

TABLE 1
FORMER STROHAUER 32-22D WELLHEAD
SOIL ANALYTICAL RESULTS SUMMARY TABLE
ORGANIC COMPOUNDS

Sample ID	Date Sampled	Depth	Benzene (mg/kg)	Toluene (mg/kg)	Ethylbenzene (mg/kg)	Total Xylenes (mg/kg)	1, 2, 4-TMB (mg/kg)	1, 3, 5-TMB (mg/kg)	Naphthalene (mg/kg)	TPH ⁽⁴⁾ (mg/kg)
Residential SSL^(1,2)			1.2	490	5.8	58	30	27	2	500
Protection of Groundwater SSL^(1,2,3)			0.0026	0.69	0.78	9.9	0.0081	0.0087	0.0038	500
FL01-01 @ 4'	2/8/2022	4 ft. bgs	<0.0020	<0.0050	<0.0050	<0.010	<0.0050	<0.0050	0.020	77

Notes:

1. Compounds referenced from the COGCC 2 CCR 404-1, Table 915-1, effective January 15, 2021.
2. Soil Screening Levels (SSL) referenced from EPA Regional Screening Levels (EPA RSLs) for Chemical Contaminants at Superfund Sites, effective November 2020.
3. SSLs are applicable if a pathway for communication with groundwater is present.
4. Value calculated by adding TVPH-GRO, TEPH-DRO, and TEPH-ORO concentrations.

COGCC = Colorado Oil and Gas Conservation Commission

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

TVPH-GRO = Total volatile petroleum hydrocarbons - gasoline range organics

TEPH-DRO = Total extractable petroleum hydrocarbons - diesel range organics

TEPH-ORO = Total extractable petroleum hydrocarbons - oil range organics

mg/kg = Milligrams per kilogram

TMB = Trimethylbenzene

ft. = Feet

bgs = Below ground surface

BOLD = Analytical result is in exceedance of applicable standard.

TABLE 2
FORMER STROHAUER 32-22D WELLHEAD
FIELD DATA SUMMARY TABLE

Sample ID	Date Sampled	Depth	GPS Data ⁽¹⁾		PDOP Value	VOC Concentration ⁽²⁾ (ppm)
			Latitude	Longitude		
BKG01 @ 6'	2/8/2022	6 ft. bgs	40.352108	-104.683083	1.1	1.1
BKG01 @ 4'	2/8/2022	4 ft. bgs	40.352052	-104.682778	1.1	0.2
FL01-01 @ 4'	2/8/2022	4 ft. bgs	40.351779	-104.681768	NC	0.3

Notes:

1. Global Positioning System (GPS) data is provided in decimal degrees using World Geodetic System (WGS) 84 UTM Zone 13 North.

2. Volatile organic compound (VOC) concentrations are measured in the field using a photoionization detector (PID).

PDOP = Position Dilution of Precision

ppm = Parts per million

ft. = Feet

bgs = Below ground surface

NC = Data not collected

ATTACHMENT A

Summit Scientific

4653 Table Mountain Drive, Golden, Colorado 80403

303.277.9310

February 22, 2022

Mark Longhurst

PDC Energy

1775 Sherman St. STE. 3000

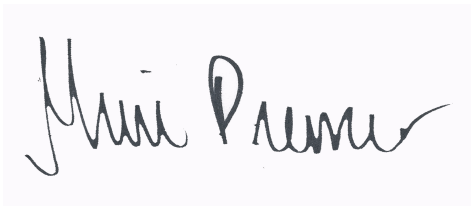
Denver, CO 80203

RE: Strothauer 32-22D Wellhead

Work Order #2202065

Enclosed are the results of analyses for samples received by Summit Scientific on 02/08/22 15:00. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

A handwritten signature in black ink that reads "Muri Premer". The signature is written in a cursive style with a large initial "M" and a long, sweeping underline.

