

TABLE 1
FORMER DABCO 2 TANK BATTERY
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
AST01 @ 0-6"	12/21/2022	0-6 in. bgs	<0.0020	<0.0050	<0.0050	0.011	0.029	0.020	<0.0038	0.56

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

in. = Inches

bgs = Below ground surface

BOLD = Analytical result is in exceedance of applicable standard.

TABLE 2
FORMER DABCO 2 TANK BATTERY
FIELD DATA SUMMARY TABLE

Sample ID	Date Sampled	Depth	GPS Data ⁽¹⁾		PDOP Value	VOC
			Latitude / Longitude			Concentration ⁽²⁾ (ppm)
AST01 @ 0-6"	12/21/2022	0-6 in. bgs	40.343554	-104.713955	1.2	0.7
BKG01 @ 2.5'	12/21/2022	2.5 ft. bgs	40.343471	-104.714193	1.3	0.0
BKG01 @ 4'	12/21/2022	4 ft. bgs	40.343471	-104.714193	1.3	0.0

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

in. = Inches

Attachment A

Summit Scientific

4653 Table Mountain Drive, Golden, Colorado 80403

303.277.9310

January 04, 2023

Mark Longhurst

PDC Energy

1775 Sherman St. STE. 3000

Denver, CO 80203

RE: Dabco 2 Tank Battery

Work Order #2212456

Enclosed are the results of analyses for samples received by Summit Scientific on 12/21/22 17:00. If you have any questions concerning this report, please feel free to contact me.

Sincerely,



Mikayla Axtell For Paul Shrewsbury

President



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

Project: Dabco 2 Tank Battery

Project Number: [none]

Project Manager: Mark Longhurst

Reported:
01/04/23 11:24

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
AST01@0-6"	2212456-01	Soil	12/21/22 11:20	12/21/22 17:00
SEP01-FL@4'	2212456-02	Soil	12/21/22 13:30	12/21/22 17:00
SEP01-DL@4'	2212456-03	Soil	12/21/22 13:35	12/21/22 17:00
PWV01-B@4'	2212456-04	Soil	12/21/22 12:05	12/21/22 17:00
PWV01-W@2.5'	2212456-06	Soil	12/21/22 12:15	12/21/22 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.

S₂

Sample Receipt Checklist

S2 Work Order# 2212486

Client: Doc Frisman Client Project ID: Dabco 2 Tank Battery

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

Matrix (Check all that apply) Air Soil/Solid Water Other

Temp (°C) Thermometer #

	Yes	No	N/A	Comments (if any)
If samples require cooling, is the temperature < 6°C? ⁽¹⁾ NOTE: If samples are delivered the same day of sampling, this requirement is met if there is evidence that cooling has begun.	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<u>on ice</u>
If custody seals are present, are they intact? ⁽¹⁾	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Are samples due within 48 hours present?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
Are water samples with short hold times present? Note the short hold analysis in the comments column - pH, Nitrate/Nitrite, Ferrous Iron (Fe ²⁺), Hexavalent Chromium (Cr ⁶⁺ , Cr VI), COD/BOD, Total Coliform, E. Coli, Total Residual Chlorine (TRC), Dissolved Oxygen	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" 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"/>	
Is the COC properly relinquished by the client w/ date and time recorded? ⁽¹⁾	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
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"/>	
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"/>	
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⁾ Note the type of preservative in the comments column – HCl, H ₂ SO ₄ , NaOH, HNO ₃ , etc.	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
If samples are acid preserved for metals, is the pH ≤ 2? ⁽¹⁾ Record the pH in Comments.	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
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.

[Signature]
Custodian Printed Name

12-21-22 1700
Date/Time



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

Project: Dabco 2 Tank Battery

Project Number: [none]
Project Manager: Mark Longhurst

Reported:
01/04/23 11:24

AST01@0-6"
2212456-01 (Soil)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **12/21/22 11:20**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Benzene	ND	0.0020		mg/kg	1	BFL0593	12/22/22	01/04/23	EPA 8260B	
Toluene	ND	0.0050		"	"	"	"	"	"	
Ethylbenzene	ND	0.0050		"	"	"	"	"	"	
Xylenes (total)	0.011	0.010		"	"	"	"	"	"	
1,2,4-Trimethylbenzene	0.029	0.0050		"	"	"	"	"	"	
1,3,5-Trimethylbenzene	0.020	0.0050		"	"	"	"	"	"	
Naphthalene	ND	0.0038		"	"	"	"	"	"	
Gasoline Range Hydrocarbons	0.56	0.50		"	"	"	"	"	"	

