	
Xylenes (total)	13000	100	"	"	"	"	"	"	

Date Sampled: 12/02/14 10:55

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 1,2-Dichloroethane-d4	107 %	37-154			"	"	"	"	
Surrogate: Toluene-d8	95.9 %	45-149			"	"	"	"	
Surrogate: 4-Bromofluorobenzene	94.2 %	45-146			"	"	"	"	

Summit Scientific

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Joseph J Egry IV For Paul Shrewsbury, President



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

Project: Dechant 1-31A
Project Number: [none]
Project Manager: Brandon Bruns

Reported:
12/09/14 09:54

MW17
1412007-04 (Water)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **12/02/14 11:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Benzene	ND	1.0	ug/l	1	1412030	12/04/14	12/04/14 05:59	EPA 8260B	
Toluene	ND	1.0	"	"	"	"	"	"	
Ethylbenzene	ND	1.0	"	"	"	"	"	"	
Xylenes (total)	6.6	1.0	"	"	"	"	"	"	

Date Sampled: **12/02/14 11:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 1,2-Dichloroethane-d4	111 %	37-154			"	"	"	"	
Surrogate: Toluene-d8	96.7 %	45-149			"	"	"	"	
Surrogate: 4-Bromofluorobenzene	97.1 %	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.

Joseph J Egry IV For Paul Shrewsbury, President



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

Project: Dechant 1-31A
Project Number: [none]
Project Manager: Brandon Bruns

Reported:
12/09/14 09:54

MW18
1412007-05 (Water)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **12/02/14 11:05**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Benzene	ND	1.0	ug/l	1	1412030	12/04/14	12/04/14 06:23	EPA 8260B	
Toluene	ND	1.0	"	"	"	"	"	"	
Ethylbenzene	ND	1.0	"	"	"	"	"	"	
Xylenes (total)	ND	1.0	"	"	"	"	"	"	

Date Sampled: **12/02/14 11:05**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 1,2-Dichloroethane-d4	108 %	37-154			"	"	"	"	
Surrogate: Toluene-d8	92.6 %	45-149			"	"	"	"	
Surrogate: 4-Bromofluorobenzene	98.0 %	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.

Joseph J Egry IV For Paul Shrewsbury, President



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

Project: Dechant 1-31A
Project Number: [none]
Project Manager: Brandon Bruns

Reported:
12/09/14 09:54

MW19
1412007-06 (Water)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **12/02/14 11:10**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Benzene	ND	1.0	ug/l	1	1412030	12/04/14	12/04/14 06:47	EPA 8260B	
Toluene	ND	1.0	"	"	"	"	"	"	
Ethylbenzene	ND	1.0	"	"	"	"	"	"	
Xylenes (total)	ND	1.0	"	"	"	"	"	"	

Date Sampled: **12/02/14 11:10**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 1,2-Dichloroethane-d4	110 %	37-154			"	"	"	"	
Surrogate: Toluene-d8	96.4 %	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.

Joseph J Egry IV For Paul Shrewsbury, President



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

Project: Dechant 1-31A
Project Number: [none]
Project Manager: Brandon Bruns

Reported:
12/09/14 09:54

MW20
1412007-07 (Water)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **12/02/14 11:15**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Benzene	ND	1.0	ug/l	1	1412030	12/04/14	12/04/14 07:12	EPA 8260B	
Toluene	ND	1.0	"	"	"	"	"	"	
Ethylbenzene	ND	1.0	"	"	"	"	"	"	
Xylenes (total)	ND	1.0	"	"	"	"	"	"	

Date Sampled: **12/02/14 11:15**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 1,2-Dichloroethane-d4	109 %	37-154			"	"	"	"	
Surrogate: Toluene-d8	97.3 %	45-149			"	"	"	"	
Surrogate: 4-Bromofluorobenzene	97.4 %	45-146			"	"	"	"	

Summit Scientific

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Joseph J Egry IV For Paul Shrewsbury, President



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

Project: Dechant 1-31A
Project Number: [none]
Project Manager: Brandon Brunns

Reported:
12/09/14 09:54

MW21
1412007-08 (Water)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **12/02/14 11:20**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Benzene	2.5	1.0	ug/l	1	1412030	12/04/14	12/04/14 07:39	EPA 8260B	
Toluene	2.2	1.0	"	"	"	"	"	"	
Ethylbenzene	1400	100	"	100	"	"	"	"	
Xylenes (total)	18000	100	"	"	"	"	"	"	

Date Sampled: **12/02/14 11:20**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 1,2-Dichloroethane-d4	106 %	37-154			"	"	"	"	
Surrogate: Toluene-d8	96.3 %	45-149			"	"	"	"	
Surrogate: 4-Bromofluorobenzene	95.5 %	45-146			"	"	"	"	

Summit Scientific

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Joseph J Egry IV For Paul Shrewsbury, President



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

Project: Dechant 1-31A
Project Number: [none]
Project Manager: Brandon Brunns

Reported:
12/09/14 09:54

MW22
1412007-09 (Water)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **12/02/14 11:25**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Benzene	ND	1.0	ug/l	1	1412030	12/04/14	12/04/14 08:03	EPA 8260B	
Toluene	ND	1.0	"	"	"	"	"	"	
Ethylbenzene	ND	1.0	"	"	"	"	"	"	
Xylenes (total)	ND	1.0	"	"	"	"	"	"	

Date Sampled: **12/02/14 11:25**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 1,2-Dichloroethane-d4	108 %	37-154			"	"	"	"	
Surrogate: Toluene-d8	94.1 %	45-149			"	"	"	"	
Surrogate: 4-Bromofluorobenzene	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.

