PDC Energy, Inc.

Second Quarter 2018 Groundwater Monitoring Summary

July 26, 2018

Former Steinwald 1 Tank Battery
NWNW S3 T1N R64W
Weld County, API # 05-123-10892
Facility ID # 437254
Remediation # 8954

This groundwater summary has been prepared by Tasman Geosciences, Inc. for the former Steinwald 1 tank battery. Per the Colorado Oil and Gas Conservation Commission approval on March 14, 2018, monitoring wells BH02R, BH03R, and BH12 were removed from the monitoring well network prior to the second quarter 2018 sampling event. On May 8, 2018, groundwater sampling was conducted at seven monitoring well locations (BH01R, BH04R, BH05R, BH06) at the site. Four groundwater samples were submitted to Summit Scientific Laboratory for analysis of benzene, toluene, ethylbenzene, total xylenes (BTEX) by USEPA Method 8260B. Groundwater analytical results are summarized in Table 1 and the laboratory report is included as Attachment A. Sample locations and corresponding analytical results are illustrated on Figure 1. Second quarter 2018 analytical results indicate that benzene concentrations are above the applicable COGCC Table 910-1 groundwater standard in monitoring well locations BH04R and BH06. BTEX concentrations are below COGCC regulatory standards in two well locations.

Monitored natural attenuation (MNA) was selected as the remediation strategy for the site during the fourth quarter 2014 and will continue through the third quarter 2018.

Third quarter 2018 groundwater sampling will be conducted during August 2018.

BH01R		
Compound (µg/L)	2/15/2018	5/8/2018
Benzene	<1.0	<1.0
Toluene	<1.0	<1.0
Ethylbenzene	<1.0	<1.0
Total Xylenes	<2.0	<2.0
Depth to Water (ft. bgs)	62.43	62.57

BH06		
Compound (µg/L)	2/15/2018	5/8/2018
Benzene	<1.0	**67**
Toluene	<1.0	6.0
Ethylbenzene	<1.0	<1.0
Total Xylenes	<2.0	2.2
Depth to Water (ft. bgs)	62.61	62.78

BH05R		
Compound (µg/L)	2/15/2018	5/8/2018
Benzene	<1.0	<1.0
Toluene	<1.0	<1.0
Ethylbenzene	<1.0	<1.0
Total Xylenes	<2.0	<2.0
Depth to Water (ft. bgs)	62.54	62.72

BH04R		
Compound (µg/L)	2/15/2018	5/8/2018
Benzene	**310**	**840**
Toluene	64	140
Ethylbenzene	1.2	10
Total Xylenes	110	180
Depth to Water (ft. bgs)	62.91	63.10

BH12

BH01R

BH03R

BH06

BH02R

BH04R

BH05R

Surface Drainage

Legend

- Replacement Monitoring Well Location (Collected via Trimble GPS)
- Monitoring Well Location (Collected via Trimble GPS)
- Monitoring Well Location - Removed from Network (Collected via Trimble GPS)
- Release Location
- Excavation Extent - 2014 (Collected via Trimble GPS)
- Excavation Extent - 2016 (Collected via Trimble GPS)
- Groundwater Flow Direction (1Q18)

Notes

All locations are approximate unless otherwise noted.

Surface drainage direction is estimated based on site topography and is not related to regional topography.

Red text denotes an exceedance of COGCC standards

ft. bgs - Feet below ground surface
µg/L - Micrograms per liter
GPS - Global Positioning System
COGCC - Colorado Oil and Gas Conservation Commission

0 40 ft. 80 ft.

