

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 ^(u) (mg/kg)	Anthracene (mg/kg)	Chrysene (mg/kg)	Fluorene (mg/kg)	1-M (mg/kg)
Residential SSL ^(1,2)			1.2	490	5.8	58	30	27	2	500	1,800	110	240	18
Protection of Groundwater SSL ^(1,2,3)			0.0026	0.69	0.78	9.9	0.0081	0.0087	0.0038	500	5.8	9	0.54	0.006
SS01 @ 3'	10/14/2021	3 ft. bgs	0.11	<0.0050	0.020	<0.010	23	<0.0050	0.25	1,062	0.757	0.170	0.452	2.12
SS02 @ 5'	10/15/2021	5 ft. bgs	<0.0020	<0.0050	<0.0050	<0.010	<0.0050	<0.0050	<0.0038	<50	<0.00500	<0.00500	<0.00500	<0.00500
SS03 @ 4'	10/15/2021	4 ft. bgs	<0.0020	<0.0050	<0.0050	<0.010	<0.0050	<0.0050	<0.0038	<50	<0.00500	<0.00500	<0.00500	<0.00500
SS04 @ 2.5'	10/15/2021	2.5 ft. bgs	<0.0020	<0.0050	<0.0050	<0.010	<0.0050	<0.0050	<0.0038	<50	<0.00500	<0.00500	<0.00500	<0.00500
SS05 @ 4'	10/15/2021	4 ft. bgs	<0.0020	<0.0050	<0.0050	<0.010	<0.0050	<0.0050	<0.0038	<50	<0.00500	<0.00500	<0.00500	<0.00500
SS06 @ 2.5'	10/15/2021	2.5 ft. bgs	<0.0020	<0.0050	<0.0050	<0.010	<0.0050	<0.0050	<0.0038	<50	<0.00500	<0.00500	<0.00500	<0.00500
SS07 @ 4'	10/18/2021	4 ft. bgs	<0.0020	<0.0050	<0.0050	<0.010	<0.0050	<0.0050	<0.0038	<50	<0.00500	<0.00500	<0.00500	<0.00500
SS08 @ 2.5'	10/18/2021	2.5 ft. bgs	<0.0020	<0.0050	<0.0050	<0.010	<0.0050	<0.0050	<0.0038	<50	<0.00500	<0.00500	<0.00500	<0.00500
SS09 @ 5'	10/18/2021	5 ft. bgs	<0.0020	<0.0050	<0.0050	<0.010	<0.0050	<0.0050	<0.0038	<50	<0.00500	<0.00500	<0.00500	<0.00500
SS10 @ 4'	10/19/2021	4 ft. bgs	0.0074	<0.0050	<0.0050	<0.010	0.16	<0.0050	0.029	59	<0.00500	<0.00500	<0.00500	<0.00500
SS11 @ 2.5'	10/19/2021	2.5 ft. bgs	<0.0020	<0.0050	<0.0050	<0.010	<0.0050	<0.0050	<0.0038	<50	<0.00500	<0.00500	<0.00500	<0.00500
SS12 @ 5'	10/20/2021	5 ft. bgs	<0.0020	<0.0050	<0.0050	<0.010	<0.0050	<0.0050	<0.0038	<50	<0.00500	<0.00500	<0.00500	<0.00500
SS13 @ 4'	10/20/2021	4 ft. bgs	<0.0020	<0.0050	<0.0050	<0.010	<0.0050	<0.0050	<0.0038	<50	<0.00500	0.00525	<0.00500	<0.00500
SS14 @ 2.5'	10/20/2021	2.5 ft. bgs	<0.0020	<0.0050	<0.0050	<0.010	<0.0050	<0.0050	<0.0038	<50	<0.00500	<0.00500	<0.00500	<0.00500
SS15 @ 4'	10/20/2021	4 ft. bgs	<0.0020	<0.0050	<0.0050	<0.010	<0.0050	<0.0050	<0.0038	<50	<0.00500	<0.00500	<0.00500	<0.00500
SS16 @ 2.5'	10/20/2021	2.5 ft. bgs	<0.0020	<0.0050	<0.0050	<0.010	<0.0050	<0.0050	<0.0038	<50	<0.00500	<0.00500	<0.00500	<0.00500
SS17 @ 5'	10/21/2021	5 ft. bgs	<0.0020	<0.0050	<0.0050	<0.010	<0.0050	<0.0050	<0.0038	<50	<0.00500	<0.00500	<0.00500	<0.00500
SS18 @ 4'	10/21/2021	4 ft. bgs	<0.0020	<0.0050	<0.0050	<0.010	<0.0050	<0.0050	<0.0038	6.3	<0.00500	<0.00500	<0.00500	<0.00500
SS19 @ 2.5'	10/21/2021	2.5 ft. bgs	<0.0020	<0.0050	<0.0050	<0.010	<0.0050	<0.0050	<0.0038	<50	<0.00500	<0.00500	<0.00500	

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

COGCC = Colorado Oil and Gas Conservation Commission

(\leq) = Analytical result is less than the indicated laboratory reporting limit

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

TEPH DRO = Total extractable petroleum hydrocarbons - diesel range organics

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

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

mg/kg = Milligrams per kilogram

TMB = Trimethylbenzene

Source material characterization sample

ft. = Feet
bgs = Below ground surface

SOLD = Analytical result is in excess of applicable standard

BOLD = Analytical result is in exceedance of applicable standard.

TABLE 2
FORMER LOLOFF 35-5 6 TANK BATTERY
SOIL ANALYTICAL RESULTS SUMMARY TABLE
INORGANIC COMPOUNDS

Sample ID	Date Sampled	Depth	pH (units)	EC (mmhos/cm)	SAR (units)	Boron (mg/L)
Soil Suitability for Reclamation Standard ⁽¹⁾			6-8.3	<4	<6	2
SS01 @ 3'	10/14/2021	3 ft. bgs	8.16	1.34	3.87	0.257
SS51 @ 2.5	12/2/2021	2.5 ft. bgs	8.02	0.336	13.5	1.34

Notes:

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

 = Source

BOLD = Analytical result is in exceedance of applicable standard.

TABLE 3
FORMER LOLOFF 35-5 6 TANK BATTERY
SOIL ANALYTICAL RESULTS SUMMARY TABLE
ORGANIC COMPOUNDS - PAHs

Sample ID	Date Sampled	Depth	Acenaphthene (mg/kg)	Anthracene (mg/kg)	Benz(a) (mg/kg)	Benzo(a) (mg/kg)	Benzo(b) (mg/kg)	Benzo(k) (mg/kg)	Chrysene (mg/kg)	A,H (mg/kg)	Fluoranthene (mg/kg)	Fluorene (mg/kg)	1,2,3-CD (mg/kg)	Pyrene (mg/kg)	1-M (mg/kg)	2-M (mg/kg)
Residential SSL ^(1,2)			360	1,800	1.1	0.11	1.1	11	110	0.11	240	240	1.1	180	18	24
Protection of Groundwater SSL ^(1,2,3)			0.55	5.8	0.011	0.24	0.3	2.9	9	0.096	8.9	0.54	0.98	1.3	0.006	0.019
SS01 @ 3'	10/14/2021	3 ft. bgs	<0.00500	0.757	<0.00500	<0.00500	<0.00500	<0.00500	0.170	<0.00500	<0.00500	0.452	<0.00500	<0.00500	2.12	<0.00500

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
COGCC = Colorado Oil and Gas Conservation Commission
(<) = Analytical result is less than the indicated laboratory reporting limit.
PAHs = Polycyclic aromatic hydrocarbons
Benz(a) = Benzanthracene
Benzo(a) = Benzopyrene
Benzo(b) = Benzofluoranthene
Benzo(k) = Benzofluoranthene
A,H = Dibenzoanthracene
1,2,3-CD = Indenopyrene
M = Methylnaphthalene
mg/kg = Milligrams per kilogram
= Source material characterization sample
ft. = Feet
bgs = Below ground surface
BOLD = Analytical result is in exceedance of applicable standard.

TABLE 4
FORMER LOLOFF 35-5 6 TANK BATTERY
SOIL ANALYTICAL RESULTS SUMMARY TABLE
METALS

Sample ID	Date Sampled	Depth	Arsenic (mg/kg)	Barium (mg/kg)	Cadmium (mg/kg)	Chromium (VI) (mg/kg)	Copper (mg/kg)	Lead (mg/kg)	Nickel (mg/kg)	Selenium (mg/kg)	Silver (mg/kg)	Zinc (mg/kg)
Residential SSL ^(1,2)			0.68	15,000	71	0.3	3,100	400	1,500	390	390	23,000
Protection of Groundwater SSL ^(1,2,3)			0.29	82	0.38	0.00067	46	14	26	0.26	0.8	370
SS01 @ 3'	10/14/2021	3 ft. bgs	1.88	62.8	<0.239	<0.30 ⁽⁴⁾	6.94	5.50	5.46	0.585	0.0391	27.0
BKG01 @ 2.5'	10/26/2021	2.5 ft. bgs	1.51	59.5	<0.235	<0.30 ⁽⁴⁾	6.74	5.81	6.27	0.787	0.0522	34.5
BKG01 @ 4'	10/26/2021	4 ft. bgs	2.06	52.8	<0.247	<0.30 ⁽⁴⁾	5.81	4.93	5.46	0.562	0.0387	28.8
BKG01 @ 6'	10/26/2021	6 ft. bgs	1.93	54.1	<0.273	<0.30 ⁽⁴⁾	5.15	4.67	5.48	0.536	0.0368	26.5

Notes:

- Compounds referenced from the COGCC 2 CCR 404-1, Table 915-1, effective January 15, 2021.
- Soil Screening Levels (SSL) referenced from EPA Regional Screening Levels (EPA RSLs) for Chemical Contaminants at Superfund Sites, effective November 2020.
- SSLs are applicable if a pathway for communication with groundwater is present.
- Compound falls within COGCC Table 915-1 Footnote 9.
- Background soil sample submitted as representative native material for this location and the adjacent Greenberg Federal 4-23 Tank Battery.

COGCC = Colorado Oil and Gas Conservation Commission

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

mg/kg = Milligrams per kilogram

= Source material characterization sample

ft. = Feet

bgs = Below ground surface

BOLD = Analytical result is in exceedance of applicable standard.

BOLD = Analytical result is in exceedance of applicable standard, but within 1.25x background concentration.

TABLE 5
FORMER LOLOFF 35-5 6 TANK BATTERY
GROUNDWATER ANALYTICAL RESULTS SUMMARY TABLE
ORGANIC COMPOUNDS

Sample ID	Date Sampled	Benzene (µg/L)	Toluene (µg/L)	Ethylbenzene (µg/L)	Total Xylenes (µg/L)	Naphthalene (µg/L)	1,2,4-TMB (µg/L)	1,3,5-TMB (µg/L)	Depth to Water ⁽²⁾ (ft.)	Groundwater Elevation (ft. AMSL)
COGCC Table 915-1 Groundwater Standard (µg/L) ⁽¹⁾		5	560	700	1,400	140	67	67	-	-
GW01	10/15/2021	220	<1.0	10	<2.0	39	400	<1.0	3	NA

Notes:

1. Groundwater standards referenced from 2 CCR 404-1, Table 915-1, January 15, 2021.
2. Depth to water measurements were measured from ground surface for excavation samples. Monitoring well measurements were collected from top of casing and adjusted using survey data to reflect depth of water from ground surface.
- TMB = Trimethylbenzene
- COGCC = Colorado Oil and Gas Conservation Commission
- µg/L = Micrograms per liter
- (<) = Analytical result is less than the indicated laboratory reporting limit.
- ft. = Feet
- BOLD** = Analytical result is in exceedance of applicable standard.
- AMSL = Above Mean Sea Level
- NA = Not applicable

TABLE 6
FORMER LOLOFF 35-5 6 TANK BATTERY
FIELD DATA SUMMARY TABLE

Sample ID	Date Sampled	Depth	GPS Data ⁽¹⁾ Latitude / Longitude		PDOP Value	VOC Concentration ⁽²⁾ (ppm)
SS01 @ 3'	10/14/2021	2 ft. bgs	40.3626948	-104.5076753	1.2	580
SS02 @ 5'	10/15/2021	5 ft. bgs	NC	NC	NC	3.1
SS03 @ 4'	10/15/2021	4 ft. bgs	40.36271311	-104.5077994	1.3	4.8
SS04 @ 2.5'	10/15/2021	2.5 ft. bgs	40.36271311	-104.5077994	1.3	3.3
SS05 @ 4'	10/15/2021	4 ft. bgs	40.36267012	-104.5077676	1.3	1.8
SS06 @ 2.5'	10/15/2021	2.5 ft. bgs	40.36267012	-104.5077676	1.3	1.4
SS07 @ 4'	10/18/2021	4 ft. bgs	40.36265332	-104.507721	1.1	6.5
SS08 @ 2.5'	10/18/2021	2.5 ft. bgs	40.36265332	-104.507721	1.1	0.7
SS09 @ 5'	10/18/2021	5 ft. bgs	NC	NC	NC	6.2
SS10 @ 4'	10/19/2021	4 ft. bgs	40.36272369	-104.5076822	1.2	79.4
SS11 @ 2.5'	10/19/2021	2.5 ft. bgs	40.36272369	-104.5076822	1.2	0.9
SS12 @ 5'	10/20/2021	5 ft. bgs	NC	NC	NC	0.0
SS13 @ 4'	10/20/2021	4 ft. bgs	40.36266269	-104.507639	1.2	6.0
SS14 @ 2.5'	10/20/2021	2.5 ft. bgs	40.36266269	-104.507639	1.2	0.2
SS15 @ 4'	10/20/2021	4 ft. bgs	40.36270786	-104.5076084	1.3	10.3
SS16 @ 2.5'	10/20/2021	2.5 ft. bgs	40.36270786	-104.5076084	1.3	0.4
SS17 @ 5'	10/21/2021	5 ft. bgs	NC	NC	NC	0.4
SS18 @ 4'	10/21/2021	4 ft. bgs	-104.507771	40.362741	1.1	13.5
SS19 @ 2.5'	10/21/2021	2.5 ft. bgs	-104.507771	40.362741	1.1	0.3
SS20 @ 4'	10/21/2021	4 ft. bgs	-104.507686	40.362757	1.1	0.2
SS21 @ 2.5'	10/21/2021	2.5 ft. bgs	-104.507686	40.362757	1.1	0.1
SS22 @ 5'	10/21/2021	5 ft. bgs	NC	NC	NC	0.3
SS23 @ 4'	10/21/2021	4 ft. bgs	-104.507620	40.362741	1.3	0.3
SS24 @ 2.5'	10/21/2021	2.5 ft. bgs	-104.507620	40.362741	1.3	0.2
SS25 @ 5'	10/22/2021	5 ft. bgs	NC	NC	NC	0.3
SS26 @ 4'	10/22/2021	4 ft. bgs	-104.507702	40.362786	1.5	0.8
SS27 @ 2.5'	10/22/2021	2.5 ft. bgs	-104.507702	40.362786	1.5	0.5
SS28 @ 4'	10/22/2021	4 ft. bgs	-104.507777	40.362782	1.5	0.8
SS29 @ 2.5'	10/22/2021	2.5 ft. bgs	-104.507777	40.362782	1.5	0.5
SS30 @ 4'	10/22/2021	4 ft. bgs	-104.507731	40.362814	1.1	5.8
SS31 @ 2.5'	10/22/2021	2.5 ft. bgs	-104.507731	40.362814	1.1	0.3
BKG01 @ 2.5'	10/26/2021	2.5 ft. bgs	-104.507812	40.362555	1.4	0.2
BKG01 @ 4'	10/26/2021	4 ft. bgs	-104.507812	40.362555	1.4	0.0
BKG01 @ 6'	10/26/2021	6 ft. bgs	-104.507812	40.362555	1.4	0.2
SS32 @ 5'	11/29/2021	5 ft. bgs	NC	NC	NC	2.7
SS33 @ 4'	11/30/2021	4 ft. bgs	40.36263853	-104.5078196	1	5.9
SS34 @ 2.5'	11/30/2021	2.5 ft. bgs	40.36263853	-104.5078196	1	2.8
SS35 @ 4'	11/30/2021	4 ft. bgs	NC	NC	NC	21.0
SS36 @ 2.5'	11/30/2021	2.5 ft. bgs	NC	NC	NC	5.1
SS37 @ 5'	12/1/2021	5 ft. bgs	NC	NC	NC	1.3
SS38 @ 4'	12/1/2021	4 ft. bgs	40.3626687	-104.5079249	1.2	7.3
SS39 @ 2.5'	12/1/2021	2.5 ft. bgs	40.3626687	-104.5079249	1.2	3.0
SS40 @ 4'	12/1/2021	4 ft. bgs	40.36264388	-104.507963	1.1	9.6

TABLE 6
FORMER LOLOFF 35-5 6 TANK BATTERY
FIELD DATA SUMMARY TABLE

Sample ID	Date Sampled	Depth	GPS Data ⁽¹⁾ Latitude / Longitude		PDOP Value	VOC Concentration ⁽²⁾ (ppm)
SS41 @ 2.5'	12/1/2021	2.5 ft. bgs	40.36264388	-104.507963	1.1	1.1
SS42 @ 4'	12/1/2021	4 ft. bgs	40.36259477	-104.5078778	1.1	17.8
SS43 @ 2.5'	12/1/2021	2.5 ft. bgs	40.36259477	-104.5078778	1.1	3.2
SS44 @ 5'	12/1/2021	5 ft. bgs	NC	NC	NC	5.3
SS45 @ 4'	12/2/2021	4 ft. bgs	40.36257706	-104.5080312	1.1	7.5
SS46 @ 2.5'	12/2/2021	2.5 ft. bgs	40.36257706	-104.5080312	1.1	4.1
SS47 @ 5'	12/2/2021	5 ft. bgs	NC	NC	NC	4.3
SS48 @ 4'	12/2/2021	4 ft. bgs	40.36255547	-104.5079503	1	8.3
SS49 @ 2.5'	12/2/2021	2.5 ft. bgs	40.36255547	-104.5079503	1	2.9
SS50 @ 4'	12/2/2021	4 ft. bgs	40.36251912	-104.5080889	1.2	3.0
SS51 @ 2.5'	12/2/2021	2.5 ft. bgs	40.36251912	-104.5080889	1.2	1.1
SS52 @ 5'	12/2/2021	5 ft. bgs	NC	NC	NC	3.3
SS53 @ 4'	12/2/2021	4 ft. bgs	40.3625113	-104.5080522	1.2	22.3
SS54 @ 2.5'	12/2/2021	2.5 ft. bgs	40.3625113	-104.5080522	1.2	3.9
SS55 @ 4'	12/2/2021	4 ft. bgs	40.36247941	-104.5081374	1.2	91.1
SS56 @ 2.5'	12/2/2021	2.5 ft. bgs	40.36247941	-104.5081374	1.2	3.5
SS57 @ 2.5'	12/3/2021	2.5 ft. bgs	40.36278033	-104.5077823	1.0	0.0
SS58 @ 4'	12/3/2021	4 ft. bgs	40.36278033	-104.5077823	1.0	1.4
SS59 @ 5'	12/3/2021	5 ft. bgs	40.36278033	-104.5077823	1.0	1.6
SS60 @ 2.5'	12/3/2021	2.5 ft. bgs	40.36282168	-104.5077833	1.0	1.0
SS61 @ 4'	12/3/2021	4 ft. bgs	40.36282168	-104.5077833	1.0	1.5
SS62 @ 5'	12/3/2021	5 ft. bgs	40.36282168	-104.5077833	1.0	0.9

Notes:

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

 = Source material characterization sample

NC = Data not collected

Attachment A

Summit Scientific

4653 Table Mountain Drive, Golden, Colorado 80403

303.277.9310

October 22, 2021

Mark Longhurst

PDC Energy

1775 Sherman St. STE. 3000

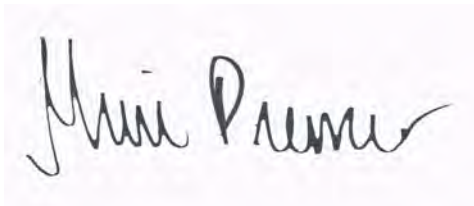
Denver, CO 80203

RE: Loloff 35-5 Tank Battery

Work Order #2110234

Enclosed are the results of analyses for samples received by Summit Scientific on 10/14/21 17:00. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

A handwritten signature in black ink, appearing to read "Muri Premier", is shown on a light pink background.

Muri Premier For Paul Shrewsbury
President



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

Project: Loloff 35-5 Tank Battery

Project Number: [none]

Project Manager: Mark Longhurst

Reported:
10/22/21 12:32

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
SS01@3'	2110234-01	Soil	10/14/21 15:15	10/14/21 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

S₂

2110234

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:	Loloff 85-5 Tank Battery
Sampler Name:	Dylan Brightwell	Project Number:	

ID	Sample Description	Date Sampled	Time Sampled	# of containers	Preservative				Matrix				Analysis Requested								Special Instructions
					HCl	HNO ₃	None	Other	Water	Soil	Air-Canister #	Other	BTEXN - 8260B	TPH - (C6 - C36)	1,2,4 & 1,3,5-TMB	Boron - HWS	pH, EC, SAR	PAHs	metals		
1	SSOI @ 3'	10/14/21	15:15	3			X			X				X	X	X	X	X	X	X	pH, EC, SAR by saturated paste
2																					
3																					
4																					
5																					
6																					
7																					
8																					
9																					
10																					

Relinquished by:	Date/Time:	Received by:	Date/Time:	Turn Around Time (Check)	Notes:
Dylan Brightwell	10/14/21 17:00	Tasman's Lock Box	10/14/21 17:00	Same Day <input checked="" type="checkbox"/> 72 hours <input type="checkbox"/>	
Relinquished by:	Date/Time:	Received by:	Date/Time:	24 hours <input type="checkbox"/> Standard <input type="checkbox"/>	
Tasman's Lock Box			10/14/21 17:00	48 hours <input type="checkbox"/>	
Relinquished by:	Date/Time:	Received by:	Date/Time:	Sample Integrity:	
				Temperature Upon Receipt: 7.1	
				Samples Intact: <input checked="" type="radio"/> Yes <input type="radio"/> No	

S₂

Sample Receipt Checklist

S2 Work Order#

2110234

Client:

Roc/Habman

Client Project ID:

Wloff-3S-5 Jamk Battery

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

Airbill #:

☐ ☒ ☐ ☐ ☐

Matrix (check all that apply):

☐ Air

☒ Soil/Solid

☐ Water

☐ Other:

(Describe)

Temp (°C)

7.1

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.	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	on ICE
Were all samples received intact ⁽¹⁾ ?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Was adequate sample volume provided ⁽¹⁾ ?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
If custody seals are present, are they intact ⁽¹⁾ ?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Are samples with holding times due within 48 hours sample due within 48 hours present?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Sameday
Is a chain-of-custody (COC) form present and filled out completely ⁽¹⁾ ?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Does the COC agree with the number and type of sample bottles received ⁽¹⁾ ?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Do the sample IDs on the bottle labels match the COC ⁽¹⁾ ?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Is the COC properly relinquished by the client w/ date and time recorded ⁽¹⁾ ?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
For volatiles in water – is there headspace present? If yes, contact client and note in narrative.	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
Are samples preserved that require preservation (excluding cooling) ⁽¹⁾ ? 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.

Custodian Printed Name or Initials

Date/Time

10-14-21



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

Project: Loloff 35-5 Tank Battery
Project Number: [none]
Project Manager: Mark Longhurst

Reported:
10/22/21 12:32

SS01@3'
2110234-01 (Soil)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **10/14/21 15:15**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Benzene	0.11	0.0020	mg/kg	1	BEJ0273	10/14/21	10/15/21	EPA 8260B	
Toluene	ND	0.0050	"	"	"	"	"	"	
Ethylbenzene	0.020	0.0050	"	"	"	"	"	"	
Xylenes (total)	ND	0.010	"	"	"	"	"	"	
1,2,4-Trimethylbenzene	23	0.50	"	100	"	"	"	"	
1,3,5-Trimethylbenzene	ND	0.0050	"	1	"	"	"	"	
Naphthalene	0.25	0.0038	"	"	"	"	"	"	
Gasoline Range Hydrocarbons	1000	50	"	100	"	"	"	"	

Date Sampled: **10/14/21 15:15**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 1,2-Dichloroethane-d4		166 %	23-173		"	"	"	"	
Surrogate: Toluene-d8		100 %	20-170		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		120 %	21-167		"	"	"	"	

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **10/14/21 15:15**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
C10-C28 (DRO)	62	50	mg/kg	1	BEJ0272	10/14/21	10/15/21	EPA 8015M	
C28-C36 (ORO)	ND	50	"	"	"	"	"	"	

Date Sampled: **10/14/21 15:15**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: o-Terphenyl		64.9 %	30-150		"	"	"	"	

PAH by EPA Method 8270D SIM

Summit Scientific

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

Project: Loloff 35-5 Tank Battery
Project Number: [none]
Project Manager: Mark Longhurst

Reported:
10/22/21 12:32

SS01@3'
2110234-01 (Soil)

Summit Scientific

PAH by EPA Method 8270D SIM

Date Sampled: **10/14/21 15:15**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Acenaphthene	ND	0.00500	mg/kg	1	BEJ0274	10/15/21	10/17/21	EPA 8270D SIM	
Anthracene	0.757	0.500	"	100	"	"	"	"	
Benzo (a) anthracene	ND	0.00500	"	1	"	"	"	"	
Benzo (a) pyrene	ND	0.00500	"	"	"	"	"	"	
Benzo (b) fluoranthene	ND	0.00500	"	"	"	"	"	"	
Benzo (k) fluoranthene	ND	0.00500	"	"	"	"	"	"	
Chrysene	0.170	0.0500	"	10	"	"	"	"	
Dibenz (a,h) anthracene	ND	0.00500	"	1	"	"	"	"	
Fluoranthene	ND	0.00500	"	"	"	"	"	"	
Fluorene	0.452	0.0500	"	10	"	"	"	"	
Indeno (1,2,3-cd) pyrene	ND	0.00500	"	1	"	"	"	"	
Pyrene	ND	0.00500	"	"	"	"	"	"	
1-Methylnaphthalene	2.12	0.0500	"	10	"	"	"	"	
2-Methylnaphthalene	ND	0.00500	"	1	"	"	"	"	

Date Sampled: **10/14/21 15:15**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 2-Methylnaphthalene-d10		88.2 %	40-150		"	"	"	"	
Surrogate: Fluoranthene-d10		86.3 %	40-150		"	"	"	"	

Total Metals by EPA 6020B Hot Water Soluble Extraction

Date Sampled: **10/14/21 15:15**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Boron	0.257	0.0100	mg/L	1	BEJ0331	10/18/21	10/20/21	EPA 6020B	

Total Metals by EPA 6020B

Date Sampled: **10/14/21 15:15**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
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Summit Scientific

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

Project: Loloff 35-5 Tank Battery

Project Number: [none]
Project Manager: Mark Longhurst

Reported:
10/22/21 12:32

SS01@3'
2110234-01 (Soil)

Summit Scientific

Total Metals by EPA 6020B

Arsenic	1.88	0.239	mg/kg dry	1	BEJ0277	10/15/21	10/19/21	EPA 6020B
Barium	62.8	0.478	"	"	"	"	"	"
Cadmium	ND	0.239	"	"	"	"	"	"
Copper	6.94	0.478	"	"	"	"	"	"
Lead	5.50	0.239	"	"	"	"	"	"
Nickel	5.46	0.478	"	"	"	"	"	"
Selenium	0.585	0.311	"	"	"	"	"	"
Silver	0.0391	0.0239	"	"	"	"	"	"
Zinc	27.0	0.478	"	"	"	"	"	"

Hexavalent Chromium by EPA Method 7196

Date Sampled: **10/14/21 15:15**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Chromium, Hexavalent	ND	0.30	mg/kg dry	1	BEJ0353	10/19/21	10/22/21	EPA 7196A	

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

Date Sampled: **10/14/21 15:15**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Calcium	49.1	0.0598	mg/L dry	1	BEJ0294	10/18/21	10/20/21	EPA 6020B	
Magnesium	49.7	0.0598	"	"	"	"	"	"	
Sodium	161	0.0598	"	"	"	"	"	"	

Calculated Analysis

Date Sampled: **10/14/21 15:15**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	3.87	0.00100	units	1	BEJ0381	10/20/21	10/20/21	Calculation	

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **10/14/21 15:15**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
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Summit Scientific

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

Project: Loloff 35-5 Tank Battery
Project Number: [none]
Project Manager: Mark Longhurst

Reported:
10/22/21 12:32

SS01@3'
2110234-01 (Soil)

Summit Scientific

Physical Parameters by APHA/ASTM/EPA Methods

% Solids	83.7	%	1	BEJ0276	10/15/21	10/15/21	Calculation
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Specific Conductance by EPA Method 120.1, Saturated Paste Extraction

Date Sampled: **10/14/21 15:15**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Specific Conductance (EC)	1.34	0.0100	mmhos/cm	1	BEJ0348	10/19/21	10/19/21	EPA 120.1	

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

Date Sampled: **10/14/21 15:15**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
pH	8.16		pH Units	1	BEJ0349	10/19/21	10/19/21	EPA 9045D	

Summit Scientific

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

Project: Loloff 35-5 Tank Battery

Project Number: [none]
Project Manager: Mark Longhurst

Reported:
10/22/21 12:32

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 BEJ0273 - EPA 5030 Soil MS

Blank (BEJ0273-BLK1)

Prepared: 10/14/21 Analyzed: 10/15/21

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	0.0375		"	0.0400		93.8	23-173			
Surrogate: Toluene-d8	0.0380		"	0.0400		95.0	20-170			
Surrogate: 4-Bromofluorobenzene	0.0393		"	0.0400		98.2	21-167			

LCS (BEJ0273-BS1)

Prepared: 10/14/21 Analyzed: 10/15/21

Benzene	0.104	0.0020	mg/kg	0.100		104	70-130			
Toluene	0.0916	0.0050	"	0.100		91.6	70-130			
Ethylbenzene	0.108	0.0050	"	0.100		108	70-130			
m,p-Xylene	0.207	0.010	"	0.200		103	70-130			
o-Xylene	0.127	0.0050	"	0.100		127	70-130			
1,2,4-Trimethylbenzene	0.129	0.0050	"	0.100		129	70-130			
1,3,5-Trimethylbenzene	0.127	0.0050	"	0.100		127	70-130			
Naphthalene	0.107	0.0038	"	0.100		107	70-130			
Surrogate: 1,2-Dichloroethane-d4	0.0381		"	0.0400		95.2	23-173			
Surrogate: Toluene-d8	0.0381		"	0.0400		95.3	20-170			
Surrogate: 4-Bromofluorobenzene	0.0391		"	0.0400		97.6	21-167			

Matrix Spike (BEJ0273-MS1)

Source: 2110222-01

Prepared: 10/14/21 Analyzed: 10/15/21

Benzene	0.102	0.0020	mg/kg	0.100	ND	102	70-130			
Toluene	0.119	0.0050	"	0.100	ND	119	70-130			
Ethylbenzene	0.124	0.0050	"	0.100	ND	124	70-130			
m,p-Xylene	0.239	0.010	"	0.200	ND	120	70-130			
o-Xylene	0.114	0.0050	"	0.100	ND	114	70-130			
1,2,4-Trimethylbenzene	0.117	0.0050	"	0.100	ND	117	70-130			
1,3,5-Trimethylbenzene	0.114	0.0050	"	0.100	ND	114	70-130			
Naphthalene	0.104	0.0038	"	0.100	ND	104	70-130			
Surrogate: 1,2-Dichloroethane-d4	0.0397		"	0.0400		99.3	23-173			
Surrogate: Toluene-d8	0.0410		"	0.0400		103	20-170			
Surrogate: 4-Bromofluorobenzene	0.0391		"	0.0400		97.7	21-167			

Summit Scientific

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

Project: Loloff 35-5 Tank Battery
Project Number: [none]
Project Manager: Mark Longhurst

Reported:
10/22/21 12:32

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 BEJ0273 - EPA 5030 Soil MS

Matrix Spike Dup (BEJ0273-MSD1)	Source: 2110222-01			Prepared: 10/14/21 Analyzed: 10/15/21						
Benzene	0.108	0.0020	mg/kg	0.100	ND	108	70-130	5.60	30	
Toluene	0.126	0.0050	"	0.100	ND	126	70-130	5.19	30	
Ethylbenzene	0.102	0.0050	"	0.100	ND	102	70-130	19.2	30	
m,p-Xylene	0.255	0.010	"	0.200	ND	127	70-130	6.38	30	
o-Xylene	0.119	0.0050	"	0.100	ND	119	70-130	4.59	30	
1,2,4-Trimethylbenzene	0.124	0.0050	"	0.100	ND	124	70-130	5.33	30	
1,3,5-Trimethylbenzene	0.120	0.0050	"	0.100	ND	120	70-130	5.35	30	
Naphthalene	0.110	0.0038	"	0.100	ND	110	70-130	6.12	30	
Surrogate: 1,2-Dichloroethane-d4	0.0424		"	0.0400		106	23-173			
Surrogate: Toluene-d8	0.0410		"	0.0400		103	20-170			
Surrogate: 4-Bromofluorobenzene	0.0385		"	0.0400		96.3	21-167			

Summit Scientific

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

Project: Loloff 35-5 Tank Battery
Project Number: [none]
Project Manager: Mark Longhurst

Reported:
10/22/21 12:32

Extractable Petroleum Hydrocarbons by 8015 - Quality Control
Summit Scientific

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

Batch BEJ0272 - EPA 3550A

Blank (BEJ0272-BLK1)

Prepared: 10/14/21 Analyzed: 10/15/21

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

LCS (BEJ0272-BS1)

Prepared: 10/14/21 Analyzed: 10/15/21

C10-C28 (DRO)	505	50	mg/kg	500	101	70-130
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Matrix Spike (BEJ0272-MS1)

Source: 2110222-01

Prepared: 10/14/21 Analyzed: 10/15/21

C10-C28 (DRO)	483	50	mg/kg	500	39.9	88.6	70-130
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Matrix Spike Dup (BEJ0272-MSD1)

Source: 2110222-01

Prepared: 10/14/21 Analyzed: 10/15/21

C10-C28 (DRO)	515	50	mg/kg	500	39.9	95.1	70-130	6.47	20
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Summit Scientific

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

Project: Loloff 35-5 Tank Battery
Project Number: [none]
Project Manager: Mark Longhurst

Reported:
10/22/21 12:32

PAH by EPA Method 8270D SIM - Quality Control

Summit Scientific

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

Batch BEJ0274 - EPA 5030 Soil MS

Blank (BEJ0274-BLK1)

Prepared: 10/15/21 Analyzed: 10/16/21

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	"								
Surrogate: 2-Methylnaphthalene-d10	0.0361		"	0.0333		108		40-150			
Surrogate: Fluoranthene-d10	0.0342		"	0.0333		103		40-150			

LCS (BEJ0274-BS1)

Prepared: 10/15/21 Analyzed: 10/17/21

Acenaphthene	0.0306	0.00500	mg/kg	0.0333		91.8		31-137			
Anthracene	0.0293	0.00500	"	0.0333		88.0		30-120			
Benzo (a) anthracene	0.0296	0.00500	"	0.0333		88.8		30-120			
Benzo (a) pyrene	0.0205	0.00500	"	0.0333		61.4		30-120			
Benzo (b) fluoranthene	0.0203	0.00500	"	0.0333		60.9		30-120			
Benzo (k) fluoranthene	0.0239	0.00500	"	0.0333		71.6		30-120			
Chrysene	0.0286	0.00500	"	0.0333		85.9		30-120			
Dibenz (a,h) anthracene	0.0239	0.00500	"	0.0333		71.7		30-120			
Fluoranthene	0.0267	0.00500	"	0.0333		80.1		30-120			
Fluorene	0.0306	0.00500	"	0.0333		91.9		30-120			
Indeno (1,2,3-cd) pyrene	0.0171	0.00500	"	0.0333		51.4		30-120			
Pyrene	0.0263	0.00500	"	0.0333		78.8		35-142			
1-Methylnaphthalene	0.0318	0.00500	"	0.0333		95.3		35-142			
2-Methylnaphthalene	0.0309	0.00500	"	0.0333		92.8		35-142			
Surrogate: 2-Methylnaphthalene-d10	0.0321		"	0.0333		96.2		40-150			
Surrogate: Fluoranthene-d10	0.0316		"	0.0333		94.7		40-150			

Summit Scientific

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

Project: Loloff 35-5 Tank Battery

Project Number: [none]
Project Manager: Mark Longhurst

Reported:
10/22/21 12:32

PAH by EPA Method 8270D SIM - Quality Control

Summit Scientific

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

Batch BEJ0274 - EPA 5030 Soil MS

Matrix Spike (BEJ0274-MS1)

Source: 2110179-01

Prepared: 10/15/21 Analyzed: 10/17/21

Acenaphthene	0.0217	0.00500	mg/kg	0.0333	ND	65.2	31-137			
Anthracene	0.0209	0.00500	"	0.0333	ND	62.7	30-120			
Benzo (a) anthracene	0.0217	0.00500	"	0.0333	ND	65.0	30-120			
Benzo (a) pyrene	0.0299	0.00500	"	0.0333	ND	89.7	30-120			
Benzo (b) fluoranthene	0.0375	0.00500	"	0.0333	ND	113	30-120			
Benzo (k) fluoranthene	0.0362	0.00500	"	0.0333	ND	109	30-120			
Chrysene	0.0218	0.00500	"	0.0333	0.00188	59.9	30-120			
Dibenz (a,h) anthracene	0.0144	0.00500	"	0.0333	ND	43.3	30-120			
Fluoranthene	0.0218	0.00500	"	0.0333	0.00236	58.2	30-120			
Fluorene	0.0225	0.00500	"	0.0333	ND	67.4	30-120			
Indeno (1,2,3-cd) pyrene	0.0110	0.00500	"	0.0333	ND	32.9	30-120			
Pyrene	0.0215	0.00500	"	0.0333	0.00243	57.2	35-142			
1-Methylnaphthalene	0.0222	0.00500	"	0.0333	ND	66.5	15-130			
2-Methylnaphthalene	0.0225	0.00500	"	0.0333	ND	67.5	15-130			
Surrogate: 2-Methylnaphthalene-d10	0.0212		"	0.0333		63.7	40-150			
Surrogate: Fluoranthene-d10	0.0233		"	0.0333		69.8	40-150			

Matrix Spike Dup (BEJ0274-MSD1)

Source: 2110179-01

Prepared: 10/15/21 Analyzed: 10/17/21

Acenaphthene	0.0243	0.00500	mg/kg	0.0333	ND	73.0	31-137	11.2	30	
Anthracene	0.0243	0.00500	"	0.0333	ND	72.8	30-120	14.9	30	
Benzo (a) anthracene	0.0251	0.00500	"	0.0333	ND	75.3	30-120	14.7	30	
Benzo (a) pyrene	0.0350	0.00500	"	0.0333	ND	105	30-120	15.7	30	
Benzo (b) fluoranthene	0.0339	0.00500	"	0.0333	ND	102	30-120	10.1	30	
Benzo (k) fluoranthene	0.0319	0.00500	"	0.0333	ND	95.7	30-120	12.7	30	
Chrysene	0.0251	0.00500	"	0.0333	0.00188	69.7	30-120	13.9	30	
Dibenz (a,h) anthracene	0.0179	0.00500	"	0.0333	ND	53.6	30-120	21.2	30	
Fluoranthene	0.0247	0.00500	"	0.0333	0.00236	67.2	30-120	12.8	30	
Fluorene	0.0248	0.00500	"	0.0333	ND	74.5	30-120	10.1	30	
Indeno (1,2,3-cd) pyrene	0.0136	0.00500	"	0.0333	ND	40.9	30-120	21.8	30	
Pyrene	0.0255	0.00500	"	0.0333	0.00243	69.2	35-142	17.0	30	
1-Methylnaphthalene	0.0264	0.00500	"	0.0333	ND	79.1	15-130	17.3	50	
2-Methylnaphthalene	0.0256	0.00500	"	0.0333	ND	76.9	15-130	13.0	50	
Surrogate: 2-Methylnaphthalene-d10	0.0265		"	0.0333		79.4	40-150			
Surrogate: Fluoranthene-d10	0.0268		"	0.0333		80.3	40-150			

Summit Scientific

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.