Joseph J Egry IV For Paul Shrewsbury, President



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

Project: Dechant 1-31A
Project Number: [none]
Project Manager: Brandon Bruns

Reported:
12/09/14 09:54

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 1412030 - EPA 5030 Water MS

Blank (1412030-BLK1)

Prepared & Analyzed: 12/03/14

Benzene	ND	1.0	ug/l							
Toluene	ND	1.0	"							
Ethylbenzene	ND	1.0	"							
Xylenes (total)	ND	1.0	"							
Surrogate: 1,2-Dichloroethane-d4	13.4		"	13.2		102	37-154			
Surrogate: Toluene-d8	12.9		"	13.3		96.9	45-149			
Surrogate: 4-Bromofluorobenzene	12.9		"	13.3		97.0	45-146			

LCS (1412030-BS1)

Prepared & Analyzed: 12/03/14

Benzene	31.0	1.0	ug/l	33.3		93.1	51-132			
Toluene	29.8	1.0	"	33.3		89.5	51-138			
Ethylbenzene	32.4	1.0	"	33.1		98.1	58-146			
m,p-Xylene	62.3	2.0	"	66.5		93.7	57-144			
o-Xylene	33.1	1.0	"	32.8		101	53-146			
Surrogate: 1,2-Dichloroethane-d4	14.0		"	13.2		106	37-154			
Surrogate: Toluene-d8	13.2		"	13.3		99.3	45-149			
Surrogate: 4-Bromofluorobenzene	12.5		"	13.3		93.8	45-146			

LCS (1412030-BS2)

Prepared & Analyzed: 12/03/14

Benzene	31.2	1.0	ug/l	33.3		93.6	51-132			
Toluene	30.0	1.0	"	33.3		90.1	51-138			
Ethylbenzene	32.4	1.0	"	33.1		98.0	58-146			
m,p-Xylene	64.0	2.0	"	66.5		96.2	57-144			
o-Xylene	33.2	1.0	"	32.8		101	53-146			
Surrogate: 1,2-Dichloroethane-d4	14.1		"	13.2		107	37-154			
Surrogate: Toluene-d8	13.2		"	13.3		99.1	45-149			
Surrogate: 4-Bromofluorobenzene	12.6		"	13.3		94.7	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.

Joseph J Egry IV For Paul Shrewsbury, President



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

Project: Dechant 1-31A
Project Number: [none]
Project Manager: Brandon Bruns

Reported:
12/09/14 09:54

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 1412030 - EPA 5030 Water MS

Matrix Spike (1412030-MS1)		Source: 1412006-01			Prepared & Analyzed: 12/03/14					
Benzene	31.2	1.0	ug/l	33.3	ND	93.7	34-141			
Toluene	29.9	1.0	"	33.3	ND	89.7	27-151			
Ethylbenzene	32.2	1.0	"	33.1	ND	97.5	29-160			
m,p-Xylene	67.2	2.0	"	66.5	ND	101	20-166			
o-Xylene	32.7	1.0	"	32.8	ND	99.6	33-159			
Surrogate: 1,2-Dichloroethane-d4	14.4		"	13.2		109	37-154			
Surrogate: Toluene-d8	13.3		"	13.3		99.9	45-149			
Surrogate: 4-Bromofluorobenzene	12.5		"	13.3		93.7	45-146			

Matrix Spike (1412030-MS2)		Source: 1412007-01			Prepared: 12/03/14 Analyzed: 12/04/14					
Benzene	31.4	1.0	ug/l	33.3	ND	94.1	34-141			
Toluene	29.7	1.0	"	33.3	ND	89.1	27-151			
Ethylbenzene	32.9	1.0	"	33.1	ND	99.4	29-160			
m,p-Xylene	64.1	2.0	"	66.5	ND	96.4	20-166			
o-Xylene	33.2	1.0	"	32.8	ND	101	33-159			
Surrogate: 1,2-Dichloroethane-d4	14.6		"	13.2		111	37-154			
Surrogate: Toluene-d8	13.0		"	13.3		97.7	45-149			
Surrogate: 4-Bromofluorobenzene	12.5		"	13.3		94.1	45-146			

Matrix Spike Dup (1412030-MSD1)		Source: 1412006-01			Prepared & Analyzed: 12/03/14					
Benzene	31.1	1.0	ug/l	33.3	ND	93.3	34-141	0.449	32	
Toluene	29.6	1.0	"	33.3	ND	89.0	27-151	0.840	25	
Ethylbenzene	32.5	1.0	"	33.1	ND	98.3	29-160	0.741	50	
m,p-Xylene	65.4	2.0	"	66.5	ND	98.2	20-166	2.72	36	
o-Xylene	33.3	1.0	"	32.8	ND	101	33-159	1.85	26	
Surrogate: 1,2-Dichloroethane-d4	14.5		"	13.2		110	37-154			
Surrogate: Toluene-d8	13.2		"	13.3		99.4	45-149			
Surrogate: 4-Bromofluorobenzene	12.7		"	13.3		95.5	45-146			

Summit Scientific

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Joseph J Egry IV For Paul Shrewsbury, President



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

Project: Dechant 1-31A
Project Number: [none]
Project Manager: Brandon Bruns

Reported:
12/09/14 09:54

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

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

Batch 1412030 - EPA 5030 Water MS

Matrix Spike Dup (1412030-MSD2)	Source: 1412007-01			Prepared: 12/03/14		Analyzed: 12/04/14				
Benzene	31.4	1.0	ug/l	33.3	ND	94.1	34-141	0.0638	32	
Toluene	29.5	1.0	"	33.3	ND	88.6	27-151	0.608	25	
Ethylbenzene	32.4	1.0	"	33.1	ND	98.0	29-160	1.38	50	
m,p-Xylene	62.9	2.0	"	66.5	ND	94.5	20-166	1.97	36	
o-Xylene	32.8	1.0	"	32.8	ND	100	33-159	1.36	26	
Surrogate: 1,2-Dichloroethane-d4	14.5		"	13.2		110	37-154			
Surrogate: Toluene-d8	12.9		"	13.3		96.8	45-149			
Surrogate: 4-Bromofluorobenzene	12.6		"	13.3		94.5	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.

Joseph J Egry IV For Paul Shrewsbury, President



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

Project: Dechant 1-31A
Project Number: [none]
Project Manager: Brandon Bruns

Reported:
12/09/14 09:54

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 read 'Joseph J Egry IV'.