N

Image Source: Google Earth; 2016 Google
Projection: WGS 84 UTM Zone 13 North

Imagery Source: 2016 Google

DATE: June 2018
DESIGNED BY: C. Hamlin
DRAWN BY: D. Cavinder

TASMAN GEOSCIENCES
Tasman Geosciences, Inc.
6899 Pecos Street - Unit C
Denver, CO 80221

PDC Energy, Inc.
Former Steinwald #1 Tank Battery
NWNW Section 3, Township 1 North, Range 64 West
Weld County, Colorado

GROUNDWATER ANALYTICAL RESULTS MAP

FIGURE 1

TABLE 1
FORMER STEINWALD #1 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 [3] (feet)
COGCC Table 910-1 Groundwater Standard (µg/L) [1]		**5**	**560**	**700**	**1,400**	
BH01	10/7/2014	4.6	15	<1.0	9.2	NM
BH01	10/20/2014	<1.0	<1.0	<1.0	<1.0	67.08
BH01	2/23/2015	**95**	3.9	<1.0	5.1	66.90
BH01	5/14/2015	**81**	<1.0	<1.0	<1.0	66.56
BH01	8/6/2015	**160**	<1.0	<1.0	2.2	66.53
BH01	11/12/2015	**360**	3.8	<1.0	10	66.51
BH01	2/10/2016	**22**	1.0	<1.0	2.3	66.49
BH01	5/3/2016	**280**	2.3	<1.0	3.8	66.45
BH01	8/15/2016	**220**	19	<1.0	33	66.28
BH01	Destroyed					
BH01R	5/11/2017	<1.0	<1.0	<1.0	<2.0	63.10
BH01R	12/1/2017	<1.0	<1.0	<1.0	<2.0	62.58
BH01R	2/15/2018	<1.0	<1.0	<1.0	<2.0	62.43
BH01R	5/8/2018	<1.0	<1.0	<1.0	<2.0	62.57
BH02	10/7/2014	<1.0	<1.0	<1.0	<1.0	NM
BH02	10/20/2014	<1.0	<1.0	<1.0	<1.0	68.90
BH02	2/23/2015	<1.0	<1.0	<1.0	<1.0	68.61
BH02	5/14/2015	**5.2**	<1.0	<1.0	<1.0	68.30
BH02	8/6/2015	**6.9**	<1.0	<1.0	<1.0	68.29
BH02	11/12/2015	**21**	<1.0	<1.0	<1.0	68.20
BH02	2/10/2016	**13**	<1.0	<1.0	<1.0	68.17
BH02	5/3/2016	**7.3**	<1.0	<1.0	<1.0	68.17
BH02	8/15/2016	3.2	7.8	<1.0	<1.0	68.04
BH02	Destroyed					
BH02R	5/11/2017	<1.0	<1.0	<1.0	<2.0	64.49
BH02R	12/1/2017	<1.0	<1.0	<1.0	<2.0	63.94
BH02R	2/15/2018	<1.0	<1.0	<1.0	<2.0	63.77
BH02R	5/8/2018	Well Removed From Monitoring Network				
BH03	10/7/2014	<1.0	2.7	<1.0	5.7	NM
BH03	10/20/2014	<1.0	<1.0	<1.0	<1.0	63.86
BH03	2/23/2015	<1.0	<1.0	<1.0	<1.0	63.69

