

**TABLE 1**  
**FORMER FRANCEN 14-30 TANK BATTERY**  
**SOIL ANALYTICAL RESULTS SUMMARY TABLE**

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 <sup>(4)</sup> (mg/kg)
Residential SSL <sup>(1,2)</sup>			1.2	490	5.8	58	30	27	2	500
Protection of Groundwater SSL <sup>(1,2,3)</sup>			0.0026	0.69	0.78	9.9	0.0081	0.0087	0.0038	500
AST01 @ 0-6"	6/14/2021	0-6 in. bgs	<0.0020	<0.0050	<0.0050	<0.010	<0.0050	<0.0050	<0.0038	<50
SEP01-DL-B @ 6'	6/14/2021	6 ft. bgs	<0.0020	<0.0050	<0.0050	<0.010	<0.0050	<0.0050	<0.0038	<50
SEP01-DL-S @ 2.5'	6/14/2021	2.5 ft. bgs	<0.0020	<0.0050	<0.0050	<0.010	<0.0050	<0.0050	<0.0038	54
SEP01-FL @ 4'	6/14/2021	4 ft. bgs	<0.0020	<0.0050	<0.0050	<0.010	<0.0050	<0.0050	<0.0038	<50

**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 extactable petroleum hydrocarbons - oil range organics

mg/kg = Milligrams per kilogram

TMB = Trimethylbenzene

ft. = Feet

in. = Inches

bgs = Below ground surface

**TABLE 2**  
**FORMER FRANCEN 14-30 TANK BATTERY**  
**SOIL ANALYTICAL RESULTS SUMMARY TABLE**  
**INORGANIC COMPOUNDS**

Sample ID	Date Sampled	Depth	pH (units)	EC (mmhos/cm)	SAR (units)	Boron (mg/L)
<b>Soil Suitability for Reclamation Standard <sup>(1)</sup></b>			<b>6-8.3</b>	<b>&lt;4</b>	<b>&lt;6</b>	<b>2</b>
SEP01-DL-B @ 6'	6/14/2021	6 ft. bgs	8.02	0.469	0.313	0.0299
SEP01-DL-S @ 2.5'	6/14/2021	2.5 ft. bgs	7.96	1.06	0.812	0.282

1. Compounds referenced from the COGCC 2 CCR 404-1, Table 915-1, effective January 15, 2021.

COGCC = Colorado Oil and Gas Conservation Commission

EC = Electrical conductivity

SAR = Sodium adsorption ratio

mmhos/cm = millimhos per centimeter

mg/L = milligram per liter

ft. = Feet

bgs = Below ground surface

**TABLE 3**  
**FORMER FRANCEN 14-30 TANK BATTERY**  
**FIELD DATA SUMMARY TABLE**

Sample ID	Date Sampled	Depth	GPS Data <sup>(1)</sup> Latitude / Longitude		PDOP Value	VOC Concentration <sup>(2)</sup> (ppm)
AST01 @ 0-6"	6/14/2021	0-6 in. bgs	40.450907	-104.595745	1.1	0.4
ECD01-W @ 0-6"	6/14/2021	0-6 in. bgs	40.451123	-104.595733	1.3	0.5
ESD02-E @ 0-6"	6/14/2021	0-6 in. bgs	40.451126	-104.595695	1.2	0.4
MH01 @ 0-6"	6/14/2021	0-6 in. bgs	40.451046	-104.595732	1.2	1.1
SEP01-DL-B @ 6'	6/14/2021	6 ft. bgs	40.451063	-104.595717	1.3	8.3
SEP01-DL-N @ 2.5'	6/14/2021	2.5 ft. bgs	40.451057	-104.595704	1.0	0.4
SEP01-DL-W @ 2.5'	6/14/2021	2.5 ft. bgs	40.451052	-104.595730	1.0	0.5
SEP01-DL-S @ 2.5'	6/14/2021	2.5 ft. bgs	40.451027	-104.595725	1.1	0.8
SEP01-DL-E @ 2.5'	6/14/2021	2.5 ft. bgs	40.451047	-104.595710	1.2	0.6
SEP01-FL @ 4'	6/14/2021	4 ft. bgs	40.451090	-104.595739	1.2	0.6
BKG01 @ 2.5'	6/14/2021	2.5 ft. bgs	40.450993	-104.595838	1.0	0.5