Joseph J Egry IV For Paul Shrewsbury, President

Summit Scientific

741 Corporate Circle – Suite I ♦ Golden, Colorado 80401

303.277.9310 - laboratory ♦ 303.277.9531 - fax

March 23, 2015

Brandon Bruns
PDC Energy
1775 Sherman St. STE. 3000
Denver, CO 80203
RE: Dechant 1-31A

Enclosed are the results of analyses for samples received by Summit Scientific on 03/16/15 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: Dechant 1-31A
Project Number: [none]
Project Manager: Brandon Bruns

Reported:
03/23/15 16:21

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
MW07	1503136-01	Water	03/16/15 15:20	03/16/15 18:10
MW10R	1503136-02	Water	03/16/15 14:50	03/16/15 18:10
MW13	1503136-03	Water	03/16/15 14:52	03/16/15 18:10
MW17	1503136-04	Water	03/16/15 15:05	03/16/15 18:10
MW18	1503136-05	Water	03/16/15 15:15	03/16/15 18:10
MW19	1503136-06	Water	03/16/15 15:40	03/16/15 18:10
MW20	1503136-07	Water	03/16/15 15:26	03/16/15 18:10
MW21	1503136-08	Water	03/16/15 15:35	03/16/15 18:10
MW22	1503136-09	Water	03/16/15 15:30	03/16/15 18:10

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: Dechant 1-31A
Project Number: [none]
Project Manager: Brandon Bruns

Reported:
03/23/15 16:21

Sample Receipt Checklist

S2 Work Order: 1503136

Client: PDC ENERGY Client Project ID: DECHANT 1-31A

Shipped Via: HAND Airbill #: _____
(UPS, FedEx, Hand Delivered, Pick-up, etc.)

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

Cooler ID			<u>1</u>		
Temp (°C)			<u>11.2 °C</u>		

Thermometer ID: 61857155-K

	Yes	No	N/A	Comments (if any)
If samples require cooling, was the temperature just above 0°C to ≤ 6°C ⁽¹⁾ ?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
NOTE: If samples are delivered the same day of sampling, this requirement is waived provided that there is evidence that cooling has begun.				
Were all samples received intact ⁽¹⁾ ?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Was adequate sample volume provided ⁽¹⁾ ?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
If custody seals are present, are they intact ⁽¹⁾ ?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Are short holding time analytes or samples with HTs due within 48 hours present?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
Is a chain-of-custody (COC) form present and filled out completely ⁽¹⁾ ?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Does the COC agree with the number and type of sample bottles received ⁽¹⁾ ?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Do the sample IDs on the bottle labels match the COC ⁽¹⁾ ?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Is the COC properly relinquished by the client w/ date and time recorded ⁽¹⁾ ?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
For volatiles in water – is there headspace present? If yes, contact client and note in narrative.	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
Are samples preserved that require preservation (excluding cooling) ⁽¹⁾ ?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<u>HCl</u>
Note the type of preservative in the Comments column – HCl, H2SO4, NaOH, etc.				
If samples are acid preserved for metals, is the pH ≤ 2 ⁽¹⁾ ?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
Record the pH in Comments.				
If dissolved metals are requested, were samples field filtered?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
Additional Comments (if any):				
⁽¹⁾ If NO, then contact the client before proceeding with analysis and note in case narrative.				

Brandon Bruns
Custodian Printed Name

Signature or Initials of Custodian

3/23/15 12:15p
Date/Time



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

Project: Dechant 1-31A
Project Number: [none]
Project Manager: Brandon Brunns

Reported:
03/23/15 16:21

MW07
1503136-01 (Water)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **03/16/15 15:20**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Benzene	ND	1.0	ug/l	1	1503227	03/20/15	03/20/15	EPA 8260B	
Toluene	ND	1.0	"	"	"	"	"	"	
Ethylbenzene	ND	1.0	"	"	"	"	"	"	
Xylenes (total)	ND	1.0	"	"	"	"	"	"	

Date Sampled: **03/16/15 15:20**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 1,2-Dichloroethane-d4		86.3 %	37-154		"	"	"	"	
Surrogate: Toluene-d8		96.2 %	45-149		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		111 %	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: Dechant 1-31A
Project Number: [none]
Project Manager: Brandon Brunns

Reported:
03/23/15 16:21

MW10R
1503136-02 (Water)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **03/16/15 14:50**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Benzene	ND	1.0	ug/l	1	1503227	03/20/15	03/20/15	EPA 8260B	
Toluene	ND	1.0	"	"	"	"	"	"	
Ethylbenzene	550	100	"	100	"	"	"	"	
Xylenes (total)	7900	100	"	"	"	"	"	"	

Date Sampled: **03/16/15 14:50**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
<i>Surrogate: 1,2-Dichloroethane-d4</i>		88.2 %	37-154		"	"	"	"	
<i>Surrogate: Toluene-d8</i>		97.7 %	45-149		"	"	"	"	
<i>Surrogate: 4-Bromofluorobenzene</i>		110 %	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: Dechant 1-31A
Project Number: [none]
Project Manager: Brandon Brunns

Reported:
03/23/15 16:21

MW13
1503136-03 (Water)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **03/16/15 14:52**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Benzene	2.2	1.0	ug/l	1	1503227	03/20/15	03/20/15	EPA 8260B	
Toluene	ND	1.0	"	"	"	"	"	"	
Ethylbenzene	530	10	"	10	"	"	"	"	
Xylenes (total)	210	1.0	"	1	"	"	"	"	

Date Sampled: **03/16/15 14:52**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
<i>Surrogate: 1,2-Dichloroethane-d4</i>		84.6 %	37-154		"	"	"	"	
<i>Surrogate: Toluene-d8</i>		96.8 %	45-149		"	"	"	"	
<i>Surrogate: 4-Bromofluorobenzene</i>		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: Dechant 1-31A
Project Number: [none]
Project Manager: Brandon Brunns

Reported:
03/23/15 16:21

MW17
1503136-04 (Water)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **03/16/15 15:05**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Benzene	ND	1.0	ug/l	1	1503227	03/20/15	03/20/15	EPA 8260B	
Toluene	ND	1.0	"	"	"	"	"	"	
Ethylbenzene	1.5	1.0	"	"	"	"	"	"	
Xylenes (total)	2.0	1.0	"	"	"	"	"	"	

Date Sampled: **03/16/15 15:05**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
<i>Surrogate: 1,2-Dichloroethane-d4</i>		87.1 %	37-154		"	"	"	"	
<i>Surrogate: Toluene-d8</i>		96.6 %	45-149		"	"	"	"	
<i>Surrogate: 4-Bromofluorobenzene</i>		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: Dechant 1-31A
Project Number: [none]
Project Manager: Brandon Brunns