TABLE 1
FORMER STEINWALD #1 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 [3] (feet)
COGCC Table 910-1 Groundwater Standard (µg/L) [1]		**5**	**560**	**700**	**1,400**	
BH03	5/14/2015	**6.1**	<1.0	<1.0	<1.0	63.41
BH03	8/6/2015	**10**	<1.0	<1.0	<1.0	63.39
BH03	11/12/2015	**56**	<1.0	<1.0	<1.0	63.35
BH03	2/10/2016	**24**	<1.0	<1.0	<1.0	63.28
BH03	5/3/2016	**26**	<1.0	<1.0	<1.0	63.30
BH03	8/15/2016	**22**	<1.0	<1.0	<1.0	63.12
BH03	Destroyed					
BH03R	5/11/2017	<1.0	<1.0	<1.0	<2.0	61.14
BH03R	12/1/2017	<1.0	<1.0	<1.0	<2.0	60.67
BH03R	2/15/2018	<1.0	<1.0	<1.0	<2.0	60.50
BH03R	5/8/2018	Well Removed From Monitoring Network				
BH04	10/7/2014	**130**	**670**	29	390	NM
BH04	10/20/2014	**91**	**720**	51	1,000	66.58
BH04	10/23/2014	**110**	320	11	260	66.46
BH04	2/23/2015	**260**	8.2	<1.0	100	66.32
BH04	5/14/2015	**500**	10	2.3	41	66.00
BH04	8/6/2015	**300**	6.1	1.7	47	65.99
BH04	11/12/2015	**1,000**	4.2	3.2	44	65.96
BH04	2/10/2016	**710**	<1.0	1.2	5.3	65.81
BH04	5/3/2016	**660**	<1.0	1.1	2.9	65.87
BH04	8/15/2016	**160**	<1.0	<1.0	<1.0	65.69
BH04	Destroyed					
BH04R	5/11/2017	**86**	**620**	12	700	63.63
BH04R	12/1/2017	**1,300**	140	11	280	63.06
BH04R	2/15/2018	**310**	64	1.2	110	62.91
BH04R	5/8/2018	**840**	140	10	180	63.10
BH05 [2]	11/26/2014	<1.0	<1.0	<1.0	<1.0	65.68 [2]
BH05	2/23/2015	<1.0	<1.0	<1.0	<1.0	65.88
BH05	5/14/2015	<1.0	<1.0	<1.0	<1.0	65.52
BH05	8/6/2015	<1.0	<1.0	<1.0	<1.0	65.56
BH05	11/12/2015	<1.0	<1.0	<1.0	<1.0	65.54

TABLE 1
FORMER STEINWALD #1 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 [3] (feet)
COGCC Table 910-1 Groundwater Standard (µg/L) [1]		**5**	**560**	**700**	**1,400**	
BH05	2/10/2016	<1.0	<1.0	<1.0	<1.0	65.38
BH05	5/3/2016	<1.0	<1.0	<1.0	<1.0	65.45
BH05	8/15/2016	<1.0	<1.0	<1.0	<1.0	65.28
BH05	Destroyed					
BH05R	5/11/2017	<1.0	<1.0	<1.0	<2.0	63.36
BH05R	12/1/2017	<1.0	<1.0	<1.0	<2.0	62.71
BH05R	2/15/2018	<1.0	<1.0	<1.0	<2.0	62.54
BH05R	5/8/2018	<1.0	<1.0	<1.0	<2.0	62.72
BH06	5/11/2017	<1.0	1.1	<1.0	<2.0	63.37
BH06	12/1/2017	<1.0	<1.0	<1.0	<2.0	62.77
BH06	2/15/2018	<1.0	<1.0	<1.0	<2.0	62.61
BH06	5/8/2018	**67**	6.0	<1.0	2.2	62.78
BH12	4/26/2017	<1.0	<1.0	<1.0	<2.0	64.66
BH12	12/1/2017	<1.0	<1.0	<1.0	<2.0	64.47
BH12	2/15/2018	<1.0	<1.0	<1.0	<2.0	64.33
BH12	5/8/2018	Well Removed From Monitoring Network				

Notes:

1. Groundwater standards referenced from 2 CCR 404-1, Table 910-1, effective May 1, 2018.
2. Water level measured on 11/24/2014.
3. Depth to water measurements collected prior to second quarter 2017 were measured from top of casing or ground surface for monitoring well samples. Subsequent monitoring well measurements were collected from top of casing and adjusted using survey data to reflect depth of water from ground surface.

COGCC = Colorado Oil and Gas Conservation Commission
µg/L = Micrograms per liter
(<) = Analytical result is less than the indicated laboratory reporting limit.
NM = Not measured
BOLD = Analytical result is in exceedance of COGCC groundwater standards.