**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

in. = Inches

bgs = Below ground surface

NC = Data not collected

## Attachment A

# Summit Scientific

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4653 Table Mountain Drive, Golden, Colorado 80403

303.277.9310

June 24, 2021

Mark Longhurst

PDC Energy

1775 Sherman St. STE. 3000

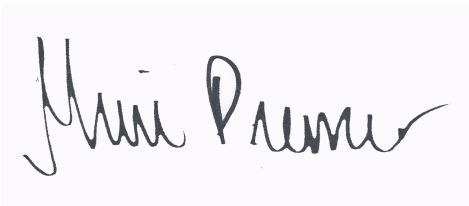
Denver, CO 80203

RE: Francen 14-30 Tank Battery

Work Order #2106275

Enclosed are the results of analyses for samples received by Summit Scientific on 06/14/21 17:15. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

A handwritten signature in black ink, reading "Muri Premer", is displayed on a light purple rectangular background.

Muri Premer For Paul Shrewsbury  
President



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

Project: Francen 14-30 Tank Battery  
Project Number: [none]  
Project Manager: Mark Longhurst

**Reported:**  
06/24/21 17:06

#### ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
AST01@0-6"	2106275-01	Soil	06/14/21 10:53	06/14/21 17:15
SEP01-DL-B@6'	2106275-02	Soil	06/14/21 12:12	06/14/21 17:15
SEP01-DL-S@2.5'	2106275-05	Soil	06/14/21 12:16	06/14/21 17:15
SEP01-FL@4'	2106275-07	Soil	06/14/21 12:18	06/14/21 17:15

Summit Scientific

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## 2106275

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[illegible]

Relinquished by: _____ Date/Time: _____	Received by: _____ Date/Time: _____	<b>Turn Around Time</b> (Check) Same Day _____ 72 hours _____ 24 hours _____ Standard <u>X</u> 48 hours _____ <b>Sample Integrity:</b> _____ Temperature Upon Receipt: <u>11</u> Samples Intact: <u>Yes</u> No	<b>Notes:</b>
Relinquished by: _____ Date/Time: _____	Received by: _____ Date/Time: _____		
Relinquished by: _____ Date/Time: _____	Received by: _____ Date/Time: _____		

2106275

## Sample Receipt Checklist

S2 Work Order \_\_\_\_\_

Client: POL / Tasman Client Project ID: Francen 14-30 Tank BatteryShipped Via: ☐ H.D. ☒ P.U. ☐ FedEx ☐ UPS ☐ USPS ☐ Other \_\_\_\_\_ Airbill #: \_\_\_\_\_Matrix (check all that apply): ☐ Air ☒ Soil/Solid ☐ Water ☐ Other: \_\_\_\_\_  
(Describe)

Temp (°C)	//
-----------	----

Thermometer ID: 61857155-K

	Yes	No	N/A	Comments (if any)
If samples require cooling, was the temperature at 4°C +/- 2°C <sup>(1)</sup> ?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	On ice.
NOTE: If samples are delivered the same day of sampling, this requirement is met provided that there is evidence that cooling has begun.				
Were all samples received intact <sup>(1)</sup> ?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Was adequate sample volume provided <sup>(1)</sup> ?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
If custody seals are present, are they intact <sup>(1)</sup> ?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
Are samples with holding times due within 48 hours sample due within 48 hours present?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
Is a chain-of-custody (COC) form present and filled out completely <sup>(1)</sup> ?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Does the COC agree with the number and type of sample bottles received <sup>(1)</sup> ?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Do the sample IDs on the bottle labels match the COC <sup>(1)</sup> ?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Is the COC properly relinquished by the client w/ date and time recorded <sup>(1)</sup> ?	<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) <sup>(1)</sup> ?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
Note the type of preservative in the Comments column – HCl, H <sub>2</sub> SO <sub>4</sub> , NaOH, HNO <sub>3</sub> , ect				
If samples are acid preserved for metals, is the pH ≤ 2 <sup>(1)</sup> ?	<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):