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

Project: Loloff 35-5 Tank Battery

Project Number: [none]
Project Manager: Mark Longhurst

Reported:
10/22/21 12:32

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 BEJ0331 - EPA 3050B

Blank (BEJ0331-BLK1)

Prepared: 10/18/21 Analyzed: 10/20/21

Boron ND 0.0100 mg/L

LCS (BEJ0331-BS1)

Prepared: 10/18/21 Analyzed: 10/20/21

Boron 5.48 0.0100 mg/L 5.00 110 80-120

Duplicate (BEJ0331-DUP1)

Source: 2110217-01

Prepared: 10/18/21 Analyzed: 10/20/21

Boron 0.376 0.0100 mg/L 0.404 7.29 20

Matrix Spike (BEJ0331-MS1)

Source: 2110217-01

Prepared: 10/18/21 Analyzed: 10/20/21

Boron 5.47 0.0100 mg/L 5.00 0.404 101 75-125

Matrix Spike Dup (BEJ0331-MSD1)

Source: 2110217-01

Prepared: 10/18/21 Analyzed: 10/20/21

Boron 5.80 0.0100 mg/L 5.00 0.404 108 75-125 5.93 25

Summit Scientific

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.



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

Project: Loloff 35-5 Tank Battery
Project Number: [none]
Project Manager: Mark Longhurst

Reported:
10/22/21 12:32

Total Metals by EPA 6020B - Quality Control
Summit Scientific

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

Batch BEJ0277 - EPA 3050B

Blank (BEJ0277-BLK1)

Prepared: 10/15/21 Analyzed: 10/19/21

Arsenic	ND	0.200	mg/kg wet
Barium	ND	0.400	"
Cadmium	ND	0.200	"
Copper	ND	0.400	"
Lead	ND	0.200	"
Nickel	ND	0.400	"
Selenium	ND	0.260	"
Silver	ND	0.0200	"
Zinc	ND	0.400	"

LCS (BEJ0277-BS1)

Prepared: 10/15/21 Analyzed: 10/19/21

Arsenic	45.7	0.200	mg/kg wet	40.0	114	80-120
Barium	42.3	0.400	"	40.0	106	80-120
Cadmium	2.30	0.200	"	2.00	115	80-120
Copper	43.2	0.400	"	40.0	108	80-120
Lead	21.0	0.200	"	20.0	105	80-120
Nickel	42.3	0.400	"	40.0	106	80-120
Selenium	4.21	0.260	"	4.00	105	80-120
Silver	2.08	0.0200	"	2.00	104	80-120
Zinc	45.4	0.400	"	40.0	114	80-120

Duplicate (BEJ0277-DUP1)

Source: 2110200-01

Prepared: 10/15/21 Analyzed: 10/19/21

Arsenic	4.27	0.242	mg/kg dry	4.29	0.404	20
Barium	138	0.484	"	132	4.87	20
Cadmium	0.319	0.242	"	0.349	8.87	20
Copper	11.2	0.484	"	11.3	0.342	20
Lead	9.49	0.242	"	10.7	11.5	20
Nickel	12.6	0.484	"	11.9	5.26	20
Selenium	0.821	0.315	"	0.852	3.73	20
Silver	0.0320	0.0242	"	0.0299	6.97	20
Zinc	54.8	0.484	"	49.7	9.79	20

Summit Scientific

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.



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

Project: Loloff 35-5 Tank Battery

Project Number: [none]
Project Manager: Mark Longhurst

Reported:
10/22/21 12:32

Total Metals by EPA 6020B - Quality Control
Summit Scientific

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

Batch BEJ0277 - EPA 3050B

Matrix Spike (BEJ0277-MS1)		Source: 2110200-01			Prepared: 10/15/21		Analyzed: 10/19/21			
Arsenic	58.8	0.242	mg/kg dry	48.4	4.29	113	75-125			
Barium	192	0.484	"	48.4	132	123	75-125			
Cadmium	3.02	0.242	"	2.42	0.349	110	75-125			
Copper	62.1	0.484	"	48.4	11.3	105	75-125			
Lead	33.2	0.242	"	24.2	10.7	93.1	75-125			
Nickel	63.3	0.484	"	48.4	11.9	106	75-125			
Selenium	4.97	0.315	"	4.84	0.852	85.1	75-125			
Silver	2.41	0.0242	"	2.42	0.0299	98.5	75-125			
Zinc	101	0.484	"	48.4	49.7	107	75-125			

Matrix Spike Dup (BEJ0277-MSD1)		Source: 2110200-01			Prepared: 10/15/21		Analyzed: 10/19/21			
Arsenic	61.3	0.242	mg/kg dry	48.4	4.29	118	75-125	4.15	25	
Barium	188	0.484	"	48.4	132	116	75-125	1.95	25	
Cadmium	3.13	0.242	"	2.42	0.349	115	75-125	3.53	25	
Copper	63.3	0.484	"	48.4	11.3	107	75-125	1.86	25	
Lead	33.9	0.242	"	24.2	10.7	96.0	75-125	2.11	25	
Nickel	67.1	0.484	"	48.4	11.9	114	75-125	5.76	25	
Selenium	5.24	0.315	"	4.84	0.852	90.6	75-125	5.21	25	
Silver	2.44	0.0242	"	2.42	0.0299	99.8	75-125	1.27	25	
Zinc	102	0.484	"	48.4	49.7	109	75-125	0.737	25	

Summit Scientific

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

Project: Loloff 35-5 Tank Battery

Project Number: [none]
Project Manager: Mark Longhurst

Reported:
10/22/21 12:32

Hexavalent Chromium by EPA Method 7196 - Quality Control
Summit Scientific

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

Batch BEJ0353 - 3060A Mod

Blank (BEJ0353-BLK1)

Prepared: 10/19/21 Analyzed: 10/22/21

Chromium, Hexavalent ND 0.30 mg/kg wet

LCS (BEJ0353-BS1)

Prepared: 10/19/21 Analyzed: 10/22/21

Chromium, Hexavalent 28.6 0.30 mg/kg wet 25.0 114 80-120

Duplicate (BEJ0353-DUP1)

Source: 2110215-01

Prepared: 10/19/21 Analyzed: 10/22/21

Chromium, Hexavalent ND 0.30 mg/kg dry ND 20

Matrix Spike (BEJ0353-MS1)

Source: 2110215-01

Prepared: 10/19/21 Analyzed: 10/22/21

Chromium, Hexavalent 30.4 0.30 mg/kg dry 27.1 ND 112 75-125

Matrix Spike Dup (BEJ0353-MSD1)

Source: 2110215-01

Prepared: 10/19/21 Analyzed: 10/22/21

Chromium, Hexavalent 30.8 0.30 mg/kg dry 27.1 ND 114 75-125 1.24 20

Summit Scientific

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

Project: Loloff 35-5 Tank Battery
Project Number: [none]
Project Manager: Mark Longhurst

Reported:
10/22/21 12:32

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 BEJ0294 - General Preparation

Blank (BEJ0294-BLK1)

Prepared: 10/15/21 Analyzed: 10/19/21

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

LCS (BEJ0294-BS1)

Prepared: 10/15/21 Analyzed: 10/19/21

Calcium	5.73	0.0500	mg/L wet	5.00	115	70-130
Magnesium	5.21	0.0500	"	5.00	104	70-130
Sodium	6.34	0.0500	"	5.00	127	70-130

Summit Scientific

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

Project: Loloff 35-5 Tank Battery

Project Number: [none]

Project Manager: Mark Longhurst

Reported:
10/22/21 12:32

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 BEJ0276 - General Preparation

Duplicate (BEJ0276-DUP1)

Source: 2110211-02

Prepared & Analyzed: 10/15/21

% Solids	81.9	%		82.0		0.165	20
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Summit Scientific

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

Project: Loloff 35-5 Tank Battery

Project Number: [none]
Project Manager: Mark Longhurst

Reported:
10/22/21 12:32

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 BEJ0348 - General Preparation

Blank (BEJ0348-BLK1)

Prepared & Analyzed: 10/19/21

Specific Conductance (EC) ND 0.0100 mmhos/cm

LCS (BEJ0348-BS1)

Prepared & Analyzed: 10/19/21

Specific Conductance (EC) 0.150 0.0100 mmhos/cm 0.150 100 95-105

Duplicate (BEJ0348-DUP1)

Source: 2110206-02

Prepared & Analyzed: 10/19/21

Specific Conductance (EC) 0.158 0.0100 mmhos/cm 0.156 0.956 20

Summit Scientific

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

Project: Loloff 35-5 Tank Battery

Project Number: [none]

Project Manager: Mark Longhurst

Reported:
10/22/21 12:32

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 BEJ0349 - General Preparation

LCS (BEJ0349-BS1)

Prepared & Analyzed: 10/19/21

pH	9.14	pH Units	9.18	99.6	95-105
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Duplicate (BEJ0349-DUP1)

Source: 2110206-02

Prepared & Analyzed: 10/19/21

pH	8.04	pH Units	7.94	1.25	20
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Summit Scientific

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

Project: Loloff 35-5 Tank Battery

Project Number: [none]
Project Manager: Mark Longhurst

Reported:
10/22/21 12:32

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



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

Project: Loloff 35-5 Tank Battery

Project Number: [none]

Project Manager: Mark Longhurst

Reported:
10/17/21 19:59

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
GW01	2110252-01	Water	10/15/21 09:30	10/15/21 14:40

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

4653 Table Mountain Drive, Golden, Colorado 80403

303.277.9310

October 17, 2021

Mark Longhurst

PDC Energy

1775 Sherman St. STE. 3000

Denver, CO 80203

RE: Loloff 35-5 Tank Battery

Work Order #2110252

Enclosed are the results of analyses for samples received by Summit Scientific on 10/15/21 14:40. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

A handwritten signature in black ink, appearing to read 'P. Shrewsbury', with a stylized, cursive script.

Paul Shrewsbury

President



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

Project: Loloff 35-5 Tank Battery

Project Number: [none]

Project Manager: Mark Longhurst

Reported:
10/17/21 19:59

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
GW01	2110252-01	Water	10/15/21 09:30	10/15/21 14:40

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

S₂

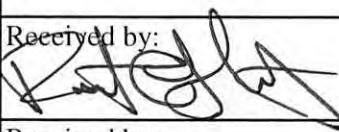
2110252

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: Loloff 35-5 Tank Battery
Sampler Name: Dylan Brightwell Project Number:

ID	Sample Description	Date Sampled	Time Sampled	# of containers	Preservative				Matrix				Analysis Requested								Special Instructions		
					HCl	HNO ₃	None	Other	Water	Soil	Air-Canister #	Other	BTEXN - 8260B	TPH - (C6 - C36)	1,2,4 & 1,3,5-TMB	Boron - HWS	pH, EC, SAR						
1	Gw1	10/15/21	9:30	3	X				X					X		X							pH, EC, SAR by saturated paste
2																							
3																							
4																							
5																							
6																							
7																							
8																							
9																							
10																							

Relinquished by:	Date/Time:	Received by:	Date/Time:	Turn Around Time	(Check)	Notes:
Dylan Brightwell	10/15/21 14:40	Tasman's Lock Box	10/15/21 14:40	Same Day	X 72 hours	
				24 hours	Standard	
				48 hours		
Relinquished by:	Date/Time:	Received by:	Date/Time:	Sample Integrity:		
Tasman's Lock Box			10-15-21 14:40	Temperature Upon Receipt: 4.1		
Relinquished by:	Date/Time:	Received by:	Date/Time:	Samples Intact: Yes No		

S₂

Sample Receipt Checklist

S2 Work Order#

2110252

Client:

Bc/Tasman

Client Project ID:

1010ff 35-S Tank Battery

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

Airbill #:

☐ ☒ ☐ ☐ ☐

Matrix (check all that apply):

☐ Air☐ Soil/Solid☒ Water☐ Other:

(Describe)

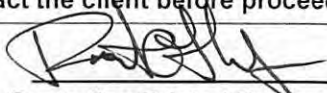
Temp (°C)

4.1

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.	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	on ICE
Were all samples received intact ⁽¹⁾ ?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Was adequate sample volume provided ⁽¹⁾ ?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
If custody seals are present, are they intact ⁽¹⁾ ?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Are samples with holding times due within 48 hours sample due within 48 hours present?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Sameday
Is a chain-of-custody (COC) form present and filled out completely ⁽¹⁾ ?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Does the COC agree with the number and type of sample bottles received ⁽¹⁾ ?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Do the sample IDs on the bottle labels match the COC ⁽¹⁾ ?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Is the COC properly relinquished by the client w/ date and time recorded ⁽¹⁾ ?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
For volatiles in water – is there headspace present? If yes, contact client and note in narrative.	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input 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 checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	HCl
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.

 Custodian Printed Name or Initials

 10.15.21
 Date/Time



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

Project: Loloff 35-5 Tank Battery
Project Number: [none]
Project Manager: Mark Longhurst

Reported:
10/17/21 19:59

GW01
2110252-01 (Water)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **10/15/21 09:30**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Benzene	220	1.0	ug/l	1	BEJ0300	10/15/21	10/16/21	EPA 8260B	
Toluene	ND	1.0	"	"	"	"	"	"	
Ethylbenzene	10	1.0	"	"	"	"	"	"	
Xylenes (total)	ND	2.0	"	"	"	"	"	"	
Naphthalene	39	1.0	"	"	"	"	"	"	
1,2,4-Trimethylbenzene	400	100	"	100	"	"	"	"	
1,3,5-Trimethylbenzene	ND	1.0	"	1	"	"	"	"	

Date Sampled: **10/15/21 09:30**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Surrogate: 1,2-Dichloroethane-d4		41.6 %	23-173		"	"	"	"	
Surrogate: Toluene-d8		69.0 %	20-170		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		115 %	21-167		"	"	"	"	

Summit Scientific

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.



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

Project: Loloff 35-5 Tank Battery
Project Number: [none]
Project Manager: Mark Longhurst

Reported:
10/17/21 19:59

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 BEJ0300 - EPA 5030 Water MS

Blank (BEJ0300-BLK1)

Prepared: 10/15/21 Analyzed: 10/16/21

Benzene	ND	1.0	ug/l							
Toluene	ND	1.0	"							
Ethylbenzene	ND	1.0	"							
Xylenes (total)	ND	2.0	"							
Naphthalene	ND	1.0	"							
1,2,4-Trimethylbenzene	ND	1.0	"							
1,3,5-Trimethylbenzene	ND	1.0	"							
Surrogate: 1,2-Dichloroethane-d4	11.0		"	13.3		82.2	23-173			
Surrogate: Toluene-d8	13.5		"	13.3		101	20-170			
Surrogate: 4-Bromofluorobenzene	13.8		"	13.3		104	21-167			

LCS (BEJ0300-BS1)

Prepared: 10/15/21 Analyzed: 10/16/21

Benzene	20.6	1.0	ug/l	25.0		82.4	51-132			
Toluene	26.6	1.0	"	25.0		106	51-138			
Ethylbenzene	26.5	1.0	"	25.0		106	58-146			
m,p-Xylene	53.6	2.0	"	50.0		107	57-144			
o-Xylene	25.0	1.0	"	25.0		100	53-146			
Naphthalene	24.5	1.0	"	25.0		98.0	70-130			
1,2,4-Trimethylbenzene	21.8	1.0	"	25.0		87.2	70-130			
1,3,5-Trimethylbenzene	22.4	1.0	"	25.0		89.7	70-130			
Surrogate: 1,2-Dichloroethane-d4	10.6		"	13.3		79.7	23-173			
Surrogate: Toluene-d8	13.0		"	13.3		97.2	20-170			
Surrogate: 4-Bromofluorobenzene	13.0		"	13.3		97.6	21-167			

Matrix Spike (BEJ0300-MS1)

Source: 2110250-01

Prepared: 10/15/21 Analyzed: 10/16/21

Benzene	19.9	1.0	ug/l	25.0	ND	79.5	34-141			
Toluene	26.8	1.0	"	25.0	ND	107	27-151			
Ethylbenzene	29.3	1.0	"	25.0	ND	117	29-160			
m,p-Xylene	59.1	2.0	"	50.0	ND	118	20-166			
o-Xylene	26.9	1.0	"	25.0	ND	108	33-159			
Naphthalene	21.3	1.0	"	25.0	ND	85.2	70-130			
1,2,4-Trimethylbenzene	25.1	1.0	"	25.0	ND	100	70-130			
1,3,5-Trimethylbenzene	26.1	1.0	"	25.0	ND	104	70-130			
Surrogate: 1,2-Dichloroethane-d4	6.53		"	13.3		49.0	23-173			
Surrogate: Toluene-d8	13.1		"	13.3		98.0	20-170			
Surrogate: 4-Bromofluorobenzene	12.3		"	13.3		92.6	21-167			

Summit Scientific

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.



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

Project: Loloff 35-5 Tank Battery
Project Number: [none]
Project Manager: Mark Longhurst

Reported:
10/17/21 19:59

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 BEJ0300 - EPA 5030 Water MS

Matrix Spike Dup (BEJ0300-MSD1)	Source: 2110250-01			Prepared: 10/15/21 Analyzed: 10/16/21						
Benzene	20.8	1.0	ug/l	25.0	ND	83.2	34-141	4.53	30	
Toluene	27.6	1.0	"	25.0	ND	111	27-151	2.86	30	
Ethylbenzene	28.6	1.0	"	25.0	ND	114	29-160	2.55	30	
m,p-Xylene	58.8	2.0	"	50.0	ND	118	20-166	0.492	30	
o-Xylene	27.1	1.0	"	25.0	ND	108	33-159	0.778	30	
Naphthalene	23.0	1.0	"	25.0	ND	91.9	70-130	7.59	30	
1,2,4-Trimethylbenzene	24.8	1.0	"	25.0	ND	99.4	70-130	1.08	30	
1,3,5-Trimethylbenzene	25.8	1.0	"	25.0	ND	103	70-130	1.23	30	
Surrogate: 1,2-Dichloroethane-d4	8.44		"	13.3		63.3	23-173			
Surrogate: Toluene-d8	13.3		"	13.3		99.5	20-170			
Surrogate: 4-Bromofluorobenzene	12.7		"	13.3		95.2	21-167			

Summit Scientific

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.



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

Project: Loloff 35-5 Tank Battery

Project Number: [none]

Project Manager: Mark Longhurst

Reported:
10/17/21 19:59

Notes and Definitions

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

Summit Scientific

4653 Table Mountain Drive, Golden, Colorado 80403

303.277.9310

November 01, 2021

Mark Longhurst

PDC Energy

1775 Sherman St. STE. 3000

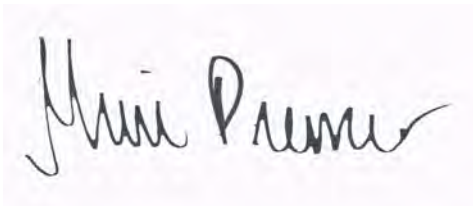
Denver, CO 80203

RE: Loloff 35-5 Tank Battery

Work Order #2110253

Enclosed are the results of analyses for samples received by Summit Scientific on 10/15/21 14:40. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

A handwritten signature in black ink, appearing to read "Muri Premier", is shown on a light pink background.

Muri Premier For Paul Shrewsbury
President



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

Project: Loloff 35-5 Tank Battery
Project Number: [none]
Project Manager: Mark Longhurst

Reported:
11/01/21 16:10

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
SS02@5'	2110253-01	Soil	10/15/21 00:00	10/15/21 14:40
SS03@4'	2110253-02	Soil	10/15/21 00:00	10/15/21 14:40
SS04@2.5'	2110253-03	Soil	10/15/21 00:00	10/15/21 14:40
SS05@4'	2110253-04	Soil	10/15/21 00:00	10/15/21 14:40
SS06@2.5'	2110253-05	Soil	10/15/21 00:00	10/15/21 14:40

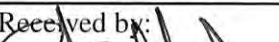
Summit Scientific

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.

210253

Page 1 of 1

[illegible]

Relinquished by:	Date/Time:	Received by:	Date/Time:	Turn Around Time (Check)	Notes:
Dylan Brightwell	10/15/21 14:40	Tasman's Lock Box	10/15/21 14:40	Same Day <input checked="" type="checkbox"/> 72 hours <input type="checkbox"/>	
Relinquished by:	Date/Time:	Received by:	Date/Time:	24 hours <input type="checkbox"/> Standard <input type="checkbox"/>	
Tasman's Lock Box			10-15-21 14:40	48 hours <input type="checkbox"/>	
Relinquished by:	Date/Time:	Received by:	Date/Time:	Sample Integrity:	
				Temperature Upon Receipt: 4.1	
				Samples Intact: <input checked="" type="radio"/> Yes <input type="radio"/> No	

S₂

Sample Receipt Checklist

S2 Work Order #

2110253

Client: Pac/Tasman Client Project ID: 1010ff 35-S Tank Battery

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

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

Temp (°C) 4.1

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.	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	on Ice
Were all samples received intact ⁽¹⁾ ?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Was adequate sample volume provided ⁽¹⁾ ?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
If custody seals are present, are they intact ⁽¹⁾ ?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Are samples with holding times due within 48 hours sample due within 48 hours present?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Same day
Is a chain-of-custody (COC) form present and filled out completely ⁽¹⁾ ?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Does the COC agree with the number and type of sample bottles received ⁽¹⁾ ?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Do the sample IDs on the bottle labels match the COC ⁽¹⁾ ?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Is the COC properly relinquished by the client w/ date and time recorded ⁽¹⁾ ?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
For volatiles in water – is there headspace present? If yes, contact client and note in narrative.	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
Are samples preserved that require preservation (excluding cooling) ⁽¹⁾ ? 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 or Initials

10-15-21
Date/Time



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

Project: Loloff 35-5 Tank Battery
Project Number: [none]
Project Manager: Mark Longhurst

Reported:
11/01/21 16:10

SS02@5'
2110253-01 (Soil)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **10/15/21 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Benzene	ND	0.0020	mg/kg	1	BEJ0299	10/15/21	10/16/21	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: **10/15/21 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 1,2-Dichloroethane-d4		86.7 %	23-173		"	"	"	"	
Surrogate: Toluene-d8		122 %	20-170		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		99.1 %	21-167		"	"	"	"	

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **10/15/21 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
C10-C28 (DRO)	ND	50	mg/kg	1	BEJ0298	10/15/21	10/15/21	EPA 8015M	
C28-C36 (ORO)	ND	50	"	"	"	"	"	"	

Date Sampled: **10/15/21 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: o-Terphenyl		78.5 %	30-150		"	"	"	"	

PAH by EPA Method 8270D SIM

Summit Scientific

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

Project: Loloff 35-5 Tank Battery
Project Number: [none]
Project Manager: Mark Longhurst

Reported:
11/01/21 16:10

SS02@5'
2110253-01 (Soil)

Summit Scientific

PAH by EPA Method 8270D SIM

Date Sampled: **10/15/21 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Anthracene	ND	0.00500	mg/kg	1	BEJ0571	10/28/21	10/30/21	EPA 8270D SIM	
Chrysene	ND	0.00500	"	"	"	"	"	"	
Fluorene	ND	0.00500	"	"	"	"	"	"	
1-Methylnaphthalene	ND	0.00500	"	"	"	"	"	"	

Date Sampled: **10/15/21 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 2-Methylnaphthalene-d10		84.3 %	40-150		"	"	"	"	
Surrogate: Fluoranthene-d10		69.5 %	40-150		"	"	"	"	

Summit Scientific

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

Project: Loloff 35-5 Tank Battery
Project Number: [none]
Project Manager: Mark Longhurst

Reported:
11/01/21 16:10

SS03@4'
2110253-02 (Soil)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **10/15/21 00:00**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Benzene	ND	0.0020	mg/kg	1	BEJ0299	10/15/21	10/16/21	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	"	"	"	"	10/16/21	"	

Date Sampled: **10/15/21 00:00**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: 1,2-Dichloroethane-d4		94.6 %	23-173		"	"	"	"	
Surrogate: Toluene-d8		136 %	20-170		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		113 %	21-167		"	"	"	"	

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **10/15/21 00:00**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
C10-C28 (DRO)	ND	50	mg/kg	1	BEJ0298	10/15/21	10/15/21	EPA 8015M	
C28-C36 (ORO)	ND	50	"	"	"	"	"	"	

Date Sampled: **10/15/21 00:00**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: o-Terphenyl		96.5 %	30-150		"	"	"	"	

PAH by EPA Method 8270D SIM

Summit Scientific

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

Project: Loloff 35-5 Tank Battery
Project Number: [none]
Project Manager: Mark Longhurst

Reported:
11/01/21 16:10

SS03@4'
2110253-02 (Soil)

Summit Scientific

PAH by EPA Method 8270D SIM

Date Sampled: **10/15/21 00:00**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Anthracene	ND	0.00500	mg/kg	1	BEJ0571	10/28/21	10/30/21	EPA 8270D SIM	
Chrysene	ND	0.00500	"	"	"	"	"	"	
Fluorene	ND	0.00500	"	"	"	"	"	"	
1-Methylnaphthalene	ND	0.00500	"	"	"	"	"	"	

Date Sampled: **10/15/21 00:00**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: 2-Methylnaphthalene-d10		79.4 %	40-150		"	"	"	"	
Surrogate: Fluoranthene-d10		74.4 %	40-150		"	"	"	"	

Summit Scientific

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

Project: Loloff 35-5 Tank Battery
Project Number: [none]
Project Manager: Mark Longhurst

Reported:
11/01/21 16:10

SS04@2.5'
2110253-03 (Soil)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **10/15/21 00:00**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Benzene	ND	0.0020	mg/kg	1	BEJ0299	10/15/21	10/16/21	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: **10/15/21 00:00**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: 1,2-Dichloroethane-d4		102 %	23-173		"	"	"	"	
Surrogate: Toluene-d8		123 %	20-170		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		104 %	21-167		"	"	"	"	

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **10/15/21 00:00**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
C10-C28 (DRO)	ND	50	mg/kg	1	BEJ0298	10/15/21	10/15/21	EPA 8015M	
C28-C36 (ORO)	ND	50	"	"	"	"	"	"	

Date Sampled: **10/15/21 00:00**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: o-Terphenyl		80.1 %	30-150		"	"	"	"	

PAH by EPA Method 8270D SIM

Summit Scientific

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

Project: Loloff 35-5 Tank Battery
Project Number: [none]
Project Manager: Mark Longhurst

Reported:
11/01/21 16:10

SS04@2.5'
2110253-03 (Soil)

Summit Scientific

PAH by EPA Method 8270D SIM

Date Sampled: **10/15/21 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Anthracene	ND	0.00500	mg/kg	1	BEJ0571	10/28/21	10/30/21	EPA 8270D SIM	
Chrysene	ND	0.00500	"	"	"	"	"	"	
Fluorene	ND	0.00500	"	"	"	"	"	"	
1-Methylnaphthalene	ND	0.00500	"	"	"	"	"	"	

Date Sampled: **10/15/21 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 2-Methylnaphthalene-d10		82.3 %	40-150		"	"	"	"	
Surrogate: Fluoranthene-d10		67.8 %	40-150		"	"	"	"	

Summit Scientific

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

Project: Loloff 35-5 Tank Battery
Project Number: [none]
Project Manager: Mark Longhurst

Reported:
11/01/21 16:10

SS05@4'
2110253-04 (Soil)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **10/15/21 00:00**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Benzene	ND	0.0020	mg/kg	1	BEJ0299	10/15/21	10/16/21	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: **10/15/21 00:00**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: 1,2-Dichloroethane-d4		104 %	23-173		"	"	"	"	
Surrogate: Toluene-d8		118 %	20-170		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		105 %	21-167		"	"	"	"	

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **10/15/21 00:00**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
C10-C28 (DRO)	ND	50	mg/kg	1	BEJ0298	10/15/21	10/15/21	EPA 8015M	
C28-C36 (ORO)	ND	50	"	"	"	"	"	"	

Date Sampled: **10/15/21 00:00**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: o-Terphenyl		85.4 %	30-150		"	"	"	"	

PAH by EPA Method 8270D SIM

Summit Scientific

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.



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

Project: Loloff 35-5 Tank Battery
Project Number: [none]
Project Manager: Mark Longhurst

Reported:
11/01/21 16:10

SS05@4'
2110253-04 (Soil)

Summit Scientific

PAH by EPA Method 8270D SIM

Date Sampled: **10/15/21 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Anthracene	ND	0.00500	mg/kg	1	BEJ0571	10/28/21	10/30/21	EPA 8270D SIM	
Chrysene	ND	0.00500	"	"	"	"	"	"	
Fluorene	ND	0.00500	"	"	"	"	"	"	
1-Methylnaphthalene	ND	0.00500	"	"	"	"	"	"	

Date Sampled: **10/15/21 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 2-Methylnaphthalene-d10		78.4 %	40-150		"	"	"	"	
Surrogate: Fluoranthene-d10		69.8 %	40-150		"	"	"	"	

Summit Scientific

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.



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

Project: Loloff 35-5 Tank Battery
Project Number: [none]
Project Manager: Mark Longhurst

Reported:
11/01/21 16:10

SS06@2.5'
2110253-05 (Soil)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **10/15/21 00:00**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Benzene	ND	0.0020	mg/kg	1	BEJ0299	10/15/21	10/16/21	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: **10/15/21 00:00**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: 1,2-Dichloroethane-d4		101 %	23-173		"	"	"	"	
Surrogate: Toluene-d8		129 %	20-170		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		102 %	21-167		"	"	"	"	

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **10/15/21 00:00**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
C10-C28 (DRO)	ND	50	mg/kg	1	BEJ0298	10/15/21	10/15/21	EPA 8015M	
C28-C36 (ORO)	ND	50	"	"	"	"	"	"	

Date Sampled: **10/15/21 00:00**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: o-Terphenyl		99.8 %	30-150		"	"	"	"	

PAH by EPA Method 8270D SIM

Summit Scientific

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.



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

Project: Loloff 35-5 Tank Battery
Project Number: [none]
Project Manager: Mark Longhurst

Reported:
11/01/21 16:10

SS06@2.5'
2110253-05 (Soil)

Summit Scientific

PAH by EPA Method 8270D SIM

Date Sampled: **10/15/21 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Anthracene	ND	0.00500	mg/kg	1	BEJ0571	10/28/21	10/30/21	EPA 8270D SIM	
Chrysene	ND	0.00500	"	"	"	"	"	"	
Fluorene	ND	0.00500	"	"	"	"	"	"	
1-Methylnaphthalene	ND	0.00500	"	"	"	"	"	"	

Date Sampled: **10/15/21 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 2-Methylnaphthalene-d10		76.1 %	40-150		"	"	"	"	
Surrogate: Fluoranthene-d10		64.3 %	40-150		"	"	"	"	

Summit Scientific

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.



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

Project: Loloff 35-5 Tank Battery

Project Number: [none]
Project Manager: Mark Longhurst

Reported:
11/01/21 16:10

Volatile Organic Compounds by EPA Method 8260B - Quality Control

Summit Scientific

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

Batch BEJ0299 - EPA 5030 Soil MS

Blank (BEJ0299-BLK1)

Prepared: 10/15/21 Analyzed: 10/16/21

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	0.0343		"	0.0400		85.6	23-173			
Surrogate: Toluene-d8	0.0496		"	0.0400		124	20-170			
Surrogate: 4-Bromofluorobenzene	0.0413		"	0.0400		103	21-167			

LCS (BEJ0299-BS1)

Prepared: 10/15/21 Analyzed: 10/16/21

Benzene	0.0639	0.0020	mg/kg	0.0750		85.2	70-130			
Toluene	0.0966	0.0050	"	0.0750		129	70-130			
Ethylbenzene	0.0773	0.0050	"	0.0750		103	70-130			
m,p-Xylene	0.154	0.010	"	0.150		103	70-130			
o-Xylene	0.0755	0.0050	"	0.0750		101	70-130			
1,2,4-Trimethylbenzene	0.0781	0.0050	"	0.0750		104	70-130			
1,3,5-Trimethylbenzene	0.0748	0.0050	"	0.0750		99.8	70-130			
Naphthalene	0.0691	0.0038	"	0.0750		92.1	70-130			
Surrogate: 1,2-Dichloroethane-d4	0.0359		"	0.0400		89.8	23-173			
Surrogate: Toluene-d8	0.0461		"	0.0400		115	20-170			
Surrogate: 4-Bromofluorobenzene	0.0421		"	0.0400		105	21-167			

Matrix Spike (BEJ0299-MS1)

Source: 2110253-01

Prepared: 10/15/21 Analyzed: 10/16/21

Benzene	0.0682	0.0020	mg/kg	0.0750	ND	90.9	70-130			
Toluene	0.0707	0.0050	"	0.0750	ND	94.2	70-130			
Ethylbenzene	0.0798	0.0050	"	0.0750	ND	106	70-130			
m,p-Xylene	0.158	0.010	"	0.150	ND	105	70-130			
o-Xylene	0.0789	0.0050	"	0.0750	ND	105	70-130			
1,2,4-Trimethylbenzene	0.0823	0.0050	"	0.0750	ND	110	70-130			
1,3,5-Trimethylbenzene	0.0793	0.0050	"	0.0750	ND	106	70-130			
Naphthalene	0.0825	0.0038	"	0.0750	ND	110	70-130			
Surrogate: 1,2-Dichloroethane-d4	0.0329		"	0.0400		82.3	23-173			
Surrogate: Toluene-d8	0.0461		"	0.0400		115	20-170			
Surrogate: 4-Bromofluorobenzene	0.0425		"	0.0400		106	21-167			

Summit Scientific

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.



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

Project: Loloff 35-5 Tank Battery

Project Number: [none]
Project Manager: Mark Longhurst

Reported:
11/01/21 16:10

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

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

Batch BEJ0299 - EPA 5030 Soil MS

Matrix Spike Dup (BEJ0299-MSD1)	Source: 2110253-01			Prepared: 10/15/21 Analyzed: 10/16/21						
Benzene	0.0622	0.0020	mg/kg	0.0750	ND	82.9	70-130	9.20	30	
Toluene	0.0702	0.0050	"	0.0750	ND	93.6	70-130	0.681	30	
Ethylbenzene	0.0803	0.0050	"	0.0750	ND	107	70-130	0.637	30	
m,p-Xylene	0.158	0.010	"	0.150	ND	105	70-130	0.114	30	
o-Xylene	0.0783	0.0050	"	0.0750	ND	104	70-130	0.687	30	
1,2,4-Trimethylbenzene	0.0824	0.0050	"	0.0750	ND	110	70-130	0.109	30	
1,3,5-Trimethylbenzene	0.0779	0.0050	"	0.0750	ND	104	70-130	1.76	30	
Naphthalene	0.0929	0.0038	"	0.0750	ND	124	70-130	11.9	30	
Surrogate: 1,2-Dichloroethane-d4	0.0381		"	0.0400		95.2	23-173			
Surrogate: Toluene-d8	0.0459		"	0.0400		115	20-170			
Surrogate: 4-Bromofluorobenzene	0.0426		"	0.0400		107	21-167			

Summit Scientific

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.



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

Project: Loloff 35-5 Tank Battery
Project Number: [none]
Project Manager: Mark Longhurst

Reported:
11/01/21 16:10

Extractable Petroleum Hydrocarbons by 8015 - Quality Control
Summit Scientific

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

Batch BEJ0298 - EPA 3550A

Blank (BEJ0298-BLK1)

Prepared & Analyzed: 10/15/21

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

LCS (BEJ0298-BS1)

Prepared: 10/15/21 Analyzed: 10/16/21

C10-C28 (DRO)	544	50	mg/kg	500	109	70-130
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Matrix Spike (BEJ0298-MS1)

Source: 2110253-01

Prepared: 10/15/21 Analyzed: 10/16/21

C10-C28 (DRO)	509	50	mg/kg	500	12.4	99.3	70-130
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Matrix Spike Dup (BEJ0298-MSD1)

Source: 2110253-01

Prepared: 10/15/21 Analyzed: 10/16/21

C10-C28 (DRO)	499	50	mg/kg	500	12.4	97.3	70-130	1.95	20
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Summit Scientific

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.