ATTACHMENT A

Summit Scientific

741 Corporate Circle – Suite I ♦ Golden, Colorado 80401

303.277.9310 - laboratory ♦ 303.277.9531 - fax

May 15, 2018

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

RE: Steinwald #1

Enclosed are the results of analyses for samples received by Summit Scientific on 05/08/18 17:00. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Paul Shrewsbury For Ben Shrewsbury
Laboratory Manager

PDC Energy 1775 Sherman St. STE. 3000 Denver CO, 80203	Project: Steinwald #1 Project Number: [none] Project Manager: Mark Longhurst	**Reported:** 05/15/18 11:23

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
BH01R	1805087-01	Water	05/08/18 12:20	05/08/18 17:00
BH04R	1805087-02	Water	05/08/18 13:13	05/08/18 17:00
BH05R	1805087-03	Water	05/08/18 12:25	05/08/18 17:00
BH06	1805087-04	Water	05/08/18 13:00	05/08/18 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.

Summit Scientific

1805087

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

Page 1 of 1

Client:	PDC / Tasman	Project Manager:	Mark Longhurst
Address:	6899 N Pecos St	E-Mail:	mark.longhust@PDCE.com
City/State/Zip:	Denver/CO/80221	Project Name:	Steinwald #1
Phone:	9704816909 Fax:	Project Number:	
Sampler Name:	Max Dahlgren		

Sample Description	Date Sampled	Time Sampled	Number of Containers	Preservative: HCl	Preservative: HNO_3	Preservative: None	Preservative: Other (Specify)	Matrix: Groundwater	Matrix: Soil	Matrix: Air - Canister Serial #	Matrix: Other (Specify)	Analyze For: BTEX	Special Instructions
BH01R	5/8/18	1226	3			X		X				X	
BH02R		1313											
BH05R		1225											
BH06		1300											

Relinquished by: Max Dahlgren	Date/Time: 17:00 5/8/18	Received by: MA	Date/Time: 5-8-18 17:00
Relinquished by:	Date/Time:	Received by:	Date/Time:
Relinquished by:	Date/Time:	Received in Lab by:	Date/Time:

Turn Around Time (Check)

Same Day		72 Hours	
24 Hours		Standard	X
48 Hours			

Sample Integrity:
Temperature Upon Receipt: 4.2
Intact: Yes X No

Notes:

1805087

Sample Receipt Checklist

S2 Work Order: _____

Client: PDC / Tasman Client Project ID: Stenwald #1

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

Matrix (check all that apply): ____Air ____Soil/Solid __X__Water ____Other: _____
(Describe)

Cooler ID					
Temp (°C)	4.2				

Thermometer ID: 61857155-K

	Yes	No	N/A	Comments (if any)
If samples require cooling, was the temperature at 4°C +/- 2°C [1]? NOTE: If samples are delivered the same day of sampling, this requirement is met provided that there is evidence that cooling has begun.	X			
Were all samples received intact [1]?	X			
Was adequate sample volume provided [1]?	X			
If custody seals are present, are they intact [1]?			X	
Are short holding time analytes or samples with HTs due within 48 hours present?			X	
Is a chain-of-custody (COC) form present and filled out completely [1]?	X			
Does the COC agree with the number and type of sample bottles received [1]?	X			
Do the sample IDs on the bottle labels match the COC [1]?	X			
Is the COC properly relinquished by the client w/ date and time recorded [1]?	X			
For volatiles in water – is there headspace present? **If yes, contact client and note in narrative.**		X		
Are samples preserved that require preservation **(excluding cooling)** [1]? Note the type of preservative in the Comments column – HCl, H2SO4, NaOH, HNO3, ect			X	
If samples are acid preserved for metals, is the pH ≤ 2 [1]? Record the pH in Comments.			X	
If dissolved metals are requested, were samples field filtered?			X	
Additional Comments (if any):				

[1] If NO, then contact the client before proceeding with analysis and note in case narrative.