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

TB  
Custodian Printed Name or Initials

[Signature]  
Signature of Custodian

6/14/21  
Date/Time





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

Project: Francen 14-30 Tank Battery  
Project Number: [none]  
Project Manager: Mark Longhurst

**Reported:**  
06/24/21 17:06

**AST01@0-6"**  
**2106275-01 (Soil)**

**Summit Scientific**

**Volatile Organic Compounds by EPA Method 8260B**

Date Sampled: **06/14/21 10:53**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Benzene	ND	0.0020	mg/kg	1	BEF0391	06/17/21	06/20/21	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: **06/14/21 10:53**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 1,2-Dichloroethane-d4		109 %	23-173		"	"	"	"	
Surrogate: Toluene-d8		100 %	20-170		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		99.3 %	21-167		"	"	"	"	

**Extractable Petroleum Hydrocarbons by 8015**

Date Sampled: **06/14/21 10:53**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
C10-C28 (DRO)	ND	50	mg/kg	1	BEF0392	06/17/21	06/20/21	EPA 8015M	
C28-C36 (ORO)	ND	50	"	"	"	"	"	"	

Date Sampled: **06/14/21 10:53**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: o-Terphenyl		91.4 %	30-150		"	"	"	"	

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

Project: Francen 14-30 Tank Battery  
Project Number: [none]  
Project Manager: Mark Longhurst

**Reported:**  
06/24/21 17:06

**SEP01-DL-B@6'**  
**2106275-02 (Soil)**

**Summit Scientific**

**Volatile Organic Compounds by EPA Method 8260B**

Date Sampled: **06/14/21 12:12**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Benzene	ND	0.0020	mg/kg	1	BEF0391	06/17/21	06/20/21	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: **06/14/21 12:12**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: 1,2-Dichloroethane-d4		109 %	23-173		"	"	"	"	
Surrogate: Toluene-d8		99.2 %	20-170		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		101 %	21-167		"	"	"	"	

**Extractable Petroleum Hydrocarbons by 8015**

Date Sampled: **06/14/21 12:12**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
C10-C28 (DRO)	ND	50	mg/kg	1	BEF0392	06/17/21	06/20/21	EPA 8015M	
C28-C36 (ORO)	ND	50	"	"	"	"	"	"	

Date Sampled: **06/14/21 12:12**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: o-Terphenyl		93.0 %	30-150		"	"	"	"	

**Total Metals by EPA 6020B Hot Water Soluble Extraction**

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

Project: Francen 14-30 Tank Battery  
Project Number: [none]  
Project Manager: Mark Longhurst

**Reported:**  
06/24/21 17:06

**SEP01-DL-B@6'**  
**2106275-02 (Soil)**

**Summit Scientific**

**Total Metals by EPA 6020B Hot Water Soluble Extraction**

Date Sampled: **06/14/21 12:12**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Boron	0.0299	0.0100	mg/L	1	BEF0463	06/22/21	06/23/21	EPA 6020B	

**Soluble Nutrients by EPA 6020/USDA60 6(2) - Saturated Paste Extraction**

Date Sampled: **06/14/21 12:12**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Calcium	24.0	0.0593	mg/L dry	1	BEF0462	06/22/21	06/23/21	EPA 6020B	
Magnesium	7.48	0.0593	"	"	"	"	"	"	
Sodium	6.85	0.0593	"	"	"	"	"	"	

**Calculated Analysis**

Date Sampled: **06/14/21 12:12**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	0.313	0.00100	units	1	BEF0519	06/24/21	06/24/21	Calculation	