Reported:
03/23/15 16:21

MW18
1503136-05 (Water)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **03/16/15 15:15**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Benzene	ND	1.0	ug/l	1	1503227	03/20/15	03/20/15	EPA 8260B	
Toluene	ND	1.0	"	"	"	"	"	"	
Ethylbenzene	ND	1.0	"	"	"	"	"	"	
Xylenes (total)	ND	1.0	"	"	"	"	"	"	

Date Sampled: **03/16/15 15:15**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Surrogate: 1,2-Dichloroethane-d4		86.5 %	37-154		"	"	"	"	
Surrogate: Toluene-d8		95.8 %	45-149		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		110 %	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: Dechant 1-31A
Project Number: [none]
Project Manager: Brandon Brunns

Reported:
03/23/15 16:21

MW19
1503136-06 (Water)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **03/16/15 15:40**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Benzene	ND	1.0	ug/l	1	1503227	03/20/15	03/20/15	EPA 8260B	
Toluene	ND	1.0	"	"	"	"	"	"	
Ethylbenzene	ND	1.0	"	"	"	"	"	"	
Xylenes (total)	ND	1.0	"	"	"	"	"	"	

Date Sampled: **03/16/15 15:40**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Surrogate: 1,2-Dichloroethane-d4		87.3 %	37-154		"	"	"	"	
Surrogate: Toluene-d8		97.3 %	45-149		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		109 %	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: Dechant 1-31A
Project Number: [none]
Project Manager: Brandon Brunns

Reported:
03/23/15 16:21

MW20
1503136-07 (Water)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **03/16/15 15:26**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Benzene	ND	1.0	ug/l	1	1503227	03/20/15	03/20/15	EPA 8260B	
Toluene	ND	1.0	"	"	"	"	"	"	
Ethylbenzene	ND	1.0	"	"	"	"	"	"	
Xylenes (total)	ND	1.0	"	"	"	"	"	"	

Date Sampled: **03/16/15 15:26**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Surrogate: 1,2-Dichloroethane-d4		87.0 %	37-154		"	"	"	"	
Surrogate: Toluene-d8		95.6 %	45-149		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		109 %	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: Dechant 1-31A
Project Number: [none]
Project Manager: Brandon Brunns

Reported:
03/23/15 16:21

MW21
1503136-08 (Water)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **03/16/15 15:35**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Benzene	3.3	1.0	ug/l	1	1503227	03/20/15	03/20/15	EPA 8260B	
Toluene	3.7	1.0	"	"	"	"	"	"	
Ethylbenzene	1700	100	"	100	"	"	"	"	
Xylenes (total)	26000	100	"	"	"	"	"	"	

Date Sampled: **03/16/15 15:35**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
<i>Surrogate: 1,2-Dichloroethane-d4</i>		82.2 %	37-154		"	"	"	"	
<i>Surrogate: Toluene-d8</i>		95.2 %	45-149		"	"	"	"	
<i>Surrogate: 4-Bromofluorobenzene</i>		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: Dechant 1-31A
Project Number: [none]
Project Manager: Brandon Brunns

Reported:
03/23/15 16:21

MW22
1503136-09 (Water)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **03/16/15 15:30**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Benzene	ND	1.0	ug/l	1	1503227	03/20/15	03/20/15	EPA 8260B	
Toluene	ND	1.0	"	"	"	"	"	"	
Ethylbenzene	ND	1.0	"	"	"	"	"	"	
Xylenes (total)	12	1.0	"	"	"	"	"	"	

Date Sampled: **03/16/15 15:30**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Surrogate: 1,2-Dichloroethane-d4		85.1 %	37-154		"	"	"	"	
Surrogate: Toluene-d8		96.1 %	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: Dechant 1-31A
Project Number: [none]
Project Manager: Brandon Bruns

Reported:
03/23/15 16:21

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 1503227 - EPA 5030 Water MS

Blank (1503227-BLK1)

Prepared & Analyzed: 03/19/15

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		83.3	37-154			
Surrogate: Toluene-d8	12.8		"	13.3		96.4	45-149			
Surrogate: 4-Bromofluorobenzene	15.2		"	13.3		114	45-146			

LCS (1503227-BS1)

Prepared & Analyzed: 03/19/15

Benzene	30.6	1.0	ug/l	33.3		91.7	51-132			
Toluene	28.8	1.0	"	33.3		86.4	51-138			
Ethylbenzene	30.9	1.0	"	33.1		93.4	58-146			
m,p-Xylene	64.7	2.0	"	66.5		97.3	57-144			
o-Xylene	30.6	1.0	"	32.8		93.3	53-146			
Surrogate: 1,2-Dichloroethane-d4	11.5		"	13.2		87.1	37-154			
Surrogate: Toluene-d8	12.9		"	13.3		96.6	45-149			
Surrogate: 4-Bromofluorobenzene	14.0		"	13.3		105	45-146			

Matrix Spike (1503227-MS1)

Source: 1503138-02

Prepared & Analyzed: 03/19/15

Benzene	30.6	1.0	ug/l	33.3	ND	91.8	34-141			
Toluene	29.2	1.0	"	33.3	ND	87.5	27-151			
Ethylbenzene	30.6	1.0	"	33.1	ND	92.6	29-160			
m,p-Xylene	64.1	2.0	"	66.5	ND	96.3	20-166			
o-Xylene	30.4	1.0	"	32.8	ND	92.7	33-159			
Surrogate: 1,2-Dichloroethane-d4	11.8		"	13.2		89.5	37-154			
Surrogate: Toluene-d8	12.8		"	13.3		96.1	45-149			
Surrogate: 4-Bromofluorobenzene	14.6		"	13.3		110	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: Dechant 1-31A
Project Number: [none]
Project Manager: Brandon Bruns

Reported:
03/23/15 16:21

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

July 01, 2015

Mark Longhurst
PDC Energy
1775 Sherman St. STE. 3000
Denver, CO 80203
RE: Dechant 1-31A

Enclosed are the results of analyses for samples received by Summit Scientific on 06/25/15 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: Dechant 1-31A
Project Number: [none]
Project Manager: Mark Longhurst