Mus
Custodian Printed Name

5-8-18
Signature or Initials of Custodian

17:30
Date/Time

PDC Energy 1775 Sherman St. STE. 3000 Denver CO, 80203	Project: Steinwald #1 Project Number: [none] Project Manager: Mark Longhurst	**Reported:** 05/15/18 11:23

BH01R

1805087-01 (Water)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **05/08/18 12:20**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Benzene	ND	1.0	ug/l	1	1805106	05/09/18	05/11/18	EPA 8260B	
Toluene	ND	1.0	"	"	"	"	"	"	
Ethylbenzene	ND	1.0	"	"	"	"	"	"	
Xylenes (total)	ND	2.0	"	"	"	"	"	"	

Date Sampled: **05/08/18 12:20**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 1,2-Dichloroethane-d4		*127 %*	*70-130*		"	"	"	"	
Surrogate: Toluene-d8		*95.6 %*	*70-130*		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		*105 %*	*70-130*		"	"	"	"	

PDC Energy 1775 Sherman St. STE. 3000 Denver CO, 80203	Project: Steinwald #1 Project Number: [none] Project Manager: Mark Longhurst	**Reported:** 05/15/18 11:23

BH04R
1805087-02 (Water)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **05/08/18 13:13**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Benzene	**840**	25	ug/l	25	1805106	05/09/18	05/11/18	EPA 8260B	
Toluene	**140**	1.0	"	1	"	"	"	"	
Ethylbenzene	**10**	1.0	"	"	"	"	"	"	
Xylenes (total)	**180**	2.0	"	"	"	"	"	"	

Date Sampled: **05/08/18 13:13**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 1,2-Dichloroethane-d4		*115 %*	*70-130*		"	"	"	"	
Surrogate: Toluene-d8		*97.3 %*	*70-130*		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		*103 %*	*70-130*		"	"	"	"	

PDC Energy 1775 Sherman St. STE. 3000 Denver CO, 80203	Project: Steinwald #1 Project Number: [none] Project Manager: Mark Longhurst	**Reported:** 05/15/18 11:23

BH05R
1805087-03 (Water)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **05/08/18 12:25**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Benzene	ND	1.0	ug/l	1	1805106	05/09/18	05/11/18	EPA 8260B	
Toluene	ND	1.0	"	"	"	"	"	"	
Ethylbenzene	ND	1.0	"	"	"	"	"	"	
Xylenes (total)	ND	2.0	"	"	"	"	"	"	

Date Sampled: **05/08/18 12:25**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 1,2-Dichloroethane-d4		*125 %*	*70-130*		"	"	"	"	
Surrogate: Toluene-d8		*97.1 %*	*70-130*		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		*102 %*	*70-130*		"	"	"	"	

PDC Energy 1775 Sherman St. STE. 3000 Denver CO, 80203	Project: Steinwald #1 Project Number: [none] Project Manager: Mark Longhurst	**Reported:** 05/15/18 11:23

BH06
1805087-04 (Water)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **05/08/18 13:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Benzene	**67**	1.0	ug/l	1	1805106	05/09/18	05/11/18	EPA 8260B	
Toluene	**6.0**	1.0	"	"	"	"	"	"	
Ethylbenzene	ND	1.0	"	"	"	"	"	"	
Xylenes (total)	**2.2**	2.0	"	"	"	"	"	"	

Date Sampled: **05/08/18 13:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 1,2-Dichloroethane-d4		*120 %*	*70-130*		"	"	"	"	
Surrogate: Toluene-d8		*97.9 %*	*70-130*		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		*102 %*	*70-130*		"	"	"	"	