Date Sampled: **12/21/22 11:20**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Surrogate: 1,2-Dichloroethane-d4	0.0392	98.0 %		50-150		"	"	"	"	
Surrogate: Toluene-d8	0.0430	107 %		50-150		"	"	"	"	
Surrogate: 4-Bromofluorobenzene	0.0455	114 %		50-150		"	"	"	"	

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **12/21/22 11:20**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
C10-C28 (DRO)	ND	50		mg/kg	1	BFL0597	12/22/22	12/23/22	EPA 8015M	
C28-C36 (ORO)	ND	50		"	"	"	"	"	"	

Date Sampled: **12/21/22 11:20**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Surrogate: o-Terphenyl	8.31	66.5 %		30-150		"	"	"	"	

Summit Scientific

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

Project: Dabco 2 Tank Battery

Project Number: [none]
Project Manager: Mark Longhurst

Reported:
01/04/23 11:24

SEP01-FL@4'
2212456-02 (Soil)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **12/21/22 13:30**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Benzene	ND	0.0020	mg/kg	1	BFL0593	12/22/22	12/23/22	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: **12/21/22 13:30**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 1,2-Dichloroethane-d4	0.0339	84.7 %	50-150		"	"	"	"	
Surrogate: Toluene-d8	0.0415	104 %	50-150		"	"	"	"	
Surrogate: 4-Bromofluorobenzene	0.0423	106 %	50-150		"	"	"	"	

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **12/21/22 13:30**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
C10-C28 (DRO)	ND	50	mg/kg	1	BFL0597	12/22/22	12/23/22	EPA 8015M	
C28-C36 (ORO)	ND	50	"	"	"	"	"	"	

Date Sampled: **12/21/22 13:30**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: o-Terphenyl	12.3	98.5 %	30-150		"	"	"	"	

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

Project: Dabco 2 Tank Battery

Project Number: [none]
Project Manager: Mark Longhurst

Reported:
01/04/23 11:24

SEP01-DL@4'
2212456-03 (Soil)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **12/21/22 13:35**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Benzene	ND	0.0020		mg/kg	1	BFL0593	12/22/22	12/23/22	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: **12/21/22 13:35**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Surrogate: 1,2-Dichloroethane-d4	0.0336	84.0 %		50-150		"	"	"	"	
Surrogate: Toluene-d8	0.0420	105 %		50-150		"	"	"	"	
Surrogate: 4-Bromofluorobenzene	0.0422	105 %		50-150		"	"	"	"	

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **12/21/22 13:35**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
C10-C28 (DRO)	ND	50		mg/kg	1	BFL0597	12/22/22	12/23/22	EPA 8015M	
C28-C36 (ORO)	ND	50		"	"	"	"	"	"	

Date Sampled: **12/21/22 13:35**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Surrogate: o-Terphenyl	12.9	103 %		30-150		"	"	"	"	

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

Project: Dabco 2 Tank Battery

Project Number: [none]
Project Manager: Mark Longhurst

Reported:
01/04/23 11:24

PWV01-B@4'
2212456-04 (Soil)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **12/21/22 12:05**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Benzene	ND	0.0020	mg/kg	1	BFL0593	12/22/22	12/23/22	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: **12/21/22 12:05**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 1,2-Dichloroethane-d4	0.0359	89.7 %	50-150		"	"	"	"	
Surrogate: Toluene-d8	0.0421	105 %	50-150		"	"	"	"	
Surrogate: 4-Bromofluorobenzene	0.0425	106 %	50-150		"	"	"	"	

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **12/21/22 12:05**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
C10-C28 (DRO)	ND	50	mg/kg	1	BFL0597	12/22/22	12/23/22	EPA 8015M	
C28-C36 (ORO)	ND	50	"	"	"	"	"	"	

Date Sampled: **12/21/22 12:05**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: o-Terphenyl	13.3	106 %	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: Dabco 2 Tank Battery

Project Number: [none]
Project Manager: Mark Longhurst

Reported:
01/04/23 11:24

PWV01-B@4'
2212456-04 (Soil)

Summit Scientific

Total Metals by EPA 6020B Hot Water Soluble Extraction

Date Sampled: **12/21/22 12:05**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Boron	0.120	0.0100	mg/L	1	BFL0697	12/28/22	12/29/22	EPA 6020B	

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

Date Sampled: **12/21/22 12:05**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Calcium	137	0.0518	mg/L dry	1	BFL0687	12/28/22	12/30/22	EPA 6020B	
Magnesium	18.5	0.0518	"	"	"	"	"	"	
Sodium	12.9	0.0518	"	"	"	"	"	"	