Muri Premer

Project Manager



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

Project: Strohauer 32-22D Wellhead

Project Number: [none]

Project Manager: Mark Longhurst

Reported:
02/22/22 14:51

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
SEP01-FL@4'	2202065-01	Soil	02/08/22 10:00	02/08/22 15:00
FLR01@4'	2202065-02	Soil	02/08/22 12:06	02/08/22 15:00
FL01-01@4'	2202065-05	Soil	02/08/22 14:12	02/08/22 15:00

Summit Scientific

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Summit Scientific

2202065

S₂

4653 Table Mountain Drive ♦ Golden, Colorado 80403

303-277-9310

Page 1 of 1 ✓

Client: PDC / Tasman Project Manager: Mark Longhurst
 Address: 6855 W 119th Ave E-Mail: mark.longhurst@PDCE.com
 City/State/Zip: Broomfield/ CO/ 80020
 Phone: 303-487-1228 Project Name: Strohaver 32-22D Wellhead
 Sampler Name: Mataya W. Project Number:

ID	Sample Description	Date Sampled	Time Sampled	# of containers	Preservative				Matrix				Analysis Requested							Special Instructions	
					HCl	HNO3	None	Other	Water	Soil	Air-Canister #	Other	GBTEXN - 8260B	TPH - (C6 - C36)	pH, EC, SAR	Boron - HWS	VOC - 915	PAH - 915	Metals - 915		
1	SEPD1-FL @ 4'	2/8/22	1000	3			X			X			X	X							pH, EC, SAR by saturated paste <u>mmes (1, 3, 5, 12, 14)</u> <u>on hold</u>
2	FLRD1 @ 4'	↓	1200	3			X			X			X	X	X						
3	BK6D1 @ 4'	↓	1205	1			X			X											
4	BK6D1 @ 6'	↓	1202	1			X			X											
5	FI01-01 @ 4'	↓	1412	3			X			X			X	X							
6																					
7																					
8																					
9																					
10																					

Relinquished by: <u>Mataya W.</u>	Date/Time: <u>2/8/22</u>	Received by: <u>Tasman's Lock Box</u>	Date/Time:	Turn Around Time (Check) Same Day _____ 72 hours _____ 24 hours _____ Standard <u>X</u> 48 hours _____ Sample Integrity: Temperature Upon Receipt: <u>6.1</u> Samples Intact: <u>Yes</u> No	Notes:
Relinquished by: <u>Tasman's Lock Box</u>	Date/Time:	Received by: <u>[Signature]</u>	Date/Time: <u>2822</u> <u>1500</u>		
Relinquished by:	Date/Time:	Received by:	Date/Time:		

S₂

2202065

Sample Receipt Checklist

S2 Work Order# _____

Client: Proffusman Client Project ID: Strohaver 32-220 wellhead

Shipped Via: H.D./P.U./FedEx/UPS/USPS/Other _____ Airbill #: _____

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

Temp (°C)	<u>6.1</u>
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Thermometer ID: G86A9201901378

	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 if there is evidence that cooling has begun.	-			ON ICE
Were all samples received intact ⁽¹⁾ ?	-			
Was adequate sample volume provided ⁽¹⁾ ?	-			
If custody seals are present, are they intact ⁽¹⁾ ?	-			
Are samples with holding times due within 48 hours sample due within 48 hours present?		-		
Is a chain-of-custody (COC) form present and filled out completely ⁽¹⁾ ?	-			
Does the COC agree with the number and type of sample bottles received ⁽¹⁾ ?	-			
Do the sample IDs on the bottle labels match the COC ⁽¹⁾ ?	-			
Is the COC properly relinquished by the client w/ date and time recorded ⁽¹⁾ ?	-			
For volatiles in water – is there headspace present? If yes, contact client and note in narrative.			-	
Are samples preserved that require preservation (excluding cooling) ⁽¹⁾ ? Note the type of preservative in the Comments column – HCl, H2SO4, NaOH, HNO3, etc.			-	
If samples are acid preserved for metals, is the pH ≤ 2 ⁽¹⁾ ? Record the pH in Comments.			-	
If dissolved metals are requested, were samples field filtered?			-	

Additional Comments (if any):