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

Project: Loloff 35-5 Tank Battery
Project Number: [none]
Project Manager: Mark Longhurst

Reported:
11/01/21 16:10

PAH by EPA Method 8270D SIM - Quality Control

Summit Scientific

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

Batch BEJ0571 - EPA 5030 Soil MS

Blank (BEJ0571-BLK1)

Prepared: 10/28/21 Analyzed: 10/30/21

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	"							
Surrogate: 2-Methylnaphthalene-d10	0.0319		"	0.0333		95.7	40-150			
Surrogate: Fluoranthene-d10	0.0267		"	0.0333		80.1	40-150			

LCS (BEJ0571-BS1)

Prepared: 10/28/21 Analyzed: 10/30/21

Acenaphthene	0.0258	0.00500	mg/kg	0.0333		77.4	31-137			
Anthracene	0.0244	0.00500	"	0.0333		73.3	30-120			
Benzo (a) anthracene	0.0255	0.00500	"	0.0333		76.6	30-120			
Benzo (a) pyrene	0.0231	0.00500	"	0.0333		69.4	30-120			
Benzo (b) fluoranthene	0.0232	0.00500	"	0.0333		69.7	30-120			
Benzo (k) fluoranthene	0.0267	0.00500	"	0.0333		80.0	30-120			
Chrysene	0.0262	0.00500	"	0.0333		78.6	30-120			
Dibenz (a,h) anthracene	0.0204	0.00500	"	0.0333		61.3	30-120			
Fluoranthene	0.0271	0.00500	"	0.0333		81.4	30-120			
Fluorene	0.0287	0.00500	"	0.0333		86.1	30-120			
Indeno (1,2,3-cd) pyrene	0.0125	0.00500	"	0.0333		37.5	30-120			
Pyrene	0.0276	0.00500	"	0.0333		82.7	35-142			
1-Methylnaphthalene	0.0301	0.00500	"	0.0333		90.4	35-142			
2-Methylnaphthalene	0.0312	0.00500	"	0.0333		93.5	35-142			
Surrogate: 2-Methylnaphthalene-d10	0.0306		"	0.0333		91.8	40-150			
Surrogate: Fluoranthene-d10	0.0271		"	0.0333		81.4	40-150			

Summit Scientific

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

Project: Loloff 35-5 Tank Battery
Project Number: [none]
Project Manager: Mark Longhurst

Reported:
11/01/21 16:10

PAH by EPA Method 8270D SIM - Quality Control

Summit Scientific

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

Batch BEJ0571 - EPA 5030 Soil MS

Matrix Spike (BEJ0571-MS1)				Source: 2110253-01		Prepared: 10/28/21		Analyzed: 10/30/21	
Acenaphthene	0.0251	0.00500	mg/kg	0.0333	ND	75.4	31-137		
Anthracene	0.0237	0.00500	"	0.0333	ND	71.0	30-120		
Benzo (a) anthracene	0.0250	0.00500	"	0.0333	ND	75.0	30-120		
Benzo (a) pyrene	0.0224	0.00500	"	0.0333	ND	67.1	30-120		
Benzo (b) fluoranthene	0.0230	0.00500	"	0.0333	ND	68.9	30-120		
Benzo (k) fluoranthene	0.0251	0.00500	"	0.0333	ND	75.4	30-120		
Chrysene	0.0251	0.00500	"	0.0333	ND	75.2	30-120		
Dibenz (a,h) anthracene	0.0194	0.00500	"	0.0333	ND	58.3	30-120		
Fluoranthene	0.0261	0.00500	"	0.0333	ND	78.4	30-120		
Fluorene	0.0275	0.00500	"	0.0333	ND	82.4	30-120		
Indeno (1,2,3-cd) pyrene	0.0118	0.00500	"	0.0333	ND	35.4	30-120		
Pyrene	0.0263	0.00500	"	0.0333	ND	78.9	35-142		
1-Methylnaphthalene	0.0291	0.00500	"	0.0333	ND	87.3	15-130		
2-Methylnaphthalene	0.0304	0.00500	"	0.0333	ND	91.2	15-130		
Surrogate: 2-Methylnaphthalene-d10	0.0285		"	0.0333		85.4	40-150		
Surrogate: Fluoranthene-d10	0.0266		"	0.0333		79.8	40-150		

Matrix Spike Dup (BEJ0571-MSD1)				Source: 2110253-01		Prepared: 10/28/21		Analyzed: 10/30/21	
Acenaphthene	0.0231	0.00500	mg/kg	0.0333	ND	69.4	31-137	8.35	30
Anthracene	0.0213	0.00500	"	0.0333	ND	63.9	30-120	10.6	30
Benzo (a) anthracene	0.0220	0.00500	"	0.0333	ND	65.9	30-120	12.9	30
Benzo (a) pyrene	0.0202	0.00500	"	0.0333	ND	60.7	30-120	9.96	30
Benzo (b) fluoranthene	0.0201	0.00500	"	0.0333	ND	60.2	30-120	13.5	30
Benzo (k) fluoranthene	0.0222	0.00500	"	0.0333	ND	66.6	30-120	12.4	30
Chrysene	0.0225	0.00500	"	0.0333	ND	67.6	30-120	10.7	30
Dibenz (a,h) anthracene	0.0174	0.00500	"	0.0333	ND	52.1	30-120	11.3	30
Fluoranthene	0.0243	0.00500	"	0.0333	ND	72.8	30-120	7.39	30
Fluorene	0.0247	0.00500	"	0.0333	ND	74.0	30-120	10.7	30
Indeno (1,2,3-cd) pyrene	0.0102	0.00500	"	0.0333	ND	30.7	30-120	14.1	30
Pyrene	0.0240	0.00500	"	0.0333	ND	72.1	35-142	9.05	30
1-Methylnaphthalene	0.0256	0.00500	"	0.0333	ND	76.9	15-130	12.6	50
2-Methylnaphthalene	0.0269	0.00500	"	0.0333	ND	80.8	15-130	12.1	50
Surrogate: 2-Methylnaphthalene-d10	0.0269		"	0.0333		80.7	40-150		
Surrogate: Fluoranthene-d10	0.0246		"	0.0333		73.8	40-150		

Summit Scientific

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

Project: Loloff 35-5 Tank Battery

Project Number: [none]
Project Manager: Mark Longhurst

Reported:
11/01/21 16:10

Notes and Definitions

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

Summit Scientific

4653 Table Mountain Drive, Golden, Colorado 80403

303.277.9310

November 01, 2021

Mark Longhurst

PDC Energy

1775 Sherman St. STE. 3000

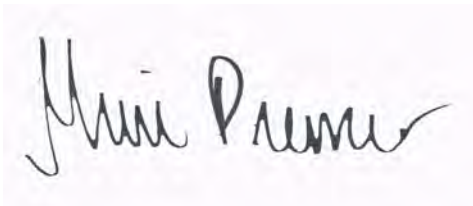
Denver, CO 80203

RE: Loloff 35-5 Tank Battery

Work Order #2110287

Enclosed are the results of analyses for samples received by Summit Scientific on 10/18/21 14:40. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

A handwritten signature in black ink, appearing to read "Muri Premier", is shown on a light pink background.

Muri Premier For Paul Shrewsbury
President



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

Project: Loloff 35-5 Tank Battery
Project Number: [none]
Project Manager: Mark Longhurst

Reported:
11/01/21 17:23

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
SS07@4'	2110287-01	Soil	10/18/21 12:32	10/18/21 14:40
SS08@2.5'	2110287-02	Soil	10/18/21 12:46	10/18/21 14:40
SS09@5'	2110287-03	Soil	10/18/21 13:16	10/18/21 14:40

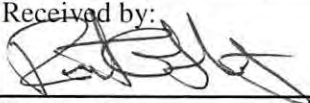
Summit Scientific

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.

2110287

Page 1 of 1

Project Manager:	Mark Longhurst
E-Mail:	mark.longhurst@PDCE.com
Project Name:	Loloff 35-5 Tank Battery
Project Number:	

					Preservative				Matrix				Analysis Requested								Special Instructions					
ID	Sample Description	Date Sampled	Time Sampled	# of containers	HCl	HNO3	None	Other _____	Water	Soil	Air-Canister #	Other _____	BTEXN - 8260B	TPH - (C6 - C36)	1,2,4 & 1,3,5-TMB	Boron - HWS	pH, EC, SAR							pH, EC, SAR by saturated paste		
1	SS07 @ 4'	10/18/21	12:32	3			X			X			X	X	X											
2	SS08 @ 2.5'	↓	12:46	3			↓			↓			↓	↓	↓											
3	SS09 @ 5'	↓	13:16	3			↓			↓			↓	↓	↓											
4																										
5																										
6																										
7																										
8																										
9																										
10																										
Relinquished by:		Date/Time:		Received by:		Date/Time:		Turn Around Time		(Check)		Notes:														
Dylan Brightwell		10/18/21 14:40		Tasman's Lock Box		10/18/21 14:40		Same Day		<input checked="" type="checkbox"/>													72 hours		___	
Tasman's Lock Box						10/18/21 1440		24 hours		___													Standard		___	
Relinquished by:		Date/Time:		Received by:		Date/Time:		48 hours		___		Sample Integrity:														
Relinquished by:		Date/Time:		Received by:		Date/Time:		Temperature Upon Receipt:		7.1																
								Samples Intact:		<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No																



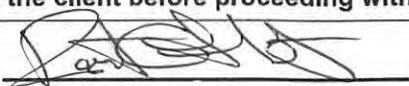
Sample Receipt Checklist

S2 Work Order# 2110287Client: Bcfasman Client Project ID: 1010ff 3S S 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) 7.1

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 if there is evidence that cooling has begun.	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	on ICE
Were all samples received intact ⁽¹⁾ ?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Was adequate sample volume provided ⁽¹⁾ ?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
If custody seals are present, are they intact ⁽¹⁾ ?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Are samples with holding times due within 48 hours sample due within 48 hours present?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Same day
Is a chain-of-custody (COC) form present and filled out completely ⁽¹⁾ ?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Does the COC agree with the number and type of sample bottles received ⁽¹⁾ ?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Do the sample IDs on the bottle labels match the COC ⁽¹⁾ ?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Is the COC properly relinquished by the client w/ date and time recorded ⁽¹⁾ ?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
For volatiles in water – is there headspace present? If yes, contact client and note in narrative.	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
Are samples preserved that require preservation (excluding cooling) ⁽¹⁾ ? Note the type of preservative in the Comments column – HCl, H2SO4, NaOH, HNO3, 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.
Custodian Printed Name or Initials10/18/21
Date/Time



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

Project: Loloff 35-5 Tank Battery
Project Number: [none]
Project Manager: Mark Longhurst

Reported:
11/01/21 17:23

SS07@4'
2110287-01 (Soil)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **10/18/21 12:32**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Benzene	ND	0.0020	mg/kg	1	BEJ0333	10/18/21	10/18/21	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: **10/18/21 12:32**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 1,2-Dichloroethane-d4		118 %	23-173		"	"	"	"	
Surrogate: Toluene-d8		115 %	20-170		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		104 %	21-167		"	"	"	"	

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **10/18/21 12:32**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
C10-C28 (DRO)	ND	50	mg/kg	1	BEJ0334	"	10/19/21	EPA 8015M	
C28-C36 (ORO)	ND	50	"	"	"	"	"	"	

Date Sampled: **10/18/21 12:32**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: o-Terphenyl		101 %	30-150		"	"	"	"	

PAH by EPA Method 8270D SIM

Summit Scientific

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.



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

Project: Loloff 35-5 Tank Battery
Project Number: [none]
Project Manager: Mark Longhurst

Reported:
11/01/21 17:23

SS07@4'
2110287-01 (Soil)

Summit Scientific

PAH by EPA Method 8270D SIM

Date Sampled: **10/18/21 12:32**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Anthracene	ND	0.00500	mg/kg	1	BEJ0600	10/29/21	10/31/21	EPA 8270D SIM	
Chrysene	ND	0.00500	"	"	"	"	"	"	
Fluorene	ND	0.00500	"	"	"	"	"	"	
1-Methylnaphthalene	ND	0.00500	"	"	"	"	"	"	

Date Sampled: **10/18/21 12:32**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 2-Methylnaphthalene-d10		87.5 %	40-150		"	"	"	"	
Surrogate: Fluoranthene-d10		75.0 %	40-150		"	"	"	"	

Summit Scientific

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

Project: Loloff 35-5 Tank Battery
Project Number: [none]
Project Manager: Mark Longhurst

Reported:
11/01/21 17:23

SS08@2.5'
2110287-02 (Soil)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **10/18/21 12:46**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Benzene	ND	0.0020	mg/kg	1	BEJ0333	10/18/21	10/18/21	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: **10/18/21 12:46**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 1,2-Dichloroethane-d4		122 %	23-173		"	"	"	"	
Surrogate: Toluene-d8		107 %	20-170		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		98.2 %	21-167		"	"	"	"	

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **10/18/21 12:46**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
C10-C28 (DRO)	ND	50	mg/kg	1	BEJ0334	"	10/19/21	EPA 8015M	
C28-C36 (ORO)	ND	50	"	"	"	"	"	"	

Date Sampled: **10/18/21 12:46**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: o-Terphenyl		99.9 %	30-150		"	"	"	"	

PAH by EPA Method 8270D SIM

Summit Scientific

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

Project: Loloff 35-5 Tank Battery
Project Number: [none]
Project Manager: Mark Longhurst

Reported:
11/01/21 17:23

SS08@2.5'
2110287-02 (Soil)

Summit Scientific

PAH by EPA Method 8270D SIM

Date Sampled: **10/18/21 12:46**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Anthracene	ND	0.00500	mg/kg	1	BEJ0600	10/29/21	10/31/21	EPA 8270D SIM	
Chrysene	ND	0.00500	"	"	"	"	"	"	
Fluorene	ND	0.00500	"	"	"	"	"	"	
1-Methylnaphthalene	ND	0.00500	"	"	"	"	"	"	

Date Sampled: **10/18/21 12:46**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 2-Methylnaphthalene-d10		87.9 %	40-150		"	"	"	"	
Surrogate: Fluoranthene-d10		68.9 %	40-150		"	"	"	"	

Summit Scientific

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

Project: Loloff 35-5 Tank Battery
Project Number: [none]
Project Manager: Mark Longhurst

Reported:
11/01/21 17:23

SS09@5'
2110287-03 (Soil)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **10/18/21 13:16**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Benzene	ND	0.0020	mg/kg	1	BEJ0333	10/18/21	10/18/21	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: **10/18/21 13:16**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: 1,2-Dichloroethane-d4		120 %	23-173		"	"	"	"	
Surrogate: Toluene-d8		111 %	20-170		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		94.0 %	21-167		"	"	"	"	

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **10/18/21 13:16**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
C10-C28 (DRO)	ND	50	mg/kg	1	BEJ0334	"	10/19/21	EPA 8015M	
C28-C36 (ORO)	ND	50	"	"	"	"	"	"	

Date Sampled: **10/18/21 13:16**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: o-Terphenyl		97.7 %	30-150		"	"	"	"	

PAH by EPA Method 8270D SIM

Summit Scientific

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

Project: Loloff 35-5 Tank Battery
Project Number: [none]
Project Manager: Mark Longhurst

Reported:
11/01/21 17:23

SS09@5'
2110287-03 (Soil)

Summit Scientific

PAH by EPA Method 8270D SIM

Date Sampled: **10/18/21 13:16**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Anthracene	ND	0.00500	mg/kg	1	BEJ0600	10/29/21	10/31/21	EPA 8270D SIM	
Chrysene	ND	0.00500	"	"	"	"	"	"	
Fluorene	ND	0.00500	"	"	"	"	"	"	
1-Methylnaphthalene	ND	0.00500	"	"	"	"	"	"	

Date Sampled: **10/18/21 13:16**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 2-Methylnaphthalene-d10		75.2 %	40-150		"	"	"	"	
Surrogate: Fluoranthene-d10		65.3 %	40-150		"	"	"	"	

Summit Scientific

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

Project: Loloff 35-5 Tank Battery

Project Number: [none]
Project Manager: Mark Longhurst

Reported:
11/01/21 17:23

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 BEJ0333 - EPA 5030 Soil MS

Blank (BEJ0333-BLK1)

Prepared: 10/18/21 Analyzed: 10/19/21

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	0.0367		"	0.0400		91.8	23-173			
Surrogate: Toluene-d8	0.0402		"	0.0400		101	20-170			
Surrogate: 4-Bromofluorobenzene	0.0387		"	0.0400		96.8	21-167			

LCS (BEJ0333-BS1)

Prepared: 10/18/21 Analyzed: 10/19/21

Benzene	0.0603	0.0020	mg/kg	0.0750		80.4	70-130			
Toluene	0.0721	0.0050	"	0.0750		96.2	70-130			
Ethylbenzene	0.0724	0.0050	"	0.0750		96.6	70-130			
m,p-Xylene	0.142	0.010	"	0.150		94.8	70-130			
o-Xylene	0.0701	0.0050	"	0.0750		93.5	70-130			
1,2,4-Trimethylbenzene	0.0688	0.0050	"	0.0750		91.8	70-130			
1,3,5-Trimethylbenzene	0.0668	0.0050	"	0.0750		89.1	70-130			
Naphthalene	0.0742	0.0038	"	0.0750		98.9	70-130			
Surrogate: 1,2-Dichloroethane-d4	0.0424		"	0.0400		106	23-173			
Surrogate: Toluene-d8	0.0441		"	0.0400		110	20-170			
Surrogate: 4-Bromofluorobenzene	0.0401		"	0.0400		100	21-167			

Matrix Spike (BEJ0333-MS1)

Source: 2110278-01

Prepared: 10/18/21 Analyzed: 10/19/21

Benzene	0.0633	0.0020	mg/kg	0.0750	ND	84.4	70-130			
Toluene	0.0844	0.0050	"	0.0750	ND	113	70-130			
Ethylbenzene	0.0763	0.0050	"	0.0750	ND	102	70-130			
m,p-Xylene	0.148	0.010	"	0.150	ND	98.6	70-130			
o-Xylene	0.0736	0.0050	"	0.0750	ND	98.2	70-130			
1,2,4-Trimethylbenzene	0.0736	0.0050	"	0.0750	ND	98.1	70-130			
1,3,5-Trimethylbenzene	0.0709	0.0050	"	0.0750	ND	94.5	70-130			
Naphthalene	0.0826	0.0038	"	0.0750	ND	110	70-130			
Surrogate: 1,2-Dichloroethane-d4	0.0440		"	0.0400		110	23-173			
Surrogate: Toluene-d8	0.0451		"	0.0400		113	20-170			
Surrogate: 4-Bromofluorobenzene	0.0409		"	0.0400		102	21-167			

Summit Scientific

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

Project: Loloff 35-5 Tank Battery

Project Number: [none]
Project Manager: Mark Longhurst

Reported:
11/01/21 17:23

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 BEJ0333 - EPA 5030 Soil MS

Matrix Spike Dup (BEJ0333-MSD1)	Source: 2110278-01			Prepared: 10/18/21 Analyzed: 10/19/21						
Benzene	0.0615	0.0020	mg/kg	0.0750	ND	82.0	70-130	2.79	30	
Toluene	0.0861	0.0050	"	0.0750	ND	115	70-130	2.01	30	
Ethylbenzene	0.0758	0.0050	"	0.0750	ND	101	70-130	0.671	30	
m,p-Xylene	0.148	0.010	"	0.150	ND	98.5	70-130	0.162	30	
o-Xylene	0.0737	0.0050	"	0.0750	ND	98.3	70-130	0.122	30	
1,2,4-Trimethylbenzene	0.0732	0.0050	"	0.0750	ND	97.6	70-130	0.490	30	
1,3,5-Trimethylbenzene	0.0712	0.0050	"	0.0750	ND	94.9	70-130	0.422	30	
Naphthalene	0.0889	0.0038	"	0.0750	ND	119	70-130	7.38	30	
Surrogate: 1,2-Dichloroethane-d4	0.0459		"	0.0400		115	23-173			
Surrogate: Toluene-d8	0.0437		"	0.0400		109	20-170			
Surrogate: 4-Bromofluorobenzene	0.0410		"	0.0400		102	21-167			

Summit Scientific

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.



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

Project: Loloff 35-5 Tank Battery
Project Number: [none]
Project Manager: Mark Longhurst

Reported:
11/01/21 17:23

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 BEJ0334 - EPA 3550A

Blank (BEJ0334-BLK1)

Prepared: 10/18/21 Analyzed: 10/19/21

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

LCS (BEJ0334-BS1)

Prepared: 10/18/21 Analyzed: 10/19/21

C10-C28 (DRO)	473	50	mg/kg	500	94.6	70-130
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Matrix Spike (BEJ0334-MS1)

Source: 2110283-01

Prepared: 10/18/21 Analyzed: 10/19/21

C10-C28 (DRO)	408	50	mg/kg	500	37.8	74.0	70-130
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Matrix Spike Dup (BEJ0334-MSD1)

Source: 2110283-01

Prepared: 10/18/21 Analyzed: 10/19/21

C10-C28 (DRO)	441	50	mg/kg	500	37.8	80.7	70-130	7.90	20
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Summit Scientific

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

Project: Loloff 35-5 Tank Battery
Project Number: [none]
Project Manager: Mark Longhurst

Reported:
11/01/21 17:23

PAH by EPA Method 8270D SIM - Quality Control

Summit Scientific

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

Batch BEJ0600 - EPA 5030 Soil MS

Blank (BEJ0600-BLK1)

Prepared: 10/29/21 Analyzed: 10/31/21

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	"							
Surrogate: 2-Methylnaphthalene-d10	0.0340		"	0.0333		102	40-150			
Surrogate: Fluoranthene-d10	0.0270		"	0.0333		81.1	40-150			

LCS (BEJ0600-BS1)

Prepared: 10/29/21 Analyzed: 10/31/21

Acenaphthene	0.0309	0.00500	mg/kg	0.0333	92.6	31-137
Anthracene	0.0286	0.00500	"	0.0333	85.9	30-120
Benzo (a) anthracene	0.0290	0.00500	"	0.0333	86.9	30-120
Benzo (a) pyrene	0.0255	0.00500	"	0.0333	76.4	30-120
Benzo (b) fluoranthene	0.0266	0.00500	"	0.0333	79.7	30-120
Benzo (k) fluoranthene	0.0314	0.00500	"	0.0333	94.2	30-120
Chrysene	0.0304	0.00500	"	0.0333	91.2	30-120
Dibenz (a,h) anthracene	0.0249	0.00500	"	0.0333	74.7	30-120
Fluoranthene	0.0315	0.00500	"	0.0333	94.4	30-120
Fluorene	0.0335	0.00500	"	0.0333	100	30-120
Indeno (1,2,3-cd) pyrene	0.0259	0.00500	"	0.0333	77.7	30-120
Pyrene	0.0328	0.00500	"	0.0333	98.4	35-142
1-Methylnaphthalene	0.0339	0.00500	"	0.0333	102	35-142
2-Methylnaphthalene	0.0359	0.00500	"	0.0333	108	35-142
Surrogate: 2-Methylnaphthalene-d10	0.0339		"	0.0333	102	40-150
Surrogate: Fluoranthene-d10	0.0307		"	0.0333	92.1	40-150

Summit Scientific

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

Project: Loloff 35-5 Tank Battery
Project Number: [none]
Project Manager: Mark Longhurst

Reported:
11/01/21 17:23

PAH by EPA Method 8270D SIM - Quality Control

Summit Scientific

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

Batch BEJ0600 - EPA 5030 Soil MS

Matrix Spike (BEJ0600-MS1)

Source: 2110287-01

Prepared: 10/29/21 Analyzed: 10/31/21

Acenaphthene	0.0259	0.00500	mg/kg	0.0333	ND	77.7	31-137
Anthracene	0.0260	0.00500	"	0.0333	ND	77.9	30-120
Benzo (a) anthracene	0.0250	0.00500	"	0.0333	ND	75.1	30-120
Benzo (a) pyrene	0.0221	0.00500	"	0.0333	ND	66.4	30-120
Benzo (b) fluoranthene	0.0220	0.00500	"	0.0333	ND	66.0	30-120
Benzo (k) fluoranthene	0.0251	0.00500	"	0.0333	ND	75.2	30-120
Chrysene	0.0269	0.00500	"	0.0333	ND	80.7	30-120
Dibenz (a,h) anthracene	0.0190	0.00500	"	0.0333	ND	56.9	30-120
Fluoranthene	0.0269	0.00500	"	0.0333	ND	80.6	30-120
Fluorene	0.0273	0.00500	"	0.0333	ND	82.0	30-120
Indeno (1,2,3-cd) pyrene	0.0111	0.00500	"	0.0333	ND	33.2	30-120
Pyrene	0.0292	0.00500	"	0.0333	ND	87.5	35-142
1-Methylnaphthalene	0.0306	0.00500	"	0.0333	ND	91.9	15-130
2-Methylnaphthalene	0.0312	0.00500	"	0.0333	ND	93.6	15-130
Surrogate: 2-Methylnaphthalene-d10	0.0302	"		0.0333		90.7	40-150
Surrogate: Fluoranthene-d10	0.0264	"		0.0333		79.2	40-150

Matrix Spike Dup (BEJ0600-MSD1)

Source: 2110287-01

Prepared: 10/29/21 Analyzed: 10/31/21

Acenaphthene	0.0246	0.00500	mg/kg	0.0333	ND	73.8	31-137	5.25	30
Anthracene	0.0239	0.00500	"	0.0333	ND	71.8	30-120	8.26	30
Benzo (a) anthracene	0.0231	0.00500	"	0.0333	ND	69.3	30-120	8.06	30
Benzo (a) pyrene	0.0194	0.00500	"	0.0333	ND	58.3	30-120	13.0	30
Benzo (b) fluoranthene	0.0205	0.00500	"	0.0333	ND	61.5	30-120	7.15	30
Benzo (k) fluoranthene	0.0243	0.00500	"	0.0333	ND	72.8	30-120	3.15	30
Chrysene	0.0242	0.00500	"	0.0333	ND	72.7	30-120	10.4	30
Dibenz (a,h) anthracene	0.0177	0.00500	"	0.0333	ND	53.0	30-120	7.04	30
Fluoranthene	0.0260	0.00500	"	0.0333	ND	77.9	30-120	3.39	30
Fluorene	0.0262	0.00500	"	0.0333	ND	78.5	30-120	4.37	30
Indeno (1,2,3-cd) pyrene	0.0102	0.00500	"	0.0333	ND	30.7	30-120	7.76	30
Pyrene	0.0274	0.00500	"	0.0333	ND	82.1	35-142	6.41	30
1-Methylnaphthalene	0.0293	0.00500	"	0.0333	ND	87.9	15-130	4.48	50
2-Methylnaphthalene	0.0316	0.00500	"	0.0333	ND	94.7	15-130	1.25	50
Surrogate: 2-Methylnaphthalene-d10	0.0293	"		0.0333		88.0	40-150		
Surrogate: Fluoranthene-d10	0.0257	"		0.0333		77.1	40-150		

Summit Scientific

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.



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

Project: Loloff 35-5 Tank Battery

Project Number: [none]

Project Manager: Mark Longhurst

Reported:
11/01/21 17:23

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

Summit Scientific

4653 Table Mountain Drive, Golden, Colorado 80403

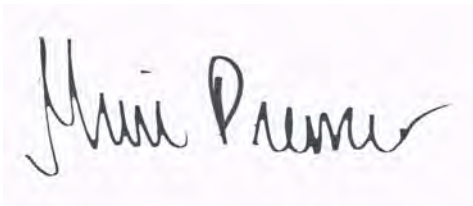
303.277.9310

November 01, 2021

Mark Longhurst
PDC Energy
1775 Sherman St. STE. 3000
Denver, CO 80203
RE: Loloff 35-5 Tank Battery
Work Order #2110315

Enclosed are the results of analyses for samples received by Summit Scientific on 10/19/21 16:00. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

A handwritten signature in black ink, appearing to read "Muri Premer", is shown on a light pink background.

Muri Premer For Paul Shrewsbury
President



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

Project: Loloff 35-5 Tank Battery

Project Number: [none]

Project Manager: Mark Longhurst

Reported:
11/01/21 17:27

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
SS10@4'	2110315-01	Soil	10/19/21 13:20	10/19/21 16:00
SS11@2.5'	2110315-02	Soil	10/19/21 13:25	10/19/21 16:00

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

S₂

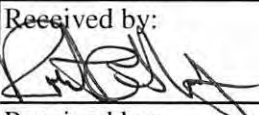
4653 Table Mountain Drive ♦ Golden, Colorado 80403
303-277-9310

2110315

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: Lolooff 35.5 Tank Battery
Sampler Name: Dylan Brightwell Project Number:

ID	Sample Description	Date Sampled	Time Sampled	# of containers	Preservative				Matrix				Analysis Requested								Special Instructions
					HCl	HNO ₃	None	Other	Water	Soil	Air-Canister #	Other	BTEXN - 8260B	TPH - (C6 - C36)	1,2,4 & 1,3,5-TMB	Boron - HWS	pH, EC, SAR				
1	5510 @ 4'	10/19/21	13:20	3			X			X				X	X	X					pH, EC, SAR by saturated paste
2	5511 @ 2.5'	10/19/21	13:25	3			X			X				X	X	X					
3																					
4																					
5																					
6																					
7																					
8																					
9																					
10																					

Relinquished by:	Date/Time:	Received by:	Date/Time:	Turn Around Time	(Check)	Notes:
<u>Dylan Brightwell</u>	<u>10/19/21 16:00</u>	<u>Tasman's Lock Box</u>	<u>10/19/21 16:00</u>	Same Day <u>X</u>	72 hours <u>—</u>	
Relinquished by:	Date/Time:	Received by:	Date/Time:	24 hours <u>—</u>	Standard <u>—</u>	
<u>Tasman's Lock Box</u>			<u>10/19/21 1600</u>	48 hours <u>—</u>		
Relinquished by:	Date/Time:	Received by:	Date/Time:	Sample Integrity:		
				Temperature Upon Receipt: <u>31</u>		
				Samples Intact: <u>Yes</u> No		

S₂

Sample Receipt Checklist

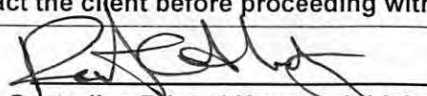
S2 Work Order# _____

2110315

Client: PBC/Tasman Client Project ID: 1010ff 35-5 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) 3.1

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.	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	on ICE
Were all samples received intact ⁽¹⁾ ?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Was adequate sample volume provided ⁽¹⁾ ?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
If custody seals are present, are they intact ⁽¹⁾ ?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Are samples with holding times due within 48 hours sample due within 48 hours present?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Sameday
Is a chain-of-custody (COC) form present and filled out completely ⁽¹⁾ ?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Does the COC agree with the number and type of sample bottles received ⁽¹⁾ ?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Do the sample IDs on the bottle labels match the COC ⁽¹⁾ ?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Is the COC properly relinquished by the client w/ date and time recorded ⁽¹⁾ ?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
For volatiles in water – is there headspace present? If yes, contact client and note in narrative.	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
Are samples preserved that require preservation (excluding cooling) ⁽¹⁾ ? 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.				


 Custodian Printed Name or Initials

10/19/21
 Date/Time



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

Project: Loloff 35-5 Tank Battery
Project Number: [none]
Project Manager: Mark Longhurst

Reported:
11/01/21 17:27

SS10@4'
2110315-01 (Soil)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **10/19/21 13:20**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Benzene	0.0074	0.0020	mg/kg	1	BEJ0363	10/19/21	10/20/21	EPA 8260B	
Toluene	ND	0.0050	"	"	"	"	"	"	
Ethylbenzene	ND	0.0050	"	"	"	"	"	"	
Xylenes (total)	ND	0.010	"	"	"	"	"	"	
1,2,4-Trimethylbenzene	0.16	0.0050	"	"	"	"	"	"	
1,3,5-Trimethylbenzene	ND	0.0050	"	"	"	"	"	"	
Naphthalene	0.029	0.0038	"	"	"	"	"	"	
Gasoline Range Hydrocarbons	59	0.50	"	"	"	"	"	"	

Date Sampled: **10/19/21 13:20**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 1,2-Dichloroethane-d4		104 %	23-173		"	"	"	"	
Surrogate: Toluene-d8		97.6 %	20-170		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		116 %	21-167		"	"	"	"	

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **10/19/21 13:20**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
C10-C28 (DRO)	ND	50	mg/kg	1	BEJ0364	10/19/21	10/19/21	EPA 8015M	
C28-C36 (ORO)	ND	50	"	"	"	"	"	"	

Date Sampled: **10/19/21 13:20**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: o-Terphenyl		105 %	30-150		"	"	"	"	

PAH by EPA Method 8270D SIM

Summit Scientific

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.



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

Project: Loloff 35-5 Tank Battery
Project Number: [none]
Project Manager: Mark Longhurst

Reported:
11/01/21 17:27

SS10@4'
2110315-01 (Soil)

Summit Scientific

PAH by EPA Method 8270D SIM

Date Sampled: **10/19/21 13:20**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Anthracene	ND	0.00500	mg/kg	1	BEJ0600	10/29/21	10/31/21	EPA 8270D SIM	
Chrysene	ND	0.00500	"	"	"	"	"	"	
Fluorene	ND	0.00500	"	"	"	"	"	"	
1-Methylnaphthalene	ND	0.00500	"	"	"	"	"	"	

Date Sampled: **10/19/21 13:20**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: Fluoranthene-d10		68.0 %	40-150		"	"	"	"	

Summit Scientific

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

Project: Loloff 35-5 Tank Battery
Project Number: [none]
Project Manager: Mark Longhurst

Reported:
11/01/21 17:27

SS11@2.5'
2110315-02 (Soil)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **10/19/21 13:25**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Benzene	ND	0.0020	mg/kg	1	BEJ0363	10/19/21	10/19/21	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: **10/19/21 13:25**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: 1,2-Dichloroethane-d4		110 %	23-173		"	"	"	"	
Surrogate: Toluene-d8		96.3 %	20-170		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		106 %	21-167		"	"	"	"	

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **10/19/21 13:25**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
C10-C28 (DRO)	ND	50	mg/kg	1	BEJ0364	10/19/21	10/19/21	EPA 8015M	
C28-C36 (ORO)	ND	50	"	"	"	"	"	"	

Date Sampled: **10/19/21 13:25**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: o-Terphenyl		106 %	30-150		"	"	"	"	

PAH by EPA Method 8270D SIM

Summit Scientific

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.



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

Project: Loloff 35-5 Tank Battery
Project Number: [none]
Project Manager: Mark Longhurst

Reported:
11/01/21 17:27

SS11@2.5'
2110315-02 (Soil)

Summit Scientific

PAH by EPA Method 8270D SIM

Date Sampled: **10/19/21 13:25**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Anthracene	ND	0.00500	mg/kg	1	BEJ0600	10/29/21	10/31/21	EPA 8270D SIM	
Chrysene	ND	0.00500	"	"	"	"	"	"	
Fluorene	ND	0.00500	"	"	"	"	"	"	
1-Methylnaphthalene	ND	0.00500	"	"	"	"	"	"	

Date Sampled: **10/19/21 13:25**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: 2-Methylnaphthalene-d10		91.6 %	40-150		"	"	"	"	
Surrogate: Fluoranthene-d10		73.7 %	40-150		"	"	"	"	

Summit Scientific

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

Project: Loloff 35-5 Tank Battery

Project Number: [none]
Project Manager: Mark Longhurst

Reported:
11/01/21 17:27

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 BEJ0363 - EPA 5030 Soil MS

Blank (BEJ0363-BLK1)

Prepared: 10/19/21 Analyzed: 10/20/21

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	0.0436		"	0.0400		109	23-173			
Surrogate: Toluene-d8	0.0399		"	0.0400		99.8	20-170			
Surrogate: 4-Bromofluorobenzene	0.0428		"	0.0400		107	21-167			

LCS (BEJ0363-BS1)

Prepared: 10/19/21 Analyzed: 10/20/21

Benzene	0.144	0.0020	mg/kg	0.150		96.2	70-130			
Toluene	0.127	0.0050	"	0.150		84.7	70-130			
Ethylbenzene	0.129	0.0050	"	0.150		86.2	70-130			
m,p-Xylene	0.259	0.010	"	0.300		86.3	70-130			
o-Xylene	0.134	0.0050	"	0.150		89.5	70-130			
1,2,4-Trimethylbenzene	0.122	0.0050	"	0.150		81.1	70-130			
1,3,5-Trimethylbenzene	0.120	0.0050	"	0.150		79.8	70-130			
Naphthalene	0.164	0.0038	"	0.150		109	70-130			
Surrogate: 1,2-Dichloroethane-d4	0.0464		"	0.0400		116	23-173			
Surrogate: Toluene-d8	0.0405		"	0.0400		101	20-170			
Surrogate: 4-Bromofluorobenzene	0.0418		"	0.0400		104	21-167			

Matrix Spike (BEJ0363-MS1)

Source: 2110318-06

Prepared: 10/19/21 Analyzed: 10/20/21

Benzene	0.122	0.0020	mg/kg	0.150	ND	81.1	70-130			
Toluene	0.109	0.0050	"	0.150	ND	72.9	70-130			
Ethylbenzene	0.106	0.0050	"	0.150	ND	70.6	70-130			
m,p-Xylene	0.213	0.010	"	0.300	ND	71.0	70-130			
o-Xylene	0.109	0.0050	"	0.150	ND	72.6	70-130			
1,2,4-Trimethylbenzene	0.131	0.0050	"	0.150	ND	87.5	70-130			
1,3,5-Trimethylbenzene	0.131	0.0050	"	0.150	ND	87.4	70-130			
Naphthalene	0.132	0.0038	"	0.150	ND	88.1	70-130			
Surrogate: 1,2-Dichloroethane-d4	0.0474		"	0.0400		118	23-173			
Surrogate: Toluene-d8	0.0407		"	0.0400		102	20-170			
Surrogate: 4-Bromofluorobenzene	0.0417		"	0.0400		104	21-167			

Summit Scientific

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

Project: Loloff 35-5 Tank Battery
Project Number: [none]
Project Manager: Mark Longhurst

Reported:
11/01/21 17:27

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 BEJ0363 - EPA 5030 Soil MS

Matrix Spike Dup (BEJ0363-MSD1)	Source: 2110318-06			Prepared: 10/19/21 Analyzed: 10/20/21						
Benzene	0.123	0.0020	mg/kg	0.150	ND	81.9	70-130	1.03	30	
Toluene	0.111	0.0050	"	0.150	ND	73.7	70-130	1.12	30	
Ethylbenzene	0.107	0.0050	"	0.150	ND	71.6	70-130	1.43	30	
m,p-Xylene	0.214	0.010	"	0.300	ND	71.3	70-130	0.366	30	
o-Xylene	0.110	0.0050	"	0.150	ND	73.5	70-130	1.23	30	
1,2,4-Trimethylbenzene	0.129	0.0050	"	0.150	ND	86.3	70-130	1.36	30	
1,3,5-Trimethylbenzene	0.129	0.0050	"	0.150	ND	85.8	70-130	1.87	30	
Naphthalene	0.133	0.0038	"	0.150	ND	88.7	70-130	0.656	30	
Surrogate: 1,2-Dichloroethane-d4	0.0500		"	0.0400		125	23-173			
Surrogate: Toluene-d8	0.0411		"	0.0400		103	20-170			
Surrogate: 4-Bromofluorobenzene	0.0412		"	0.0400		103	21-167			

Summit Scientific

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.