**Physical Parameters by APHA/ASTM/EPA Methods**

Date Sampled: **06/14/21 12:12**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
% Solids	84.4		%	1	BEF0443	06/21/21	06/22/21	Calculation	

**Specific Conductance by EPA Method 120.1, Saturated Paste Extraction**

Date Sampled: **06/14/21 12:12**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Specific Conductance (EC)	0.469	0.0100	mmhos/cm	1	BEF0490	06/23/21	06/23/21	EPA 120.1	

**Physical Parameters by APHA/ASTM/EPA Methods, Saturated Paste Extraction**

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1775 Sherman St. STE. 3000  
Denver CO, 80203

Project: Francen 14-30 Tank Battery  
Project Number: [none]  
Project Manager: Mark Longhurst

**Reported:**  
06/24/21 17:06

**SEP01-DL-B@6'**  
**2106275-02 (Soil)**

**Summit Scientific**

**Physical Parameters by APHA/ASTM/EPA Methods, Saturated Paste Extraction**

Date Sampled: **06/14/21 12:12**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
<b>pH</b>	<b>8.02</b>			pH Units	1	BEF0489	06/23/21	06/23/21	EPA 9045D	

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Project Number: [none]  
Project Manager: Mark Longhurst

**Reported:**  
06/24/21 17:06

**SEP01-DL-S@2.5'**  
**2106275-05 (Soil)**

**Summit Scientific**

**Volatile Organic Compounds by EPA Method 8260B**

Date Sampled: **06/14/21 12:16**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Benzene	ND	0.0020	mg/kg	1	BEF0391	06/17/21	06/20/21	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: **06/14/21 12:16**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: 1,2-Dichloroethane-d4		109 %	23-173		"	"	"	"	
Surrogate: Toluene-d8		98.9 %	20-170		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		99.1 %	21-167		"	"	"	"	

**Extractable Petroleum Hydrocarbons by 8015**

Date Sampled: **06/14/21 12:16**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
C10-C28 (DRO)	54	50	mg/kg	1	BEF0392	06/17/21	06/20/21	EPA 8015M	
C28-C36 (ORO)	ND	50	"	"	"	"	"	"	

Date Sampled: **06/14/21 12:16**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: o-Terphenyl		97.9 %	30-150		"	"	"	"	

**Total Metals by EPA 6020B Hot Water Soluble Extraction**

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1775 Sherman St. STE. 3000  
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Project: Francen 14-30 Tank Battery  
Project Number: [none]  
Project Manager: Mark Longhurst

**Reported:**  
06/24/21 17:06

**SEP01-DL-S@2.5'**  
**2106275-05 (Soil)**

**Summit Scientific**

**Total Metals by EPA 6020B Hot Water Soluble Extraction**

Date Sampled: **06/14/21 12:16**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Boron	0.282	0.0100	mg/L	1	BEF0463	06/22/21	06/23/21	EPA 6020B	

**Soluble Nutrients by EPA 6020/USDA60 6(2) - Saturated Paste Extraction**

Date Sampled: **06/14/21 12:16**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Calcium	97.2	0.0571	mg/L dry	1	BEF0462	06/22/21	06/23/21	EPA 6020B	
Magnesium	37.1	0.0571	"	"	"	"	"	"	
Sodium	37.1	0.0571	"	"	"	"	"	"	

**Calculated Analysis**

Date Sampled: **06/14/21 12:16**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	0.812	0.00100	units	1	BEF0519	06/24/21	06/24/21	Calculation	

**Physical Parameters by APHA/ASTM/EPA Methods**

Date Sampled: **06/14/21 12:16**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
% Solids	87.5		%	1	BEF0443	06/21/21	06/22/21	Calculation	

**Specific Conductance by EPA Method 120.1, Saturated Paste Extraction**

Date Sampled: **06/14/21 12:16**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Specific Conductance (EC)	1.06	0.0100	mmhos/cm	1	BEF0490	06/23/21	06/23/21	EPA 120.1	