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

[Signature]
Custodian Printed Name or Initials

2.8.22
Date/Time



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

Project: Strohauer 32-22D Wellhead

Project Number: [none]
Project Manager: Mark Longhurst

Reported:
02/22/22 14:51

SEP01-FL@4'
2202065-01 (Soil)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **02/08/22 10:00**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Benzene	ND	0.0020		mg/kg	1	BFB0093	02/09/22	02/11/22	EPA 8260B	
Toluene	ND	0.0050		"	"	"	"	"	"	
Ethylbenzene	ND	0.0050		"	"	"	"	"	"	
Xylenes (total)	ND	0.010		"	"	"	"	"	"	
1,2,4-Trimethylbenzene	ND	0.0050		"	"	"	"	"	"	
1,3,5-Trimethylbenzene	ND	0.0050		"	"	"	"	"	"	
Naphthalene	ND	0.0038		"	"	"	"	"	"	
Gasoline Range Hydrocarbons	ND	0.50		"	"	"	"	"	"	

Date Sampled: **02/08/22 10:00**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Surrogate: 1,2-Dichloroethane-d4		91.6 %		70-130		"	"	"	"	
Surrogate: Toluene-d8		103 %		70-130		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		97.4 %		70-130		"	"	"	"	

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **02/08/22 10:00**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
C10-C28 (DRO)	ND	50		mg/kg	1	BFB0092	02/09/22	02/10/22	EPA 8015M	
C28-C36 (ORO)	ND	50		"	"	"	"	"	"	

Date Sampled: **02/08/22 10:00**

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

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

Project: Strohauer 32-22D Wellhead

Project Number: [none]
Project Manager: Mark Longhurst

Reported:
02/22/22 14:51

FLR01@4'
2202065-02 (Soil)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **02/08/22 12:06**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Benzene	ND	0.0020	mg/kg	1	BFB0093	02/09/22	02/10/22	EPA 8260B	
Toluene	ND	0.0050	"	"	"	"	"	"	
Ethylbenzene	ND	0.0050	"	"	"	"	"	"	
Xylenes (total)	ND	0.010	"	"	"	"	"	"	
1,2,4-Trimethylbenzene	ND	0.0050	"	"	"	"	"	"	
1,3,5-Trimethylbenzene	ND	0.0050	"	"	"	"	"	"	
Naphthalene	ND	0.0038	"	"	"	"	"	"	
Gasoline Range Hydrocarbons	0.70	0.50	"	"	"	"	"	"	

Date Sampled: **02/08/22 12:06**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 1,2-Dichloroethane-d4		102 %	70-130		"	"	"	"	
Surrogate: Toluene-d8		102 %	70-130		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		100 %	70-130		"	"	"	"	

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **02/08/22 12:06**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
C10-C28 (DRO)	ND	50	mg/kg	1	BFB0092	02/09/22	02/10/22	EPA 8015M	
C28-C36 (ORO)	ND	50	"	"	"	"	"	"	

Date Sampled: **02/08/22 12:06**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: o-Terphenyl		85.9 %	30-150		"	"	"	"	

PAH by EPA Method 8270D SIM

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

Project: Strohauer 32-22D Wellhead

Project Number: [none]
 Project Manager: Mark Longhurst

Reported:
 02/22/22 14:51

FLR01@4'
2202065-02 (Soil)

Summit Scientific

PAH by EPA Method 8270D SIM

Date Sampled: **02/08/22 12:06**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Acenaphthene	ND	0.00500	mg/kg	1	BFB0084	02/09/22	02/10/22	EPA 8270D SIM	
Anthracene	ND	0.00500	"	"	"	"	"	"	
Benzo (a) anthracene	ND	0.00500	"	"	"	"	"	"	
Benzo (a) pyrene	ND	0.00500	"	"	"	"	"	"	
Benzo (b) fluoranthene	ND	0.00500	"	"	"	"	"	"	
Benzo (k) fluoranthene	ND	0.00500	"	"	"	"	"	"	
Chrysene	ND	0.00500	"	"	"	"	"	"	
Dibenz (a,h) anthracene	ND	0.00500	"	"	"	"	"	"	
Fluoranthene	ND	0.00500	"	"	"	"	"	"	
Fluorene	ND	0.00500	"	"	"	"	"	"	
Indeno (1,2,3-cd) pyrene	ND	0.00500	"	"	"	"	"	"	
Pyrene	ND	0.00500	"	"	"	"	"	"	
1-Methylnaphthalene	ND	0.00500	"	"	"	"	"	"	
2-Methylnaphthalene	ND	0.00500	"	"	"	"	"	"	