Reported:
07/01/15 08:56

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
MW07	1506266-01	Water	06/25/15 09:34	06/25/15 17:00
MW10R	1506266-02	Water	06/25/15 09:18	06/25/15 17:00
MW13	1506266-03	Water	06/25/15 09:20	06/25/15 17:00
MW17	1506266-04	Water	06/25/15 09:37	06/25/15 17:00
MW18	1506266-05	Water	06/25/15 09:41	06/25/15 17:00
MW19	1506266-06	Water	06/25/15 09:39	06/25/15 17:00
MW20	1506266-07	Water	06/25/15 09:26	06/25/15 17:00
MW21	1506266-08	Water	06/25/15 09:33	06/25/15 17:00
MW22	1506266-09	Water	06/25/15 09:25	06/25/15 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: Dechant 1-31A

Project Number: [none]
Project Manager: Mark Longhurst

Reported:
07/01/15 08:56

Summit Scientific

1506266

741 Corporate Circle Suite 1 ♦ 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: Kate Forsmark

Project Manager: Mark Longhurst

E-Mail: Mark.Longhurst@PDCE.com

Project Name: Dechant 1-31A

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)				
MW07	6/25/15	934	3	X				X							
MW10R		918													
MW13		920													
MW17		937													
MW18		941													
MW19		939													
MW20		926													
MW21		933													
MW22		925													

Relinquished by: <i>Kate Forsmark</i>	Date/Time: 6/25/15	Received by: <i>[Signature]</i>	Date/Time: 6/25/15 1700	Turn Around Time (Check)	Notes:
Relinquished by: <i>[Signature]</i>	Date/Time: 6/25/15 1900	Received by: <i>[Signature]</i>	Date/Time: 6/25 1900	Same Day <input type="checkbox"/> 72 Hours <input type="checkbox"/> 24 Hours <input type="checkbox"/> Standard <input checked="" type="checkbox"/> 48 Hours <input type="checkbox"/>	
Relinquished by:	Date/Time:	Received in Lab by:	Date/Time:	Sample Integrity:	
				Temperature Upon Receipt: 5.3	
				Intact: Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	

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

Project: Dechant 1-31A
Project Number: [none]
Project Manager: Mark Longhurst

Reported:
07/01/15 08:56

MW07
1506266-01 (Water)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **06/25/15 09:34**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Benzene	ND	1.0	ug/l	1	1506341	06/27/15	06/27/15	EPA 8260B	
Toluene	ND	1.0	"	"	"	"	"	"	
Ethylbenzene	ND	1.0	"	"	"	"	"	"	
Xylenes (total)	ND	1.0	"	"	"	"	"	"	

Date Sampled: **06/25/15 09:34**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 1,2-Dichloroethane-d4		144 %	37-154		"	"	"	"	
Surrogate: Toluene-d8		100 %	45-149		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		109 %	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: Dechant 1-31A
Project Number: [none]
Project Manager: Mark Longhurst

Reported:
07/01/15 08:56

MW10R
1506266-02 (Water)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **06/25/15 09:18**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Benzene	ND	1.0		ug/l	1	1506341	06/27/15	06/27/15	EPA 8260B	
Toluene	ND	1.0		"	"	"	"	"	"	
Ethylbenzene	230	1.0		"	"	"	"	"	"	
Xylenes (total)	2700	100		"	100	"	"	"	"	

Date Sampled: **06/25/15 09:18**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Surrogate: 1,2-Dichloroethane-d4		147 %		37-154		"	"	"	"	
Surrogate: Toluene-d8		115 %		45-149		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		117 %		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: Dechant 1-31A
Project Number: [none]
Project Manager: Mark Longhurst

Reported:
07/01/15 08:56

MW13
1506266-03 (Water)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **06/25/15 09:20**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Benzene	1.8	1.0		ug/l	1	1506341	06/27/15	06/27/15	EPA 8260B	
Toluene	ND	1.0		"	"	"	"	"	"	
Ethylbenzene	260	1.0		"	"	"	"	"	"	
Xylenes (total)	310	1.0		"	"	"	"	"	"	

Date Sampled: **06/25/15 09:20**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Surrogate: 1,2-Dichloroethane-d4		145 %		37-154		"	"	"	"	
Surrogate: Toluene-d8		99.5 %		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: Dechant 1-31A
Project Number: [none]
Project Manager: Mark Longhurst

Reported:
07/01/15 08:56

MW17
1506266-04 (Water)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **06/25/15 09:37**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Benzene	ND	1.0	ug/l	1	1506341	06/27/15	06/27/15	EPA 8260B	
Toluene	ND	1.0	"	"	"	"	"	"	
Ethylbenzene	ND	1.0	"	"	"	"	"	"	
Xylenes (total)	ND	1.0	"	"	"	"	"	"	

Date Sampled: **06/25/15 09:37**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Surrogate: 1,2-Dichloroethane-d4		146 %	37-154		"	"	"	"	
Surrogate: Toluene-d8		101 %	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: Dechant 1-31A
Project Number: [none]
Project Manager: Mark Longhurst

Reported:
07/01/15 08:56

MW18
1506266-05 (Water)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **06/25/15 09:41**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Benzene	ND	1.0	ug/l	1	1506341	06/27/15	06/27/15	EPA 8260B	
Toluene	ND	1.0	"	"	"	"	"	"	
Ethylbenzene	ND	1.0	"	"	"	"	"	"	
Xylenes (total)	ND	1.0	"	"	"	"	"	"	

Date Sampled: **06/25/15 09:41**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Surrogate: 1,2-Dichloroethane-d4		146 %	37-154		"	"	"	"	
Surrogate: Toluene-d8		104 %	45-149		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		107 %	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: Dechant 1-31A
Project Number: [none]
Project Manager: Mark Longhurst

Reported:
07/01/15 08:56

MW19
1506266-06 (Water)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **06/25/15 09:39**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Benzene	ND	1.0	ug/l	1	1506341	06/27/15	06/27/15	EPA 8260B	
Toluene	ND	1.0	"	"	"	"	"	"	
Ethylbenzene	ND	1.0	"	"	"	"	"	"	
Xylenes (total)	ND	1.0	"	"	"	"	"	"	

Date Sampled: **06/25/15 09:39**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Surrogate: 1,2-Dichloroethane-d4		148 %	37-154		"	"	"	"	
Surrogate: Toluene-d8		101 %	45-149		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		107 %	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: Dechant 1-31A
Project Number: [none]
Project Manager: Mark Longhurst