**Physical Parameters by APHA/ASTM/EPA Methods, Saturated Paste Extraction**

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1775 Sherman St. STE. 3000  
Denver CO, 80203

Project: Francen 14-30 Tank Battery  
Project Number: [none]  
Project Manager: Mark Longhurst

**Reported:**  
06/24/21 17:06

**SEP01-DL-S@2.5'**  
**2106275-05 (Soil)**

**Summit Scientific**

**Physical Parameters by APHA/ASTM/EPA Methods, Saturated Paste Extraction**

Date Sampled: **06/14/21 12:16**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
<b>pH</b>	<b>7.96</b>			pH Units	1	BEF0489	06/23/21	06/23/21	EPA 9045D	

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1775 Sherman St. STE. 3000  
Denver CO, 80203

Project: Francen 14-30 Tank Battery  
Project Number: [none]  
Project Manager: Mark Longhurst

**Reported:**  
06/24/21 17:06

**SEP01-FL@4'**  
**2106275-07 (Soil)**

**Summit Scientific**

**Volatile Organic Compounds by EPA Method 8260B**

Date Sampled: **06/14/21 12:18**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Benzene	ND	0.0020	mg/kg	1	BEF0391	06/17/21	06/20/21	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: **06/14/21 12:18**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: 1,2-Dichloroethane-d4		107 %	23-173		"	"	"	"	
Surrogate: Toluene-d8		99.4 %	20-170		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		97.4 %	21-167		"	"	"	"	

**Extractable Petroleum Hydrocarbons by 8015**

Date Sampled: **06/14/21 12:18**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
C10-C28 (DRO)	ND	50	mg/kg	1	BEF0392	06/17/21	06/20/21	EPA 8015M	
C28-C36 (ORO)	ND	50	"	"	"	"	"	"	

Date Sampled: **06/14/21 12:18**

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

Summit Scientific

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

Project: Francen 14-30 Tank Battery

Project Number: [none]  
Project Manager: Mark Longhurst

**Reported:**  
06/24/21 17:06

## 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 BEF0391 - EPA 5030 Soil MS

##### Blank (BEF0391-BLK1)

Prepared: 06/17/21 Analyzed: 06/20/21

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	0.0411		"	0.0400		103	23-173			
Surrogate: Toluene-d8	0.0399		"	0.0400		99.8	20-170			
Surrogate: 4-Bromofluorobenzene	0.0400		"	0.0400		100	21-167			

##### LCS (BEF0391-BS1)

Prepared: 06/17/21 Analyzed: 06/20/21

Benzene	0.0871	0.0020	mg/kg	0.100		87.1	70-130			
Toluene	0.0914	0.0050	"	0.100		91.4	70-130			
Ethylbenzene	0.110	0.0050	"	0.100		110	70-130			
m,p-Xylene	0.219	0.010	"	0.200		109	70-130			
o-Xylene	0.106	0.0050	"	0.100		106	70-130			
1,2,4-Trimethylbenzene	0.124	0.0050	"	0.100		124	70-130			
1,3,5-Trimethylbenzene	0.123	0.0050	"	0.100		123	70-130			
Naphthalene	0.117	0.0038	"	0.100		117	70-130			
Surrogate: 1,2-Dichloroethane-d4	0.0421		"	0.0400		105	23-173			
Surrogate: Toluene-d8	0.0411		"	0.0400		103	20-170			
Surrogate: 4-Bromofluorobenzene	0.0395		"	0.0400		98.8	21-167			