Date Sampled: **02/08/22 12:06**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 2-Methylnaphthalene-d10		63.3 %	40-150		"	"	"	"	
Surrogate: Fluoranthene-d10		63.8 %	40-150		"	"	"	"	

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **02/08/22 12:06**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
% Solids	97.3		%	1	BFB0083	02/09/22	02/09/22	Calculation	

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

Project: Strohauer 32-22D Wellhead

Project Number: [none]
Project Manager: Mark Longhurst

Reported:
02/22/22 14:51

FL01-01@4'
2202065-05 (Soil)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **02/08/22 14:12**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Benzene	ND	0.0020	mg/kg	1	BFB0093	02/09/22	02/10/22	EPA 8260B	
Toluene	ND	0.0050	"	"	"	"	"	"	
Ethylbenzene	ND	0.0050	"	"	"	"	"	"	
Xylenes (total)	ND	0.010	"	"	"	"	"	"	
1,2,4-Trimethylbenzene	ND	0.0050	"	"	"	"	"	"	
1,3,5-Trimethylbenzene	ND	0.0050	"	"	"	"	"	"	
Naphthalene	0.020	0.0038	"	"	"	"	"	"	
Gasoline Range Hydrocarbons	ND	0.50	"	"	"	"	"	"	

Date Sampled: **02/08/22 14:12**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 1,2-Dichloroethane-d4		99.3 %	70-130		"	"	"	"	
Surrogate: Toluene-d8		102 %	70-130		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		102 %	70-130		"	"	"	"	

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **02/08/22 14:12**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
C10-C28 (DRO)	77	50	mg/kg	1	BFB0092	02/09/22	02/10/22	EPA 8015M	
C28-C36 (ORO)	ND	50	"	"	"	"	"	"	

Date Sampled: **02/08/22 14:12**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: o-Terphenyl		97.4 %	30-150		"	"	"	"	

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

Project: Strohauer 32-22D Wellhead

Project Number: [none]
Project Manager: Mark Longhurst

Reported:
02/22/22 14:51

Volatile Organic Compounds by EPA Method 8260B - Quality Control

Summit Scientific

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

Batch BFB0093 - EPA 5030 Soil MS

Blank (BFB0093-BLK1)

Prepared: 02/09/22 Analyzed: 02/11/22

Benzene	ND	0.0020	mg/kg							
Toluene	ND	0.0050	"							
Ethylbenzene	ND	0.0050	"							
Xylenes (total)	ND	0.010	"							
1,2,4-Trimethylbenzene	ND	0.0050	"							
1,3,5-Trimethylbenzene	ND	0.0050	"							
Naphthalene	ND	0.0038	"							
Gasoline Range Hydrocarbons	ND	0.50	"							
Surrogate: 1,2-Dichloroethane-d4	0.0376		"	0.0400		94.1		70-130		
Surrogate: Toluene-d8	0.0443		"	0.0400		111		70-130		
Surrogate: 4-Bromofluorobenzene	0.0391		"	0.0400		97.6		70-130		

LCS (BFB0093-BS1)

Prepared: 02/09/22 Analyzed: 02/11/22

Benzene	0.0714	0.0020	mg/kg	0.0750		95.2		70-130		
Toluene	0.0794	0.0050	"	0.0750		106		70-130		
Ethylbenzene	0.0783	0.0050	"	0.0750		104		70-130		
m,p-Xylene	0.159	0.010	"	0.150		106		70-130		
o-Xylene	0.0777	0.0050	"	0.0750		104		70-130		
1,2,4-Trimethylbenzene	0.0741	0.0050	"	0.0750		98.8		70-130		
1,3,5-Trimethylbenzene	0.0755	0.0050	"	0.0750		101		70-130		
Naphthalene	0.0779	0.0038	"	0.0750		104		70-130		
Surrogate: 1,2-Dichloroethane-d4	0.0403		"	0.0400		101		70-130		
Surrogate: Toluene-d8	0.0411		"	0.0400		103		70-130		
Surrogate: 4-Bromofluorobenzene	0.0411		"	0.0400		103		70-130		