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

Project: Loloff 35-5 Tank Battery
Project Number: [none]
Project Manager: Mark Longhurst

Reported:
11/01/21 17:27

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 BEJ0364 - EPA 3550A

Blank (BEJ0364-BLK1)

Prepared: 10/19/21 Analyzed: 10/20/21

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

LCS (BEJ0364-BS1)

Prepared: 10/19/21 Analyzed: 10/20/21

C10-C28 (DRO)	476	50	mg/kg	500	95.2	70-130
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Matrix Spike (BEJ0364-MS1)

Source: 2110302-05

Prepared: 10/19/21 Analyzed: 10/20/21

C10-C28 (DRO)	473	50	mg/kg	500	111	72.4	70-130
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Matrix Spike Dup (BEJ0364-MSD1)

Source: 2110302-05

Prepared: 10/19/21 Analyzed: 10/20/21

C10-C28 (DRO)	492	50	mg/kg	500	111	76.2	70-130	4.01	20
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Summit Scientific

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.



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

Project: Loloff 35-5 Tank Battery
Project Number: [none]
Project Manager: Mark Longhurst

Reported:
11/01/21 17:27

PAH by EPA Method 8270D SIM - Quality Control

Summit Scientific

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

Batch BEJ0600 - EPA 5030 Soil MS

Blank (BEJ0600-BLK1)

Prepared: 10/29/21 Analyzed: 10/31/21

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	"							
Surrogate: 2-Methylnaphthalene-d10	0.0340		"	0.0333		102	40-150			
Surrogate: Fluoranthene-d10	0.0270		"	0.0333		81.1	40-150			

LCS (BEJ0600-BS1)

Prepared: 10/29/21 Analyzed: 10/31/21

Acenaphthene	0.0309	0.00500	mg/kg	0.0333	92.6	31-137
Anthracene	0.0286	0.00500	"	0.0333	85.9	30-120
Benzo (a) anthracene	0.0290	0.00500	"	0.0333	86.9	30-120
Benzo (a) pyrene	0.0255	0.00500	"	0.0333	76.4	30-120
Benzo (b) fluoranthene	0.0266	0.00500	"	0.0333	79.7	30-120
Benzo (k) fluoranthene	0.0314	0.00500	"	0.0333	94.2	30-120
Chrysene	0.0304	0.00500	"	0.0333	91.2	30-120
Dibenz (a,h) anthracene	0.0249	0.00500	"	0.0333	74.7	30-120
Fluoranthene	0.0315	0.00500	"	0.0333	94.4	30-120
Fluorene	0.0335	0.00500	"	0.0333	100	30-120
Indeno (1,2,3-cd) pyrene	0.0259	0.00500	"	0.0333	77.7	30-120
Pyrene	0.0328	0.00500	"	0.0333	98.4	35-142
1-Methylnaphthalene	0.0339	0.00500	"	0.0333	102	35-142
2-Methylnaphthalene	0.0359	0.00500	"	0.0333	108	35-142
Surrogate: 2-Methylnaphthalene-d10	0.0339		"	0.0333	102	40-150
Surrogate: Fluoranthene-d10	0.0307		"	0.0333	92.1	40-150

Summit Scientific

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.



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

Project: Loloff 35-5 Tank Battery

Project Number: [none]
Project Manager: Mark Longhurst

Reported:
11/01/21 17:27

PAH by EPA Method 8270D SIM - Quality Control

Summit Scientific

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

Batch BEJ0600 - EPA 5030 Soil MS

Matrix Spike (BEJ0600-MS1)

Source: 2110287-01

Prepared: 10/29/21 Analyzed: 10/31/21

Acenaphthene	0.0259	0.00500	mg/kg	0.0333	ND	77.7	31-137		
Anthracene	0.0260	0.00500	"	0.0333	ND	77.9	30-120		
Benzo (a) anthracene	0.0250	0.00500	"	0.0333	ND	75.1	30-120		
Benzo (a) pyrene	0.0221	0.00500	"	0.0333	ND	66.4	30-120		
Benzo (b) fluoranthene	0.0220	0.00500	"	0.0333	ND	66.0	30-120		
Benzo (k) fluoranthene	0.0251	0.00500	"	0.0333	ND	75.2	30-120		
Chrysene	0.0269	0.00500	"	0.0333	ND	80.7	30-120		
Dibenz (a,h) anthracene	0.0190	0.00500	"	0.0333	ND	56.9	30-120		
Fluoranthene	0.0269	0.00500	"	0.0333	ND	80.6	30-120		
Fluorene	0.0273	0.00500	"	0.0333	ND	82.0	30-120		
Indeno (1,2,3-cd) pyrene	0.0111	0.00500	"	0.0333	ND	33.2	30-120		
Pyrene	0.0292	0.00500	"	0.0333	ND	87.5	35-142		
1-Methylnaphthalene	0.0306	0.00500	"	0.0333	ND	91.9	15-130		
2-Methylnaphthalene	0.0312	0.00500	"	0.0333	ND	93.6	15-130		
Surrogate: 2-Methylnaphthalene-d10	0.0302		"	0.0333		90.7	40-150		
Surrogate: Fluoranthene-d10	0.0264		"	0.0333		79.2	40-150		

Matrix Spike Dup (BEJ0600-MSD1)

Source: 2110287-01

Prepared: 10/29/21 Analyzed: 10/31/21

Acenaphthene	0.0246	0.00500	mg/kg	0.0333	ND	73.8	31-137	5.25	30
Anthracene	0.0239	0.00500	"	0.0333	ND	71.8	30-120	8.26	30
Benzo (a) anthracene	0.0231	0.00500	"	0.0333	ND	69.3	30-120	8.06	30
Benzo (a) pyrene	0.0194	0.00500	"	0.0333	ND	58.3	30-120	13.0	30
Benzo (b) fluoranthene	0.0205	0.00500	"	0.0333	ND	61.5	30-120	7.15	30
Benzo (k) fluoranthene	0.0243	0.00500	"	0.0333	ND	72.8	30-120	3.15	30
Chrysene	0.0242	0.00500	"	0.0333	ND	72.7	30-120	10.4	30
Dibenz (a,h) anthracene	0.0177	0.00500	"	0.0333	ND	53.0	30-120	7.04	30
Fluoranthene	0.0260	0.00500	"	0.0333	ND	77.9	30-120	3.39	30
Fluorene	0.0262	0.00500	"	0.0333	ND	78.5	30-120	4.37	30
Indeno (1,2,3-cd) pyrene	0.0102	0.00500	"	0.0333	ND	30.7	30-120	7.76	30
Pyrene	0.0274	0.00500	"	0.0333	ND	82.1	35-142	6.41	30
1-Methylnaphthalene	0.0293	0.00500	"	0.0333	ND	87.9	15-130	4.48	50
2-Methylnaphthalene	0.0316	0.00500	"	0.0333	ND	94.7	15-130	1.25	50
Surrogate: 2-Methylnaphthalene-d10	0.0293		"	0.0333		88.0	40-150		
Surrogate: Fluoranthene-d10	0.0257		"	0.0333		77.1	40-150		

Summit Scientific

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.



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

Project: Loloff 35-5 Tank Battery

Project Number: [none]

Project Manager: Mark Longhurst

Reported:
11/01/21 17:27

Notes and Definitions

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

Summit Scientific

4653 Table Mountain Drive, Golden, Colorado 80403

303.277.9310

November 03, 2021

Mark Longhurst

PDC Energy

1775 Sherman St. STE. 3000

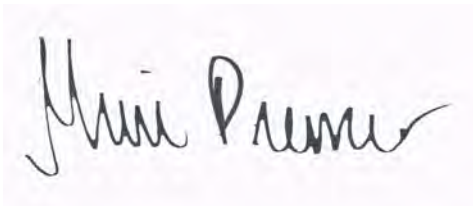
Denver, CO 80203

RE: Loloff 35-5 Tank Battery

Work Order #2110334

Enclosed are the results of analyses for samples received by Summit Scientific on 10/20/21 14:43. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

A handwritten signature in black ink, appearing to read "Muri Premer", is shown on a light pink background.

Muri Premer For Paul Shrewsbury
President



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

Project: Loloff 35-5 Tank Battery
Project Number: [none]
Project Manager: Mark Longhurst

Reported:
11/03/21 12:01

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
SS12@5'	2110334-01	Soil	10/20/21 09:50	10/20/21 14:43
SS13@4'	2110334-02	Soil	10/20/21 10:05	10/20/21 14:43
SS14@2.5'	2110334-03	Soil	10/20/21 10:15	10/20/21 14:43
SS15@4'	2110334-04	Soil	10/20/21 11:50	10/20/21 14:43
SS16@2.5'	2110334-05	Soil	10/20/21 11:55	10/20/21 14:43

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

S₂

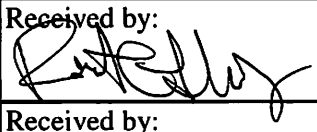
2110334

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: **Loloff 35-5 Tank Battery**
Sampler Name: **Dylan Brightwell** Project Number:

ID	Sample Description	Date Sampled	Time Sampled	# of containers	Preservative				Matrix				Analysis Requested							Special Instructions	
					HCl	HNO ₃	None	Other	Water	Soil	Air-Canister #	Other	BTEXN - 8260B	TPH - (C6 - C36)	1,2,4 & 1,3,5-TMB	Boron - HWS	pH, EC, SAR				
1	SS 12 @ 5'	10/20/21	9:50	3			X			X				X	X	X					pH, EC, SAR by saturated paste
2	SS 13 @ 4'	↓	10:05	↓			↓			↓				↓	↓	↓					
3	SS 14 @ 2.5'	↓	10:15	↓			↓			↓				↓	↓	↓					
4	SS 15 @ 4'	↓	11:50	↓			↓			↓				↓	↓	↓					
5	SS 16 @ 2.5'	↓	11:55	↓			↓			↓				↓	↓	↓					
6																					
7																					
8																					
9																					
10																					

Relinquished by: Dylan Brightwell	Date/Time: 10/20/21 14:43	Received by: Tasman's Lock Box	Date/Time: 10/20/21 14:43	Turn Around Time (Check) Same Day <input checked="" type="checkbox"/> 72 hours <input type="checkbox"/> 24 hours <input type="checkbox"/> Standard <input type="checkbox"/> 48 hours <input type="checkbox"/>	Notes:
Relinquished by: Tasman's Lock Box	Date/Time:	Received by: 	Date/Time: 10/20/21 14:43	Sample Integrity: 4.7	
Relinquished by:	Date/Time:	Received by:	Date/Time:	Temperature Upon Receipt: <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	

S₂

2110334

Sample Receipt Checklist

S2 Work Order# _____

Client: Pac/Tasman Client Project ID: 1010ff 35-S 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)

4.7

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.	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	on ICE
Were all samples received intact ⁽¹⁾ ?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Was adequate sample volume provided ⁽¹⁾ ?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
If custody seals are present, are they intact ⁽¹⁾ ?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Are samples with holding times due within 48 hours sample due within 48 hours present?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Some delay
Is a chain-of-custody (COC) form present and filled out completely ⁽¹⁾ ?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Does the COC agree with the number and type of sample bottles received ⁽¹⁾ ?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Do the sample IDs on the bottle labels match the COC ⁽¹⁾ ?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Is the COC properly relinquished by the client w/ date and time recorded ⁽¹⁾ ?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
For volatiles in water – is there headspace present? If yes, contact client and note in narrative.	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
Are samples preserved that require preservation (excluding cooling) ⁽¹⁾ ? 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.

 Custodian Printed Name or Initials

0.20.21

Date/Time



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

Project: Loloff 35-5 Tank Battery
Project Number: [none]
Project Manager: Mark Longhurst

Reported:
11/03/21 12:01

SS12@5'
2110334-01 (Soil)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **10/20/21 09:50**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Benzene	ND	0.0020	mg/kg	1	BEJ0396	10/20/21	10/20/21	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: **10/20/21 09:50**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 1,2-Dichloroethane-d4		126 %	23-173		"	"	"	"	
Surrogate: Toluene-d8		112 %	20-170		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		98.6 %	21-167		"	"	"	"	

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **10/20/21 09:50**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
C10-C28 (DRO)	ND	50	mg/kg	1	BEJ0397	10/20/21	10/20/21	EPA 8015M	
C28-C36 (ORO)	ND	50	"	"	"	"	"	"	

Date Sampled: **10/20/21 09:50**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: o-Terphenyl		122 %	30-150		"	"	"	"	

PAH by EPA Method 8270D SIM

Summit Scientific

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.



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

Project: Loloff 35-5 Tank Battery
Project Number: [none]
Project Manager: Mark Longhurst

Reported:
11/03/21 12:01

SS12@5'
2110334-01 (Soil)

Summit Scientific

PAH by EPA Method 8270D SIM

Date Sampled: **10/20/21 09:50**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Anthracene	ND	0.00500	mg/kg	1	BEJ0601	11/01/21	11/02/21	EPA 8270D SIM	
Chrysene	ND	0.00500	"	"	"	"	"	"	
Fluorene	ND	0.00500	"	"	"	"	"	"	
1-Methylnaphthalene	ND	0.00500	"	"	"	"	"	"	

Date Sampled: **10/20/21 09:50**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 2-Methylnaphthalene-d10		82.3 %	40-150		"	"	"	"	
Surrogate: Fluoranthene-d10		65.6 %	40-150		"	"	"	"	

Summit Scientific

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

Project: Loloff 35-5 Tank Battery
Project Number: [none]
Project Manager: Mark Longhurst

Reported:
11/03/21 12:01

SS13@4'
2110334-02 (Soil)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **10/20/21 10:05**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Benzene	ND	0.0020	mg/kg	1	BEJ0396	10/20/21	10/21/21	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: **10/20/21 10:05**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: 1,2-Dichloroethane-d4		117 %	23-173		"	"	"	"	
Surrogate: Toluene-d8		115 %	20-170		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		105 %	21-167		"	"	"	"	

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **10/20/21 10:05**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
C10-C28 (DRO)	ND	50	mg/kg	1	BEJ0397	10/20/21	10/20/21	EPA 8015M	
C28-C36 (ORO)	ND	50	"	"	"	"	"	"	

Date Sampled: **10/20/21 10:05**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: o-Terphenyl		131 %	30-150		"	"	"	"	

PAH by EPA Method 8270D SIM

Summit Scientific

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

Project: Loloff 35-5 Tank Battery
Project Number: [none]
Project Manager: Mark Longhurst

Reported:
11/03/21 12:01

SS13@4'
2110334-02 (Soil)

Summit Scientific

PAH by EPA Method 8270D SIM

Date Sampled: **10/20/21 10:05**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Anthracene	ND	0.00500	mg/kg	1	BEJ0601	11/01/21	11/02/21	EPA 8270D SIM	
Chrysene	0.00525	0.00500	"	"	"	"	"	"	
Fluorene	ND	0.00500	"	"	"	"	"	"	
1-Methylnaphthalene	ND	0.00500	"	"	"	"	"	"	

Date Sampled: **10/20/21 10:05**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: 2-Methylnaphthalene-d10		77.3 %	40-150		"	"	"	"	
Surrogate: Fluoranthene-d10		70.0 %	40-150		"	"	"	"	

Summit Scientific

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

Project: Loloff 35-5 Tank Battery
Project Number: [none]
Project Manager: Mark Longhurst

Reported:
11/03/21 12:01

SS14@2.5'
2110334-03 (Soil)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **10/20/21 10:15**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Benzene	ND	0.0020	mg/kg	1	BEJ0396	10/20/21	10/20/21	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: **10/20/21 10:15**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: 1,2-Dichloroethane-d4		116 %	23-173		"	"	"	"	
Surrogate: Toluene-d8		111 %	20-170		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		97.9 %	21-167		"	"	"	"	

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **10/20/21 10:15**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
C10-C28 (DRO)	ND	50	mg/kg	1	BEJ0397	10/20/21	10/21/21	EPA 8015M	
C28-C36 (ORO)	ND	50	"	"	"	"	"	"	

Date Sampled: **10/20/21 10:15**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: o-Terphenyl		129 %	30-150		"	"	"	"	

PAH by EPA Method 8270D SIM

Summit Scientific

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.



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

Project: Loloff 35-5 Tank Battery
Project Number: [none]
Project Manager: Mark Longhurst

Reported:
11/03/21 12:01

SS14@2.5'
2110334-03 (Soil)

Summit Scientific

PAH by EPA Method 8270D SIM

Date Sampled: **10/20/21 10:15**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Anthracene	ND	0.00500	mg/kg	1	BEJ0601	11/01/21	11/02/21	EPA 8270D SIM	
Chrysene	ND	0.00500	"	"	"	"	"	"	
Fluorene	ND	0.00500	"	"	"	"	"	"	
1-Methylnaphthalene	ND	0.00500	"	"	"	"	"	"	

Date Sampled: **10/20/21 10:15**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: 2-Methylnaphthalene-d10		80.1 %	40-150		"	"	"	"	
Surrogate: Fluoranthene-d10		61.4 %	40-150		"	"	"	"	

Summit Scientific

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.



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

Project: Loloff 35-5 Tank Battery

Project Number: [none]
Project Manager: Mark Longhurst

Reported:
11/03/21 12:01

SS15@4'
2110334-04 (Soil)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **10/20/21 11:50**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Benzene	ND	0.0020	mg/kg	1	BEJ0396	10/20/21	10/21/21	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: **10/20/21 11:50**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 1,2-Dichloroethane-d4		134 %	23-173		"	"	"	"	
Surrogate: Toluene-d8		131 %	20-170		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		119 %	21-167		"	"	"	"	

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **10/20/21 11:50**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
C10-C28 (DRO)	ND	50	mg/kg	1	BEJ0397	10/20/21	10/21/21	EPA 8015M	
C28-C36 (ORO)	ND	50	"	"	"	"	"	"	

Date Sampled: **10/20/21 11:50**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: o-Terphenyl		99.5 %	30-150		"	"	"	"	

PAH by EPA Method 8270D SIM

Summit Scientific

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.



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

Project: Loloff 35-5 Tank Battery
Project Number: [none]
Project Manager: Mark Longhurst

Reported:
11/03/21 12:01

SS15@4'
2110334-04 (Soil)

Summit Scientific

PAH by EPA Method 8270D SIM

Date Sampled: **10/20/21 11:50**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Anthracene	ND	0.00500	mg/kg	1	BEJ0601	11/01/21	11/02/21	EPA 8270D SIM	
Chrysene	ND	0.00500	"	"	"	"	"	"	
Fluorene	ND	0.00500	"	"	"	"	"	"	
1-Methylnaphthalene	ND	0.00500	"	"	"	"	"	"	

Date Sampled: **10/20/21 11:50**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 2-Methylnaphthalene-d10		80.5 %	40-150		"	"	"	"	
Surrogate: Fluoranthene-d10		76.9 %	40-150		"	"	"	"	

Summit Scientific

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.



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

Project: Loloff 35-5 Tank Battery
Project Number: [none]
Project Manager: Mark Longhurst

Reported:
11/03/21 12:01

SS16@2.5'
2110334-05 (Soil)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **10/20/21 11:55**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Benzene	ND	0.0020	mg/kg	1	BEJ0396	10/20/21	10/21/21	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: **10/20/21 11:55**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: 1,2-Dichloroethane-d4		121 %	23-173		"	"	"	"	
Surrogate: Toluene-d8		116 %	20-170		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		115 %	21-167		"	"	"	"	

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **10/20/21 11:55**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
C10-C28 (DRO)	ND	50	mg/kg	1	BEJ0397	10/20/21	10/21/21	EPA 8015M	
C28-C36 (ORO)	ND	50	"	"	"	"	"	"	

Date Sampled: **10/20/21 11:55**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: o-Terphenyl		123 %	30-150		"	"	"	"	

PAH by EPA Method 8270D SIM

Summit Scientific

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.



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

Project: Loloff 35-5 Tank Battery
Project Number: [none]
Project Manager: Mark Longhurst

Reported:
11/03/21 12:01

SS16@2.5'
2110334-05 (Soil)

Summit Scientific

PAH by EPA Method 8270D SIM

Date Sampled: **10/20/21 11:55**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Anthracene	ND	0.00500	mg/kg	1	BEJ0601	11/01/21	11/02/21	EPA 8270D SIM	
Chrysene	ND	0.00500	"	"	"	"	"	"	
Fluorene	ND	0.00500	"	"	"	"	"	"	
1-Methylnaphthalene	ND	0.00500	"	"	"	"	"	"	

Date Sampled: **10/20/21 11:55**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: 2-Methylnaphthalene-d10		88.1 %	40-150		"	"	"	"	
Surrogate: Fluoranthene-d10		69.1 %	40-150		"	"	"	"	

Summit Scientific

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.



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

Project: Loloff 35-5 Tank Battery

Project Number: [none]
Project Manager: Mark Longhurst

Reported:
11/03/21 12:01

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 BEJ0396 - EPA 5030 Soil MS

Blank (BEJ0396-BLK1)

Prepared: 10/20/21 Analyzed: 10/21/21

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	0.0399		"	0.0400		99.8	23-173			
Surrogate: Toluene-d8	0.0397		"	0.0400		99.2	20-170			
Surrogate: 4-Bromofluorobenzene	0.0391		"	0.0400		97.7	21-167			

LCS (BEJ0396-BS1)

Prepared: 10/20/21 Analyzed: 10/21/21

Benzene	0.108	0.0020	mg/kg	0.100		108	70-130			
Toluene	0.114	0.0050	"	0.100		114	70-130			
Ethylbenzene	0.122	0.0050	"	0.100		122	70-130			
m,p-Xylene	0.243	0.010	"	0.200		122	70-130			
o-Xylene	0.115	0.0050	"	0.100		115	70-130			
1,2,4-Trimethylbenzene	0.121	0.0050	"	0.100		121	70-130			
1,3,5-Trimethylbenzene	0.117	0.0050	"	0.100		117	70-130			
Naphthalene	0.103	0.0038	"	0.100		103	70-130			
Surrogate: 1,2-Dichloroethane-d4	0.0440		"	0.0400		110	23-173			
Surrogate: Toluene-d8	0.0361		"	0.0400		90.2	20-170			
Surrogate: 4-Bromofluorobenzene	0.0400		"	0.0400		100	21-167			

Matrix Spike (BEJ0396-MS1)

Source: 2110331-01

Prepared: 10/20/21 Analyzed: 10/21/21

Benzene	0.113	0.0020	mg/kg	0.100	ND	113	70-130			
Toluene	0.121	0.0050	"	0.100	ND	121	70-130			
Ethylbenzene	0.124	0.0050	"	0.100	ND	124	70-130			
m,p-Xylene	0.244	0.010	"	0.200	ND	122	70-130			
o-Xylene	0.118	0.0050	"	0.100	ND	118	70-130			
1,2,4-Trimethylbenzene	0.122	0.0050	"	0.100	ND	122	70-130			
1,3,5-Trimethylbenzene	0.117	0.0050	"	0.100	ND	117	70-130			
Naphthalene	0.102	0.0038	"	0.100	ND	102	70-130			
Surrogate: 1,2-Dichloroethane-d4	0.0445		"	0.0400		111	23-173			
Surrogate: Toluene-d8	0.0378		"	0.0400		94.6	20-170			
Surrogate: 4-Bromofluorobenzene	0.0400		"	0.0400		100	21-167			

Summit Scientific

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.



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

Project: Loloff 35-5 Tank Battery

Project Number: [none]
Project Manager: Mark Longhurst

Reported:
11/03/21 12:01

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 BEJ0396 - EPA 5030 Soil MS

Matrix Spike Dup (BEJ0396-MSD1)		Source: 2110331-01			Prepared: 10/20/21 Analyzed: 10/21/21					
Benzene	0.103	0.0020	mg/kg	0.100	ND	103	70-130	10.0	30	
Toluene	0.126	0.0050	"	0.100	ND	126	70-130	4.71	30	
Ethylbenzene	0.124	0.0050	"	0.100	ND	124	70-130	0.194	30	
m,p-Xylene	0.244	0.010	"	0.200	ND	122	70-130	0.0246	30	
o-Xylene	0.117	0.0050	"	0.100	ND	117	70-130	1.18	30	
1,2,4-Trimethylbenzene	0.122	0.0050	"	0.100	ND	122	70-130	0.222	30	
1,3,5-Trimethylbenzene	0.117	0.0050	"	0.100	ND	117	70-130	0.0769	30	
Naphthalene	0.101	0.0038	"	0.100	ND	101	70-130	1.15	30	
<hr/>										
Surrogate: 1,2-Dichloroethane-d4	0.0410		"	0.0400		102	23-173			
Surrogate: Toluene-d8	0.0392		"	0.0400		98.0	20-170			
Surrogate: 4-Bromofluorobenzene	0.0396		"	0.0400		98.9	21-167			

Summit Scientific

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.



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

Project: Loloff 35-5 Tank Battery
Project Number: [none]
Project Manager: Mark Longhurst

Reported:
11/03/21 12:01

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 BEJ0397 - EPA 3550A

Blank (BEJ0397-BLK1)

Prepared: 10/20/21 Analyzed: 10/21/21

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

LCS (BEJ0397-BS1)

Prepared: 10/20/21 Analyzed: 10/21/21

C10-C28 (DRO)	622	50	mg/kg	500	124	70-130
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Matrix Spike (BEJ0397-MS1)

Source: 2110331-01

Prepared: 10/20/21 Analyzed: 10/21/21

C10-C28 (DRO)	476	50	mg/kg	500	ND	95.1	70-130
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Matrix Spike Dup (BEJ0397-MSD1)

Source: 2110331-01

Prepared: 10/20/21 Analyzed: 10/21/21

C10-C28 (DRO)	481	50	mg/kg	500	ND	96.2	70-130	1.10	20
---------------	-----	----	-------	-----	----	------	--------	------	----

Summit Scientific

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.



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

Project: Loloff 35-5 Tank Battery
Project Number: [none]
Project Manager: Mark Longhurst

Reported:
11/03/21 12:01

PAH by EPA Method 8270D SIM - Quality Control

Summit Scientific

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

Batch BEJ0601 - EPA 5030 Soil MS

Blank (BEJ0601-BLK1)

Prepared: 10/29/21 Analyzed: 11/02/21

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	"							
Surrogate: 2-Methylnaphthalene-d10	0.0341		"	0.0333		102	40-150			
Surrogate: Fluoranthene-d10	0.0278		"	0.0333		83.3	40-150			

LCS (BEJ0601-BS1)

Prepared: 10/29/21 Analyzed: 11/02/21

Acenaphthene	0.0291	0.00500	mg/kg	0.0333		87.4	31-137			
Anthracene	0.0282	0.00500	"	0.0333		84.7	30-120			
Benzo (a) anthracene	0.0285	0.00500	"	0.0333		85.4	30-120			
Benzo (a) pyrene	0.0250	0.00500	"	0.0333		75.1	30-120			
Benzo (b) fluoranthene	0.0213	0.00500	"	0.0333		63.9	30-120			
Benzo (k) fluoranthene	0.0215	0.00500	"	0.0333		64.5	30-120			
Chrysene	0.0280	0.00500	"	0.0333		83.9	30-120			
Dibenz (a,h) anthracene	0.0400	0.00500	"	0.0333		120	30-120			
Fluoranthene	0.0285	0.00500	"	0.0333		85.4	30-120			
Fluorene	0.0300	0.00500	"	0.0333		90.0	30-120			
Indeno (1,2,3-cd) pyrene	0.0290	0.00500	"	0.0333		86.9	30-120			
Pyrene	0.0236	0.00500	"	0.0333		70.9	35-142			
1-Methylnaphthalene	0.0353	0.00500	"	0.0333		106	35-142			
2-Methylnaphthalene	0.0376	0.00500	"	0.0333		113	35-142			
Surrogate: 2-Methylnaphthalene-d10	0.0345		"	0.0333		104	40-150			
Surrogate: Fluoranthene-d10	0.0287		"	0.0333		86.2	40-150			

Summit Scientific

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

Project: Loloff 35-5 Tank Battery
Project Number: [none]
Project Manager: Mark Longhurst

Reported:
11/03/21 12:01

PAH by EPA Method 8270D SIM - Quality Control

Summit Scientific

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

Batch BEJ0601 - EPA 5030 Soil MS

Matrix Spike (BEJ0601-MS1)

Source: 2110334-01

Prepared: 10/29/21 Analyzed: 11/02/21

Acenaphthene	0.0247	0.00500	mg/kg	0.0333	ND	74.2	31-137				
Anthracene	0.0250	0.00500	"	0.0333	ND	75.0	30-120				
Benzo (a) anthracene	0.0256	0.00500	"	0.0333	ND	76.8	30-120				
Benzo (a) pyrene	0.0228	0.00500	"	0.0333	ND	68.3	30-120				
Benzo (b) fluoranthene	0.0188	0.00500	"	0.0333	ND	56.5	30-120				
Benzo (k) fluoranthene	0.0195	0.00500	"	0.0333	ND	58.4	30-120				
Chrysene	0.0249	0.00500	"	0.0333	ND	74.6	30-120				
Dibenz (a,h) anthracene	0.0337	0.00500	"	0.0333	ND	101	30-120				
Fluoranthene	0.0259	0.00500	"	0.0333	ND	77.7	30-120				
Fluorene	0.0246	0.00500	"	0.0333	ND	73.7	30-120				
Indeno (1,2,3-cd) pyrene	0.0245	0.00500	"	0.0333	ND	73.4	30-120				
Pyrene	0.0214	0.00500	"	0.0333	ND	64.3	35-142				
1-Methylnaphthalene	0.0318	0.00500	"	0.0333	ND	95.5	15-130				
2-Methylnaphthalene	0.0342	0.00500	"	0.0333	ND	103	15-130				
Surrogate: 2-Methylnaphthalene-d10	0.0314		"	0.0333		94.3	40-150				
Surrogate: Fluoranthene-d10	0.0267		"	0.0333		80.2	40-150				

Matrix Spike Dup (BEJ0601-MSD1)

Source: 2110334-01

Prepared: 10/29/21 Analyzed: 11/02/21

Acenaphthene	0.0261	0.00500	mg/kg	0.0333	ND	78.4	31-137	5.55	30		
Anthracene	0.0258	0.00500	"	0.0333	ND	77.5	30-120	3.32	30		
Benzo (a) anthracene	0.0268	0.00500	"	0.0333	ND	80.5	30-120	4.65	30		
Benzo (a) pyrene	0.0235	0.00500	"	0.0333	ND	70.6	30-120	3.24	30		
Benzo (b) fluoranthene	0.0196	0.00500	"	0.0333	ND	58.8	30-120	3.94	30		
Benzo (k) fluoranthene	0.0202	0.00500	"	0.0333	ND	60.5	30-120	3.57	30		
Chrysene	0.0262	0.00500	"	0.0333	ND	78.7	30-120	5.31	30		
Dibenz (a,h) anthracene	0.0361	0.00500	"	0.0333	ND	108	30-120	6.85	30		
Fluoranthene	0.0266	0.00500	"	0.0333	ND	79.8	30-120	2.72	30		
Fluorene	0.0269	0.00500	"	0.0333	ND	80.8	30-120	9.20	30		
Indeno (1,2,3-cd) pyrene	0.0266	0.00500	"	0.0333	ND	79.9	30-120	8.42	30		
Pyrene	0.0225	0.00500	"	0.0333	ND	67.5	35-142	4.83	30		
1-Methylnaphthalene	0.0323	0.00500	"	0.0333	ND	97.0	15-130	1.54	50		
2-Methylnaphthalene	0.0346	0.00500	"	0.0333	ND	104	15-130	1.13	50		
Surrogate: 2-Methylnaphthalene-d10	0.0327		"	0.0333		98.0	40-150				
Surrogate: Fluoranthene-d10	0.0271		"	0.0333		81.3	40-150				

Summit Scientific

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.



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

Project: Loloff 35-5 Tank Battery

Project Number: [none]

Project Manager: Mark Longhurst

Reported:
11/03/21 12:01

Notes and Definitions

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

Summit Scientific

4653 Table Mountain Drive, Golden, Colorado 80403

303.277.9310

November 03, 2021

Mark Longhurst

PDC Energy

1775 Sherman St. STE. 3000

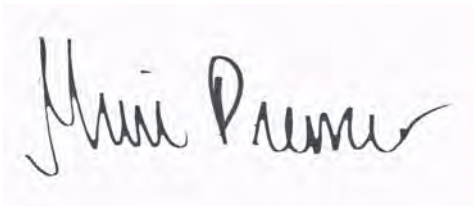
Denver, CO 80203

RE: Loloff 35-5 Tank Battery

Work Order #2110366

Enclosed are the results of analyses for samples received by Summit Scientific on 10/21/21 14:40. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

A handwritten signature in black ink, appearing to read "Muri Premier", is shown on a light pink background.

Muri Premier For Paul Shrewsbury
President



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

Project: Loloff 35-5 Tank Battery

Project Number: [none]
Project Manager: Mark Longhurst

Reported:
11/03/21 12:08

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
SS17@5'	2110366-01	Soil	10/21/21 10:43	10/21/21 14:40
SS18@4'	2110366-02	Soil	10/21/21 11:05	10/21/21 14:40
SS19@2.5'	2110366-03	Soil	10/21/21 11:17	10/21/21 14:40
SS20@4'	2110366-04	Soil	10/21/21 11:55	10/21/21 14:40
SS21@2.5'	2110366-05	Soil	10/21/21 12:00	10/21/21 14:40
SS22@5'	2110366-06	Soil	10/21/21 12:11	10/21/21 14:40
SS23@4'	2110366-07	Soil	10/21/21 12:30	10/21/21 14:40
SS24@2.5'	2110366-08	Soil	10/21/21 12:39	10/21/21 14:40

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

S₂

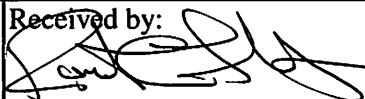
2110366

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: Loloff 35-5 Tank Battery
Sampler Name: Dylan Brightwell	Project Number:

ID	Sample Description	Date Sampled	Time Sampled	# of containers	Preservative				Matrix				Analysis Requested								Special Instructions
					HCl	HNO ₃	None	Other	Water	Soil	Air-Canister #	Other	BTEXN - 8260B	TPH - (C6 - C36)	1,2,4 & 1,3,5-TMB	Boron - HWS	pH, EC, SAR				
1	5517 @ 5'	10/21/21	10:43	3			X			X				X	X	X					pH, EC, SAR by saturated paste
2	5518 @ 4'		11:05																		
3	5519 @ 2.5'		11:17																		
4	5520 @ 4'		11:55																		
5	5521 @ 2.5'		12:00																		
6	5522 @ 5'		12:11																		
7	5523 @ 4'		12:30																		
8	5524 @ 2.5'	↓	12:39	↓			↓			↓				↓	↓	↓					
9																					
10																					

Relinquished by: Dylan Brightwell	Date/Time: 10/21/21 14:40	Received by: Tasman's Lock Box	Date/Time: 10/21/21 14:40	Turn Around Time (Check)	Notes:
Relinquished by: Tasman's Lock Box	Date/Time:	Received by: 	Date/Time: 10/21/21 1440	Same Day <input checked="" type="checkbox"/> 72 hours	
Relinquished by:	Date/Time:	Received by:	Date/Time:	24 hours	
				48 hours	
				Sample Integrity:	
				Temperature Upon Receipt: 3.8	
				Samples Intact: <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	

S₂

Sample Receipt Checklist

S2 Work Order#

2110366

Client: POC/TasmanianClient Project ID: loloff 35-S 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)

3.8

Thermometer ID: G86A9201901378

	Yes	No	N/A	Comments (if any)
If samples require cooling, was the temperature at 4°C +/- 2°C ⁽¹⁾ ?	<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 if there is evidence that cooling has begun.				
Were all samples received intact ⁽¹⁾ ?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Was adequate sample volume provided ⁽¹⁾ ?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
If custody seals are present, are they intact ⁽¹⁾ ?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Are samples with holding times due within 48 hours sample due within 48 hours present?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	same day
Is a chain-of-custody (COC) form present and filled out completely ⁽¹⁾ ?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Does the COC agree with the number and type of sample bottles received ⁽¹⁾ ?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Do the sample IDs on the bottle labels match the COC ⁽¹⁾ ?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Is the COC properly relinquished by the client w/ date and time recorded ⁽¹⁾ ?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
For volatiles in water – is there headspace present? If yes, contact client and note in narrative.	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
Are samples preserved that require preservation (excluding cooling) ⁽¹⁾ ?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
Note the type of preservative in the Comments column – HCl, H ₂ SO ₄ , NaOH, HNO ₃ , etc.				
If samples are acid preserved for metals, is the pH ≤ 2 ⁽¹⁾ ?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
Record the pH in Comments.				
If dissolved metals are requested, were samples field filtered?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	

Additional Comments (if any):

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

Custodian Printed Name or Initials

Date/Time

10.21.21



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

Project: Loloff 35-5 Tank Battery
Project Number: [none]
Project Manager: Mark Longhurst

Reported:
11/03/21 12:08

SS17@5'
2110366-01 (Soil)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **10/21/21 10:43**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Benzene	ND	0.0020	mg/kg	1	BEJ0421	10/21/21	10/22/21	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: **10/21/21 10:43**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 1,2-Dichloroethane-d4		120 %	23-173		"	"	"	"	
Surrogate: Toluene-d8		113 %	20-170		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		96.4 %	21-167		"	"	"	"	

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **10/21/21 10:43**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
C10-C28 (DRO)	ND	50	mg/kg	1	BEJ0422	10/21/21	10/21/21	EPA 8015M	
C28-C36 (ORO)	ND	50	"	"	"	"	"	"	

Date Sampled: **10/21/21 10:43**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: o-Terphenyl		102 %	30-150		"	"	"	"	

PAH by EPA Method 8270D SIM

Summit Scientific

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.