Calculated Analysis

Date Sampled: **12/21/22 12:05**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	0.274	0.00100	units	1	BGA0020	01/03/23	01/03/23	Calculation	

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **12/21/22 12:05**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
% Solids	96.5		%	1	BFL0696	12/28/22	12/29/22	Calculation	

Specific Conductance by EPA Method 120.1, Saturated Paste Extraction

Date Sampled: **12/21/22 12:05**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Specific Conductance (EC)	0.293	0.0100	mmhos/cm	1	BFL0726	12/29/22	12/29/22	EPA 120.1	

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

Summit Scientific

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

Project: Dabco 2 Tank Battery

Project Number: [none]

Project Manager: Mark Longhurst

Reported:
 01/04/23 11:24

PWV01-B@4'
2212456-04 (Soil)

Summit Scientific

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

Date Sampled: **12/21/22 12:05**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
pH	8.18		pH Units	1	BFL0727	12/29/22	12/29/22	EPA 9045D	

Summit Scientific



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

Project: Dabco 2 Tank Battery

Project Number: [none]
Project Manager: Mark Longhurst

Reported:
01/04/23 11:24

PWV01-W@2.5'
2212456-06 (Soil)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **12/21/22 12:15**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Benzene	ND	0.0020	mg/kg	1	BFL0593	12/22/22	12/23/22	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: **12/21/22 12:15**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 1,2-Dichloroethane-d4	0.0332	83.1 %	50-150		"	"	"	"	
Surrogate: Toluene-d8	0.0418	105 %	50-150		"	"	"	"	
Surrogate: 4-Bromofluorobenzene	0.0417	104 %	50-150		"	"	"	"	

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **12/21/22 12:15**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
C10-C28 (DRO)	ND	50	mg/kg	1	BFL0597	12/22/22	12/23/22	EPA 8015M	
C28-C36 (ORO)	ND	50	"	"	"	"	"	"	

Date Sampled: **12/21/22 12:15**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: o-Terphenyl	13.9	111 %	30-150		"	"	"	"	

Total Metals by EPA 6020B Hot Water Soluble Extraction

Summit Scientific

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

Project: Dabco 2 Tank Battery
Project Number: [none]
Project Manager: Mark Longhurst

Reported:
01/04/23 11:24

PWV01-W@2.5'
2212456-06 (Soil)

Summit Scientific

Total Metals by EPA 6020B Hot Water Soluble Extraction

Date Sampled: **12/21/22 12:15**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Boron	0.127	0.0100	mg/L	1	BFL0697	12/28/22	12/29/22	EPA 6020B	

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

Date Sampled: **12/21/22 12:15**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Calcium	212	0.0541	mg/L dry	1	BFL0687	12/28/22	12/30/22	EPA 6020B	
Magnesium	14.1	0.0541	"	"	"	"	"	"	
Sodium	1.17	0.0541	"	"	"	"	"	"	

Calculated Analysis

Date Sampled: **12/21/22 12:15**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	0.0210	0.00100	units	1	BGA0020	01/03/23	01/03/23	Calculation	

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **12/21/22 12:15**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
% Solids	92.4		%	1	BFL0696	12/28/22	12/29/22	Calculation	

Specific Conductance by EPA Method 120.1, Saturated Paste Extraction

Date Sampled: **12/21/22 12:15**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Specific Conductance (EC)	0.220	0.0100	mmhos/cm	1	BFL0726	12/29/22	12/29/22	EPA 120.1	

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

Summit Scientific

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

Project: Dabco 2 Tank Battery

Project Number: [none]

Project Manager: Mark Longhurst

Reported:
 01/04/23 11:24

PWV01-W@2.5'
2212456-06 (Soil)

Summit Scientific

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

Date Sampled: **12/21/22 12:15**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
pH	8.12		pH Units	1	BFL0727	12/29/22	12/29/22	EPA 9045D	

Summit Scientific



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

Project: Dabco 2 Tank Battery

Project Number: [none]
Project Manager: Mark Longhurst

Reported:
01/04/23 11:24

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 BFL0593 - EPA 5030 Soil MS

Blank (BFL0593-BLK1)

Prepared: 12/22/22 Analyzed: 12/23/22

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	0.0327		"	0.0400		81.8	50-150			
Surrogate: Toluene-d8	0.0416		"	0.0400		104	50-150			
Surrogate: 4-Bromofluorobenzene	0.0412		"	0.0400		103	50-150			

LCS (BFL0593-BS1)