Matrix Spike (BFB0093-MS1)

Source: 2202065-01

Prepared: 02/09/22 Analyzed: 02/11/22

Benzene	0.0717	0.0020	mg/kg	0.0750	ND	95.6		70-130		
Toluene	0.0768	0.0050	"	0.0750	ND	102		70-130		
Ethylbenzene	0.0734	0.0050	"	0.0750	ND	97.9		70-130		
m,p-Xylene	0.149	0.010	"	0.150	ND	99.1		70-130		
o-Xylene	0.0735	0.0050	"	0.0750	ND	98.0		70-130		
1,2,4-Trimethylbenzene	0.0716	0.0050	"	0.0750	ND	95.4		70-130		
1,3,5-Trimethylbenzene	0.0725	0.0050	"	0.0750	ND	96.6		70-130		
Naphthalene	0.0860	0.0038	"	0.0750	ND	115		70-130		
Surrogate: 1,2-Dichloroethane-d4	0.0412		"	0.0400		103		70-130		
Surrogate: Toluene-d8	0.0412		"	0.0400		103		70-130		
Surrogate: 4-Bromofluorobenzene	0.0408		"	0.0400		102		70-130		

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

Project: Strohauer 32-22D Wellhead

Project Number: [none]
 Project Manager: Mark Longhurst

Reported:
 02/22/22 14:51

Volatile Organic Compounds by EPA Method 8260B - Quality Control

Summit Scientific

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

Batch BFB0093 - EPA 5030 Soil MS

Matrix Spike Dup (BFB0093-MSD1)	Source: 2202065-01			Prepared: 02/09/22 Analyzed: 02/11/22						
Benzene	0.0625	0.0020	mg/kg	0.0750	ND	83.3	70-130	13.7	30	
Toluene	0.0677	0.0050	"	0.0750	ND	90.3	70-130	12.6	30	
Ethylbenzene	0.0680	0.0050	"	0.0750	ND	90.7	70-130	7.64	30	
m,p-Xylene	0.139	0.010	"	0.150	ND	92.4	70-130	7.04	30	
o-Xylene	0.0681	0.0050	"	0.0750	ND	90.8	70-130	7.63	30	
1,2,4-Trimethylbenzene	0.0668	0.0050	"	0.0750	ND	89.1	70-130	6.85	30	
1,3,5-Trimethylbenzene	0.0672	0.0050	"	0.0750	ND	89.6	70-130	7.52	30	
Naphthalene	0.0846	0.0038	"	0.0750	ND	113	70-130	1.62	30	
Surrogate: 1,2-Dichloroethane-d4	0.0367		"	0.0400		91.6	70-130			
Surrogate: Toluene-d8	0.0409		"	0.0400		102	70-130			
Surrogate: 4-Bromofluorobenzene	0.0392		"	0.0400		98.0	70-130			

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

Project: Strohauer 32-22D Wellhead

Project Number: [none]
 Project Manager: Mark Longhurst

Reported:
 02/22/22 14:51

Extractable Petroleum Hydrocarbons by 8015 - Quality Control
Summit Scientific

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

Batch BFB0092 - EPA 3550A

Blank (BFB0092-BLK1)

Prepared: 02/09/22 Analyzed: 02/10/22

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

LCS (BFB0092-BS1)

Prepared: 02/09/22 Analyzed: 02/10/22

C10-C28 (DRO)	432	50	mg/kg	500	86.4	70-130					
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Matrix Spike (BFB0092-MS1)

Source: 2202065-01

Prepared: 02/09/22 Analyzed: 02/10/22

C10-C28 (DRO)	447	50	mg/kg	500	45.2	80.4	70-130				
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Matrix Spike Dup (BFB0092-MSD1)