Reported:
07/01/15 08:56

MW20
1506266-07 (Water)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **06/25/15 09:26**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Benzene	ND	1.0	ug/l	1	1506341	06/27/15	06/27/15	EPA 8260B	
Toluene	ND	1.0	"	"	"	"	"	"	
Ethylbenzene	ND	1.0	"	"	"	"	"	"	
Xylenes (total)	ND	1.0	"	"	"	"	"	"	

Date Sampled: **06/25/15 09:26**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Surrogate: 1,2-Dichloroethane-d4		143 %	37-154		"	"	"	"	
Surrogate: Toluene-d8		99.2 %	45-149		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		109 %	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: Dechant 1-31A
Project Number: [none]
Project Manager: Mark Longhurst

Reported:
07/01/15 08:56

MW21
1506266-08 (Water)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **06/25/15 09:33**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Benzene	4.5	1.0		ug/l	1	1506341	06/27/15	06/27/15	EPA 8260B	
Toluene	4.9	1.0		"	"	"	"	"	"	
Ethylbenzene	1300	100		"	100	"	"	"	"	
Xylenes (total)	21000	100		"	"	"	"	"	"	

Date Sampled: **06/25/15 09:33**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
<i>Surrogate: 1,2-Dichloroethane-d4</i>		143 %		37-154		"	"	"	"	
<i>Surrogate: Toluene-d8</i>		117 %		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: Dechant 1-31A
Project Number: [none]
Project Manager: Mark Longhurst

Reported:
07/01/15 08:56

MW22
1506266-09 (Water)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **06/25/15 09:25**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Benzene	ND	1.0	ug/l	1	1506341	06/27/15	06/27/15	EPA 8260B	
Toluene	ND	1.0	"	"	"	"	"	"	
Ethylbenzene	ND	1.0	"	"	"	"	"	"	
Xylenes (total)	12	1.0	"	"	"	"	"	"	

Date Sampled: **06/25/15 09:25**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Surrogate: 1,2-Dichloroethane-d4		147 %	37-154		"	"	"	"	
Surrogate: Toluene-d8		101 %	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: Dechant 1-31A
Project Number: [none]
Project Manager: Mark Longhurst

Reported:
07/01/15 08:56

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 1506341 - EPA 5030 Water MS

Blank (1506341-BLK1)

Prepared & Analyzed: 06/27/15

Benzene	ND	1.0	ug/l							
Toluene	ND	1.0	"							
Ethylbenzene	ND	1.0	"							
Xylenes (total)	ND	1.0	"							
Surrogate: 1,2-Dichloroethane-d4	19.8		"	13.2	150	37-154				
Surrogate: Toluene-d8	13.7		"	13.3	103	45-149				
Surrogate: 4-Bromofluorobenzene	14.4		"	13.3	108	45-146				

LCS (1506341-BS1)

Prepared & Analyzed: 06/27/15

Benzene	37.8	1.0	ug/l	33.3	113	51-132				
Toluene	36.7	1.0	"	33.3	110	51-138				
Ethylbenzene	39.8	1.0	"	33.1	120	58-146				
m,p-Xylene	74.8	2.0	"	66.5	112	57-144				
o-Xylene	37.6	1.0	"	32.8	115	53-146				
Surrogate: 1,2-Dichloroethane-d4	19.4		"	13.2	147	37-154				
Surrogate: Toluene-d8	13.7		"	13.3	103	45-149				
Surrogate: 4-Bromofluorobenzene	14.4		"	13.3	108	45-146				

Matrix Spike (1506341-MS1)

Source: 1506265-03

Prepared & Analyzed: 06/27/15

Benzene	37.1	1.0	ug/l	33.3	ND	111	34-141			
Toluene	36.3	1.0	"	33.3	ND	109	27-151			
Ethylbenzene	38.6	1.0	"	33.1	ND	117	29-160			
m,p-Xylene	71.2	2.0	"	66.5	ND	107	20-166			
o-Xylene	36.2	1.0	"	32.8	ND	110	33-159			
Surrogate: 1,2-Dichloroethane-d4	19.9		"	13.2	151	37-154				
Surrogate: Toluene-d8	13.6		"	13.3	102	45-149				
Surrogate: 4-Bromofluorobenzene	14.3		"	13.3	107	45-146				

Summit Scientific

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

Project: Dechant 1-31A
Project Number: [none]
Project Manager: Mark Longhurst

Reported:
07/01/15 08:56

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 1506341 - EPA 5030 Water MS

Matrix Spike Dup (1506341-MSD1)		Source: 1506265-03			Prepared & Analyzed: 06/27/15					
Benzene	37.0	1.0	ug/l	33.3	ND	111	34-141	0.297	32	
Toluene	36.1	1.0	"	33.3	ND	108	27-151	0.525	25	
Ethylbenzene	40.2	1.0	"	33.1	ND	122	29-160	4.16	50	
m,p-Xylene	74.7	2.0	"	66.5	ND	112	20-166	4.81	36	
o-Xylene	37.0	1.0	"	32.8	ND	113	33-159	2.22	26	
Surrogate: 1,2-Dichloroethane-d4	20.9		"	13.2		158	37-154			
Surrogate: Toluene-d8	13.1		"	13.3		98.6	45-149			
Surrogate: 4-Bromofluorobenzene	14.6		"	13.3		109	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: Dechant 1-31A
Project Number: [none]
Project Manager: Mark Longhurst

Reported:
07/01/15 08:56

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

October 02, 2015

Mark Longhurst
PDC Energy
1775 Sherman St. STE. 3000
Denver, CO 80203
RE: Dechant 1-31A

Enclosed are the results of analyses for samples received by Summit Scientific on 09/25/15 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: Dechant 1-31A
Project Number: [none]
Project Manager: Mark Longhurst

Reported:
10/02/15 16:41

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
MW07	1509249-01	Water	09/25/15 09:52	09/25/15 17:00
MW10R	1509249-02	Water	09/25/15 10:04	09/25/15 17:00
MW13	1509249-03	Water	09/25/15 09:57	09/25/15 17:00
MW17	1509249-04	Water	09/25/15 09:43	09/25/15 17:00
MW18	1509249-05	Water	09/25/15 09:56	09/25/15 17:00
MW19	1509249-06	Water	09/25/15 09:56	09/25/15 17:00
MW20	1509249-07	Water	09/25/15 09:42	09/25/15 17:00
MW21	1509249-08	Water	09/25/15 09:40	09/25/15 17:00
MW22	1509249-09	Water	09/25/15 10:00	09/25/15 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: Dechant 1-31A
Project Number: [none]
Project Manager: Mark Longhurst