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

Project: Loloff 35-5 Tank Battery
Project Number: [none]
Project Manager: Mark Longhurst

Reported:
11/03/21 12:08

SS17@5'
2110366-01 (Soil)

Summit Scientific

PAH by EPA Method 8270D SIM

Date Sampled: **10/21/21 10:43**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Anthracene	ND	0.00500	mg/kg	1	BEJ0601	11/01/21	11/02/21	EPA 8270D SIM	
Chrysene	ND	0.00500	"	"	"	"	"	"	
Fluorene	ND	0.00500	"	"	"	"	"	"	
1-Methylnaphthalene	ND	0.00500	"	"	"	"	"	"	

Date Sampled: **10/21/21 10:43**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: 2-Methylnaphthalene-d10		77.5 %	40-150		"	"	"	"	
Surrogate: Fluoranthene-d10		61.4 %	40-150		"	"	"	"	

Summit Scientific

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

Project: Loloff 35-5 Tank Battery
Project Number: [none]
Project Manager: Mark Longhurst

Reported:
11/03/21 12:08

SS18@4'
2110366-02 (Soil)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **10/21/21 11:05**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Benzene	ND	0.0020	mg/kg	1	BEJ0421	10/21/21	10/22/21	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	6.3	0.50	"	"	"	"	"	"	

Date Sampled: **10/21/21 11:05**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 1,2-Dichloroethane-d4		134 %	23-173		"	"	"	"	
Surrogate: Toluene-d8		141 %	20-170		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		165 %	21-167		"	"	"	"	

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **10/21/21 11:05**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
C10-C28 (DRO)	ND	50	mg/kg	1	BEJ0422	10/21/21	10/22/21	EPA 8015M	
C28-C36 (ORO)	ND	50	"	"	"	"	"	"	

Date Sampled: **10/21/21 11:05**

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

PAH by EPA Method 8270D SIM

Summit Scientific

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

Project: Loloff 35-5 Tank Battery
Project Number: [none]
Project Manager: Mark Longhurst

Reported:
11/03/21 12:08

SS18@4'
2110366-02 (Soil)

Summit Scientific

PAH by EPA Method 8270D SIM

Date Sampled: **10/21/21 11:05**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Anthracene	ND	0.00500	mg/kg	1	BEJ0601	11/01/21	11/02/21	EPA 8270D SIM	
Chrysene	ND	0.00500	"	"	"	"	"	"	
Fluorene	ND	0.00500	"	"	"	"	"	"	
1-Methylnaphthalene	ND	0.00500	"	"	"	"	"	"	

Date Sampled: **10/21/21 11:05**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: 2-Methylnaphthalene-d10		78.1 %	40-150		"	"	"	"	
Surrogate: Fluoranthene-d10		72.4 %	40-150		"	"	"	"	

Summit Scientific

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

Project: Loloff 35-5 Tank Battery
Project Number: [none]
Project Manager: Mark Longhurst

Reported:
11/03/21 12:08

SS19@2.5'
2110366-03 (Soil)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **10/21/21 11:17**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Benzene	ND	0.0020	mg/kg	1	BEJ0421	10/21/21	10/22/21	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: **10/21/21 11:17**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: 1,2-Dichloroethane-d4		130 %	23-173		"	"	"	"	
Surrogate: Toluene-d8		120 %	20-170		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		106 %	21-167		"	"	"	"	

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **10/21/21 11:17**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
C10-C28 (DRO)	ND	50	mg/kg	1	BEJ0422	10/21/21	10/22/21	EPA 8015M	
C28-C36 (ORO)	ND	50	"	"	"	"	"	"	

Date Sampled: **10/21/21 11:17**

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

PAH by EPA Method 8270D SIM

Summit Scientific

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

Project: Loloff 35-5 Tank Battery
Project Number: [none]
Project Manager: Mark Longhurst

Reported:
11/03/21 12:08

SS19@2.5'
2110366-03 (Soil)

Summit Scientific

PAH by EPA Method 8270D SIM

Date Sampled: **10/21/21 11:17**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Anthracene	ND	0.00500	mg/kg	1	BEJ0601	11/01/21	11/02/21	EPA 8270D SIM	
Chrysene	ND	0.00500	"	"	"	"	"	"	
Fluorene	ND	0.00500	"	"	"	"	"	"	
1-Methylnaphthalene	ND	0.00500	"	"	"	"	"	"	

Date Sampled: **10/21/21 11:17**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: 2-Methylnaphthalene-d10		84.7 %	40-150		"	"	"	"	
Surrogate: Fluoranthene-d10		75.1 %	40-150		"	"	"	"	

Summit Scientific

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

Project: Loloff 35-5 Tank Battery
Project Number: [none]
Project Manager: Mark Longhurst

Reported:
11/03/21 12:08

SS20@4'
2110366-04 (Soil)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **10/21/21 11:55**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Benzene	ND	0.0020	mg/kg	1	BEJ0421	10/21/21	10/22/21	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: **10/21/21 11:55**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: 1,2-Dichloroethane-d4		129 %	23-173		"	"	"	"	
Surrogate: Toluene-d8		120 %	20-170		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		105 %	21-167		"	"	"	"	

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **10/21/21 11:55**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
C10-C28 (DRO)	ND	50	mg/kg	1	BEJ0422	10/21/21	10/22/21	EPA 8015M	
C28-C36 (ORO)	ND	50	"	"	"	"	"	"	

Date Sampled: **10/21/21 11:55**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: o-Terphenyl		102 %	30-150		"	"	"	"	

PAH by EPA Method 8270D SIM

Summit Scientific

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.



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

Project: Loloff 35-5 Tank Battery
Project Number: [none]
Project Manager: Mark Longhurst

Reported:
11/03/21 12:08

SS20@4'
2110366-04 (Soil)

Summit Scientific

PAH by EPA Method 8270D SIM

Date Sampled: **10/21/21 11:55**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Anthracene	ND	0.00500	mg/kg	1	BEJ0601	11/01/21	11/02/21	EPA 8270D SIM	
Chrysene	ND	0.00500	"	"	"	"	"	"	
Fluorene	ND	0.00500	"	"	"	"	"	"	
1-Methylnaphthalene	ND	0.00500	"	"	"	"	"	"	

Date Sampled: **10/21/21 11:55**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 2-Methylnaphthalene-d10		88.6 %	40-150		"	"	"	"	
Surrogate: Fluoranthene-d10		69.0 %	40-150		"	"	"	"	

Summit Scientific

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

Project: Loloff 35-5 Tank Battery
Project Number: [none]
Project Manager: Mark Longhurst

Reported:
11/03/21 12:08

SS21@2.5'
2110366-05 (Soil)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **10/21/21 12:00**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Benzene	ND	0.0020	mg/kg	1	BEJ0421	10/21/21	10/22/21	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: **10/21/21 12:00**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: 1,2-Dichloroethane-d4		107 %	23-173		"	"	"	"	
Surrogate: Toluene-d8		98.3 %	20-170		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		114 %	21-167		"	"	"	"	

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **10/21/21 12:00**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
C10-C28 (DRO)	ND	50	mg/kg	1	BEJ0422	10/21/21	10/22/21	EPA 8015M	
C28-C36 (ORO)	ND	50	"	"	"	"	"	"	

Date Sampled: **10/21/21 12:00**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: o-Terphenyl		104 %	30-150		"	"	"	"	

PAH by EPA Method 8270D SIM

Summit Scientific

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.



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

Project: Loloff 35-5 Tank Battery
Project Number: [none]
Project Manager: Mark Longhurst

Reported:
11/03/21 12:08

SS21@2.5'
2110366-05 (Soil)

Summit Scientific

PAH by EPA Method 8270D SIM

Date Sampled: **10/21/21 12:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Anthracene	ND	0.00500	mg/kg	1	BEJ0601	11/01/21	11/02/21	EPA 8270D SIM	
Chrysene	ND	0.00500	"	"	"	"	"	"	
Fluorene	ND	0.00500	"	"	"	"	"	"	
1-Methylnaphthalene	ND	0.00500	"	"	"	"	"	"	

Date Sampled: **10/21/21 12:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 2-Methylnaphthalene-d10		92.0 %	40-150		"	"	"	"	
Surrogate: Fluoranthene-d10		69.9 %	40-150		"	"	"	"	

Summit Scientific

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

Project: Loloff 35-5 Tank Battery
Project Number: [none]
Project Manager: Mark Longhurst

Reported:
11/03/21 12:08

SS22@5'
2110366-06 (Soil)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **10/21/21 12:11**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Benzene	ND	0.0020	mg/kg	1	BEJ0421	10/21/21	10/22/21	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: **10/21/21 12:11**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: 1,2-Dichloroethane-d4		105 %	23-173		"	"	"	"	
Surrogate: Toluene-d8		94.4 %	20-170		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		106 %	21-167		"	"	"	"	

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **10/21/21 12:11**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
C10-C28 (DRO)	ND	50	mg/kg	1	BEJ0422	10/21/21	10/22/21	EPA 8015M	
C28-C36 (ORO)	ND	50	"	"	"	"	"	"	

Date Sampled: **10/21/21 12:11**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: o-Terphenyl		101 %	30-150		"	"	"	"	

PAH by EPA Method 8270D SIM

Summit Scientific

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.



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

Project: Loloff 35-5 Tank Battery
Project Number: [none]
Project Manager: Mark Longhurst

Reported:
11/03/21 12:08

SS22@5'
2110366-06 (Soil)

Summit Scientific

PAH by EPA Method 8270D SIM

Date Sampled: **10/21/21 12:11**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Anthracene	ND	0.00500	mg/kg	1	BEJ0601	11/01/21	11/02/21	EPA 8270D SIM	
Chrysene	ND	0.00500	"	"	"	"	"	"	
Fluorene	ND	0.00500	"	"	"	"	"	"	
1-Methylnaphthalene	ND	0.00500	"	"	"	"	"	"	

Date Sampled: **10/21/21 12:11**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: 2-Methylnaphthalene-d10		78.2 %	40-150		"	"	"	"	
Surrogate: Fluoranthene-d10		65.2 %	40-150		"	"	"	"	

Summit Scientific

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

Project: Loloff 35-5 Tank Battery
Project Number: [none]
Project Manager: Mark Longhurst

Reported:
11/03/21 12:08

SS23@4'
2110366-07 (Soil)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **10/21/21 12:30**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Benzene	ND	0.0020	mg/kg	1	BEJ0421	10/21/21	10/22/21	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: **10/21/21 12:30**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: 1,2-Dichloroethane-d4		113 %	23-173		"	"	"	"	
Surrogate: Toluene-d8		96.6 %	20-170		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		105 %	21-167		"	"	"	"	

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **10/21/21 12:30**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
C10-C28 (DRO)	ND	50	mg/kg	1	BEJ0422	10/21/21	10/22/21	EPA 8015M	
C28-C36 (ORO)	ND	50	"	"	"	"	"	"	

Date Sampled: **10/21/21 12:30**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: o-Terphenyl		106 %	30-150		"	"	"	"	

PAH by EPA Method 8270D SIM

Summit Scientific

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

Project: Loloff 35-5 Tank Battery
Project Number: [none]
Project Manager: Mark Longhurst

Reported:
11/03/21 12:08

SS23@4'
2110366-07 (Soil)

Summit Scientific

PAH by EPA Method 8270D SIM

Date Sampled: **10/21/21 12:30**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Anthracene	ND	0.00500	mg/kg	1	BEJ0601	11/01/21	11/02/21	EPA 8270D SIM	
Chrysene	ND	0.00500	"	"	"	"	"	"	
Fluorene	ND	0.00500	"	"	"	"	"	"	
1-Methylnaphthalene	ND	0.00500	"	"	"	"	"	"	

Date Sampled: **10/21/21 12:30**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: 2-Methylnaphthalene-d10		87.6 %	40-150		"	"	"	"	
Surrogate: Fluoranthene-d10		69.0 %	40-150		"	"	"	"	

Summit Scientific

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

Project: Loloff 35-5 Tank Battery
Project Number: [none]
Project Manager: Mark Longhurst

Reported:
11/03/21 12:08

SS24@2.5'
2110366-08 (Soil)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **10/21/21 12:39**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Benzene	ND	0.0020	mg/kg	1	BEJ0421	10/21/21	10/22/21	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: **10/21/21 12:39**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: 1,2-Dichloroethane-d4		115 %	23-173		"	"	"	"	
Surrogate: Toluene-d8		98.6 %	20-170		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		103 %	21-167		"	"	"	"	

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **10/21/21 12:39**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
C10-C28 (DRO)	ND	50	mg/kg	1	BEJ0422	10/21/21	10/22/21	EPA 8015M	
C28-C36 (ORO)	ND	50	"	"	"	"	"	"	

Date Sampled: **10/21/21 12:39**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: o-Terphenyl		101 %	30-150		"	"	"	"	

PAH by EPA Method 8270D SIM

Summit Scientific

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

Project: Loloff 35-5 Tank Battery
Project Number: [none]
Project Manager: Mark Longhurst

Reported:
11/03/21 12:08

SS24@2.5'
2110366-08 (Soil)

Summit Scientific

PAH by EPA Method 8270D SIM

Date Sampled: **10/21/21 12:39**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Anthracene	ND	0.00500	mg/kg	1	BEJ0601	11/01/21	11/02/21	EPA 8270D SIM	
Chrysene	ND	0.00500	"	"	"	"	"	"	
Fluorene	ND	0.00500	"	"	"	"	"	"	
1-Methylnaphthalene	ND	0.00500	"	"	"	"	"	"	

Date Sampled: **10/21/21 12:39**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: 2-Methylnaphthalene-d10		82.9 %	40-150		"	"	"	"	
Surrogate: Fluoranthene-d10		68.8 %	40-150		"	"	"	"	

Summit Scientific

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

Project: Loloff 35-5 Tank Battery
Project Number: [none]
Project Manager: Mark Longhurst

Reported:
11/03/21 12:08

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 BEJ0421 - EPA 5030 Soil MS

Blank (BEJ0421-BLK1)

Prepared: 10/21/21 Analyzed: 10/22/21

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	0.0424		"	0.0400		106	23-173			
Surrogate: Toluene-d8	0.0369		"	0.0400		92.3	20-170			
Surrogate: 4-Bromofluorobenzene	0.0410		"	0.0400		102	21-167			

LCS (BEJ0421-BS1)

Prepared: 10/21/21 Analyzed: 10/22/21

Benzene	0.117	0.0020	mg/kg	0.100		117	70-130			
Toluene	0.102	0.0050	"	0.100		102	70-130			
Ethylbenzene	0.128	0.0050	"	0.100		128	70-130			
m,p-Xylene	0.251	0.010	"	0.200		126	70-130			
o-Xylene	0.120	0.0050	"	0.100		120	70-130			
1,2,4-Trimethylbenzene	0.126	0.0050	"	0.100		126	70-130			
1,3,5-Trimethylbenzene	0.121	0.0050	"	0.100		121	70-130			
Naphthalene	0.101	0.0038	"	0.100		101	70-130			
Surrogate: 1,2-Dichloroethane-d4	0.0460		"	0.0400		115	23-173			
Surrogate: Toluene-d8	0.0392		"	0.0400		97.9	20-170			
Surrogate: 4-Bromofluorobenzene	0.0409		"	0.0400		102	21-167			

Matrix Spike (BEJ0421-MS1)

Source: 2110358-01

Prepared: 10/21/21 Analyzed: 10/22/21

Benzene	0.101	0.0020	mg/kg	0.100	ND	101	70-130			
Toluene	0.102	0.0050	"	0.100	ND	102	70-130			
Ethylbenzene	0.127	0.0050	"	0.100	ND	127	70-130			
m,p-Xylene	0.253	0.010	"	0.200	ND	127	70-130			
o-Xylene	0.121	0.0050	"	0.100	ND	121	70-130			
1,2,4-Trimethylbenzene	0.124	0.0050	"	0.100	ND	124	70-130			
1,3,5-Trimethylbenzene	0.121	0.0050	"	0.100	ND	121	70-130			
Naphthalene	0.109	0.0038	"	0.100	ND	109	70-130			
Surrogate: 1,2-Dichloroethane-d4	0.0400		"	0.0400		100	23-173			
Surrogate: Toluene-d8	0.0396		"	0.0400		99.0	20-170			
Surrogate: 4-Bromofluorobenzene	0.0400		"	0.0400		100	21-167			

Summit Scientific

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

Project: Loloff 35-5 Tank Battery

Project Number: [none]
Project Manager: Mark Longhurst

Reported:
11/03/21 12:08

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 BEJ0421 - EPA 5030 Soil MS

Matrix Spike Dup (BEJ0421-MSD1)	Source: 2110358-01			Prepared: 10/21/21 Analyzed: 10/22/21						
Benzene	0.107	0.0020	mg/kg	0.100	ND	107	70-130	5.26	30	
Toluene	0.120	0.0050	"	0.100	ND	120	70-130	15.6	30	
Ethylbenzene	0.125	0.0050	"	0.100	ND	125	70-130	1.93	30	
m,p-Xylene	0.249	0.010	"	0.200	ND	124	70-130	1.78	30	
o-Xylene	0.120	0.0050	"	0.100	ND	120	70-130	1.20	30	
1,2,4-Trimethylbenzene	0.124	0.0050	"	0.100	ND	124	70-130	0.677	30	
1,3,5-Trimethylbenzene	0.120	0.0050	"	0.100	ND	120	70-130	1.34	30	
Naphthalene	0.103	0.0038	"	0.100	ND	103	70-130	4.95	30	
Surrogate: 1,2-Dichloroethane-d4	0.0420		"	0.0400		105	23-173			
Surrogate: Toluene-d8	0.0364		"	0.0400		91.1	20-170			
Surrogate: 4-Bromofluorobenzene	0.0410		"	0.0400		103	21-167			

Summit Scientific

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

Project: Loloff 35-5 Tank Battery
Project Number: [none]
Project Manager: Mark Longhurst

Reported:
11/03/21 12:08

Extractable Petroleum Hydrocarbons by 8015 - Quality Control
Summit Scientific

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

Batch BEJ0422 - EPA 3550A

Blank (BEJ0422-BLK1)

Prepared: 10/21/21 Analyzed: 10/22/21

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

LCS (BEJ0422-BS1)

Prepared: 10/21/21 Analyzed: 10/22/21

C10-C28 (DRO)	472	50	mg/kg	500	94.4	70-130
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Matrix Spike (BEJ0422-MS1)

Source: 2110358-01

Prepared: 10/21/21 Analyzed: 10/22/21

C10-C28 (DRO)	561	50	mg/kg	500	ND	112	70-130
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Matrix Spike Dup (BEJ0422-MSD1)

Source: 2110358-01

Prepared: 10/21/21 Analyzed: 10/22/21

C10-C28 (DRO)	546	50	mg/kg	500	ND	109	70-130	2.60	20
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PDC Energy
1775 Sherman St. STE. 3000
Denver CO, 80203

Project: Loloff 35-5 Tank Battery
Project Number: [none]
Project Manager: Mark Longhurst

Reported:
11/03/21 12:08

PAH by EPA Method 8270D SIM - Quality Control

Summit Scientific

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

Batch BEJ0601 - EPA 5030 Soil MS

Blank (BEJ0601-BLK1)

Prepared: 10/29/21 Analyzed: 11/02/21

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	"							
Surrogate: 2-Methylnaphthalene-d10	0.0341		"	0.0333		102	40-150			
Surrogate: Fluoranthene-d10	0.0278		"	0.0333		83.3	40-150			

LCS (BEJ0601-BS1)

Prepared: 10/29/21 Analyzed: 11/02/21

Acenaphthene	0.0291	0.00500	mg/kg	0.0333		87.4	31-137			
Anthracene	0.0282	0.00500	"	0.0333		84.7	30-120			
Benzo (a) anthracene	0.0285	0.00500	"	0.0333		85.4	30-120			
Benzo (a) pyrene	0.0250	0.00500	"	0.0333		75.1	30-120			
Benzo (b) fluoranthene	0.0213	0.00500	"	0.0333		63.9	30-120			
Benzo (k) fluoranthene	0.0215	0.00500	"	0.0333		64.5	30-120			
Chrysene	0.0280	0.00500	"	0.0333		83.9	30-120			
Dibenz (a,h) anthracene	0.0400	0.00500	"	0.0333		120	30-120			
Fluoranthene	0.0285	0.00500	"	0.0333		85.4	30-120			
Fluorene	0.0300	0.00500	"	0.0333		90.0	30-120			
Indeno (1,2,3-cd) pyrene	0.0290	0.00500	"	0.0333		86.9	30-120			
Pyrene	0.0236	0.00500	"	0.0333		70.9	35-142			
1-Methylnaphthalene	0.0353	0.00500	"	0.0333		106	35-142			
2-Methylnaphthalene	0.0376	0.00500	"	0.0333		113	35-142			
Surrogate: 2-Methylnaphthalene-d10	0.0345		"	0.0333		104	40-150			
Surrogate: Fluoranthene-d10	0.0287		"	0.0333		86.2	40-150			

Summit Scientific

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

Project: Loloff 35-5 Tank Battery

Project Number: [none]
Project Manager: Mark Longhurst

Reported:
11/03/21 12:08

PAH by EPA Method 8270D SIM - Quality Control

Summit Scientific

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

Batch BEJ0601 - EPA 5030 Soil MS

Matrix Spike (BEJ0601-MS1)

Source: 2110334-01

Prepared: 10/29/21 Analyzed: 11/02/21

Acenaphthene	0.0247	0.00500	mg/kg	0.0333	ND	74.2	31-137				
Anthracene	0.0250	0.00500	"	0.0333	ND	75.0	30-120				
Benzo (a) anthracene	0.0256	0.00500	"	0.0333	ND	76.8	30-120				
Benzo (a) pyrene	0.0228	0.00500	"	0.0333	ND	68.3	30-120				
Benzo (b) fluoranthene	0.0188	0.00500	"	0.0333	ND	56.5	30-120				
Benzo (k) fluoranthene	0.0195	0.00500	"	0.0333	ND	58.4	30-120				
Chrysene	0.0249	0.00500	"	0.0333	ND	74.6	30-120				
Dibenz (a,h) anthracene	0.0337	0.00500	"	0.0333	ND	101	30-120				
Fluoranthene	0.0259	0.00500	"	0.0333	ND	77.7	30-120				
Fluorene	0.0246	0.00500	"	0.0333	ND	73.7	30-120				
Indeno (1,2,3-cd) pyrene	0.0245	0.00500	"	0.0333	ND	73.4	30-120				
Pyrene	0.0214	0.00500	"	0.0333	ND	64.3	35-142				
1-Methylnaphthalene	0.0318	0.00500	"	0.0333	ND	95.5	15-130				
2-Methylnaphthalene	0.0342	0.00500	"	0.0333	ND	103	15-130				
Surrogate: 2-Methylnaphthalene-d10	0.0314		"	0.0333		94.3	40-150				
Surrogate: Fluoranthene-d10	0.0267		"	0.0333		80.2	40-150				

Matrix Spike Dup (BEJ0601-MSD1)

Source: 2110334-01

Prepared: 10/29/21 Analyzed: 11/02/21

Acenaphthene	0.0261	0.00500	mg/kg	0.0333	ND	78.4	31-137	5.55	30		
Anthracene	0.0258	0.00500	"	0.0333	ND	77.5	30-120	3.32	30		
Benzo (a) anthracene	0.0268	0.00500	"	0.0333	ND	80.5	30-120	4.65	30		
Benzo (a) pyrene	0.0235	0.00500	"	0.0333	ND	70.6	30-120	3.24	30		
Benzo (b) fluoranthene	0.0196	0.00500	"	0.0333	ND	58.8	30-120	3.94	30		
Benzo (k) fluoranthene	0.0202	0.00500	"	0.0333	ND	60.5	30-120	3.57	30		
Chrysene	0.0262	0.00500	"	0.0333	ND	78.7	30-120	5.31	30		
Dibenz (a,h) anthracene	0.0361	0.00500	"	0.0333	ND	108	30-120	6.85	30		
Fluoranthene	0.0266	0.00500	"	0.0333	ND	79.8	30-120	2.72	30		
Fluorene	0.0269	0.00500	"	0.0333	ND	80.8	30-120	9.20	30		
Indeno (1,2,3-cd) pyrene	0.0266	0.00500	"	0.0333	ND	79.9	30-120	8.42	30		
Pyrene	0.0225	0.00500	"	0.0333	ND	67.5	35-142	4.83	30		
1-Methylnaphthalene	0.0323	0.00500	"	0.0333	ND	97.0	15-130	1.54	50		
2-Methylnaphthalene	0.0346	0.00500	"	0.0333	ND	104	15-130	1.13	50		
Surrogate: 2-Methylnaphthalene-d10	0.0327		"	0.0333		98.0	40-150				
Surrogate: Fluoranthene-d10	0.0271		"	0.0333		81.3	40-150				

Summit Scientific

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

Project: Loloff 35-5 Tank Battery

Project Number: [none]

Project Manager: Mark Longhurst

Reported:
11/03/21 12:08

Notes and Definitions

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

Summit Scientific

4653 Table Mountain Drive, Golden, Colorado 80403

303.277.9310

November 03, 2021

Mark Longhurst

PDC Energy

1775 Sherman St. STE. 3000

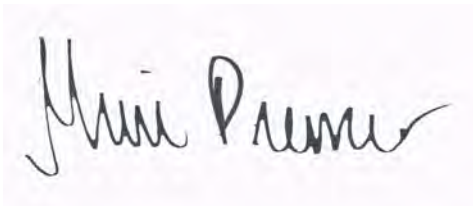
Denver, CO 80203

RE: Loloff 35-5 Tank Battery

Work Order #2110399

Enclosed are the results of analyses for samples received by Summit Scientific on 10/22/21 14:15. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

A handwritten signature in black ink, appearing to read "Muri Premier", is shown on a light pink background.

Muri Premier For Paul Shrewsbury
President



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

Project: Loloff 35-5 Tank Battery
Project Number: [none]
Project Manager: Mark Longhurst

Reported:
11/03/21 16:30

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
SS25@5'	2110399-01	Soil	10/22/21 10:00	10/22/21 14:15
SS26@4'	2110399-02	Soil	10/22/21 10:20	10/22/21 14:15
SS27@2.5'	2110399-03	Soil	10/22/21 10:23	10/22/21 14:15
SS28@4'	2110399-04	Soil	10/22/21 11:05	10/22/21 14:15
SS29@2.5'	2110399-05	Soil	10/22/21 11:09	10/22/21 14:15
SS30@4'	2110399-06	Soil	10/22/21 12:14	10/22/21 14:15
SS31@2.5'	2110399-07	Soil	10/22/21 12:30	10/22/21 14:15

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

S₂

2110399

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: Loloff 35-5 Tank Battery
Sampler Name: Dylan Brightwell Project Number:

ID	Sample Description	Date Sampled	Time Sampled	# of containers	Preservative				Matrix				Analysis Requested							Special Instructions	
					HCl	HNO ₃	None	Other	Water	Soil	Air-Canister #	Other	BTEXN - 8260B	TPH - (C6 - C36)	1,2,4 & 1,3,5-TNMB	Boron - HWS	pH, EC, SAR				
1	SS25 @ 5'	10/22/21	10:00	3			X			X				X	X	X					pH, EC, SAR by saturated paste
2	SS26 @ 4'	↓	10:20	↓			↓			↓				↓	↓	↓					
3	SS27 @ 2.5'	↓	10:23	↓			↓			↓				↓	↓	↓					
4	SS28 @ 4'	↓	11:05	↓			↓			↓				↓	↓	↓					
5	SS29 @ 2.5'	↓	11:09	↓			↓			↓				↓	↓	↓					
6	SS30 @ 4'	↓	12:14	↓			↓			↓				↓	↓	↓					
7	SS31 @ 2.5'	↓	12:30	↓			↓			↓				↓	↓	↓					
8																					
9																					
10																					

Relinquished by:	Date/Time:	Received by:	Date/Time:	Turn Around Time	(Check)	Notes:
Dylan Brightwell	10/22/21 14:15	Tasman's Lock Box	10/22/21 14:15	Same Day	X 72 hours	
Relinquished by:	Date/Time:	Received by:	Date/Time:	24 hours	Standard	
Tasman's Lock Box			10/22/21 14:15	48 hours		
Relinquished by:	Date/Time:	Received by:	Date/Time:	Sample Integrity:	3.1	
				Temperature Upon Receipt:		
				Samples Intact:	Yes No	

S₂

2110399

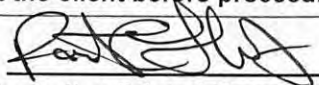
Sample Receipt Checklist

S2 Work Order# _____

Client: PBC/Tasman Client Project ID: 10/01/08 35-5 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) 3.1

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.	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	on ICE
Were all samples received intact ⁽¹⁾ ?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Was adequate sample volume provided ⁽¹⁾ ?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
If custody seals are present, are they intact ⁽¹⁾ ?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Are samples with holding times due within 48 hours sample due within 48 hours present?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Sameday
Is a chain-of-custody (COC) form present and filled out completely ⁽¹⁾ ?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Does the COC agree with the number and type of sample bottles received ⁽¹⁾ ?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Do the sample IDs on the bottle labels match the COC ⁽¹⁾ ?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Is the COC properly relinquished by the client w/ date and time recorded ⁽¹⁾ ?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
For volatiles in water – is there headspace present? If yes, contact client and note in narrative.	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
Are samples preserved that require preservation (excluding cooling) ⁽¹⁾ ? 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.

 Custodian Printed Name or Initials

10.22.21
 Date/Time



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

Project: Loloff 35-5 Tank Battery
Project Number: [none]
Project Manager: Mark Longhurst

Reported:
11/03/21 16:30

SS25@5'
2110399-01 (Soil)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **10/22/21 10:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Benzene	ND	0.0020	mg/kg	1	BEJ0468	10/22/21	10/24/21	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: **10/22/21 10:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 1,2-Dichloroethane-d4		106 %	23-173		"	"	"	"	
Surrogate: Toluene-d8		122 %	20-170		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		96.4 %	21-167		"	"	"	"	

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **10/22/21 10:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
C10-C28 (DRO)	ND	50	mg/kg	1	BEJ0467	10/22/21	10/23/21	EPA 8015M	
C28-C36 (ORO)	ND	50	"	"	"	"	"	"	

Date Sampled: **10/22/21 10:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: o-Terphenyl		104 %	30-150		"	"	"	"	

PAH by EPA Method 8270D SIM

Summit Scientific

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

Project: Loloff 35-5 Tank Battery
Project Number: [none]
Project Manager: Mark Longhurst

Reported:
11/03/21 16:30

SS25@5'
2110399-01 (Soil)

Summit Scientific

PAH by EPA Method 8270D SIM

Date Sampled: **10/22/21 10:00**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Anthracene	ND	0.00500	mg/kg	1	BEJ0601	11/01/21	11/02/21	EPA 8270D SIM	
Chrysene	ND	0.00500	"	"	"	"	"	"	
Fluorene	ND	0.00500	"	"	"	"	"	"	
1-Methylnaphthalene	ND	0.00500	"	"	"	"	"	"	

Date Sampled: **10/22/21 10:00**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: 2-Methylnaphthalene-d10		83.0 %	40-150		"	"	"	"	
Surrogate: Fluoranthene-d10		67.0 %	40-150		"	"	"	"	

Summit Scientific

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

Project: Loloff 35-5 Tank Battery
Project Number: [none]
Project Manager: Mark Longhurst

Reported:
11/03/21 16:30

SS26@4'
2110399-02 (Soil)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **10/22/21 10:20**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Benzene	ND	0.0020	mg/kg	1	BEJ0468	10/22/21	10/24/21	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: **10/22/21 10:20**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: 1,2-Dichloroethane-d4		106 %	23-173		"	"	"	"	
Surrogate: Toluene-d8		123 %	20-170		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		88.3 %	21-167		"	"	"	"	

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **10/22/21 10:20**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
C10-C28 (DRO)	ND	50	mg/kg	1	BEJ0467	10/22/21	10/23/21	EPA 8015M	
C28-C36 (ORO)	ND	50	"	"	"	"	"	"	

Date Sampled: **10/22/21 10:20**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: o-Terphenyl		104 %	30-150		"	"	"	"	

PAH by EPA Method 8270D SIM

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

Project: Loloff 35-5 Tank Battery
Project Number: [none]
Project Manager: Mark Longhurst

Reported:
11/03/21 16:30

SS26@4'
2110399-02 (Soil)

Summit Scientific

PAH by EPA Method 8270D SIM

Date Sampled: **10/22/21 10:20**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Anthracene	ND	0.00500	mg/kg	1	BEJ0601	11/01/21	11/02/21	EPA 8270D SIM	
Chrysene	ND	0.00500	"	"	"	"	"	"	
Fluorene	ND	0.00500	"	"	"	"	"	"	
1-Methylnaphthalene	ND	0.00500	"	"	"	"	"	"	

Date Sampled: **10/22/21 10:20**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 2-Methylnaphthalene-d10		84.0 %	40-150		"	"	"	"	
Surrogate: Fluoranthene-d10		68.6 %	40-150		"	"	"	"	

Summit Scientific

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

Project: Loloff 35-5 Tank Battery
Project Number: [none]
Project Manager: Mark Longhurst

Reported:
11/03/21 16:30

SS27@2.5'
2110399-03 (Soil)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **10/22/21 10:23**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Benzene	ND	0.0020	mg/kg	1	BEJ0468	10/22/21	10/24/21	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: **10/22/21 10:23**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: 1,2-Dichloroethane-d4		108 %	23-173		"	"	"	"	
Surrogate: Toluene-d8		112 %	20-170		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		92.5 %	21-167		"	"	"	"	

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **10/22/21 10:23**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
C10-C28 (DRO)	ND	50	mg/kg	1	BEJ0467	10/22/21	10/23/21	EPA 8015M	
C28-C36 (ORO)	ND	50	"	"	"	"	"	"	

Date Sampled: **10/22/21 10:23**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: o-Terphenyl		101 %	30-150		"	"	"	"	

PAH by EPA Method 8270D SIM

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

Project: Loloff 35-5 Tank Battery
Project Number: [none]
Project Manager: Mark Longhurst

Reported:
11/03/21 16:30

SS27@2.5'
2110399-03 (Soil)

Summit Scientific

PAH by EPA Method 8270D SIM

Date Sampled: **10/22/21 10:23**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Anthracene	ND	0.00500	mg/kg	1	BEJ0601	11/01/21	11/02/21	EPA 8270D SIM	
Chrysene	ND	0.00500	"	"	"	"	"	"	
Fluorene	ND	0.00500	"	"	"	"	"	"	
1-Methylnaphthalene	ND	0.00500	"	"	"	"	"	"	

Date Sampled: **10/22/21 10:23**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 2-Methylnaphthalene-d10		82.1 %	40-150		"	"	"	"	
Surrogate: Fluoranthene-d10		63.8 %	40-150		"	"	"	"	

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

Project: Loloff 35-5 Tank Battery
Project Number: [none]
Project Manager: Mark Longhurst

Reported:
11/03/21 16:30

SS28@4'
2110399-04 (Soil)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **10/22/21 11:05**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Benzene	ND	0.0020	mg/kg	1	BEJ0468	10/22/21	10/24/21	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: **10/22/21 11:05**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: 1,2-Dichloroethane-d4		106 %	23-173		"	"	"	"	
Surrogate: Toluene-d8		112 %	20-170		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		94.2 %	21-167		"	"	"	"	

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **10/22/21 11:05**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
C10-C28 (DRO)	ND	50	mg/kg	1	BEJ0467	10/22/21	10/23/21	EPA 8015M	
C28-C36 (ORO)	ND	50	"	"	"	"	"	"	

Date Sampled: **10/22/21 11:05**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: o-Terphenyl		105 %	30-150		"	"	"	"	

PAH by EPA Method 8270D SIM

Summit Scientific

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

Project: Loloff 35-5 Tank Battery
Project Number: [none]
Project Manager: Mark Longhurst

Reported:
11/03/21 16:30

SS28@4'
2110399-04 (Soil)

Summit Scientific

PAH by EPA Method 8270D SIM

Date Sampled: **10/22/21 11:05**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Anthracene	ND	0.00500	mg/kg	1	BEJ0601	11/01/21	11/02/21	EPA 8270D SIM	
Chrysene	ND	0.00500	"	"	"	"	"	"	
Fluorene	ND	0.00500	"	"	"	"	"	"	
1-Methylnaphthalene	ND	0.00500	"	"	"	"	"	"	

Date Sampled: **10/22/21 11:05**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: 2-Methylnaphthalene-d10		94.2 %	40-150		"	"	"	"	
Surrogate: Fluoranthene-d10		68.0 %	40-150		"	"	"	"	

Summit Scientific

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

Project: Loloff 35-5 Tank Battery
Project Number: [none]
Project Manager: Mark Longhurst

Reported:
11/03/21 16:30

SS29@2.5'
2110399-05 (Soil)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **10/22/21 11:09**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Benzene	ND	0.0020	mg/kg	1	BEJ0468	10/22/21	10/24/21	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: **10/22/21 11:09**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: 1,2-Dichloroethane-d4		105 %	23-173		"	"	"	"	
Surrogate: Toluene-d8		112 %	20-170		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		90.9 %	21-167		"	"	"	"	

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **10/22/21 11:09**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
C10-C28 (DRO)	ND	50	mg/kg	1	BEJ0467	10/22/21	10/23/21	EPA 8015M	
C28-C36 (ORO)	ND	50	"	"	"	"	"	"	

Date Sampled: **10/22/21 11:09**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: o-Terphenyl		104 %	30-150		"	"	"	"	

PAH by EPA Method 8270D SIM

Summit Scientific

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

Project: Loloff 35-5 Tank Battery
Project Number: [none]
Project Manager: Mark Longhurst

Reported:
11/03/21 16:30

SS29@2.5'
2110399-05 (Soil)

Summit Scientific

PAH by EPA Method 8270D SIM

Date Sampled: **10/22/21 11:09**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Anthracene	ND	0.00500	mg/kg	1	BEJ0601	11/01/21	11/02/21	EPA 8270D SIM	
Chrysene	ND	0.00500	"	"	"	"	"	"	
Fluorene	ND	0.00500	"	"	"	"	"	"	
1-Methylnaphthalene	ND	0.00500	"	"	"	"	"	"	

Date Sampled: **10/22/21 11:09**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 2-Methylnaphthalene-d10		81.1 %	40-150		"	"	"	"	
Surrogate: Fluoranthene-d10		65.8 %	40-150		"	"	"	"	

Summit Scientific

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.