Source: 2202065-01

Prepared: 02/09/22 Analyzed: 02/10/22

C10-C28 (DRO)	418	50	mg/kg	500	45.2	74.6	70-130	6.66	20		
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Summit Scientific

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

Project: Strohauer 32-22D Wellhead

Project Number: [none]
Project Manager: Mark Longhurst

Reported:
02/22/22 14:51

PAH by EPA Method 8270D SIM - Quality Control

Summit Scientific

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

Batch BFB0084 - EPA 5030 Soil MS

Blank (BFB0084-BLK1)

Prepared & Analyzed: 02/09/22

Acenaphthene	ND	0.00500	mg/kg							
Anthracene	ND	0.00500	"							
Benzo (a) anthracene	ND	0.00500	"							
Benzo (a) pyrene	ND	0.00500	"							
Benzo (b) fluoranthene	ND	0.00500	"							
Benzo (k) fluoranthene	ND	0.00500	"							
Chrysene	ND	0.00500	"							
Dibenz (a,h) anthracene	ND	0.00500	"							
Fluoranthene	ND	0.00500	"							
Fluorene	ND	0.00500	"							
Indeno (1,2,3-cd) pyrene	ND	0.00500	"							
Pyrene	ND	0.00500	"							
1-Methylnaphthalene	ND	0.00500	"							
2-Methylnaphthalene	ND	0.00500	"							
<i>Surrogate: 2-Methylnaphthalene-d10</i>	<i>0.0213</i>		"	<i>0.0333</i>		<i>63.8</i>	<i>40-150</i>			
<i>Surrogate: Fluoranthene-d10</i>	<i>0.0211</i>		"	<i>0.0333</i>		<i>63.4</i>	<i>40-150</i>			

LCS (BFB0084-BS1)

Prepared & Analyzed: 02/09/22

Acenaphthene	0.0176	0.00500	mg/kg	0.0333		52.9	31-137			
Anthracene	0.0188	0.00500	"	0.0333		56.4	30-120			
Benzo (a) anthracene	0.0210	0.00500	"	0.0333		63.0	30-120			
Benzo (a) pyrene	0.0200	0.00500	"	0.0333		60.1	30-120			
Benzo (b) fluoranthene	0.0214	0.00500	"	0.0333		64.2	30-120			
Benzo (k) fluoranthene	0.0239	0.00500	"	0.0333		71.8	30-120			
Chrysene	0.0218	0.00500	"	0.0333		65.3	30-120			
Dibenz (a,h) anthracene	0.0237	0.00500	"	0.0333		71.1	30-120			
Fluoranthene	0.0198	0.00500	"	0.0333		59.5	30-120			
Fluorene	0.0187	0.00500	"	0.0333		56.2	30-120			
Indeno (1,2,3-cd) pyrene	0.0289	0.00500	"	0.0333		86.7	30-120			
Pyrene	0.0234	0.00500	"	0.0333		70.3	35-142			
1-Methylnaphthalene	0.0135	0.00500	"	0.0333		40.4	35-142			
2-Methylnaphthalene	0.0192	0.00500	"	0.0333		57.6	35-142			
<i>Surrogate: 2-Methylnaphthalene-d10</i>	<i>0.0186</i>		"	<i>0.0333</i>		<i>55.9</i>	<i>40-150</i>			
<i>Surrogate: Fluoranthene-d10</i>	<i>0.0201</i>		"	<i>0.0333</i>		<i>60.2</i>	<i>40-150</i>			