Reported:
10/02/15 16:41

Summit Scientific

1509249

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

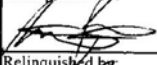



Client: PDC Energy

Page 1 of 1

Address:
City/State/Zip:
Phone: Fax:
Sampler Name: M.H.P., Kate F., Jesse, Daniel

Project Manager: Mark Longhurst
E-Mail: Mark.Longhurst@PDCE.com
Project Name: Dechant 1-31A
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)	STE X (8260)		
MW07	9/25/15	9:52	3	X				X						
MW10R		10:04												
MW13		9:57												
MW17		9:43												
MW18		9:56												
MW19		9:56												
MW20		9:42												
MW21		9:40												
MW22		10:00												

Relinquished by: 	Date/Time: 9/25/15 16:00	Received by: 	Date/Time: 9/25/15 17:00	Turn Around Time (Check) Same Day <input type="checkbox"/> 72 Hours <input type="checkbox"/> 24 Hours <input type="checkbox"/> Standard <input checked="" type="checkbox"/> 48 Hours <input type="checkbox"/>	Notes: on ice
Relinquished by: 	Date/Time: 9/25/15 17:40	Received by: 	Date/Time: 9/25 17:40		
Relinquished by:	Date/Time:	Received in Lab by:	Date/Time:		

Sample Integrity:
Temperature Upon Receipt: 2.5°C
Intact: ☒ Yes ☐ No

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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: Dechant 1-31A
Project Number: [none]
Project Manager: Mark Longhurst

Reported:
10/02/15 16:41

MW07
1509249-01 (Water)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **09/25/15 09:52**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Benzene	ND	1.0	ug/l	1	1509280	09/29/15	09/30/15	EPA 8260B	
Toluene	ND	1.0	"	"	"	"	"	"	
Ethylbenzene	ND	1.0	"	"	"	"	"	"	
Xylenes (total)	ND	1.0	"	"	"	"	"	"	

Date Sampled: **09/25/15 09:52**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 1,2-Dichloroethane-d4		109 %	37-154		"	"	"	"	
Surrogate: Toluene-d8		98.8 %	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: Dechant 1-31A
Project Number: [none]
Project Manager: Mark Longhurst

Reported:
10/02/15 16:41

MW10R
1509249-02 (Water)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **09/25/15 10:04**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Benzene	ND	1.0	ug/l	1	1509280	09/30/15	09/30/15	EPA 8260B	
Toluene	ND	1.0	"	"	"	"	"	"	
Ethylbenzene	59	1.0	"	"	"	"	"	"	
Xylenes (total)	240	1.0	"	"	"	"	"	"	

Date Sampled: **09/25/15 10:04**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
<i>Surrogate: 1,2-Dichloroethane-d4</i>		<i>103 %</i>	<i>37-154</i>		<i>"</i>	<i>"</i>	<i>"</i>	<i>"</i>	
<i>Surrogate: Toluene-d8</i>		<i>96.0 %</i>	<i>45-149</i>		<i>"</i>	<i>"</i>	<i>"</i>	<i>"</i>	
<i>Surrogate: 4-Bromofluorobenzene</i>		<i>99.4 %</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: Dechant 1-31A
Project Number: [none]
Project Manager: Mark Longhurst

Reported:
10/02/15 16:41

MW13
1509249-03 (Water)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **09/25/15 09:57**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Benzene	2.0	1.0		ug/l	1	1509280	09/30/15	09/30/15	EPA 8260B	
Toluene	ND	1.0		"	"	"	"	"	"	
Ethylbenzene	570	10		"	10	"	"	"	"	
Xylenes (total)	710	10		"	"	"	"	"	"	

Date Sampled: **09/25/15 09:57**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Surrogate: 1,2-Dichloroethane-d4		103 %		37-154		"	"	"	"	
Surrogate: Toluene-d8		94.5 %		45-149		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		94.6 %		45-146		"	"	"	"	

Summit Scientific

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

Project: Dechant 1-31A
Project Number: [none]
Project Manager: Mark Longhurst

Reported:
10/02/15 16:41

MW17
1509249-04 (Water)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **09/25/15 09:43**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Benzene	ND	1.0	ug/l	1	1509280	09/30/15	09/30/15	EPA 8260B	
Toluene	ND	1.0	"	"	"	"	"	"	
Ethylbenzene	ND	1.0	"	"	"	"	"	"	
Xylenes (total)	ND	1.0	"	"	"	"	"	"	

Date Sampled: **09/25/15 09:43**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Surrogate: 1,2-Dichloroethane-d4		107 %	37-154		"	"	"	"	
Surrogate: Toluene-d8		94.1 %	45-149		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		94.6 %	45-146		"	"	"	"	

Summit Scientific

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

Project: Dechant 1-31A
Project Number: [none]
Project Manager: Mark Longhurst

Reported:
10/02/15 16:41

MW18
1509249-05 (Water)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **09/25/15 09:56**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Benzene	ND	1.0	ug/l	1	1509280	09/30/15	09/30/15	EPA 8260B	
Toluene	ND	1.0	"	"	"	"	"	"	
Ethylbenzene	ND	1.0	"	"	"	"	"	"	
Xylenes (total)	ND	1.0	"	"	"	"	"	"	

Date Sampled: **09/25/15 09:56**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Surrogate: 1,2-Dichloroethane-d4		106 %	37-154		"	"	"	"	
Surrogate: Toluene-d8		94.9 %	45-149		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		94.9 %	45-146		"	"	"	"	

Summit Scientific

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

Project: Dechant 1-31A
Project Number: [none]
Project Manager: Mark Longhurst

Reported:
10/02/15 16:41

MW19
1509249-06 (Water)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **09/25/15 09:56**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Benzene	ND	1.0	ug/l	1	1509280	09/30/15	09/30/15	EPA 8260B	
Toluene	ND	1.0	"	"	"	"	"	"	
Ethylbenzene	ND	1.0	"	"	"	"	"	"	
Xylenes (total)	ND	1.0	"	"	"	"	"	"	