##### Matrix Spike (BEF0391-MS1)

Source: 2106251-02

Prepared: 06/17/21 Analyzed: 06/20/21

Benzene	0.0854	0.0020	mg/kg	0.100	ND	85.4	70-130			
Toluene	0.0868	0.0050	"	0.100	ND	86.8	70-130			
Ethylbenzene	0.107	0.0050	"	0.100	ND	107	70-130			
m,p-Xylene	0.212	0.010	"	0.200	0.00603	103	70-130			
o-Xylene	0.103	0.0050	"	0.100	ND	103	70-130			
1,2,4-Trimethylbenzene	0.118	0.0050	"	0.100	ND	118	70-130			
1,3,5-Trimethylbenzene	0.117	0.0050	"	0.100	ND	117	70-130			
Naphthalene	0.112	0.0038	"	0.100	ND	112	70-130			
Surrogate: 1,2-Dichloroethane-d4	0.0406		"	0.0400		102	23-173			
Surrogate: Toluene-d8	0.0405		"	0.0400		101	20-170			
Surrogate: 4-Bromofluorobenzene	0.0390		"	0.0400		97.4	21-167			

Summit Scientific

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

Project: Francen 14-30 Tank Battery  
Project Number: [none]  
Project Manager: Mark Longhurst

**Reported:**  
06/24/21 17:06

**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 BEF0391 - EPA 5030 Soil MS**

Matrix Spike Dup (BEF0391-MSD1)	Source: 2106251-02			Prepared: 06/17/21 Analyzed: 06/20/21						
Benzene	0.0843	0.0020	mg/kg	0.100	ND	84.3	70-130	1.27	30	
Toluene	0.0850	0.0050	"	0.100	ND	85.0	70-130	2.09	30	
Ethylbenzene	0.103	0.0050	"	0.100	ND	103	70-130	3.49	30	
m,p-Xylene	0.204	0.010	"	0.200	0.00603	98.8	70-130	4.21	30	
o-Xylene	0.100	0.0050	"	0.100	ND	100	70-130	2.57	30	
1,2,4-Trimethylbenzene	0.114	0.0050	"	0.100	ND	114	70-130	3.07	30	
1,3,5-Trimethylbenzene	0.112	0.0050	"	0.100	ND	112	70-130	4.69	30	
Naphthalene	0.0949	0.0038	"	0.100	ND	94.9	70-130	16.7	30	
Surrogate: 1,2-Dichloroethane-d4	0.0415		"	0.0400		104	23-173			
Surrogate: Toluene-d8	0.0406		"	0.0400		102	20-170			
Surrogate: 4-Bromofluorobenzene	0.0400		"	0.0400		99.9	21-167			

Summit Scientific

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

Project: Francen 14-30 Tank Battery  
Project Number: [none]  
Project Manager: Mark Longhurst

**Reported:**  
06/24/21 17:06

**Extractable Petroleum Hydrocarbons by 8015 - Quality Control**  
**Summit Scientific**

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

**Batch BEF0392 - EPA 3550A**

**Blank (BEF0392-BLK1)**

Prepared: 06/17/21 Analyzed: 06/20/21

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

**LCS (BEF0392-BS1)**

Prepared: 06/17/21 Analyzed: 06/20/21

C10-C28 (DRO)	561	50	mg/kg	500	112	70-130
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**Matrix Spike (BEF0392-MS1)**

Source: 2106251-01

Prepared: 06/17/21 Analyzed: 06/20/21

C10-C28 (DRO)	462	50	mg/kg	500	59.9	80.4	70-130
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**Matrix Spike Dup (BEF0392-MSD1)**

Source: 2106251-01

Prepared: 06/17/21 Analyzed: 06/20/21

C10-C28 (DRO)	447	50	mg/kg	500	59.9	77.4	70-130	3.25	20
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Summit Scientific