Volatile Organic Compounds by EPA Method 8260B - Quality Control

Summit Scientific

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 1805106 - EPA 5030 Water MS										
Blank (1805106-BLK1)				Prepared: 05/09/18 Analyzed: 05/10/18						
Benzene	ND	1.0	ug/l							
Toluene	ND	1.0	"							
Ethylbenzene	ND	1.0	"							
Xylenes (total)	ND	2.0	"							
Surrogate: 1,2-Dichloroethane-d4	*12.7*		*"*	*13.2*		*95.9*	*70-130*			
Surrogate: Toluene-d8	*12.0*		*"*	*13.3*		*89.9*	*70-130*			
Surrogate: 4-Bromofluorobenzene	*13.7*		*"*	*13.3*		*103*	*70-130*			
LCS (1805106-BS1)				Prepared: 05/09/18 Analyzed: 05/10/18						
Benzene	28.4	1.0	ug/l	33.3		85.1	70-130			
Toluene	30.8	1.0	"	33.3		92.4	70-130			
Ethylbenzene	37.7	1.0	"	33.3		113	70-130			
m,p-Xylene	78.0	2.0	"	66.7		117	70-130			
o-Xylene	37.7	1.0	"	33.3		113	70-130			
Surrogate: 1,2-Dichloroethane-d4	*13.9*		*"*	*13.2*		*105*	*70-130*			
Surrogate: Toluene-d8	*12.1*		*"*	*13.3*		*90.7*	*70-130*			
Surrogate: 4-Bromofluorobenzene	*13.1*		*"*	*13.3*		*98.4*	*70-130*			
Matrix Spike (1805106-MS1)		**Source: 1805085-01**		Prepared: 05/09/18 Analyzed: 05/10/18						
Benzene	29.8	1.0	ug/l	33.3	ND	89.3	70-130			
Toluene	32.5	1.0	"	33.3	ND	97.6	70-130			
Ethylbenzene	38.6	1.0	"	33.3	ND	116	70-130			
m,p-Xylene	79.4	2.0	"	66.7	ND	119	70-130			
o-Xylene	39.0	1.0	"	33.3	ND	117	70-130			
Surrogate: 1,2-Dichloroethane-d4	*14.2*		*"*	*13.2*		*108*	*70-130*			
Surrogate: Toluene-d8	*12.4*		*"*	*13.3*		*92.9*	*70-130*			
Surrogate: 4-Bromofluorobenzene	*12.8*		*"*	*13.3*		*96.2*	*70-130*			

Volatile Organic Compounds by EPA Method 8260B - Quality Control

Summit Scientific

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 1805106 - EPA 5030 Water MS										
Matrix Spike Dup (1805106-MSD1)	**Source: 1805085-01**			Prepared: 05/09/18 Analyzed: 05/10/18						
Benzene	29.4	1.0	ug/l	33.3	ND	88.2	70-130	1.22	30	
Toluene	32.3	1.0	"	33.3	ND	96.9	70-130	0.679	30	
Ethylbenzene	39.1	1.0	"	33.3	ND	117	70-130	1.31	30	
m,p-Xylene	80.2	2.0	"	66.7	ND	120	70-130	1.09	30	
o-Xylene	39.5	1.0	"	33.3	ND	118	70-130	1.20	30	
Surrogate: 1,2-Dichloroethane-d4	*14.2*		*"*	*13.2*		*108*	*70-130*			
Surrogate: Toluene-d8	*12.2*		*"*	*13.3*		*91.3*	*70-130*			
Surrogate: 4-Bromofluorobenzene	*13.2*		*"*	*13.3*		*98.7*	*70-130*			

PDC Energy 1775 Sherman St. STE. 3000 Denver CO, 80203	Project: Steinwald #1 Project Number: [none] Project Manager: Mark Longhurst	**Reported:** 05/15/18 11:23

Notes and Definitions

DET	Analyte DETECTED
ND	Analyte NOT DETECTED at or above the reporting limit
NR	Not Reported
dry	Sample results reported on a dry weight basis
RPD	Relative Percent Difference