Date Sampled: **09/25/15 09:56**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Surrogate: 1,2-Dichloroethane-d4		107 %	37-154		"	"	"	"	
Surrogate: Toluene-d8		93.6 %	45-149		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		94.7 %	45-146		"	"	"	"	

Summit Scientific

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

Project: Dechant 1-31A
Project Number: [none]
Project Manager: Mark Longhurst

Reported:
10/02/15 16:41

MW20
1509249-07 (Water)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **09/25/15 09:42**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Benzene	ND	1.0	ug/l	1	1509280	09/30/15	09/30/15	EPA 8260B	
Toluene	ND	1.0	"	"	"	"	"	"	
Ethylbenzene	ND	1.0	"	"	"	"	"	"	
Xylenes (total)	ND	1.0	"	"	"	"	"	"	

Date Sampled: **09/25/15 09:42**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Surrogate: 1,2-Dichloroethane-d4		105 %	37-154		"	"	"	"	
Surrogate: Toluene-d8		94.1 %	45-149		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		89.8 %	45-146		"	"	"	"	

Summit Scientific

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

Project: Dechant 1-31A
Project Number: [none]
Project Manager: Mark Longhurst

Reported:
10/02/15 16:41

MW21
1509249-08 (Water)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **09/25/15 09:40**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Benzene	2.6	1.0	ug/l	1	1509280	09/30/15	09/30/15	EPA 8260B	
Toluene	3.6	1.0	"	"	"	"	"	"	
Ethylbenzene	840	100	"	100	"	"	"	"	
Xylenes (total)	14000	100	"	"	"	"	"	"	

Date Sampled: **09/25/15 09:40**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
<i>Surrogate: 1,2-Dichloroethane-d4</i>		105 %	37-154		"	"	"	"	
<i>Surrogate: Toluene-d8</i>		95.3 %	45-149		"	"	"	"	
<i>Surrogate: 4-Bromofluorobenzene</i>		97.1 %	45-146		"	"	"	"	

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

Project: Dechant 1-31A
Project Number: [none]
Project Manager: Mark Longhurst

Reported:
10/02/15 16:41

MW22
1509249-09 (Water)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **09/25/15 10:00**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Benzene	ND	1.0	ug/l	1	1509280	09/30/15	09/30/15	EPA 8260B	
Toluene	ND	1.0	"	"	"	"	"	"	
Ethylbenzene	ND	1.0	"	"	"	"	"	"	
Xylenes (total)	ND	1.0	"	"	"	"	"	"	

Date Sampled: **09/25/15 10:00**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Surrogate: 1,2-Dichloroethane-d4		104 %	37-154		"	"	"	"	
Surrogate: Toluene-d8		94.4 %	45-149		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		93.2 %	45-146		"	"	"	"	

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

Project: Dechant 1-31A
Project Number: [none]
Project Manager: Mark Longhurst

Reported:
10/02/15 16:41

Volatile Organic Compounds by EPA Method 8260B - Quality Control

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

Batch 1509280 - EPA 5030 Water MS

Blank (1509280-BLK1)

Prepared: 09/29/15 Analyzed: 09/30/15

Benzene	ND	1.0	ug/l							
Toluene	ND	1.0	"							
Ethylbenzene	ND	1.0	"							
Xylenes (total)	ND	1.0	"							
Surrogate: 1,2-Dichloroethane-d4	15.0		"	13.2	113	37-154				
Surrogate: Toluene-d8	13.2		"	13.3	99.2	45-149				
Surrogate: 4-Bromofluorobenzene	13.9		"	13.3	105	45-146				

LCS (1509280-BS1)

Prepared: 09/29/15 Analyzed: 09/30/15

Benzene	34.5	1.0	ug/l	33.3	103	51-132				
Toluene	31.6	1.0	"	33.3	94.9	51-138				
Ethylbenzene	33.6	1.0	"	33.1	102	58-146				
m,p-Xylene	61.8	2.0	"	66.5	92.9	57-144				
o-Xylene	31.1	1.0	"	32.8	94.8	53-146				
Surrogate: 1,2-Dichloroethane-d4	15.3		"	13.2	116	37-154				
Surrogate: Toluene-d8	14.0		"	13.3	105	45-149				
Surrogate: 4-Bromofluorobenzene	13.3		"	13.3	99.6	45-146				

Matrix Spike (1509280-MS1)

Source: 1509249-01

Prepared: 09/29/15 Analyzed: 09/30/15

Benzene	33.8	1.0	ug/l	33.3	ND	101	34-141			
Toluene	30.7	1.0	"	33.3	ND	92.2	27-151			
Ethylbenzene	33.3	1.0	"	33.1	ND	101	29-160			
m,p-Xylene	62.0	2.0	"	66.5	ND	93.1	20-166			
o-Xylene	30.7	1.0	"	32.8	ND	93.5	33-159			
Surrogate: 1,2-Dichloroethane-d4	14.6		"	13.2	111	37-154				
Surrogate: Toluene-d8	14.1		"	13.3	105	45-149				
Surrogate: 4-Bromofluorobenzene	12.2		"	13.3	91.9	45-146				

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

Project: Dechant 1-31A
Project Number: [none]
Project Manager: Mark Longhurst

Reported:
10/02/15 16:41

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 1509280 - EPA 5030 Water MS

Matrix Spike Dup (1509280-MSD1)	Source: 1509249-01			Prepared: 09/29/15		Analyzed: 09/30/15				
Benzene	34.9	1.0	ug/l	33.3	ND	105	34-141	3.26	32	
Toluene	32.2	1.0	"	33.3	ND	96.6	27-151	4.67	25	
Ethylbenzene	34.7	1.0	"	33.1	ND	105	29-160	4.14	50	
m,p-Xylene	64.3	2.0	"	66.5	ND	96.7	20-166	3.75	36	
o-Xylene	32.0	1.0	"	32.8	ND	97.5	33-159	4.18	26	
Surrogate: 1,2-Dichloroethane-d4	14.6		"	13.2		111	37-154			
Surrogate: Toluene-d8	13.9		"	13.3		104	45-149			
Surrogate: 4-Bromofluorobenzene	13.2		"	13.3		99.2	45-146			

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

Project: Dechant 1-31A
Project Number: [none]
Project Manager: Mark Longhurst

Reported:
10/02/15 16:41

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'.