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

Project: Francen 14-30 Tank Battery

Project Number: [none]  
Project Manager: Mark Longhurst

**Reported:**  
06/24/21 17:06

**Total Metals by EPA 6020B Hot Water Soluble Extraction - Quality Control**

**Summit Scientific**

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

**Batch BEF0463 - EPA 3050B**

**Blank (BEF0463-BLK1)**

Prepared: 06/22/21 Analyzed: 06/23/21

Boron ND 0.0100 mg/L

**LCS (BEF0463-BS1)**

Prepared: 06/22/21 Analyzed: 06/23/21

Boron 5.04 0.0100 mg/L 5.00 101 80-120

**Duplicate (BEF0463-DUP1)**

**Source: 2106263-01**

Prepared: 06/22/21 Analyzed: 06/23/21

Boron 0.529 0.0100 mg/L 0.535 0.969 20

**Matrix Spike (BEF0463-MS1)**

**Source: 2106263-01**

Prepared: 06/22/21 Analyzed: 06/23/21

Boron 5.31 0.0100 mg/L 5.00 0.535 95.6 75-125

**Matrix Spike Dup (BEF0463-MSD1)**

**Source: 2106263-01**

Prepared: 06/22/21 Analyzed: 06/23/21

Boron 5.58 0.0100 mg/L 5.00 0.535 101 75-125 4.90 25

Summit Scientific

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

Project: Francen 14-30 Tank Battery

Project Number: [none]  
Project Manager: Mark Longhurst

**Reported:**  
06/24/21 17:06

**Soluble Nutrients by EPA 6020/USDA60 6(2) - Saturated Paste Extraction - Quality Control**  
**Summit Scientific**

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

**Batch BEF0462 - General Preparation**

**Blank (BEF0462-BLK1)**

Prepared: 06/22/21 Analyzed: 06/23/21

Calcium	ND	0.0500	mg/L wet
Magnesium	ND	0.0500	"
Sodium	ND	0.0500	"

**LCS (BEF0462-BS1)**

Prepared: 06/22/21 Analyzed: 06/23/21

Calcium	4.93	0.0500	mg/L wet	5.00	98.6	70-130
Magnesium	5.67	0.0500	"	5.00	113	70-130
Sodium	4.97	0.0500	"	5.00	99.3	70-130

Summit Scientific

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

Project: Francen 14-30 Tank Battery

Project Number: [none]  
Project Manager: Mark Longhurst

**Reported:**  
06/24/21 17:06

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

#### Summit Scientific

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

#### Batch BEF0443 - General Preparation

Duplicate (BEF0443-DUP1)		Source: 2106268-01		Prepared: 06/21/21 Analyzed: 06/22/21	
% Solids	98.2		%	98.1	0.0887 20

Summit Scientific

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

Project: Francen 14-30 Tank Battery

Project Number: [none]  
Project Manager: Mark Longhurst

**Reported:**  
06/24/21 17:06

**Specific Conductance by EPA Method 120.1, Saturated Paste Extraction - Quality Control**  
**Summit Scientific**

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

**Batch BEF0490 - General Preparation**

**Blank (BEF0490-BLK1)**

Prepared & Analyzed: 06/23/21

Specific Conductance (EC) ND 0.0100 mmhos/cm

**LCS (BEF0490-BS1)**

Prepared & Analyzed: 06/23/21

Specific Conductance (EC) 0.142 0.0100 mmhos/cm 0.150 94.7 90-110

**Duplicate (BEF0490-DUP1)**

**Source: 2106225-01**

Prepared & Analyzed: 06/23/21

Specific Conductance (EC) 3.17 0.0100 mmhos/cm 3.17 0.00 20

Summit Scientific

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

Project: Francen 14-30 Tank Battery

Project Number: [none]  
Project Manager: Mark Longhurst

**Reported:**  
06/24/21 17:06

**Physical Parameters by APHA/ASTM/EPA Methods, Saturated Paste Extraction - Quality Control**  
**Summit Scientific**

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

**Batch BEF0489 - General Preparation**

**LCS (BEF0489-BS1)**

Prepared & Analyzed: 06/23/21

pH	9.20	pH Units	9.21	99.9	95-105
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**Duplicate (BEF0489-DUP1)**

**Source: 2106275-02**

Prepared & Analyzed: 06/23/21

pH	8.02	pH Units	8.02	0.00	20
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Summit Scientific

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

Project: Francen 14-30 Tank Battery

Project Number: [none]  
Project Manager: Mark Longhurst

**Reported:**  
06/24/21 17:06

### 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