Prepared: 12/22/22 Analyzed: 12/23/22

Benzene	0.115	0.0020	mg/kg	0.125		92.1	70-130			
Toluene	0.146	0.0050	"	0.125		117	70-130			
Ethylbenzene	0.153	0.0050	"	0.125		122	70-130			
m,p-Xylene	0.303	0.010	"	0.250		121	70-130			
o-Xylene	0.143	0.0050	"	0.125		115	70-130			
1,2,4-Trimethylbenzene	0.161	0.0050	"	0.125		129	70-130			
1,3,5-Trimethylbenzene	0.158	0.0050	"	0.125		126	70-130			
Naphthalene	0.123	0.0038	"	0.125		98.3	70-130			
Surrogate: 1,2-Dichloroethane-d4	0.0332		"	0.0400		83.1	50-150			
Surrogate: Toluene-d8	0.0413		"	0.0400		103	50-150			
Surrogate: 4-Bromofluorobenzene	0.0382		"	0.0400		95.6	50-150			

Matrix Spike (BFL0593-MS1)

Source: 2212454-01

Prepared: 12/22/22 Analyzed: 12/23/22

Benzene	0.115	0.0020	mg/kg	0.125	ND	91.6	70-130			
Toluene	0.144	0.0050	"	0.125	ND	115	70-130			
Ethylbenzene	0.154	0.0050	"	0.125	ND	123	70-130			
m,p-Xylene	0.304	0.010	"	0.250	ND	122	70-130			
o-Xylene	0.144	0.0050	"	0.125	ND	115	70-130			
1,2,4-Trimethylbenzene	0.160	0.0050	"	0.125	ND	128	70-130			
1,3,5-Trimethylbenzene	0.158	0.0050	"	0.125	ND	127	70-130			
Naphthalene	0.133	0.0038	"	0.125	ND	106	70-130			
Surrogate: 1,2-Dichloroethane-d4	0.0355		"	0.0400		88.7	50-150			
Surrogate: Toluene-d8	0.0424		"	0.0400		106	50-150			
Surrogate: 4-Bromofluorobenzene	0.0389		"	0.0400		97.3	50-150			

Summit Scientific

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

Project: Dabco 2 Tank Battery

Project Number: [none]
 Project Manager: Mark Longhurst

Reported:
 01/04/23 11:24

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 BFL0593 - EPA 5030 Soil MS

Matrix Spike Dup (BFL0593-MSD1)	Source: 2212454-01			Prepared: 12/22/22 Analyzed: 12/23/22						
Benzene	0.112	0.0020	mg/kg	0.125	ND	89.6	70-130	2.20	30	
Toluene	0.143	0.0050	"	0.125	ND	114	70-130	0.711	30	
Ethylbenzene	0.154	0.0050	"	0.125	ND	123	70-130	0.312	30	
m,p-Xylene	0.298	0.010	"	0.250	ND	119	70-130	1.83	30	
o-Xylene	0.143	0.0050	"	0.125	ND	115	70-130	0.167	30	
1,2,4-Trimethylbenzene	0.162	0.0050	"	0.125	ND	130	70-130	1.32	30	
1,3,5-Trimethylbenzene	0.158	0.0050	"	0.125	ND	126	70-130	0.475	30	
Naphthalene	0.137	0.0038	"	0.125	ND	110	70-130	3.38	30	
<i>Surrogate: 1,2-Dichloroethane-d4</i>	<i>0.0359</i>		<i>"</i>	<i>0.0400</i>		<i>89.8</i>	<i>50-150</i>			
<i>Surrogate: Toluene-d8</i>	<i>0.0416</i>		<i>"</i>	<i>0.0400</i>		<i>104</i>	<i>50-150</i>			
<i>Surrogate: 4-Bromofluorobenzene</i>	<i>0.0388</i>		<i>"</i>	<i>0.0400</i>		<i>97.0</i>	<i>50-150</i>			

Summit Scientific

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

Project: Dabco 2 Tank Battery

Project Number: [none]
 Project Manager: Mark Longhurst

Reported:
 01/04/23 11:24

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 BFL0597 - EPA 3550A

Blank (BFL0597-BLK1)

Prepared: 12/22/22 Analyzed: 12/23/22

C10-C28 (DRO)	ND	50	mg/kg								
C28-C36 (ORO)	ND	50	"								
Surrogate: <i>o</i> -Terphenyl	13.7		"	12.5		109	30-150				

LCS (BFL0597-BS1)