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

Project: Loloff 35-5 Tank Battery
Project Number: [none]
Project Manager: Mark Longhurst

Reported:
11/03/21 16:30

SS30@4'
2110399-06 (Soil)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **10/22/21 12:14**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Benzene	ND	0.0020	mg/kg	1	BEJ0468	10/22/21	10/24/21	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: **10/22/21 12:14**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: 1,2-Dichloroethane-d4		109 %	23-173		"	"	"	"	
Surrogate: Toluene-d8		121 %	20-170		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		91.1 %	21-167		"	"	"	"	

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **10/22/21 12:14**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
C10-C28 (DRO)	ND	50	mg/kg	1	BEJ0467	10/22/21	10/23/21	EPA 8015M	
C28-C36 (ORO)	ND	50	"	"	"	"	"	"	

Date Sampled: **10/22/21 12:14**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: o-Terphenyl		107 %	30-150		"	"	"	"	

PAH by EPA Method 8270D SIM

Summit Scientific

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

Project: Loloff 35-5 Tank Battery
Project Number: [none]
Project Manager: Mark Longhurst

Reported:
11/03/21 16:30

SS30@4'
2110399-06 (Soil)

Summit Scientific

PAH by EPA Method 8270D SIM

Date Sampled: **10/22/21 12:14**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Anthracene	ND	0.00500	mg/kg	1	BEJ0601	11/01/21	11/02/21	EPA 8270D SIM	
Chrysene	ND	0.00500	"	"	"	"	"	"	
Fluorene	ND	0.00500	"	"	"	"	"	"	
1-Methylnaphthalene	ND	0.00500	"	"	"	"	"	"	

Date Sampled: **10/22/21 12:14**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 2-Methylnaphthalene-d10		81.8 %	40-150		"	"	"	"	
Surrogate: Fluoranthene-d10		61.8 %	40-150		"	"	"	"	

Summit Scientific

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

Project: Loloff 35-5 Tank Battery

Project Number: [none]
Project Manager: Mark Longhurst

Reported:
11/03/21 16:30

SS31@2.5'
2110399-07 (Soil)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **10/22/21 12:30**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Benzene	ND	0.0020	mg/kg	1	BEJ0468	10/22/21	10/24/21	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: **10/22/21 12:30**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 1,2-Dichloroethane-d4		110 %	23-173		"	"	"	"	
Surrogate: Toluene-d8		120 %	20-170		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		93.2 %	21-167		"	"	"	"	

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **10/22/21 12:30**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
C10-C28 (DRO)	ND	50	mg/kg	1	BEJ0467	10/22/21	10/23/21	EPA 8015M	
C28-C36 (ORO)	ND	50	"	"	"	"	"	"	

Date Sampled: **10/22/21 12:30**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: o-Terphenyl		104 %	30-150		"	"	"	"	

PAH by EPA Method 8270D SIM

Summit Scientific

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.



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

Project: Loloff 35-5 Tank Battery
Project Number: [none]
Project Manager: Mark Longhurst

Reported:
11/03/21 16:30

SS31@2.5'
2110399-07 (Soil)

Summit Scientific

PAH by EPA Method 8270D SIM

Date Sampled: **10/22/21 12:30**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Anthracene	ND	0.00500	mg/kg	1	BEJ0601	11/01/21	11/02/21	EPA 8270D SIM	
Chrysene	ND	0.00500	"	"	"	"	"	"	
Fluorene	ND	0.00500	"	"	"	"	"	"	
1-Methylnaphthalene	ND	0.00500	"	"	"	"	"	"	

Date Sampled: **10/22/21 12:30**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: 2-Methylnaphthalene-d10		92.7 %	40-150		"	"	"	"	
Surrogate: Fluoranthene-d10		70.3 %	40-150		"	"	"	"	

Summit Scientific

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

Project: Loloff 35-5 Tank Battery

Project Number: [none]
Project Manager: Mark Longhurst

Reported:
11/03/21 16:30

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 BEJ0468 - EPA 5030 Soil MS

Blank (BEJ0468-BLK1)

Prepared: 10/22/21 Analyzed: 10/24/21

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	0.0407		"	0.0400		102	23-173			
Surrogate: Toluene-d8	0.0470		"	0.0400		118	20-170			
Surrogate: 4-Bromofluorobenzene	0.0391		"	0.0400		97.7	21-167			

LCS (BEJ0468-BS1)

Prepared: 10/22/21 Analyzed: 10/24/21

Benzene	0.0669	0.0020	mg/kg	0.0750		89.2	70-130			
Toluene	0.0765	0.0050	"	0.0750		102	70-130			
Ethylbenzene	0.0759	0.0050	"	0.0750		101	70-130			
m,p-Xylene	0.145	0.010	"	0.150		96.9	70-130			
o-Xylene	0.0634	0.0050	"	0.0750		84.6	70-130			
1,2,4-Trimethylbenzene	0.0641	0.0050	"	0.0750		85.4	70-130			
1,3,5-Trimethylbenzene	0.0684	0.0050	"	0.0750		91.2	70-130			
Naphthalene	0.0781	0.0038	"	0.0750		104	70-130			
Surrogate: 1,2-Dichloroethane-d4	0.0418		"	0.0400		105	23-173			
Surrogate: Toluene-d8	0.0465		"	0.0400		116	20-170			
Surrogate: 4-Bromofluorobenzene	0.0379		"	0.0400		94.7	21-167			

Matrix Spike (BEJ0468-MS1)

Source: 2110396-01

Prepared: 10/22/21 Analyzed: 10/24/21

Benzene	0.0688	0.0020	mg/kg	0.0750	ND	91.8	70-130			
Toluene	0.0792	0.0050	"	0.0750	ND	106	70-130			
Ethylbenzene	0.0802	0.0050	"	0.0750	ND	107	70-130			
m,p-Xylene	0.153	0.010	"	0.150	ND	102	70-130			
o-Xylene	0.0686	0.0050	"	0.0750	ND	91.4	70-130			
1,2,4-Trimethylbenzene	0.0714	0.0050	"	0.0750	ND	95.2	70-130			
1,3,5-Trimethylbenzene	0.0759	0.0050	"	0.0750	ND	101	70-130			
Naphthalene	0.0910	0.0038	"	0.0750	ND	121	70-130			
Surrogate: 1,2-Dichloroethane-d4	0.0416		"	0.0400		104	23-173			
Surrogate: Toluene-d8	0.0478		"	0.0400		120	20-170			
Surrogate: 4-Bromofluorobenzene	0.0390		"	0.0400		97.5	21-167			

Summit Scientific

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.



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

Project: Loloff 35-5 Tank Battery

Project Number: [none]
Project Manager: Mark Longhurst

Reported:
11/03/21 16:30

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 BEJ0468 - EPA 5030 Soil MS

Matrix Spike Dup (BEJ0468-MSD1)	Source: 2110396-01			Prepared: 10/22/21 Analyzed: 10/24/21						
Benzene	0.0680	0.0020	mg/kg	0.0750	ND	90.7	70-130	1.14	30	
Toluene	0.0704	0.0050	"	0.0750	ND	93.8	70-130	11.8	30	
Ethylbenzene	0.0691	0.0050	"	0.0750	ND	92.1	70-130	14.9	30	
m,p-Xylene	0.132	0.010	"	0.150	ND	87.8	70-130	15.1	30	
o-Xylene	0.0595	0.0050	"	0.0750	ND	79.3	70-130	14.2	30	
1,2,4-Trimethylbenzene	0.0609	0.0050	"	0.0750	ND	81.2	70-130	16.0	30	
1,3,5-Trimethylbenzene	0.0642	0.0050	"	0.0750	ND	85.6	70-130	16.6	30	
Naphthalene	0.0968	0.0038	"	0.0750	ND	129	70-130	6.10	30	
Surrogate: 1,2-Dichloroethane-d4	0.0416		"	0.0400		104	23-173			
Surrogate: Toluene-d8	0.0455		"	0.0400		114	20-170			
Surrogate: 4-Bromofluorobenzene	0.0406		"	0.0400		102	21-167			

Summit Scientific

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

Project: Loloff 35-5 Tank Battery
Project Number: [none]
Project Manager: Mark Longhurst

Reported:
11/03/21 16:30

Extractable Petroleum Hydrocarbons by 8015 - Quality Control
Summit Scientific

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

Batch BEJ0467 - EPA 3550A

Blank (BEJ0467-BLK1)

Prepared: 10/22/21 Analyzed: 10/23/21

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

LCS (BEJ0467-BS1)

Prepared: 10/22/21 Analyzed: 10/23/21

C10-C28 (DRO)	505	50	mg/kg	500	101	70-130
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Matrix Spike (BEJ0467-MS1)

Source: 2110398-01

Prepared: 10/22/21 Analyzed: 10/23/21

C10-C28 (DRO)	655	50	mg/kg	500	36.8	124	70-130
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Matrix Spike Dup (BEJ0467-MSD1)

Source: 2110398-01

Prepared: 10/22/21 Analyzed: 10/23/21

C10-C28 (DRO)	675	50	mg/kg	500	36.8	128	70-130	3.02	20
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Summit Scientific

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

Project: Loloff 35-5 Tank Battery
Project Number: [none]
Project Manager: Mark Longhurst

Reported:
11/03/21 16:30

PAH by EPA Method 8270D SIM - Quality Control

Summit Scientific

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

Batch BEJ0601 - EPA 5030 Soil MS

Blank (BEJ0601-BLK1)

Prepared: 10/29/21 Analyzed: 11/02/21

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	"							
Surrogate: 2-Methylnaphthalene-d10	0.0341		"	0.0333		102	40-150			
Surrogate: Fluoranthene-d10	0.0278		"	0.0333		83.3	40-150			

LCS (BEJ0601-BS1)

Prepared: 10/29/21 Analyzed: 11/02/21

Acenaphthene	0.0291	0.00500	mg/kg	0.0333		87.4	31-137			
Anthracene	0.0282	0.00500	"	0.0333		84.7	30-120			
Benzo (a) anthracene	0.0285	0.00500	"	0.0333		85.4	30-120			
Benzo (a) pyrene	0.0250	0.00500	"	0.0333		75.1	30-120			
Benzo (b) fluoranthene	0.0213	0.00500	"	0.0333		63.9	30-120			
Benzo (k) fluoranthene	0.0215	0.00500	"	0.0333		64.5	30-120			
Chrysene	0.0280	0.00500	"	0.0333		83.9	30-120			
Dibenz (a,h) anthracene	0.0400	0.00500	"	0.0333		120	30-120			
Fluoranthene	0.0285	0.00500	"	0.0333		85.4	30-120			
Fluorene	0.0300	0.00500	"	0.0333		90.0	30-120			
Indeno (1,2,3-cd) pyrene	0.0290	0.00500	"	0.0333		86.9	30-120			
Pyrene	0.0236	0.00500	"	0.0333		70.9	35-142			
1-Methylnaphthalene	0.0353	0.00500	"	0.0333		106	35-142			
2-Methylnaphthalene	0.0376	0.00500	"	0.0333		113	35-142			
Surrogate: 2-Methylnaphthalene-d10	0.0345		"	0.0333		104	40-150			
Surrogate: Fluoranthene-d10	0.0287		"	0.0333		86.2	40-150			

Summit Scientific

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

Project: Loloff 35-5 Tank Battery

Project Number: [none]
Project Manager: Mark Longhurst

Reported:
11/03/21 16:30

PAH by EPA Method 8270D SIM - Quality Control

Summit Scientific

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

Batch BEJ0601 - EPA 5030 Soil MS

Matrix Spike (BEJ0601-MS1)

Source: 2110334-01

Prepared: 10/29/21 Analyzed: 11/02/21

Acenaphthene	0.0247	0.00500	mg/kg	0.0333	ND	74.2	31-137				
Anthracene	0.0250	0.00500	"	0.0333	ND	75.0	30-120				
Benzo (a) anthracene	0.0256	0.00500	"	0.0333	ND	76.8	30-120				
Benzo (a) pyrene	0.0228	0.00500	"	0.0333	ND	68.3	30-120				
Benzo (b) fluoranthene	0.0188	0.00500	"	0.0333	ND	56.5	30-120				
Benzo (k) fluoranthene	0.0195	0.00500	"	0.0333	ND	58.4	30-120				
Chrysene	0.0249	0.00500	"	0.0333	ND	74.6	30-120				
Dibenz (a,h) anthracene	0.0337	0.00500	"	0.0333	ND	101	30-120				
Fluoranthene	0.0259	0.00500	"	0.0333	ND	77.7	30-120				
Fluorene	0.0246	0.00500	"	0.0333	ND	73.7	30-120				
Indeno (1,2,3-cd) pyrene	0.0245	0.00500	"	0.0333	ND	73.4	30-120				
Pyrene	0.0214	0.00500	"	0.0333	ND	64.3	35-142				
1-Methylnaphthalene	0.0318	0.00500	"	0.0333	ND	95.5	15-130				
2-Methylnaphthalene	0.0342	0.00500	"	0.0333	ND	103	15-130				
Surrogate: 2-Methylnaphthalene-d10	0.0314		"	0.0333		94.3	40-150				
Surrogate: Fluoranthene-d10	0.0267		"	0.0333		80.2	40-150				

Matrix Spike Dup (BEJ0601-MSD1)

Source: 2110334-01

Prepared: 10/29/21 Analyzed: 11/02/21

Acenaphthene	0.0261	0.00500	mg/kg	0.0333	ND	78.4	31-137	5.55	30		
Anthracene	0.0258	0.00500	"	0.0333	ND	77.5	30-120	3.32	30		
Benzo (a) anthracene	0.0268	0.00500	"	0.0333	ND	80.5	30-120	4.65	30		
Benzo (a) pyrene	0.0235	0.00500	"	0.0333	ND	70.6	30-120	3.24	30		
Benzo (b) fluoranthene	0.0196	0.00500	"	0.0333	ND	58.8	30-120	3.94	30		
Benzo (k) fluoranthene	0.0202	0.00500	"	0.0333	ND	60.5	30-120	3.57	30		
Chrysene	0.0262	0.00500	"	0.0333	ND	78.7	30-120	5.31	30		
Dibenz (a,h) anthracene	0.0361	0.00500	"	0.0333	ND	108	30-120	6.85	30		
Fluoranthene	0.0266	0.00500	"	0.0333	ND	79.8	30-120	2.72	30		
Fluorene	0.0269	0.00500	"	0.0333	ND	80.8	30-120	9.20	30		
Indeno (1,2,3-cd) pyrene	0.0266	0.00500	"	0.0333	ND	79.9	30-120	8.42	30		
Pyrene	0.0225	0.00500	"	0.0333	ND	67.5	35-142	4.83	30		
1-Methylnaphthalene	0.0323	0.00500	"	0.0333	ND	97.0	15-130	1.54	50		
2-Methylnaphthalene	0.0346	0.00500	"	0.0333	ND	104	15-130	1.13	50		
Surrogate: 2-Methylnaphthalene-d10	0.0327		"	0.0333		98.0	40-150				
Surrogate: Fluoranthene-d10	0.0271		"	0.0333		81.3	40-150				

Summit Scientific

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.



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

Project: Loloff 35-5 Tank Battery

Project Number: [none]

Project Manager: Mark Longhurst

Reported:
11/03/21 16:30

Notes and Definitions

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

Summit Scientific

4653 Table Mountain Drive, Golden, Colorado 80403

303.277.9310

December 03, 2021

Mark Longhurst

PDC Energy

1775 Sherman St. STE. 3000

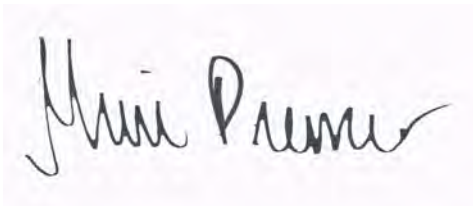
Denver, CO 80203

RE: Loloff 35-5 Tank Battery

Work Order #2111470

Enclosed are the results of analyses for samples received by Summit Scientific on 11/29/21 14:35. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

A handwritten signature in black ink, appearing to read "Muri Premer", is shown on a light pink background.

Muri Premer For Paul Shrewsbury
President



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

Project: Loloff 35-5 Tank Battery

Project Number: [none]

Project Manager: Mark Longhurst

Reported:
12/03/21 12:52

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
SS32@5'	2111470-01	Soil	11/29/21 13:25	11/29/21 14:35

Summit Scientific

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2111470

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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: Loloff 35-5 Tank Battery

Sampler Name: David Vigil

Project Number:

ID	Sample Description	Date Sampled	Time Sampled	# of containers	Preservative				Matrix				Analysis Requested							Special Instructions		
					HCl	HNO ₃	None	Other	Water	Soil	Air-Canister #	Other	BTEXN - 8260B	TPH - (C6 - C36)	pH, EC, SAR	Boron - HWS	TMIBs (1,2,4)&(1,3,5)	PAH - 915	Metals - 915			
1	SS 32' 05'	11/29/21	1325	2			X			X				X	X			X				pH, EC, SAR by saturated paste - Anthracene - chrysene - Fluorene - 1-Methylphthalene
2																						
3																						
4																						
5																						
6																						
7																						
8																						
9																						
10																						

Relinquished by:	Date/Time:	Received by:	Date/Time:	Turn Around Time	(Check)	Notes:
David Vigil	11/29/21 1435	Tasman's Lock Box		Same Day	X 72 hours	
Relinquished by:	Date/Time:	Received by:	Date/Time:	24 hours	Standard	
Tasman's Lock Box		[Signature]	11/29/21 1435	48 hours		
Relinquished by:	Date/Time:	Received by:	Date/Time:	Sample Integrity:		
				Temperature Upon Receipt:	9.1	
				Samples Intact:	Yes No	

S₂

Sample Receipt Checklist

S2 Work Order#

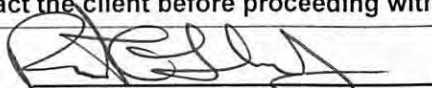
2111430

Client: Poc/Tasman Client Project ID: Woloff 35-S 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) 9.1

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.	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	on ICE
Were all samples received intact ⁽¹⁾ ?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Was adequate sample volume provided ⁽¹⁾ ?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
If custody seals are present, are they intact ⁽¹⁾ ?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Are samples with holding times due within 48 hours sample due within 48 hours present?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Sameday
Is a chain-of-custody (COC) form present and filled out completely ⁽¹⁾ ?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Does the COC agree with the number and type of sample bottles received ⁽¹⁾ ?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Do the sample IDs on the bottle labels match the COC ⁽¹⁾ ?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Is the COC properly relinquished by the client w/ date and time recorded ⁽¹⁾ ?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
For volatiles in water – is there headspace present? If yes, contact client and note in narrative.	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
Are samples preserved that require preservation (excluding cooling) ⁽¹⁾ ? 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.

 Custodian Printed Name or Initials

11.29.21
 Date/Time



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

Project: Loloff 35-5 Tank Battery
Project Number: [none]
Project Manager: Mark Longhurst

Reported:
12/03/21 12:52

SS32@5'
2111470-01 (Soil)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **11/29/21 13:25**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Benzene	ND	0.0020	mg/kg	1	BEK0581	11/29/21	11/29/21	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: **11/29/21 13:25**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 1,2-Dichloroethane-d4		122 %	23-173		"	"	"	"	
Surrogate: Toluene-d8		90.6 %	20-170		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		125 %	21-167		"	"	"	"	

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **11/29/21 13:25**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
C10-C28 (DRO)	ND	50	mg/kg	1	BEK0582	11/29/21	11/29/21	EPA 8015M	
C28-C36 (ORO)	ND	50	"	"	"	"	"	"	

Date Sampled: **11/29/21 13:25**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: o-Terphenyl		115 %	30-150		"	"	"	"	

PAH by EPA Method 8270D SIM

Summit Scientific

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

Project: Loloff 35-5 Tank Battery
Project Number: [none]
Project Manager: Mark Longhurst

Reported:
12/03/21 12:52

SS32@5'
2111470-01 (Soil)

Summit Scientific

PAH by EPA Method 8270D SIM

Date Sampled: **11/29/21 13:25**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Anthracene	ND	0.00500	mg/kg	1	BEK0588	11/30/21	12/02/21	EPA 8270D SIM	
Chrysene	ND	0.00500	"	"	"	"	"	"	
Fluorene	ND	0.00500	"	"	"	"	"	"	
1-Methylnaphthalene	ND	0.00500	"	"	"	"	"	"	

Date Sampled: **11/29/21 13:25**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 2-Methylnaphthalene-d10		84.1 %	40-150		"	"	"	"	
Surrogate: Fluoranthene-d10		72.2 %	40-150		"	"	"	"	

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

Project: Loloff 35-5 Tank Battery

Project Number: [none]
Project Manager: Mark Longhurst

Reported:
12/03/21 12:52

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 BEK0581 - EPA 5030 Soil MS

Blank (BEK0581-BLK1)

Prepared: 11/29/21 Analyzed: 11/30/21

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	0.0393		"	0.0400		98.2	23-173			
Surrogate: Toluene-d8	0.0406		"	0.0400		101	20-170			
Surrogate: 4-Bromofluorobenzene	0.0405		"	0.0400		101	21-167			

LCS (BEK0581-BS1)

Prepared: 11/29/21 Analyzed: 11/30/21

Benzene	0.147	0.0020	mg/kg	0.150		98.3	70-130			
Toluene	0.140	0.0050	"	0.150		93.6	70-130			
Ethylbenzene	0.135	0.0050	"	0.150		90.3	70-130			
m,p-Xylene	0.262	0.010	"	0.300		87.3	70-130			
o-Xylene	0.134	0.0050	"	0.150		89.0	70-130			
1,2,4-Trimethylbenzene	0.131	0.0050	"	0.150		87.2	70-130			
1,3,5-Trimethylbenzene	0.130	0.0050	"	0.150		86.8	70-130			
Naphthalene	0.141	0.0038	"	0.150		94.3	70-130			
Surrogate: 1,2-Dichloroethane-d4	0.0386		"	0.0400		96.6	23-173			
Surrogate: Toluene-d8	0.0407		"	0.0400		102	20-170			
Surrogate: 4-Bromofluorobenzene	0.0397		"	0.0400		99.3	21-167			

Matrix Spike (BEK0581-MS1)

Source: 2111467-01

Prepared: 11/29/21 Analyzed: 11/30/21

Benzene	0.143	0.0020	mg/kg	0.150	ND	95.2	70-130			
Toluene	0.135	0.0050	"	0.150	ND	90.3	70-130			
Ethylbenzene	0.131	0.0050	"	0.150	ND	87.1	70-130			
m,p-Xylene	0.253	0.010	"	0.300	ND	84.5	70-130			
o-Xylene	0.130	0.0050	"	0.150	ND	86.4	70-130			
1,2,4-Trimethylbenzene	0.127	0.0050	"	0.150	ND	84.3	70-130			
1,3,5-Trimethylbenzene	0.126	0.0050	"	0.150	ND	83.9	70-130			
Naphthalene	0.142	0.0038	"	0.150	ND	94.7	70-130			
Surrogate: 1,2-Dichloroethane-d4	0.0399		"	0.0400		99.7	23-173			
Surrogate: Toluene-d8	0.0412		"	0.0400		103	20-170			
Surrogate: 4-Bromofluorobenzene	0.0399		"	0.0400		99.8	21-167			

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

Project: Loloff 35-5 Tank Battery
Project Number: [none]
Project Manager: Mark Longhurst

Reported:
12/03/21 12:52

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 BEK0581 - EPA 5030 Soil MS

Matrix Spike Dup (BEK0581-MSD1)	Source: 2111467-01			Prepared: 11/29/21 Analyzed: 11/30/21						
Benzene	0.142	0.0020	mg/kg	0.150	ND	94.5	70-130	0.780	30	
Toluene	0.137	0.0050	"	0.150	ND	91.2	70-130	0.948	30	
Ethylbenzene	0.133	0.0050	"	0.150	ND	88.5	70-130	1.59	30	
m,p-Xylene	0.259	0.010	"	0.300	ND	86.4	70-130	2.20	30	
o-Xylene	0.132	0.0050	"	0.150	ND	87.8	70-130	1.54	30	
1,2,4-Trimethylbenzene	0.132	0.0050	"	0.150	ND	88.0	70-130	4.20	30	
1,3,5-Trimethylbenzene	0.130	0.0050	"	0.150	ND	86.6	70-130	3.14	30	
Naphthalene	0.161	0.0038	"	0.150	ND	108	70-130	12.7	30	
Surrogate: 1,2-Dichloroethane-d4	0.0411		"	0.0400		103	23-173			
Surrogate: Toluene-d8	0.0405		"	0.0400		101	20-170			
Surrogate: 4-Bromofluorobenzene	0.0393		"	0.0400		98.2	21-167			

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

Project: Loloff 35-5 Tank Battery
Project Number: [none]
Project Manager: Mark Longhurst

Reported:
12/03/21 12:52

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 BEK0582 - EPA 3550A

Blank (BEK0582-BLK1)

Prepared: 11/29/21 Analyzed: 11/30/21

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

LCS (BEK0582-BS1)

Prepared: 11/29/21 Analyzed: 11/30/21

C10-C28 (DRO)	521	50	mg/kg	500	104	70-130
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Matrix Spike (BEK0582-MS1)

Source: 2111467-01

Prepared: 11/29/21 Analyzed: 11/30/21

C10-C28 (DRO)	462	50	mg/kg	500	ND	92.4	70-130
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Matrix Spike Dup (BEK0582-MSD1)

Source: 2111467-01

Prepared: 11/29/21 Analyzed: 11/30/21

C10-C28 (DRO)	426	50	mg/kg	500	ND	85.2	70-130	8.11	20
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PDC Energy
1775 Sherman St. STE. 3000
Denver CO, 80203

Project: Loloff 35-5 Tank Battery
Project Number: [none]
Project Manager: Mark Longhurst

Reported:
12/03/21 12:52

PAH by EPA Method 8270D SIM - Quality Control

Summit Scientific

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

Batch BEK0588 - EPA 5030 Soil MS

Blank (BEK0588-BLK1)

Prepared: 11/30/21 Analyzed: 12/01/21

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	"								
Surrogate: 2-Methylnaphthalene-d10	0.0339		"	0.0333		102		40-150			
Surrogate: Fluoranthene-d10	0.0316		"	0.0333		94.9		40-150			

LCS (BEK0588-BS1)

Prepared: 11/30/21 Analyzed: 12/01/21

Acenaphthene	0.0283	0.00500	mg/kg	0.0333		84.8		31-137			
Anthracene	0.0279	0.00500	"	0.0333		83.8		30-120			
Benzo (a) anthracene	0.0261	0.00500	"	0.0333		78.3		30-120			
Benzo (a) pyrene	0.0276	0.00500	"	0.0333		82.7		30-120			
Benzo (b) fluoranthene	0.0283	0.00500	"	0.0333		84.8		30-120			
Benzo (k) fluoranthene	0.0296	0.00500	"	0.0333		88.9		30-120			
Chrysene	0.0265	0.00500	"	0.0333		79.5		30-120			
Dibenz (a,h) anthracene	0.0291	0.00500	"	0.0333		87.3		30-120			
Fluoranthene	0.0281	0.00500	"	0.0333		84.3		30-120			
Fluorene	0.0289	0.00500	"	0.0333		86.6		30-120			
Indeno (1,2,3-cd) pyrene	0.0266	0.00500	"	0.0333		79.9		30-120			
Pyrene	0.0273	0.00500	"	0.0333		81.9		35-142			
1-Methylnaphthalene	0.0284	0.00500	"	0.0333		85.2		35-142			
2-Methylnaphthalene	0.0293	0.00500	"	0.0333		87.9		35-142			
Surrogate: 2-Methylnaphthalene-d10	0.0275		"	0.0333		82.4		40-150			
Surrogate: Fluoranthene-d10	0.0295		"	0.0333		88.6		40-150			

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

Project: Loloff 35-5 Tank Battery

Project Number: [none]
Project Manager: Mark Longhurst

Reported:
12/03/21 12:52

PAH by EPA Method 8270D SIM - Quality Control

Summit Scientific

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

Batch BEK0588 - EPA 5030 Soil MS

Matrix Spike (BEK0588-MS1)			Source: 2111280-04		Prepared: 11/30/21		Analyzed: 12/01/21			
Acenaphthene	0.0878	0.00500	mg/kg	0.0333	0.101	NR	31-137			QM-07
Anthracene	0.0597	0.00500	"	0.0333	0.0620	NR	30-120			QM-07
Benzo (a) anthracene	0.0391	0.00500	"	0.0333	0.0356	10.5	30-120			QM-07
Benzo (a) pyrene	0.0323	0.00500	"	0.0333	0.0175	44.4	30-120			
Benzo (b) fluoranthene	0.0355	0.00500	"	0.0333	0.0247	32.4	30-120			
Benzo (k) fluoranthene	0.0323	0.00500	"	0.0333	ND	96.9	30-120			
Chrysene	0.0466	0.00500	"	0.0333	0.0436	8.79	30-120			QM-07
Dibenz (a,h) anthracene	0.0146	0.00500	"	0.0333	ND	43.8	30-120			
Fluoranthene	0.0587	0.00500	"	0.0333	0.0741	NR	30-120			QM-07
Fluorene	0.0648	0.00500	"	0.0333	0.0689	NR	30-120			QM-07
Indeno (1,2,3-cd) pyrene	0.0150	0.00500	"	0.0333	0.00388	33.3	30-120			
Pyrene	0.113	0.00500	"	0.0333	0.171	NR	35-142			QM-07
1-Methylnaphthalene	2.20	0.00500	"	0.0333	2.61	NR	15-130			QM-07
2-Methylnaphthalene	3.39	0.00500	"	0.0333	6.52	NR	15-130			QM-07
Surrogate: 2-Methylnaphthalene-d10	0.0361		"	0.0333		108	40-150			
Surrogate: Fluoranthene-d10	0.0233		"	0.0333		70.0	40-150			

Matrix Spike Dup (BEK0588-MSD1)			Source: 2111280-04		Prepared: 11/30/21		Analyzed: 12/01/21			
Acenaphthene	0.0634	0.00500	mg/kg	0.0333	0.101	NR	31-137	32.3	30	QM-07
Anthracene	0.0596	0.00500	"	0.0333	0.0620	NR	30-120	0.0956	30	QM-07
Benzo (a) anthracene	0.0442	0.00500	"	0.0333	0.0356	26.1	30-120	12.5	30	QM-07
Benzo (a) pyrene	0.0329	0.00500	"	0.0333	0.0175	46.2	30-120	1.84	30	
Benzo (b) fluoranthene	0.0365	0.00500	"	0.0333	0.0247	35.5	30-120	2.84	30	
Benzo (k) fluoranthene	0.0289	0.00500	"	0.0333	ND	86.6	30-120	11.1	30	
Chrysene	0.0495	0.00500	"	0.0333	0.0436	17.7	30-120	6.17	30	QM-07
Dibenz (a,h) anthracene	0.0140	0.00500	"	0.0333	ND	42.1	30-120	3.96	30	
Fluoranthene	0.0683	0.00500	"	0.0333	0.0741	NR	30-120	15.0	30	QM-07
Fluorene	0.0755	0.00500	"	0.0333	0.0689	19.6	30-120	15.3	30	QM-07
Indeno (1,2,3-cd) pyrene	0.0156	0.00500	"	0.0333	0.00388	35.1	30-120	4.08	30	
Pyrene	0.114	0.00500	"	0.0333	0.171	NR	35-142	0.940	30	QM-07
1-Methylnaphthalene	2.00	0.00500	"	0.0333	2.61	NR	15-130	9.32	50	QM-07
2-Methylnaphthalene	3.07	0.00500	"	0.0333	6.52	NR	15-130	9.72	50	QM-07
Surrogate: 2-Methylnaphthalene-d10	0.0314		"	0.0333		94.2	40-150			
Surrogate: Fluoranthene-d10	0.0227		"	0.0333		68.2	40-150			

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

Project: Loloff 35-5 Tank Battery

Project Number: [none]

Project Manager: Mark Longhurst

Reported:
12/03/21 12:52

Notes and Definitions

QM-07	The spike recovery was outside acceptance limits for the MS and/or MSD. The batch was accepted based on acceptable LCS/LCSD recovery.
DET	Analyte DETECTED
ND	Analyte NOT DETECTED at or above the reporting limit
NR	Not Reported
dry	Sample results reported on a dry weight basis
RPD	Relative Percent Difference

Summit Scientific

4653 Table Mountain Drive, Golden, Colorado 80403

303.277.9310

January 20, 2022

Mark Longhurst

PDC Energy

1775 Sherman St. STE. 3000

Denver, CO 80203

RE: Loloff 35-5,6 Tank Battery

Work Order #2111497

Enclosed are the results of analyses for samples received by Summit Scientific on 11/30/21 16:55. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

A handwritten signature in black ink, appearing to read 'P. Shrewsbury', with a stylized, cursive script.

Paul Shrewsbury

President



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

Project: Loloff 35-5,6 Tank Battery
Project Number: [none]
Project Manager: Mark Longhurst

Reported:
01/20/22 12:59

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
SS33@4'	2111497-01	Soil	11/30/21 11:50	11/30/21 16:55
SS34@2.5'	2111497-02	Soil	11/30/21 11:52	11/30/21 16:55
SS35@4'	2111497-03	Soil	11/30/21 14:50	11/30/21 16:55
SS36@2.5'	2111497-04	Soil	11/30/21 14:52	11/30/21 16:55

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.

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2111497

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: LoloFF 35-5, 6 Tank Battery
 Sampler Name: David Vigil Project Number:

ID	Sample Description	Date Sampled	Time Sampled	# of containers	Preservative				Matrix				Analysis Requested								Special Instructions
					HCl	HNO ₃	None	Other	Water	Soil	Air-Canister #	Other	BTEXN - 8260B	TPH - (C6 - C36)	pH, EC, SAR	Boron - HWS	TMBs (1,2,4)&(1,3,5)	PAH - 915	Metals - 915		
1	SS33 @ 4'	11/30/21	1150	2			X			X			X	X			X				pH, EC, SAR by saturated paste -Anthracene -chrysene -Fluorene -1-Methylnaphthalene
2	SS34 @ 2.5'	↓	1152	2			X			X			X	X			X				X
3	SS35 @ 4'	↓	1450	2			X			X			X	X			X				X
4	SS36 @ 2.5'	↓	1452	2			X			X			X	X			X				X
5																					
6																					
7																					
8																					
9																					
10																					

Relinquished by: <u>David Vigil</u>	Date/Time: <u>11/30/21 1615</u>	Received by: <u>Tasman's Lock Box</u>	Date/Time: _____	Turn Around Time (Check) Same Day <u>X</u> 72 hours _____ 24 hours _____ Standard _____ 48 hours _____ Sample Integrity: Temperature Upon Receipt: <u>8.2</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>11-30-21 1615</u>		
Relinquished by: _____	Date/Time: _____	Received by: _____	Date/Time: _____		

S₂

2111497

Sample Receipt Checklist

S2 Work Order#

Client: Poc/Tasman

Client Project ID:

Wloff 35-5, 6 Tank BatteryShipped Via: ☐ H.D./P.U./FedEx/UPS/USPS/Other

Airbill #:

Matrix (check all that apply):

☐ Air☒ Soil/Solid☐ Water☐ Other:

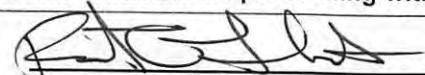
(Describe)

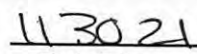
Temp (°C)	8.2
-----------	-----

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.	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	on ICE
Were all samples received intact ⁽¹⁾ ?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Was adequate sample volume provided ⁽¹⁾ ?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
If custody seals are present, are they intact ⁽¹⁾ ?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Are samples with holding times due within 48 hours sample due within 48 hours present?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Sameday
Is a chain-of-custody (COC) form present and filled out completely ⁽¹⁾ ?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Does the COC agree with the number and type of sample bottles received ⁽¹⁾ ?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Do the sample IDs on the bottle labels match the COC ⁽¹⁾ ?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Is the COC properly relinquished by the client w/ date and time recorded ⁽¹⁾ ?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
For volatiles in water – is there headspace present? If yes, contact client and note in narrative.	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
Are samples preserved that require preservation (excluding cooling) ⁽¹⁾ ? 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.