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

Project: Strohauer 32-22D Wellhead

Project Number: [none]
Project Manager: Mark Longhurst

Reported:
02/22/22 14:51

PAH by EPA Method 8270D SIM - Quality Control

Summit Scientific

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

Batch BFB0084 - EPA 5030 Soil MS

Matrix Spike (BFB0084-MS1)	Source: 2202064-01			Prepared & Analyzed: 02/09/22						
Acenaphthene	0.0182	0.00500	mg/kg	0.0333	ND	54.6	31-137			
Anthracene	0.0205	0.00500	"	0.0333	ND	61.4	30-120			
Benzo (a) anthracene	0.0210	0.00500	"	0.0333	ND	63.1	30-120			
Benzo (a) pyrene	0.0220	0.00500	"	0.0333	ND	65.9	30-120			
Benzo (b) fluoranthene	0.0218	0.00500	"	0.0333	ND	65.5	30-120			
Benzo (k) fluoranthene	0.0239	0.00500	"	0.0333	ND	71.6	30-120			
Chrysene	0.0217	0.00500	"	0.0333	ND	65.0	30-120			
Dibenz (a,h) anthracene	0.0209	0.00500	"	0.0333	ND	62.7	30-120			
Fluoranthene	0.0205	0.00500	"	0.0333	ND	61.5	30-120			
Fluorene	0.0190	0.00500	"	0.0333	ND	57.0	30-120			
Indeno (1,2,3-cd) pyrene	0.0258	0.00500	"	0.0333	ND	77.4	30-120			
Pyrene	0.0243	0.00500	"	0.0333	ND	72.8	35-142			
1-Methylnaphthalene	0.0171	0.00500	"	0.0333	ND	51.3	15-130			
2-Methylnaphthalene	0.0192	0.00500	"	0.0333	ND	57.5	15-130			
Surrogate: 2-Methylnaphthalene-d10	0.0200		"	0.0333		60.1	40-150			
Surrogate: Fluoranthene-d10	0.0212		"	0.0333		63.6	40-150			

Matrix Spike Dup (BFB0084-MSD1)	Source: 2202064-01			Prepared & Analyzed: 02/09/22						
Acenaphthene	0.0193	0.00500	mg/kg	0.0333	ND	57.8	31-137	5.63	30	
Anthracene	0.0209	0.00500	"	0.0333	ND	62.6	30-120	2.00	30	
Benzo (a) anthracene	0.0216	0.00500	"	0.0333	ND	64.8	30-120	2.76	30	
Benzo (a) pyrene	0.0228	0.00500	"	0.0333	ND	68.5	30-120	3.77	30	
Benzo (b) fluoranthene	0.0228	0.00500	"	0.0333	ND	68.4	30-120	4.36	30	
Benzo (k) fluoranthene	0.0238	0.00500	"	0.0333	ND	71.4	30-120	0.190	30	
Chrysene	0.0218	0.00500	"	0.0333	ND	65.4	30-120	0.607	30	
Dibenz (a,h) anthracene	0.0232	0.00500	"	0.0333	ND	69.7	30-120	10.6	30	
Fluoranthene	0.0203	0.00500	"	0.0333	ND	61.0	30-120	0.812	30	
Fluorene	0.0200	0.00500	"	0.0333	ND	60.1	30-120	5.32	30	
Indeno (1,2,3-cd) pyrene	0.0271	0.00500	"	0.0333	ND	81.2	30-120	4.87	30	
Pyrene	0.0243	0.00500	"	0.0333	ND	72.9	35-142	0.107	30	
1-Methylnaphthalene	0.0197	0.00500	"	0.0333	ND	59.0	15-130	13.9	50	
2-Methylnaphthalene	0.0213	0.00500	"	0.0333	ND	63.9	15-130	10.6	50	
Surrogate: 2-Methylnaphthalene-d10	0.0210		"	0.0333		63.0	40-150			
Surrogate: Fluoranthene-d10	0.0217		"	0.0333		65.2	40-150			

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

Project: Strohauer 32-22D Wellhead

Project Number: [none]

Project Manager: Mark Longhurst

Reported:
 02/22/22 14:51

Physical Parameters by APHA/ASTM/EPA Methods - Quality Control

Summit Scientific

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

Batch BFB0083 - General Preparation

Duplicate (BFB0083-DUP1)

Source: 2202064-01

Prepared & Analyzed: 02/09/22

% Solids	93.6		%		93.9			0.344	20	
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PDC Energy
1775 Sherman St. STE. 3000
Denver CO, 80203

Project: Strohauer 32-22D Wellhead

Project Number: [none]
Project Manager: Mark Longhurst

Reported:
02/22/22 14:51

Notes and Definitions

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