Prepared: 12/22/22 Analyzed: 12/23/22

C10-C28 (DRO)	434	50	mg/kg	500		86.8	70-130				
Surrogate: <i>o</i> -Terphenyl	12.8		"	12.5		102	30-150				

Matrix Spike (BFL0597-MS1)

Source: 2212454-01

Prepared: 12/22/22 Analyzed: 12/23/22

C10-C28 (DRO)	406	50	mg/kg	500	17.6	77.7	70-130				
Surrogate: <i>o</i> -Terphenyl	11.8		"	12.5		94.3	30-150				

Matrix Spike Dup (BFL0597-MSD1)

Source: 2212454-01

Prepared: 12/22/22 Analyzed: 12/23/22

C10-C28 (DRO)	404	50	mg/kg	500	17.6	77.2	70-130	0.509	20		
Surrogate: <i>o</i> -Terphenyl	12.9		"	12.5		103	30-150				

Summit Scientific

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

Project: Dabco 2 Tank Battery

Project Number: [none]
 Project Manager: Mark Longhurst

Reported:
 01/04/23 11:24

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

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

Batch BFL0697 - EPA 3050B

Blank (BFL0697-BLK1)

Prepared: 12/28/22 Analyzed: 12/29/22

Boron ND 0.0100 mg/L

LCS (BFL0697-BS1)

Prepared: 12/28/22 Analyzed: 12/29/22

Boron 5.17 0.0100 mg/L 5.00 103 80-120

Duplicate (BFL0697-DUP1)

Source: 2212455-02

Prepared: 12/28/22 Analyzed: 12/29/22

Boron 0.388 0.0100 mg/L 0.375 3.48 20

Matrix Spike (BFL0697-MS1)

Source: 2212455-02

Prepared: 12/28/22 Analyzed: 12/29/22

Boron 5.16 0.0100 mg/L 5.00 0.375 95.7 75-125

Matrix Spike Dup (BFL0697-MSD1)

Source: 2212455-02

Prepared: 12/28/22 Analyzed: 12/29/22

Boron 5.21 0.0100 mg/L 5.00 0.375 96.7 75-125 1.01 25

Summit Scientific

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

Project: Dabco 2 Tank Battery

Project Number: [none]
 Project Manager: Mark Longhurst

Reported:
 01/04/23 11:24

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

Summit Scientific

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

Batch BFL0687 - General Preparation

Blank (BFL0687-BLK1)

Prepared: 12/28/22 Analyzed: 12/30/22

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

LCS (BFL0687-BS1)

Prepared: 12/28/22 Analyzed: 12/30/22

Calcium	5.46	0.0500	mg/L wet	5.00		109	70-130			
Magnesium	5.06	0.0500	"	5.00		101	70-130			
Sodium	4.96	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: Dabco 2 Tank Battery

Project Number: [none]

Project Manager: Mark Longhurst

Reported:
 01/04/23 11:24

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 BFL0696 - General Preparation

Duplicate (BFL0696-DUP1)	Source: 2212454-01	Prepared: 12/28/22	Analyzed: 12/29/22
% Solids	93.9	%	93.5
			0.416
			20

Summit Scientific

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

Project: Dabco 2 Tank Battery

Project Number: [none]
 Project Manager: Mark Longhurst

Reported:
 01/04/23 11:24

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

Summit Scientific

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

Batch BFL0726 - General Preparation

Blank (BFL0726-BLK1)

Prepared & Analyzed: 12/29/22

Specific Conductance (EC) ND 0.0100 mmhos/cm

LCS (BFL0726-BS1)

Prepared & Analyzed: 12/29/22

Specific Conductance (EC) 0.156 0.0100 mmhos/cm 0.150 104 95-105

Duplicate (BFL0726-DUP1)

Source: 2212453-01

Prepared & Analyzed: 12/29/22

Specific Conductance (EC) 0.288 0.0100 mmhos/cm 0.293 1.45 20

Summit Scientific

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

Project: Dabco 2 Tank Battery

Project Number: [none]
 Project Manager: Mark Longhurst

Reported:
 01/04/23 11:24

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

Summit Scientific

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

Batch BFL0727 - General Preparation

LCS (BFL0727-BS1)

Prepared & Analyzed: 12/29/22

pH	9.08		pH Units	9.18		98.9	95-105			
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Duplicate (BFL0727-DUP1)

Source: 2212453-01

Prepared & Analyzed: 12/29/22

pH	8.23		pH Units	8.23		0.00	20			
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Summit Scientific

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

Project: Dabco 2 Tank Battery

Project Number: [none]
Project Manager: Mark Longhurst

Reported:
01/04/23 11:24

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