 Custodian Printed Name or Initials


 Date/Time



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

Project: Loloff 35-5,6 Tank Battery
Project Number: [none]
Project Manager: Mark Longhurst

Reported:
01/20/22 12:59

SS33@4'
2111497-01 (Soil)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **11/30/21 11:50**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Benzene	ND	0.0020	mg/kg	1	BEK0624	11/30/21	11/30/21	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: **11/30/21 11:50**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 1,2-Dichloroethane-d4		115 %	23-173		"	"	12/01/21	"	
Surrogate: Toluene-d8		121 %	20-170		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		137 %	21-167		"	"	"	"	

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **11/30/21 11:50**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
C10-C28 (DRO)	ND	50	mg/kg	1	BEK0625	11/30/21	11/30/21	EPA 8015M	
C28-C36 (ORO)	ND	50	"	"	"	"	"	"	

Date Sampled: **11/30/21 11:50**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: o-Terphenyl		118 %	30-150		"	"	"	"	

PAH by EPA Method 8270D SIM

Summit Scientific

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

Project: Loloff 35-5,6 Tank Battery
Project Number: [none]
Project Manager: Mark Longhurst

Reported:
01/20/22 12:59

SS33@4'
2111497-01 (Soil)

Summit Scientific

PAH by EPA Method 8270D SIM

Date Sampled: **11/30/21 11:50**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Anthracene	ND	0.00500	mg/kg	1	BEL0002	12/01/21	12/04/21	EPA 8270D SIM	
Chrysene	ND	0.00500	"	"	"	"	"	"	
Fluorene	ND	0.00500	"	"	"	"	"	"	
1-Methylnaphthalene	ND	0.00500	"	"	"	"	"	"	

Date Sampled: **11/30/21 11:50**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 2-Methylnaphthalene-d10		75.7 %	40-150		"	"	"	"	
Surrogate: Fluoranthene-d10		81.1 %	40-150		"	"	"	"	

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

Project: Loloff 35-5,6 Tank Battery

Project Number: [none]
Project Manager: Mark Longhurst

Reported:
01/20/22 12:59

SS34@2.5'
2111497-02 (Soil)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **11/30/21 11:52**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Benzene	ND	0.0020	mg/kg	1	BEK0624	11/30/21	11/30/21	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: **11/30/21 11:52**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: 1,2-Dichloroethane-d4		122 %	23-173		"	"	"	"	
Surrogate: Toluene-d8		112 %	20-170		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		111 %	21-167		"	"	"	"	

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **11/30/21 11:52**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
C10-C28 (DRO)	ND	50	mg/kg	1	BEK0625	11/30/21	11/30/21	EPA 8015M	
C28-C36 (ORO)	ND	50	"	"	"	"	"	"	

Date Sampled: **11/30/21 11:52**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: o-Terphenyl		109 %	30-150		"	"	"	"	

PAH by EPA Method 8270D SIM

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

Project: Loloff 35-5,6 Tank Battery
Project Number: [none]
Project Manager: Mark Longhurst

Reported:
01/20/22 12:59

SS34@2.5'
2111497-02 (Soil)

Summit Scientific

PAH by EPA Method 8270D SIM

Date Sampled: **11/30/21 11:52**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Anthracene	ND	0.00500	mg/kg	1	BEL0002	12/01/21	12/04/21	EPA 8270D SIM	
Chrysene	ND	0.00500	"	"	"	"	"	"	
Fluorene	ND	0.00500	"	"	"	"	"	"	
1-Methylnaphthalene	ND	0.00500	"	"	"	"	"	"	

Date Sampled: **11/30/21 11:52**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 2-Methylnaphthalene-d10		89.6 %	40-150		"	"	"	"	
Surrogate: Fluoranthene-d10		78.3 %	40-150		"	"	"	"	

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1775 Sherman St. STE. 3000
Denver CO, 80203

Project: Loloff 35-5,6 Tank Battery
Project Number: [none]
Project Manager: Mark Longhurst

Reported:
01/20/22 12:59

SS35@4'
2111497-03 (Soil)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **11/30/21 14:50**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Benzene	ND	0.0020	mg/kg	1	BEK0624	11/30/21	11/30/21	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: **11/30/21 14:50**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: 1,2-Dichloroethane-d4		110 %	23-173		"	"	12/01/21	"	
Surrogate: Toluene-d8		120 %	20-170		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		140 %	21-167		"	"	"	"	

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **11/30/21 14:50**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
C10-C28 (DRO)	ND	50	mg/kg	1	BEK0625	11/30/21	11/30/21	EPA 8015M	
C28-C36 (ORO)	ND	50	"	"	"	"	"	"	

Date Sampled: **11/30/21 14:50**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: o-Terphenyl		107 %	30-150		"	"	"	"	

PAH by EPA Method 8270D SIM

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

Project: Loloff 35-5,6 Tank Battery
Project Number: [none]
Project Manager: Mark Longhurst

Reported:
01/20/22 12:59

SS35@4'
2111497-03 (Soil)

Summit Scientific

PAH by EPA Method 8270D SIM

Date Sampled: **11/30/21 14:50**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Anthracene	ND	0.00500	mg/kg	1	BEL0002	12/01/21	12/04/21	EPA 8270D SIM	
Chrysene	ND	0.00500	"	"	"	"	"	"	
Fluorene	ND	0.00500	"	"	"	"	"	"	
1-Methylnaphthalene	ND	0.00500	"	"	"	"	"	"	

Date Sampled: **11/30/21 14:50**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 2-Methylnaphthalene-d10		75.1 %	40-150		"	"	"	"	
Surrogate: Fluoranthene-d10		81.2 %	40-150		"	"	"	"	

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

Project: Loloff 35-5,6 Tank Battery

Project Number: [none]
Project Manager: Mark Longhurst

Reported:
01/20/22 12:59

SS36@2.5'
2111497-04 (Soil)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **11/30/21 14:52**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Benzene	ND	0.0020	mg/kg	1	BEK0624	11/30/21	11/30/21	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	0.55	0.50	"	"	"	"	"	"	

Date Sampled: **11/30/21 14:52**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 1,2-Dichloroethane-d4		111 %	23-173		"	"	"	"	
Surrogate: Toluene-d8		106 %	20-170		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		116 %	21-167		"	"	"	"	

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **11/30/21 14:52**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
C10-C28 (DRO)	ND	50	mg/kg	1	BEK0625	11/30/21	11/30/21	EPA 8015M	
C28-C36 (ORO)	ND	50	"	"	"	"	"	"	

Date Sampled: **11/30/21 14:52**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: o-Terphenyl		102 %	30-150		"	"	"	"	

PAH by EPA Method 8270D SIM

Summit Scientific

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

Project: Loloff 35-5,6 Tank Battery
Project Number: [none]
Project Manager: Mark Longhurst

Reported:
01/20/22 12:59

SS36@2.5'
2111497-04 (Soil)

Summit Scientific

PAH by EPA Method 8270D SIM

Date Sampled: **11/30/21 14:52**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Anthracene	ND	0.00500	mg/kg	1	BEL0002	12/01/21	12/04/21	EPA 8270D SIM	
Chrysene	ND	0.00500	"	"	"	"	"	"	
Fluorene	ND	0.00500	"	"	"	"	"	"	
1-Methylnaphthalene	ND	0.00500	"	"	"	"	"	"	

Date Sampled: **11/30/21 14:52**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 2-Methylnaphthalene-d10		75.7 %	40-150		"	"	"	"	
Surrogate: Fluoranthene-d10		69.2 %	40-150		"	"	"	"	

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

Project: Loloff 35-5,6 Tank Battery

Project Number: [none]
Project Manager: Mark Longhurst

Reported:
01/20/22 12:59

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 BEK0624 - EPA 5030 Soil MS

Blank (BEK0624-BLK1)

Prepared: 11/30/21 Analyzed: 12/01/21

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	0.0399		"	0.0400		99.7	23-173			
Surrogate: Toluene-d8	0.0406		"	0.0400		102	20-170			
Surrogate: 4-Bromofluorobenzene	0.0450		"	0.0400		112	21-167			

LCS (BEK0624-BS1)

Prepared: 11/30/21 Analyzed: 12/01/21

Benzene	0.145	0.0020	mg/kg	0.150		96.5	70-130			
Toluene	0.132	0.0050	"	0.150		88.0	70-130			
Ethylbenzene	0.126	0.0050	"	0.150		84.3	70-130			
m,p-Xylene	0.251	0.010	"	0.300		83.8	70-130			
o-Xylene	0.133	0.0050	"	0.150		89.0	70-130			
1,2,4-Trimethylbenzene	0.125	0.0050	"	0.150		83.3	70-130			
1,3,5-Trimethylbenzene	0.124	0.0050	"	0.150		82.5	70-130			
Naphthalene	0.130	0.0038	"	0.150		86.5	70-130			
Surrogate: 1,2-Dichloroethane-d4	0.0393		"	0.0400		98.3	23-173			
Surrogate: Toluene-d8	0.0409		"	0.0400		102	20-170			
Surrogate: 4-Bromofluorobenzene	0.0426		"	0.0400		106	21-167			

Matrix Spike (BEK0624-MS1)

Source: 2111497-01

Prepared: 11/30/21 Analyzed: 12/01/21

Benzene	0.153	0.0020	mg/kg	0.150	ND	102	70-130			
Toluene	0.144	0.0050	"	0.150	ND	95.9	70-130			
Ethylbenzene	0.140	0.0050	"	0.150	ND	93.2	70-130			
m,p-Xylene	0.277	0.010	"	0.300	ND	92.4	70-130			
o-Xylene	0.148	0.0050	"	0.150	ND	98.5	70-130			
1,2,4-Trimethylbenzene	0.140	0.0050	"	0.150	ND	93.6	70-130			
1,3,5-Trimethylbenzene	0.138	0.0050	"	0.150	ND	92.0	70-130			
Naphthalene	0.153	0.0038	"	0.150	ND	102	70-130			
Surrogate: 1,2-Dichloroethane-d4	0.0391		"	0.0400		97.8	23-173			
Surrogate: Toluene-d8	0.0403		"	0.0400		101	20-170			
Surrogate: 4-Bromofluorobenzene	0.0421		"	0.0400		105	21-167			

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1775 Sherman St. STE. 3000
Denver CO, 80203

Project: Loloff 35-5,6 Tank Battery

Project Number: [none]
Project Manager: Mark Longhurst

Reported:
01/20/22 12:59

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 BEK0624 - EPA 5030 Soil MS

Matrix Spike Dup (BEK0624-MSD1)	Source: 2111497-01			Prepared: 11/30/21 Analyzed: 12/01/21						
Benzene	0.161	0.0020	mg/kg	0.150	ND	108	70-130	5.29	30	
Toluene	0.154	0.0050	"	0.150	ND	102	70-130	6.64	30	
Ethylbenzene	0.150	0.0050	"	0.150	ND	100	70-130	7.26	30	
m,p-Xylene	0.300	0.010	"	0.300	ND	100	70-130	7.92	30	
o-Xylene	0.158	0.0050	"	0.150	ND	105	70-130	6.56	30	
1,2,4-Trimethylbenzene	0.151	0.0050	"	0.150	ND	101	70-130	7.15	30	
1,3,5-Trimethylbenzene	0.149	0.0050	"	0.150	ND	99.2	70-130	7.53	30	
Naphthalene	0.161	0.0038	"	0.150	ND	107	70-130	4.74	30	
Surrogate: 1,2-Dichloroethane-d4	0.0380		"	0.0400		95.0	23-173			
Surrogate: Toluene-d8	0.0406		"	0.0400		102	20-170			
Surrogate: 4-Bromofluorobenzene	0.0422		"	0.0400		106	21-167			

Summit Scientific

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.



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

Project: Loloff 35-5,6 Tank Battery
Project Number: [none]
Project Manager: Mark Longhurst

Reported:
01/20/22 12:59

Extractable Petroleum Hydrocarbons by 8015 - Quality Control
Summit Scientific

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

Batch BEK0625 - EPA 3550A

Blank (BEK0625-BLK1)

Prepared: 11/30/21 Analyzed: 12/01/21

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

LCS (BEK0625-BS1)

Prepared: 11/30/21 Analyzed: 12/01/21

C10-C28 (DRO)	475	50	mg/kg	500	95.0	70-130
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Matrix Spike (BEK0625-MS1)

Source: 2111497-01

Prepared: 11/30/21 Analyzed: 12/01/21

C10-C28 (DRO)	446	50	mg/kg	500	20.2	85.1	70-130
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Matrix Spike Dup (BEK0625-MSD1)

Source: 2111497-01

Prepared: 11/30/21 Analyzed: 12/01/21

C10-C28 (DRO)	415	50	mg/kg	500	20.2	78.9	70-130	7.23	20
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Summit Scientific

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

Project: Loloff 35-5,6 Tank Battery

Project Number: [none]
Project Manager: Mark Longhurst

Reported:
01/20/22 12:59

PAH by EPA Method 8270D SIM - Quality Control

Summit Scientific

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

Batch BEL0002 - EPA 5030 Soil MS

Blank (BEL0002-BLK1)

Prepared: 12/01/21 Analyzed: 12/03/21

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	"							
Surrogate: 2-Methylnaphthalene-d10	0.0324		"	0.0333		97.4	40-150			
Surrogate: Fluoranthene-d10	0.0296		"	0.0333		88.9	40-150			

LCS (BEL0002-BS1)

Prepared: 12/01/21 Analyzed: 12/03/21

Acenaphthene	0.0253	0.00500	mg/kg	0.0333	76.0	31-137
Anthracene	0.0258	0.00500	"	0.0333	77.5	30-120
Benzo (a) anthracene	0.0244	0.00500	"	0.0333	73.1	30-120
Benzo (a) pyrene	0.0258	0.00500	"	0.0333	77.4	30-120
Benzo (b) fluoranthene	0.0262	0.00500	"	0.0333	78.6	30-120
Benzo (k) fluoranthene	0.0270	0.00500	"	0.0333	80.9	30-120
Chrysene	0.0251	0.00500	"	0.0333	75.2	30-120
Dibenz (a,h) anthracene	0.0271	0.00500	"	0.0333	81.3	30-120
Fluoranthene	0.0284	0.00500	"	0.0333	85.2	30-120
Fluorene	0.0277	0.00500	"	0.0333	83.1	30-120
Indeno (1,2,3-cd) pyrene	0.0244	0.00500	"	0.0333	73.3	30-120
Pyrene	0.0241	0.00500	"	0.0333	72.2	35-142
1-Methylnaphthalene	0.0277	0.00500	"	0.0333	83.0	35-142
2-Methylnaphthalene	0.0290	0.00500	"	0.0333	87.0	35-142
Surrogate: 2-Methylnaphthalene-d10	0.0272		"	0.0333	81.5	40-150
Surrogate: Fluoranthene-d10	0.0288		"	0.0333	86.5	40-150

Summit Scientific

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

Project: Loloff 35-5,6 Tank Battery

Project Number: [none]
Project Manager: Mark Longhurst

Reported:
01/20/22 12:59

PAH by EPA Method 8270D SIM - Quality Control

Summit Scientific

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

Batch BEL0002 - EPA 5030 Soil MS

Matrix Spike (BEL0002-MS1)

Source: 2111316-01

Prepared: 12/01/21 Analyzed: 12/03/21

Acenaphthene	0.0261	0.00500	mg/kg	0.0333	ND	78.4	31-137		
Anthracene	0.0250	0.00500	"	0.0333	ND	75.0	30-120		
Benzo (a) anthracene	0.0227	0.00500	"	0.0333	ND	68.0	30-120		
Benzo (a) pyrene	0.0236	0.00500	"	0.0333	ND	70.9	30-120		
Benzo (b) fluoranthene	0.0238	0.00500	"	0.0333	ND	71.3	30-120		
Benzo (k) fluoranthene	0.0239	0.00500	"	0.0333	ND	71.8	30-120		
Chrysene	0.0234	0.00500	"	0.0333	ND	70.2	30-120		
Dibenz (a,h) anthracene	0.0249	0.00500	"	0.0333	ND	74.6	30-120		
Fluoranthene	0.0274	0.00500	"	0.0333	ND	82.3	30-120		
Fluorene	0.0283	0.00500	"	0.0333	ND	85.0	30-120		
Indeno (1,2,3-cd) pyrene	0.0227	0.00500	"	0.0333	ND	68.0	30-120		
Pyrene	0.0229	0.00500	"	0.0333	ND	68.7	35-142		
1-Methylnaphthalene	0.0283	0.00500	"	0.0333	ND	84.9	15-130		
2-Methylnaphthalene	0.0292	0.00500	"	0.0333	ND	87.5	15-130		
Surrogate: 2-Methylnaphthalene-d10	0.0295		"	0.0333		88.6	40-150		
Surrogate: Fluoranthene-d10	0.0271		"	0.0333		81.4	40-150		

Matrix Spike Dup (BEL0002-MSD1)

Source: 2111316-01

Prepared: 12/01/21 Analyzed: 12/03/21

Acenaphthene	0.0274	0.00500	mg/kg	0.0333	ND	82.3	31-137	4.81	30
Anthracene	0.0273	0.00500	"	0.0333	ND	82.0	30-120	8.93	30
Benzo (a) anthracene	0.0242	0.00500	"	0.0333	ND	72.6	30-120	6.55	30
Benzo (a) pyrene	0.0258	0.00500	"	0.0333	ND	77.5	30-120	8.86	30
Benzo (b) fluoranthene	0.0259	0.00500	"	0.0333	ND	77.6	30-120	8.48	30
Benzo (k) fluoranthene	0.0267	0.00500	"	0.0333	ND	80.0	30-120	10.8	30
Chrysene	0.0250	0.00500	"	0.0333	ND	75.0	30-120	6.72	30
Dibenz (a,h) anthracene	0.0262	0.00500	"	0.0333	ND	78.7	30-120	5.37	30
Fluoranthene	0.0289	0.00500	"	0.0333	ND	86.8	30-120	5.25	30
Fluorene	0.0287	0.00500	"	0.0333	ND	86.1	30-120	1.26	30
Indeno (1,2,3-cd) pyrene	0.0238	0.00500	"	0.0333	ND	71.3	30-120	4.85	30
Pyrene	0.0248	0.00500	"	0.0333	ND	74.5	35-142	8.21	30
1-Methylnaphthalene	0.0311	0.00500	"	0.0333	ND	93.3	15-130	9.40	50
2-Methylnaphthalene	0.0318	0.00500	"	0.0333	ND	95.5	15-130	8.72	50
Surrogate: 2-Methylnaphthalene-d10	0.0314		"	0.0333		94.2	40-150		
Surrogate: Fluoranthene-d10	0.0296		"	0.0333		88.9	40-150		

Summit Scientific

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

Project: Loloff 35-5,6 Tank Battery

Project Number: [none]

Project Manager: Mark Longhurst

Reported:
01/20/22 12:59

Notes and Definitions

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

Summit Scientific

4653 Table Mountain Drive, Golden, Colorado 80403

303.277.9310

January 20, 2022

Mark Longhurst

PDC Energy

1775 Sherman St. STE. 3000

Denver, CO 80203

RE: Loloff 35-5,6 Tank Battery

Work Order #2112005

Enclosed are the results of analyses for samples received by Summit Scientific on 12/01/21 15:45. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

A handwritten signature in black ink, appearing to read 'P. Shrewsbury', written in a cursive style.

Paul Shrewsbury

President



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

Project: Loloff 35-5,6 Tank Battery

Project Number: [none]
Project Manager: Mark Longhurst

Reported:
01/20/22 13:01

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
SS37@5'	2112005-01	Soil	12/01/21 09:15	12/01/21 15:45
SS38@4'	2112005-02	Soil	12/01/21 10:58	12/01/21 15:45
SS39@2.5'	2112005-03	Soil	12/01/21 11:00	12/01/21 15:45
SS40@4'	2112005-04	Soil	12/01/21 11:26	12/01/21 15:45
SS41@2.5'	2112005-05	Soil	12/01/21 11:28	12/01/21 15:45
SS42@4'	2112005-06	Soil	12/01/21 12:05	12/01/21 15:45
SS43@2.5'	2112005-07	Soil	12/01/21 12:10	12/01/21 15:45
SS44@5'	2112005-08	Soil	12/01/21 14:20	12/01/21 15:45

Summit Scientific

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2112005

Summit Scientific

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: Lo/Off 35-5.6 Tank BatterySampler Name: David Vigil

Project Number:

ID	Sample Description	Date Sampled	Time Sampled	# of containers	Preservative				Matrix				Analysis Requested								Special Instructions			
					HCl	HNO ₃	None	Other	Water	Soil	Air-Canister #	Other	BTEXN - 8260B	TPH - (C6 - C36)	pH, EC, SAR	Boron - HWS	TMBS (1,2,4)&(1,3,5)	PAH - 915	Metals - 915					
1	SS 37 @ 5'	12/1/21	0915	2			X			X				X	X			X	X				X	pH, EC, SAR by saturated paste PAHs: • Anthracene • Chrysene • Fluorene • 1-Methylnaphthalene
2	SS 38 @ 4'		1058	2			X			X				X	X			X	X				X	
3	SS 39 @ 2.5'		1100	2			X			X				X	X			X	X				X	
4	SS 40 @ 4'		1126	2			X			X				X	X			X	X				X	
5	SS 41 @ 2.5'		1128	2			X			X				X	X			X	X				X	
6	SS 42 @ 4'		1205	2			X			X				X	X			X	X				X	
7	SS 43 @ 2.5'		1210	2			X			X				X	X			X	X				X	
8	SS 44 @ 5'		1420	2			X			X				X	X			X	X				X	
9																								
10																								

Relinquished by:	Date/Time:	Received by:	Date/Time:	Turn Around Time	(Check)	Notes:
<u>David Vigil</u>	12/1/21 1545	Tasman's Lock Box		Same Day	<u>X</u> 72 hours	
Relinquished by:	Date/Time:	Received by:	Date/Time:	24 hours	Standard	
Tasman's Lock Box		<u>[Signature]</u>	12/1 1545	48 hours		
Relinquished by:	Date/Time:	Received by:	Date/Time:	Sample Integrity:		
				Temperature Upon Receipt:	<u>8.2</u>	
				Samples Intact:	<u>Yes</u> No	



Sample Receipt Checklist

S2 Work Order#


2112005

Client: POC/Tasmanian Client Project ID: Loloff 35-S, CO 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) 8.2

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 if there is evidence that cooling has begun.	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	ON ICE
Were all samples received intact ⁽¹⁾ ?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Was adequate sample volume provided ⁽¹⁾ ?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
If custody seals are present, are they intact ⁽¹⁾ ?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Are samples with holding times due within 48 hours sample due within 48 hours present?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	same day
Is a chain-of-custody (COC) form present and filled out completely ⁽¹⁾ ?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Does the COC agree with the number and type of sample bottles received ⁽¹⁾ ?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Do the sample IDs on the bottle labels match the COC ⁽¹⁾ ?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Is the COC properly relinquished by the client w/ date and time recorded ⁽¹⁾ ?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
For volatiles in water – is there headspace present? If yes, contact client and note in narrative.	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
Are samples preserved that require preservation (excluding cooling) ⁽¹⁾ ? 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.
Custodian Printed Name or Initials12:121
Date/Time



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

Project: Loloff 35-5,6 Tank Battery
Project Number: [none]
Project Manager: Mark Longhurst

Reported:
01/20/22 13:01

SS37@5'
2112005-01 (Soil)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **12/01/21 09:15**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Benzene	ND	0.0020	mg/kg	1	BEL0022	12/01/21	12/01/21	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: **12/01/21 09:15**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 1,2-Dichloroethane-d4		99.0 %	23-173		"	"	"	"	
Surrogate: Toluene-d8		102 %	20-170		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		101 %	21-167		"	"	"	"	

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **12/01/21 09:15**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
C10-C28 (DRO)	ND	50	mg/kg	1	BEL0021	12/01/21	12/01/21	EPA 8015M	
C28-C36 (ORO)	ND	50	"	"	"	"	"	"	

Date Sampled: **12/01/21 09:15**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: o-Terphenyl		98.1 %	30-150		"	"	"	"	

PAH by EPA Method 8270D SIM

Summit Scientific

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

Project: Loloff 35-5,6 Tank Battery
Project Number: [none]
Project Manager: Mark Longhurst

Reported:
01/20/22 13:01

SS37@5'
2112005-01 (Soil)

Summit Scientific

PAH by EPA Method 8270D SIM

Date Sampled: **12/01/21 09:15**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Anthracene	ND	0.00500	mg/kg	1	BEL0026	12/02/21	12/05/21	EPA 8270D SIM	
Chrysene	ND	0.00500	"	"	"	"	"	"	
Fluorene	ND	0.00500	"	"	"	"	"	"	
1-Methylnaphthalene	ND	0.00500	"	"	"	"	"	"	

Date Sampled: **12/01/21 09:15**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 2-Methylnaphthalene-d10		60.3 %	40-150		"	"	"	"	
Surrogate: Fluoranthene-d10		65.9 %	40-150		"	"	"	"	

Summit Scientific

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

Project: Loloff 35-5,6 Tank Battery

Project Number: [none]
Project Manager: Mark Longhurst

Reported:
01/20/22 13:01

SS38@4'
2112005-02 (Soil)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **12/01/21 10:58**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Benzene	ND	0.0020	mg/kg	1	BEL0022	12/01/21	12/01/21	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	18	0.50	"	"	"	"	"	"	

Date Sampled: **12/01/21 10:58**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 1,2-Dichloroethane-d4		101 %	23-173		"	"	"	"	
Surrogate: Toluene-d8		102 %	20-170		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		119 %	21-167		"	"	"	"	

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **12/01/21 10:58**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
C10-C28 (DRO)	ND	50	mg/kg	1	BEL0021	12/01/21	12/01/21	EPA 8015M	
C28-C36 (ORO)	ND	50	"	"	"	"	"	"	

Date Sampled: **12/01/21 10:58**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: o-Terphenyl		91.5 %	30-150		"	"	"	"	

PAH by EPA Method 8270D SIM

Summit Scientific

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

Project: Loloff 35-5,6 Tank Battery
Project Number: [none]
Project Manager: Mark Longhurst

Reported:
01/20/22 13:01

SS38@4'
2112005-02 (Soil)

Summit Scientific

PAH by EPA Method 8270D SIM

Date Sampled: **12/01/21 10:58**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Anthracene	ND	0.00500	mg/kg	1	BEL0026	12/02/21	12/05/21	EPA 8270D SIM	
Chrysene	ND	0.00500	"	"	"	"	"	"	
Fluorene	ND	0.00500	"	"	"	"	"	"	
1-Methylnaphthalene	ND	0.00500	"	"	"	"	"	"	

Date Sampled: **12/01/21 10:58**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 2-Methylnaphthalene-d10		56.9 %	40-150		"	"	"	"	
Surrogate: Fluoranthene-d10		72.7 %	40-150		"	"	"	"	

Summit Scientific

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

Project: Loloff 35-5,6 Tank Battery

Project Number: [none]
Project Manager: Mark Longhurst

Reported:
01/20/22 13:01

SS39@2.5'
2112005-03 (Soil)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **12/01/21 11:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Benzene	ND	0.0020	mg/kg	1	BEL0022	12/01/21	12/01/21	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: **12/01/21 11:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 1,2-Dichloroethane-d4		103 %	23-173		"	"	"	"	
Surrogate: Toluene-d8		101 %	20-170		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		104 %	21-167		"	"	"	"	

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **12/01/21 11:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
C10-C28 (DRO)	ND	50	mg/kg	1	BEL0021	12/01/21	12/01/21	EPA 8015M	
C28-C36 (ORO)	ND	50	"	"	"	"	"	"	

Date Sampled: **12/01/21 11:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: o-Terphenyl		84.4 %	30-150		"	"	"	"	

PAH by EPA Method 8270D SIM

Summit Scientific

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

Project: Loloff 35-5,6 Tank Battery
Project Number: [none]
Project Manager: Mark Longhurst

Reported:
01/20/22 13:01

SS39@2.5'
2112005-03 (Soil)

Summit Scientific

PAH by EPA Method 8270D SIM

Date Sampled: **12/01/21 11:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Anthracene	ND	0.00500	mg/kg	1	BEL0026	12/02/21	12/05/21	EPA 8270D SIM	
Chrysene	ND	0.00500	"	"	"	"	"	"	
Fluorene	ND	0.00500	"	"	"	"	"	"	
1-Methylnaphthalene	ND	0.00500	"	"	"	"	"	"	

Date Sampled: **12/01/21 11:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 2-Methylnaphthalene-d10		87.2 %	40-150		"	"	"	"	
Surrogate: Fluoranthene-d10		84.9 %	40-150		"	"	"	"	

Summit Scientific

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

Project: Loloff 35-5,6 Tank Battery

Project Number: [none]
Project Manager: Mark Longhurst

Reported:
01/20/22 13:01

SS40@4'
2112005-04 (Soil)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **12/01/21 11:26**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Benzene	ND	0.0020	mg/kg	1	BEL0022	12/01/21	12/01/21	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	26	0.50	"	"	"	"	"	"	

Date Sampled: **12/01/21 11:26**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 1,2-Dichloroethane-d4		99.8 %	23-173		"	"	"	"	
Surrogate: Toluene-d8		102 %	20-170		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		105 %	21-167		"	"	"	"	

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **12/01/21 11:26**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
C10-C28 (DRO)	ND	50	mg/kg	1	BEL0021	12/01/21	12/01/21	EPA 8015M	
C28-C36 (ORO)	ND	50	"	"	"	"	"	"	

Date Sampled: **12/01/21 11:26**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: o-Terphenyl		98.2 %	30-150		"	"	"	"	

PAH by EPA Method 8270D SIM

Summit Scientific

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

Project: Loloff 35-5,6 Tank Battery
Project Number: [none]
Project Manager: Mark Longhurst

Reported:
01/20/22 13:01

SS40@4'
2112005-04 (Soil)

Summit Scientific

PAH by EPA Method 8270D SIM

Date Sampled: **12/01/21 11:26**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Anthracene	ND	0.00500	mg/kg	1	BEL0026	12/02/21	12/05/21	EPA 8270D SIM	
Chrysene	ND	0.00500	"	"	"	"	"	"	
Fluorene	ND	0.00500	"	"	"	"	"	"	
1-Methylnaphthalene	ND	0.00500	"	"	"	"	"	"	

Date Sampled: **12/01/21 11:26**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 2-Methylnaphthalene-d10		62.6 %	40-150		"	"	"	"	
Surrogate: Fluoranthene-d10		72.9 %	40-150		"	"	"	"	

Summit Scientific

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

Project: Loloff 35-5,6 Tank Battery

Project Number: [none]
Project Manager: Mark Longhurst

Reported:
01/20/22 13:01

SS41@2.5'
2112005-05 (Soil)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **12/01/21 11:28**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Benzene	ND	0.0020	mg/kg	1	BEL0022	12/01/21	12/01/21	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: **12/01/21 11:28**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: 1,2-Dichloroethane-d4		102 %	23-173		"	"	"	"	
Surrogate: Toluene-d8		101 %	20-170		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		100 %	21-167		"	"	"	"	

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **12/01/21 11:28**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
C10-C28 (DRO)	ND	50	mg/kg	1	BEL0021	12/01/21	12/01/21	EPA 8015M	
C28-C36 (ORO)	ND	50	"	"	"	"	"	"	

Date Sampled: **12/01/21 11:28**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: o-Terphenyl		99.2 %	30-150		"	"	"	"	

PAH by EPA Method 8270D SIM

Summit Scientific

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

Project: Loloff 35-5,6 Tank Battery
Project Number: [none]
Project Manager: Mark Longhurst

Reported:
01/20/22 13:01

SS41@2.5'
2112005-05 (Soil)

Summit Scientific

PAH by EPA Method 8270D SIM

Date Sampled: **12/01/21 11:28**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Anthracene	ND	0.00500	mg/kg	1	BEL0026	12/02/21	12/05/21	EPA 8270D SIM	
Chrysene	ND	0.00500	"	"	"	"	"	"	
Fluorene	ND	0.00500	"	"	"	"	"	"	
1-Methylnaphthalene	ND	0.00500	"	"	"	"	"	"	

Date Sampled: **12/01/21 11:28**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 2-Methylnaphthalene-d10		66.7 %	40-150		"	"	"	"	
Surrogate: Fluoranthene-d10		73.8 %	40-150		"	"	"	"	

Summit Scientific

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

Project: Loloff 35-5,6 Tank Battery
Project Number: [none]
Project Manager: Mark Longhurst

Reported:
01/20/22 13:01

SS42@4'
2112005-06 (Soil)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **12/01/21 12:05**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Benzene	ND	0.0020	mg/kg	1	BEL0022	12/01/21	12/01/21	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	5.7	0.50	"	"	"	"	"	"	

Date Sampled: **12/01/21 12:05**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 1,2-Dichloroethane-d4		99.9 %	23-173		"	"	"	"	
Surrogate: Toluene-d8		102 %	20-170		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		103 %	21-167		"	"	"	"	

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **12/01/21 12:05**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
C10-C28 (DRO)	ND	50	mg/kg	1	BEL0021	12/01/21	12/01/21	EPA 8015M	
C28-C36 (ORO)	ND	50	"	"	"	"	"	"	

Date Sampled: **12/01/21 12:05**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: o-Terphenyl		99.5 %	30-150		"	"	"	"	

PAH by EPA Method 8270D SIM

Summit Scientific

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

Project: Loloff 35-5,6 Tank Battery
Project Number: [none]
Project Manager: Mark Longhurst

Reported:
01/20/22 13:01

SS42@4'
2112005-06 (Soil)

Summit Scientific

PAH by EPA Method 8270D SIM

Date Sampled: **12/01/21 12:05**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Anthracene	ND	0.00500	mg/kg	1	BEL0026	12/02/21	12/05/21	EPA 8270D SIM	
Chrysene	0.00602	0.00500	"	"	"	"	"	"	
Fluorene	ND	0.00500	"	"	"	"	"	"	
1-Methylnaphthalene	ND	0.00500	"	"	"	"	"	"	

Date Sampled: **12/01/21 12:05**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: 2-Methylnaphthalene-d10		69.4 %	40-150		"	"	"	"	
Surrogate: Fluoranthene-d10		78.7 %	40-150		"	"	"	"	

Summit Scientific

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

Project: Loloff 35-5,6 Tank Battery

Project Number: [none]
Project Manager: Mark Longhurst

Reported:
01/20/22 13:01

SS43@2.5'
2112005-07 (Soil)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **12/01/21 12:10**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Benzene	ND	0.0020	mg/kg	1	BEL0022	12/01/21	12/01/21	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: **12/01/21 12:10**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: 1,2-Dichloroethane-d4		105 %	23-173		"	"	"	"	
Surrogate: Toluene-d8		101 %	20-170		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		103 %	21-167		"	"	"	"	

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **12/01/21 12:10**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
C10-C28 (DRO)	ND	50	mg/kg	1	BEL0021	12/01/21	12/01/21	EPA 8015M	
C28-C36 (ORO)	ND	50	"	"	"	"	"	"	

Date Sampled: **12/01/21 12:10**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: o-Terphenyl		99.3 %	30-150		"	"	"	"	

PAH by EPA Method 8270D SIM

Summit Scientific

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

Project: Loloff 35-5,6 Tank Battery
Project Number: [none]
Project Manager: Mark Longhurst

Reported:
01/20/22 13:01

SS43@2.5'
2112005-07 (Soil)

Summit Scientific

PAH by EPA Method 8270D SIM

Date Sampled: **12/01/21 12:10**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Anthracene	ND	0.00500	mg/kg	1	BEL0026	12/02/21	12/05/21	EPA 8270D SIM	
Chrysene	ND	0.00500	"	"	"	"	"	"	
Fluorene	ND	0.00500	"	"	"	"	"	"	
1-Methylnaphthalene	ND	0.00500	"	"	"	"	"	"	

Date Sampled: **12/01/21 12:10**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 2-Methylnaphthalene-d10		70.2 %	40-150		"	"	"	"	
Surrogate: Fluoranthene-d10		76.5 %	40-150		"	"	"	"	

Summit Scientific

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

Project: Loloff 35-5,6 Tank Battery
Project Number: [none]
Project Manager: Mark Longhurst

Reported:
01/20/22 13:01

SS44@5'
2112005-08 (Soil)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **12/01/21 14:20**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Benzene	ND	0.0020	mg/kg	1	BEL0022	12/01/21	12/01/21	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: **12/01/21 14:20**

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

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **12/01/21 14:20**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
C10-C28 (DRO)	ND	50	mg/kg	1	BEL0021	12/01/21	12/01/21	EPA 8015M	
C28-C36 (ORO)	ND	50	"	"	"	"	"	"	

Date Sampled: **12/01/21 14:20**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: o-Terphenyl		96.9 %	30-150		"	"	"	"	

PAH by EPA Method 8270D SIM

Summit Scientific

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

Project: Loloff 35-5,6 Tank Battery
Project Number: [none]
Project Manager: Mark Longhurst

Reported:
01/20/22 13:01

SS44@5'
2112005-08 (Soil)

Summit Scientific

PAH by EPA Method 8270D SIM

Date Sampled: **12/01/21 14:20**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Anthracene	ND	0.00500	mg/kg	1	BEL0026	12/02/21	12/05/21	EPA 8270D SIM	
Chrysene	ND	0.00500	"	"	"	"	"	"	
Fluorene	ND	0.00500	"	"	"	"	"	"	
1-Methylnaphthalene	ND	0.00500	"	"	"	"	"	"	

Date Sampled: **12/01/21 14:20**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 2-Methylnaphthalene-d10		63.4 %	40-150		"	"	"	"	
Surrogate: Fluoranthene-d10		71.1 %	40-150		"	"	"	"	

Summit Scientific

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.



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

Project: Loloff 35-5,6 Tank Battery

Project Number: [none]
Project Manager: Mark Longhurst

Reported:
01/20/22 13:01

Volatile Organic Compounds by EPA Method 8260B - Quality Control

Summit Scientific

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

Batch BEL0022 - EPA 5030 Soil MS

Blank (BEL0022-BLK1)

Prepared & Analyzed: 12/01/21

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	0.0412		"	0.0400		103	23-173			
Surrogate: Toluene-d8	0.0430		"	0.0400		108	20-170			
Surrogate: 4-Bromofluorobenzene	0.0439		"	0.0400		110	21-167			

LCS (BEL0022-BS1)

Prepared & Analyzed: 12/01/21

Benzene	0.110	0.0020	mg/kg	0.125		88.4	70-130			
Toluene	0.123	0.0050	"	0.125		98.7	70-130			
Ethylbenzene	0.141	0.0050	"	0.125		113	70-130			
m,p-Xylene	0.265	0.010	"	0.250		106	70-130			
o-Xylene	0.102	0.0050	"	0.125		81.6	70-130			
1,2,4-Trimethylbenzene	0.144	0.0050	"	0.125		115	70-130			
1,3,5-Trimethylbenzene	0.108	0.0050	"	0.125		86.2	70-130			
Naphthalene	0.0989	0.0038	"	0.125		79.1	70-130			
Surrogate: 1,2-Dichloroethane-d4	0.0428		"	0.0400		107	23-173			
Surrogate: Toluene-d8	0.0419		"	0.0400		105	20-170			
Surrogate: 4-Bromofluorobenzene	0.0410		"	0.0400		102	21-167			

Matrix Spike (BEL0022-MS1)

Source: 2112014-01

Prepared & Analyzed: 12/01/21

Benzene	0.108	0.0020	mg/kg	0.125	ND	86.4	70-130			
Toluene	0.120	0.0050	"	0.125	ND	96.2	70-130			
Ethylbenzene	0.134	0.0050	"	0.125	ND	108	70-130			
m,p-Xylene	0.257	0.010	"	0.250	ND	103	70-130			
o-Xylene	0.0985	0.0050	"	0.125	ND	78.8	70-130			
1,2,4-Trimethylbenzene	0.137	0.0050	"	0.125	ND	109	70-130			
1,3,5-Trimethylbenzene	0.102	0.0050	"	0.125	ND	81.5	70-130			
Naphthalene	0.103	0.0038	"	0.125	ND	82.1	70-130			
Surrogate: 1,2-Dichloroethane-d4	0.0440		"	0.0400		110	23-173			
Surrogate: Toluene-d8	0.0422		"	0.0400		106	20-170			
Surrogate: 4-Bromofluorobenzene	0.0421		"	0.0400		105	21-167			

Summit Scientific

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.



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

Project: Loloff 35-5,6 Tank Battery
Project Number: [none]
Project Manager: Mark Longhurst

Reported:
01/20/22 13:01

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 BEL0022 - EPA 5030 Soil MS

Matrix Spike Dup (BEL0022-MSD1)	Source: 2112014-01			Prepared & Analyzed: 12/01/21						
Benzene	0.104	0.0020	mg/kg	0.125	ND	83.1	70-130	3.85	30	
Toluene	0.114	0.0050	"	0.125	ND	91.2	70-130	5.35	30	
Ethylbenzene	0.128	0.0050	"	0.125	ND	102	70-130	5.27	30	
m,p-Xylene	0.240	0.010	"	0.250	ND	96.0	70-130	6.94	30	
o-Xylene	0.0941	0.0050	"	0.125	ND	75.3	70-130	4.55	30	
1,2,4-Trimethylbenzene	0.132	0.0050	"	0.125	ND	106	70-130	3.17	30	
1,3,5-Trimethylbenzene	0.0985	0.0050	"	0.125	ND	78.8	70-130	3.38	30	
Naphthalene	0.104	0.0038	"	0.125	ND	82.9	70-130	1.05	30	
Surrogate: 1,2-Dichloroethane-d4	0.0426		"	0.0400		106	23-173			
Surrogate: Toluene-d8	0.0417		"	0.0400		104	20-170			
Surrogate: 4-Bromofluorobenzene	0.0408		"	0.0400		102	21-167			

Summit Scientific

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.



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

Project: Loloff 35-5,6 Tank Battery
Project Number: [none]
Project Manager: Mark Longhurst

Reported:
01/20/22 13:01

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 BEL0021 - EPA 3550A

Blank (BEL0021-BLK1)

Prepared & Analyzed: 12/01/21

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

LCS (BEL0021-BS1)

Prepared & Analyzed: 12/01/21

C10-C28 (DRO)	439	50	mg/kg	500	87.8	70-130
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Matrix Spike (BEL0021-MS1)

Source: 2112005-01

Prepared: 12/01/21 Analyzed: 12/02/21

C10-C28 (DRO)	559	50	mg/kg	500	18.5	108	70-130
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Matrix Spike Dup (BEL0021-MSD1)

Source: 2112005-01

Prepared: 12/01/21 Analyzed: 12/02/21

C10-C28 (DRO)	552	50	mg/kg	500	18.5	107	70-130	1.27	20
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Summit Scientific

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.



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

Project: Loloff 35-5,6 Tank Battery
Project Number: [none]
Project Manager: Mark Longhurst

Reported:
01/20/22 13:01

PAH by EPA Method 8270D SIM - Quality Control

Summit Scientific

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

Batch BEL0026 - EPA 5030 Soil MS

Blank (BEL0026-BLK1)

Prepared: 12/02/21 Analyzed: 12/05/21

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	"								
Surrogate: 2-Methylnaphthalene-d10	0.0285		"	0.0333		85.6		40-150			
Surrogate: Fluoranthene-d10	0.0298		"	0.0333		89.4		40-150			

LCS (BEL0026-BS1)

Prepared: 12/02/21 Analyzed: 12/05/21

Acenaphthene	0.0253	0.00500	mg/kg	0.0333		75.9		31-137			
Anthracene	0.0252	0.00500	"	0.0333		75.6		30-120			
Benzo (a) anthracene	0.0224	0.00500	"	0.0333		67.3		30-120			
Benzo (a) pyrene	0.0237	0.00500	"	0.0333		71.1		30-120			
Benzo (b) fluoranthene	0.0249	0.00500	"	0.0333		74.8		30-120			
Benzo (k) fluoranthene	0.0255	0.00500	"	0.0333		76.5		30-120			
Chrysene	0.0230	0.00500	"	0.0333		68.9		30-120			
Dibenz (a,h) anthracene	0.0238	0.00500	"	0.0333		71.3		30-120			
Fluoranthene	0.0261	0.00500	"	0.0333		78.2		30-120			
Fluorene	0.0273	0.00500	"	0.0333		81.8		30-120			
Indeno (1,2,3-cd) pyrene	0.0151	0.00500	"	0.0333		45.2		30-120			
Pyrene	0.0242	0.00500	"	0.0333		72.6		35-142			
1-Methylnaphthalene	0.0245	0.00500	"	0.0333		73.6		35-142			
2-Methylnaphthalene	0.0263	0.00500	"	0.0333		79.0		35-142			
Surrogate: 2-Methylnaphthalene-d10	0.0247		"	0.0333		74.2		40-150			
Surrogate: Fluoranthene-d10	0.0263		"	0.0333		79.0		40-150			

Summit Scientific

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

Project: Loloff 35-5,6 Tank Battery

Project Number: [none]
Project Manager: Mark Longhurst

Reported:
01/20/22 13:01

PAH by EPA Method 8270D SIM - Quality Control

Summit Scientific

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

Batch BEL0026 - EPA 5030 Soil MS

Matrix Spike (BEL0026-MS1)

Source: 2111332-01

Prepared: 12/02/21 Analyzed: 12/05/21

Acenaphthene	0.0258	0.00500	mg/kg	0.0333	ND	77.5	31-137		
Anthracene	0.0262	0.00500	"	0.0333	ND	78.7	30-120		
Benzo (a) anthracene	0.0237	0.00500	"	0.0333	ND	71.1	30-120		
Benzo (a) pyrene	0.0255	0.00500	"	0.0333	ND	76.4	30-120		
Benzo (b) fluoranthene	0.0264	0.00500	"	0.0333	ND	79.1	30-120		
Benzo (k) fluoranthene	0.0271	0.00500	"	0.0333	ND	81.2	30-120		
Chrysene	0.0245	0.00500	"	0.0333	ND	73.5	30-120		
Dibenz (a,h) anthracene	0.0255	0.00500	"	0.0333	ND	76.5	30-120		
Fluoranthene	0.0261	0.00500	"	0.0333	ND	78.4	30-120		
Fluorene	0.0278	0.00500	"	0.0333	ND	83.4	30-120		
Indeno (1,2,3-cd) pyrene	0.0164	0.00500	"	0.0333	ND	49.2	30-120		
Pyrene	0.0258	0.00500	"	0.0333	ND	77.5	35-142		
1-Methylnaphthalene	0.0253	0.00500	"	0.0333	ND	75.8	15-130		
2-Methylnaphthalene	0.0251	0.00500	"	0.0333	ND	75.4	15-130		
Surrogate: 2-Methylnaphthalene-d10	0.0257		"	0.0333		77.1	40-150		
Surrogate: Fluoranthene-d10	0.0273		"	0.0333		82.0	40-150		

Matrix Spike Dup (BEL0026-MSD1)

Source: 2111332-01

Prepared: 12/02/21 Analyzed: 12/05/21

Acenaphthene	0.0233	0.00500	mg/kg	0.0333	ND	69.9	31-137	10.4	30
Anthracene	0.0240	0.00500	"	0.0333	ND	72.0	30-120	8.89	30
Benzo (a) anthracene	0.0211	0.00500	"	0.0333	ND	63.2	30-120	11.7	30
Benzo (a) pyrene	0.0225	0.00500	"	0.0333	ND	67.6	30-120	12.2	30
Benzo (b) fluoranthene	0.0230	0.00500	"	0.0333	ND	69.1	30-120	13.5	30
Benzo (k) fluoranthene	0.0245	0.00500	"	0.0333	ND	73.4	30-120	10.1	30
Chrysene	0.0221	0.00500	"	0.0333	ND	66.4	30-120	10.0	30
Dibenz (a,h) anthracene	0.0224	0.00500	"	0.0333	ND	67.1	30-120	13.1	30
Fluoranthene	0.0246	0.00500	"	0.0333	ND	73.7	30-120	6.16	30
Fluorene	0.0248	0.00500	"	0.0333	ND	74.4	30-120	11.4	30
Indeno (1,2,3-cd) pyrene	0.0140	0.00500	"	0.0333	ND	42.0	30-120	15.7	30
Pyrene	0.0231	0.00500	"	0.0333	ND	69.2	35-142	11.3	30
1-Methylnaphthalene	0.0228	0.00500	"	0.0333	ND	68.5	15-130	10.2	50
2-Methylnaphthalene	0.0235	0.00500	"	0.0333	ND	70.4	15-130	6.86	50
Surrogate: 2-Methylnaphthalene-d10	0.0232		"	0.0333		69.5	40-150		
Surrogate: Fluoranthene-d10	0.0249		"	0.0333		74.7	40-150		

Summit Scientific

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

Project: Loloff 35-5,6 Tank Battery

Project Number: [none]

Project Manager: Mark Longhurst

Reported:
01/20/22 13:01

Notes and Definitions

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

Summit Scientific

4653 Table Mountain Drive, Golden, Colorado 80403

303.277.9310

December 17, 2021

Mark Longhurst

PDC Energy

1775 Sherman St. STE. 3000

Denver, CO 80203

RE: Loloff 35-5,6 Tank Battery

Work Order #2112034

Enclosed are the results of analyses for samples received by Summit Scientific on 12/02/21 16:30. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

A handwritten signature in black ink, appearing to read 'P. Shrewsbury', with a stylized, cursive script.

Paul Shrewsbury

President



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

Project: Loloff 35-5,6 Tank Battery

Project Number: [none]
Project Manager: Mark Longhurst

Reported:
12/17/21 11:05

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
SS45@4'	2112034-01	Soil	12/02/21 09:33	12/02/21 16:30
SS46@2.5'	2112034-02	Soil	12/02/21 09:35	12/02/21 16:30
SS47@5'	2112034-03	Soil	12/02/21 11:50	12/02/21 16:30
SS48@4'	2112034-04	Soil	12/02/21 11:55	12/02/21 16:30
SS49@2.5'	2112034-05	Soil	12/02/21 11:57	12/02/21 16:30
SS50@4'	2112034-06	Soil	12/02/21 14:13	12/02/21 16:30
SS51@2.5'	2112034-07	Soil	12/02/21 14:15	12/02/21 16:30
SS52@5'	2112034-08	Soil	12/02/21 14:25	12/02/21 16:30
SS53@4'	2112034-09	Soil	12/02/21 14:35	12/02/21 16:30
SS54@2.5'	2112034-10	Soil	12/02/21 14:37	12/02/21 16:30
SS55@4'	2112034-11	Soil	12/02/21 14:58	12/02/21 16:30
SS56@2.5'	2112034-12	Soil	12/02/21 15:00	12/02/21 16:30

Summit Scientific

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Summit Scientific

S₂

4653 Table Mountain Drive ♦ Golden, Colorado 80403

303-277-9310

2112034.1

Page 1 of 2

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: LoloFF 35-5, 6 Tank Battery

Sampler Name: David Vigil

Project Number:

ID	Sample Description	Date Sampled	Time Sampled	# of containers	Preservative				Matrix				Analysis Requested							Special Instructions	
					HCl	HNO ₃	None	Other	Water	Soil	Air-Canister #	Other	BTEXN - 8260B	TPH - (C6 - C36)	pH, EC, SAR	Boron - HWS	TMBs (1,2,4)&(1,3,5)	PAH - 915	Metals - 915		
1	SS 45 @ 4'	12/2/21	0933	2			X			X				X	X			X	X		pH, EC, SAR by saturated paste PAHs: • Anthracene • chrysene • Fluorene • 1-Methylnaphthalene
2	SS 46 @ 2.5'		0935	2			X			X				X	X			X	X		
3	SS 47 @ 5'		1150	2			X			X				X	X			X	X		
4	SS 48 @ 2.5' 4'		1155	2			X			X				X	X			X	X		
5	SS 49 @ 2.5'		1157	2			X			X				X	X			X	X		
6	SS 50 @ 4'		1413	2			X			X				X	X			X	X		
7	SS 51 @ 2.5'		1415	3			X			X				X	X	X	X	X	X		
8	SS 52 @ 5'		1425	2			X			X				X	X			X	X		
9	SS 53 @ 4'		1435	2			X			X				X	X			X	X		
10	SS 54 @ 2.5'		1437	2			X			X				X	X			X	X		
Relinquished by: 		Date/Time: 12/2/21 1630		Received by: Tasman's Lock Box		Date/Time:		Turn Around Time (Check)		Same Day <input checked="" type="checkbox"/> 72 hours		24 hours		Standard		Notes:					
Relinquished by: Tasman's Lock Box		Date/Time:		Received by: 		Date/Time: 12-2-21 1630		48 hours		Sample Integrity:		Temperature Upon Receipt: 12.6		Samples Intact: <input checked="" type="radio"/> Yes <input type="radio"/> No							
Relinquished by:		Date/Time:		Received by:		Date/Time:															

Summit Scientific

S₂

4653 Table Mountain Drive ♦ Golden, Colorado 80403

303-277-9310

214034.2

Page 2 of 2

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: Loloff 35-5, 6 Tank Battery
 Sampler Name: David Rigall Project Number:

ID	Sample Description	Date Sampled	Time Sampled	# of containers	Preservative				Matrix				Analysis Requested							Special Instructions		
					HCl	HNO ₃	None	Other	Water	Soil	Air-Canister #	Other	BTEXN - 8260B	TPH - (C6 - C36)	pH, EC, SAR	Boron - HWS	TMBs (1,2,4)&(1,3,5)	PAH - 915	Metals - 915			
1	SS55041	12/2/21	1458	2			X			X				X	X			X	X			pH, EC, SAR by saturated paste <u>PAHs:</u> • Anthracene • Chrysene • Fluorene • 1-Methylnaphthalene
2	SS5602.51	12/2/21	1500	2			X			X				X	X			X	X			
3																						
4																						
5																						
6																						
7																						
8																						
9																						
10																						

Relinquished by: <u>Tal Nitz</u>	Date/Time: <u>12/2/21 1630</u>	Received by: <u>Tasman's Lock Box</u>	Date/Time: _____	Turn Around Time (Check) Same Day <u>X</u> 72 hours _____ 24 hours _____ Standard _____ 48 hours _____ Sample Integrity: _____ Temperature Upon Receipt: <u>12.6</u> Samples Intact: Yes No	Notes:
Relinquished by: <u>Tasman's Lock Box</u>	Date/Time: _____	Received by: <u>Rigall</u>	Date/Time: <u>12-2-21 1630</u>		
Relinquished by: _____	Date/Time: _____	Received by: _____	Date/Time: _____		

S₂

2/2

Sample Receipt Checklist

S2 Work Order# 2112034Client: Doc/TasmanClient Project ID: 1010ff 35-S.6 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)	<u>12.6</u>
-----------	-------------

Thermometer ID: G86A9201901378

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

12.2.21
Date/Time



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

Project: Loloff 35-5,6 Tank Battery

Project Number: [none]
Project Manager: Mark Longhurst

Reported:
12/17/21 11:05

SS45@4'
2112034-01 (Soil)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **12/02/21 09:33**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Benzene	ND	0.0020	mg/kg	1	BEL0044	12/02/21	12/02/21	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: **12/02/21 09:33**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 1,2-Dichloroethane-d4		113 %	23-173		"	"	"	"	
Surrogate: Toluene-d8		119 %	20-170		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		121 %	21-167		"	"	"	"	

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **12/02/21 09:33**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
C10-C28 (DRO)	ND	50	mg/kg	1	BEL0045	12/02/21	12/02/21	EPA 8015M	
C28-C36 (ORO)	ND	50	"	"	"	"	"	"	

Date Sampled: **12/02/21 09:33**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: o-Terphenyl		114 %	30-150		"	"	"	"	

PAH by EPA Method 8270D SIM

Summit Scientific

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.



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

Project: Loloff 35-5,6 Tank Battery
Project Number: [none]
Project Manager: Mark Longhurst

Reported:
12/17/21 11:05

SS45@4'
2112034-01 (Soil)

Summit Scientific

PAH by EPA Method 8270D SIM

Date Sampled: **12/02/21 09:33**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Anthracene	ND	0.00500	mg/kg	1	BEL0046	12/03/21	12/06/21	EPA 8270D SIM	
Chrysene	ND	0.00500	"	"	"	"	"	"	
Fluorene	ND	0.00500	"	"	"	"	"	"	
1-Methylnaphthalene	ND	0.00500	"	"	"	"	"	"	

Date Sampled: **12/02/21 09:33**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: 2-Methylnaphthalene-d10		58.6 %	40-150		"	"	"	"	
Surrogate: Fluoranthene-d10		75.5 %	40-150		"	"	"	"	

Summit Scientific

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.



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

Project: Loloff 35-5,6 Tank Battery
Project Number: [none]
Project Manager: Mark Longhurst

Reported:
12/17/21 11:05

SS46@2.5'
2112034-02 (Soil)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **12/02/21 09:35**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Benzene	ND	0.0020	mg/kg	1	BEL0044	12/02/21	12/02/21	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: **12/02/21 09:35**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: 1,2-Dichloroethane-d4		111 %	23-173		"	"	"	"	
Surrogate: Toluene-d8		114 %	20-170		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		116 %	21-167		"	"	"	"	

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **12/02/21 09:35**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
C10-C28 (DRO)	ND	50	mg/kg	1	BEL0045	12/02/21	12/02/21	EPA 8015M	
C28-C36 (ORO)	ND	50	"	"	"	"	"	"	

Date Sampled: **12/02/21 09:35**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: o-Terphenyl		100 %	30-150		"	"	"	"	

PAH by EPA Method 8270D SIM

Summit Scientific

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.



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

Project: Loloff 35-5,6 Tank Battery
Project Number: [none]
Project Manager: Mark Longhurst

Reported:
12/17/21 11:05

SS46@2.5'
2112034-02 (Soil)

Summit Scientific

PAH by EPA Method 8270D SIM

Date Sampled: **12/02/21 09:35**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Anthracene	ND	0.00500	mg/kg	1	BEL0046	12/03/21	12/06/21	EPA 8270D SIM	
Chrysene	ND	0.00500	"	"	"	"	"	"	
Fluorene	ND	0.00500	"	"	"	"	"	"	
1-Methylnaphthalene	ND	0.00500	"	"	"	"	"	"	

Date Sampled: **12/02/21 09:35**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 2-Methylnaphthalene-d10		77.8 %	40-150		"	"	"	"	
Surrogate: Fluoranthene-d10		83.9 %	40-150		"	"	"	"	

Summit Scientific

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.



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

Project: Loloff 35-5,6 Tank Battery
Project Number: [none]
Project Manager: Mark Longhurst

Reported:
12/17/21 11:05

SS47@5'
2112034-03 (Soil)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **12/02/21 11:50**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Benzene	ND	0.0020	mg/kg	1	BEL0044	12/02/21	12/02/21	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: **12/02/21 11:50**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: 1,2-Dichloroethane-d4		112 %	23-173		"	"	"	"	
Surrogate: Toluene-d8		114 %	20-170		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		112 %	21-167		"	"	"	"	

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **12/02/21 11:50**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
C10-C28 (DRO)	ND	50	mg/kg	1	BEL0045	12/02/21	12/02/21	EPA 8015M	
C28-C36 (ORO)	ND	50	"	"	"	"	"	"	

Date Sampled: **12/02/21 11:50**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: o-Terphenyl		92.7 %	30-150		"	"	"	"	

PAH by EPA Method 8270D SIM

Summit Scientific

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

Project: Loloff 35-5,6 Tank Battery
Project Number: [none]
Project Manager: Mark Longhurst

Reported:
12/17/21 11:05

SS47@5'
2112034-03 (Soil)

Summit Scientific

PAH by EPA Method 8270D SIM

Date Sampled: **12/02/21 11:50**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Anthracene	ND	0.00500	mg/kg	1	BEL0046	12/03/21	12/06/21	EPA 8270D SIM	
Chrysene	ND	0.00500	"	"	"	"	"	"	
Fluorene	ND	0.00500	"	"	"	"	"	"	
1-Methylnaphthalene	ND	0.00500	"	"	"	"	"	"	

Date Sampled: **12/02/21 11:50**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 2-Methylnaphthalene-d10		70.5 %	40-150		"	"	"	"	
Surrogate: Fluoranthene-d10		74.0 %	40-150		"	"	"	"	

Summit Scientific

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

Project: Loloff 35-5,6 Tank Battery
Project Number: [none]
Project Manager: Mark Longhurst

Reported:
12/17/21 11:05

SS48@4'
2112034-04 (Soil)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **12/02/21 11:55**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Benzene	ND	0.0020	mg/kg	1	BEL0044	12/02/21	12/02/21	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: **12/02/21 11:55**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: 1,2-Dichloroethane-d4		111 %	23-173		"	"	"	"	
Surrogate: Toluene-d8		113 %	20-170		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		110 %	21-167		"	"	"	"	

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **12/02/21 11:55**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
C10-C28 (DRO)	ND	50	mg/kg	1	BEL0045	12/02/21	12/02/21	EPA 8015M	
C28-C36 (ORO)	ND	50	"	"	"	"	"	"	

Date Sampled: **12/02/21 11:55**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: o-Terphenyl		84.1 %	30-150		"	"	"	"	

PAH by EPA Method 8270D SIM

Summit Scientific

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.



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

Project: Loloff 35-5,6 Tank Battery
Project Number: [none]
Project Manager: Mark Longhurst

Reported:
12/17/21 11:05

SS48@4'
2112034-04 (Soil)

Summit Scientific

PAH by EPA Method 8270D SIM

Date Sampled: **12/02/21 11:55**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Anthracene	ND	0.00500	mg/kg	1	BEL0046	12/03/21	12/06/21	EPA 8270D SIM	
Chrysene	ND	0.00500	"	"	"	"	"	"	
Fluorene	ND	0.00500	"	"	"	"	"	"	
1-Methylnaphthalene	ND	0.00500	"	"	"	"	"	"	

Date Sampled: **12/02/21 11:55**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: 2-Methylnaphthalene-d10		72.0 %	40-150		"	"	"	"	
Surrogate: Fluoranthene-d10		74.9 %	40-150		"	"	"	"	

Summit Scientific

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

Project: Loloff 35-5,6 Tank Battery

Project Number: [none]
Project Manager: Mark Longhurst

Reported:
12/17/21 11:05

SS49@2.5'
2112034-05 (Soil)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **12/02/21 11:57**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Benzene	ND	0.0020	mg/kg	1	BEL0044	12/02/21	12/02/21	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: **12/02/21 11:57**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: 1,2-Dichloroethane-d4		114 %	23-173		"	"	"	"	
Surrogate: Toluene-d8		116 %	20-170		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		112 %	21-167		"	"	"	"	

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **12/02/21 11:57**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
C10-C28 (DRO)	ND	50	mg/kg	1	BEL0045	12/02/21	12/02/21	EPA 8015M	
C28-C36 (ORO)	ND	50	"	"	"	"	"	"	

Date Sampled: **12/02/21 11:57**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: o-Terphenyl		97.0 %	30-150		"	"	"	"	

PAH by EPA Method 8270D SIM

Summit Scientific

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.



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

Project: Loloff 35-5,6 Tank Battery
Project Number: [none]
Project Manager: Mark Longhurst

Reported:
12/17/21 11:05

SS49@2.5'
2112034-05 (Soil)

Summit Scientific

PAH by EPA Method 8270D SIM

Date Sampled: **12/02/21 11:57**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Anthracene	ND	0.00500	mg/kg	1	BEL0046	12/03/21	12/06/21	EPA 8270D SIM	
Chrysene	ND	0.00500	"	"	"	"	"	"	
Fluorene	ND	0.00500	"	"	"	"	"	"	
1-Methylnaphthalene	ND	0.00500	"	"	"	"	"	"	

Date Sampled: **12/02/21 11:57**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 2-Methylnaphthalene-d10		61.5 %	40-150		"	"	"	"	
Surrogate: Fluoranthene-d10		74.4 %	40-150		"	"	"	"	

Summit Scientific

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

Project: Loloff 35-5,6 Tank Battery

Project Number: [none]
Project Manager: Mark Longhurst

Reported:
12/17/21 11:05

SS50@4'
2112034-06 (Soil)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **12/02/21 14:13**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Benzene	ND	0.0020	mg/kg	1	BEL0044	12/02/21	12/02/21	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: **12/02/21 14:13**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: 1,2-Dichloroethane-d4		114 %	23-173		"	"	"	"	
Surrogate: Toluene-d8		114 %	20-170		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		112 %	21-167		"	"	"	"	

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **12/02/21 14:13**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
C10-C28 (DRO)	ND	50	mg/kg	1	BEL0045	12/02/21	12/02/21	EPA 8015M	
C28-C36 (ORO)	ND	50	"	"	"	"	"	"	

Date Sampled: **12/02/21 14:13**

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

PAH by EPA Method 8270D SIM

Summit Scientific

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

Project: Loloff 35-5,6 Tank Battery
Project Number: [none]
Project Manager: Mark Longhurst

Reported:
12/17/21 11:05

SS50@4'
2112034-06 (Soil)

Summit Scientific

PAH by EPA Method 8270D SIM

Date Sampled: **12/02/21 14:13**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Anthracene	ND	0.00500	mg/kg	1	BEL0046	12/03/21	12/06/21	EPA 8270D SIM	
Chrysene	ND	0.00500	"	"	"	"	"	"	
Fluorene	ND	0.00500	"	"	"	"	"	"	
1-Methylnaphthalene	ND	0.00500	"	"	"	"	"	"	

Date Sampled: **12/02/21 14:13**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 2-Methylnaphthalene-d10		64.5 %	40-150		"	"	"	"	
Surrogate: Fluoranthene-d10		75.5 %	40-150		"	"	"	"	

Summit Scientific

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.



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

Project: Loloff 35-5,6 Tank Battery
Project Number: [none]
Project Manager: Mark Longhurst

Reported:
12/17/21 11:05

SS51@2.5'
2112034-07 (Soil)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **12/02/21 14:15**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Benzene	ND	0.0020	mg/kg	1	BEL0044	12/02/21	12/02/21	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: **12/02/21 14:15**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: 1,2-Dichloroethane-d4		120 %	23-173		"	"	"	"	
Surrogate: Toluene-d8		117 %	20-170		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		111 %	21-167		"	"	"	"	

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **12/02/21 14:15**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
C10-C28 (DRO)	ND	50	mg/kg	1	BEL0045	12/02/21	12/02/21	EPA 8015M	
C28-C36 (ORO)	ND	50	"	"	"	"	"	"	

Date Sampled: **12/02/21 14:15**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: o-Terphenyl		98.4 %	30-150		"	"	"	"	

PAH by EPA Method 8270D SIM

Summit Scientific

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.



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

Project: Loloff 35-5,6 Tank Battery
Project Number: [none]
Project Manager: Mark Longhurst

Reported:
12/17/21 11:05

SS51@2.5'
2112034-07 (Soil)

Summit Scientific

PAH by EPA Method 8270D SIM

Date Sampled: **12/02/21 14:15**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Anthracene	ND	0.00500	mg/kg	1	BEL0046	12/03/21	12/06/21	EPA 8270D SIM	
Chrysene	ND	0.00500	"	"	"	"	"	"	
Fluorene	ND	0.00500	"	"	"	"	"	"	
1-Methylnaphthalene	ND	0.00500	"	"	"	"	"	"	

Date Sampled: **12/02/21 14:15**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 2-Methylnaphthalene-d10		78.2 %	40-150		"	"	"	"	
Surrogate: Fluoranthene-d10		84.1 %	40-150		"	"	"	"	

Total Metals by EPA 6020B Hot Water Soluble Extraction

Date Sampled: **12/02/21 14:15**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Boron	1.34	0.0100	mg/L	1	BEL0146	12/07/21	12/13/21	EPA 6020B	

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

Date Sampled: **12/02/21 14:15**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Calcium	0.726	0.0629	mg/L dry	1	BEL0034	12/03/21	12/11/21	EPA 6020B	
Magnesium	250	0.0629	"	"	"	"	"	"	
Sodium	993	0.0629	"	"	"	"	"	"	

Calculated Analysis

Date Sampled: **12/02/21 14:15**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	13.5	0.00100	units	1	BEL0261	12/13/21	12/13/21	Calculation	

Summit Scientific

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.



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

Project: Loloff 35-5,6 Tank Battery
Project Number: [none]
Project Manager: Mark Longhurst

Reported:
12/17/21 11:05

SS51@2.5'
2112034-07 (Soil)

Summit Scientific

Calculated Analysis

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **12/02/21 14:15**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
% Solids	79.5		%	1	BEL0169	12/08/21	12/09/21	Calculation	

Specific Conductance by EPA Method 120.1, Saturated Paste Extraction

Date Sampled: **12/02/21 14:15**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Specific Conductance (EC)	0.336	0.0100	mmhos/cm	1	BEL0055	12/03/21	12/03/21	EPA 120.1	

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

Date Sampled: **12/02/21 14:15**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
pH	8.02		pH Units	1	BEL0056	12/03/21	12/03/21	EPA 9045D	

Summit Scientific

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

Project: Loloff 35-5,6 Tank Battery
Project Number: [none]
Project Manager: Mark Longhurst

Reported:
12/17/21 11:05

SS52@5'
2112034-08 (Soil)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **12/02/21 14:25**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Benzene	ND	0.0020	mg/kg	1	BEL0044	12/02/21	12/02/21	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: **12/02/21 14:25**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: 1,2-Dichloroethane-d4		114 %	23-173		"	"	"	"	
Surrogate: Toluene-d8		116 %	20-170		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		112 %	21-167		"	"	"	"	

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **12/02/21 14:25**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
C10-C28 (DRO)	ND	50	mg/kg	1	BEL0045	12/02/21	12/02/21	EPA 8015M	
C28-C36 (ORO)	ND	50	"	"	"	"	"	"	

Date Sampled: **12/02/21 14:25**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: o-Terphenyl		99.1 %	30-150		"	"	"	"	

PAH by EPA Method 8270D SIM

Summit Scientific

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

Project: Loloff 35-5,6 Tank Battery
Project Number: [none]
Project Manager: Mark Longhurst

Reported:
12/17/21 11:05

SS52@5'
2112034-08 (Soil)

Summit Scientific

PAH by EPA Method 8270D SIM

Date Sampled: **12/02/21 14:25**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Anthracene	ND	0.00500	mg/kg	1	BEL0046	12/03/21	12/06/21	EPA 8270D SIM	
Chrysene	ND	0.00500	"	"	"	"	"	"	
Fluorene	ND	0.00500	"	"	"	"	"	"	
1-Methylnaphthalene	ND	0.00500	"	"	"	"	"	"	

Date Sampled: **12/02/21 14:25**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 2-Methylnaphthalene-d10		70.3 %	40-150		"	"	"	"	
Surrogate: Fluoranthene-d10		81.8 %	40-150		"	"	"	"	

Summit Scientific

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

Project: Loloff 35-5,6 Tank Battery
Project Number: [none]
Project Manager: Mark Longhurst

Reported:
12/17/21 11:05

SS53@4'
2112034-09 (Soil)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **12/02/21 14:35**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Benzene	ND	0.0020	mg/kg	1	BEL0044	12/02/21	12/02/21	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: **12/02/21 14:35**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: 1,2-Dichloroethane-d4		122 %	23-173		"	"	"	"	
Surrogate: Toluene-d8		120 %	20-170		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		116 %	21-167		"	"	"	"	

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **12/02/21 14:35**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
C10-C28 (DRO)	ND	50	mg/kg	1	BEL0045	12/02/21	12/02/21	EPA 8015M	
C28-C36 (ORO)	ND	50	"	"	"	"	"	"	

Date Sampled: **12/02/21 14:35**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: o-Terphenyl		97.8 %	30-150		"	"	"	"	

PAH by EPA Method 8270D SIM

Summit Scientific

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.



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

Project: Loloff 35-5,6 Tank Battery
Project Number: [none]
Project Manager: Mark Longhurst

Reported:
12/17/21 11:05

SS53@4'
2112034-09 (Soil)

Summit Scientific

PAH by EPA Method 8270D SIM

Date Sampled: **12/02/21 14:35**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Anthracene	ND	0.00500	mg/kg	1	BEL0046	12/03/21	12/06/21	EPA 8270D SIM	
Chrysene	ND	0.00500	"	"	"	"	"	"	
Fluorene	ND	0.00500	"	"	"	"	"	"	
1-Methylnaphthalene	ND	0.00500	"	"	"	"	"	"	

Date Sampled: **12/02/21 14:35**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: 2-Methylnaphthalene-d10		60.2 %	40-150		"	"	"	"	
Surrogate: Fluoranthene-d10		77.3 %	40-150		"	"	"	"	

Summit Scientific

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

Project: Loloff 35-5,6 Tank Battery
Project Number: [none]
Project Manager: Mark Longhurst

Reported:
12/17/21 11:05

SS54@2.5'
2112034-10 (Soil)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **12/02/21 14:37**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Benzene	ND	0.0020	mg/kg	1	BEL0044	12/02/21	12/02/21	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: **12/02/21 14:37**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: 1,2-Dichloroethane-d4		114 %	23-173		"	"	"	"	
Surrogate: Toluene-d8		115 %	20-170		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		110 %	21-167		"	"	"	"	

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **12/02/21 14:37**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
C10-C28 (DRO)	ND	50	mg/kg	1	BEL0045	12/02/21	12/03/21	EPA 8015M	
C28-C36 (ORO)	ND	50	"	"	"	"	"	"	

Date Sampled: **12/02/21 14:37**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: o-Terphenyl		92.3 %	30-150		"	"	"	"	

PAH by EPA Method 8270D SIM

Summit Scientific

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

Project: Loloff 35-5,6 Tank Battery
Project Number: [none]
Project Manager: Mark Longhurst

Reported:
12/17/21 11:05

SS54@2.5'
2112034-10 (Soil)

Summit Scientific

PAH by EPA Method 8270D SIM

Date Sampled: **12/02/21 14:37**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Anthracene	ND	0.00500	mg/kg	1	BEL0046	12/03/21	12/06/21	EPA 8270D SIM	
Chrysene	ND	0.00500	"	"	"	"	"	"	
Fluorene	ND	0.00500	"	"	"	"	"	"	
1-Methylnaphthalene	ND	0.00500	"	"	"	"	"	"	

Date Sampled: **12/02/21 14:37**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 2-Methylnaphthalene-d10		69.5 %	40-150		"	"	"	"	
Surrogate: Fluoranthene-d10		77.2 %	40-150		"	"	"	"	

Summit Scientific

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

Project: Loloff 35-5,6 Tank Battery
Project Number: [none]
Project Manager: Mark Longhurst

Reported:
12/17/21 11:05

SS55@4'
2112034-11 (Soil)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **12/02/21 14:58**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Benzene	ND	0.0020	mg/kg	1	BEL0044	12/02/21	12/03/21	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: **12/02/21 14:58**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: 1,2-Dichloroethane-d4		120 %	23-173		"	"	"	"	
Surrogate: Toluene-d8		132 %	20-170		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		122 %	21-167		"	"	"	"	

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **12/02/21 14:58**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
C10-C28 (DRO)	ND	50	mg/kg	1	BEL0045	12/02/21	12/03/21	EPA 8015M	
C28-C36 (ORO)	ND	50	"	"	"	"	"	"	

Date Sampled: **12/02/21 14:58**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: o-Terphenyl		96.6 %	30-150		"	"	"	"	

PAH by EPA Method 8270D SIM

Summit Scientific

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.



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

Project: Loloff 35-5,6 Tank Battery
Project Number: [none]
Project Manager: Mark Longhurst

Reported:
12/17/21 11:05

SS55@4'
2112034-11 (Soil)

Summit Scientific

PAH by EPA Method 8270D SIM

Date Sampled: **12/02/21 14:58**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Anthracene	ND	0.00500	mg/kg	1	BEL0046	12/03/21	12/06/21	EPA 8270D SIM	
Chrysene	ND	0.00500	"	"	"	"	"	"	
Fluorene	0.00952	0.00500	"	"	"	"	"	"	
1-Methylnaphthalene	ND	0.00500	"	"	"	"	"	"	

Date Sampled: **12/02/21 14:58**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: 2-Methylnaphthalene-d10		63.0 %	40-150		"	"	"	"	
Surrogate: Fluoranthene-d10		82.7 %	40-150		"	"	"	"	

Summit Scientific

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

Project: Loloff 35-5,6 Tank Battery
Project Number: [none]
Project Manager: Mark Longhurst

Reported:
12/17/21 11:05

SS56@2.5'
2112034-12 (Soil)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **12/02/21 15:00**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Benzene	ND	0.0020	mg/kg	1	BEL0044	12/02/21	12/03/21	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: **12/02/21 15:00**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: 1,2-Dichloroethane-d4		120 %	23-173		"	"	"	"	
Surrogate: Toluene-d8		116 %	20-170		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		114 %	21-167		"	"	"	"	

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **12/02/21 15:00**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
C10-C28 (DRO)	ND	50	mg/kg	1	BEL0045	12/02/21	12/03/21	EPA 8015M	
C28-C36 (ORO)	ND	50	"	"	"	"	"	"	

Date Sampled: **12/02/21 15:00**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: o-Terphenyl		108 %	30-150		"	"	"	"	

PAH by EPA Method 8270D SIM

Summit Scientific

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

Project: Loloff 35-5,6 Tank Battery
Project Number: [none]
Project Manager: Mark Longhurst

Reported:
12/17/21 11:05

SS56@2.5'
2112034-12 (Soil)

Summit Scientific

PAH by EPA Method 8270D SIM

Date Sampled: **12/02/21 15:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Anthracene	ND	0.00500	mg/kg	1	BEL0046	12/03/21	12/06/21	EPA 8270D SIM	
Chrysene	ND	0.00500	"	"	"	"	"	"	
Fluorene	ND	0.00500	"	"	"	"	"	"	
1-Methylnaphthalene	ND	0.00500	"	"	"	"	"	"	

Date Sampled: **12/02/21 15:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 2-Methylnaphthalene-d10		63.7 %	40-150		"	"	"	"	
Surrogate: Fluoranthene-d10		73.3 %	40-150		"	"	"	"	

Summit Scientific

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

Project: Loloff 35-5,6 Tank Battery

Project Number: [none]
Project Manager: Mark Longhurst

Reported:
12/17/21 11:05

Volatile Organic Compounds by EPA Method 8260B - Quality Control

Summit Scientific

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

Batch BEL0044 - EPA 5030 Soil MS

Blank (BEL0044-BLK1)

Prepared: 12/02/21 Analyzed: 12/03/21

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	0.0403		"	0.0400		101	23-173			
Surrogate: Toluene-d8	0.0412		"	0.0400		103	20-170			
Surrogate: 4-Bromofluorobenzene	0.0399		"	0.0400		99.8	21-167			

LCS (BEL0044-BS1)

Prepared: 12/02/21 Analyzed: 12/03/21

Benzene	0.108	0.0020	mg/kg	0.100		108	70-130			
Toluene	0.103	0.0050	"	0.100		103	70-130			
Ethylbenzene	0.0950	0.0050	"	0.100		95.0	70-130			
m,p-Xylene	0.187	0.010	"	0.200		93.4	70-130			
o-Xylene	0.0931	0.0050	"	0.100		93.1	70-130			
1,2,4-Trimethylbenzene	0.0949	0.0050	"	0.100		94.9	70-130			
1,3,5-Trimethylbenzene	0.0897	0.0050	"	0.100		89.7	70-130			
Naphthalene	0.0792	0.0038	"	0.100		79.2	70-130			
Surrogate: 1,2-Dichloroethane-d4	0.0400		"	0.0400		100	23-173			
Surrogate: Toluene-d8	0.0420		"	0.0400		105	20-170			
Surrogate: 4-Bromofluorobenzene	0.0396		"	0.0400		99.1	21-167			

Matrix Spike (BEL0044-MS1)

Source: 2112034-01

Prepared: 12/02/21 Analyzed: 12/03/21

Benzene	0.0985	0.0020	mg/kg	0.100	ND	98.5	70-130			
Toluene	0.0925	0.0050	"	0.100	ND	92.5	70-130			
Ethylbenzene	0.0849	0.0050	"	0.100	ND	84.9	70-130			
m,p-Xylene	0.166	0.010	"	0.200	ND	82.8	70-130			
o-Xylene	0.0820	0.0050	"	0.100	ND	82.0	70-130			
1,2,4-Trimethylbenzene	0.0802	0.0050	"	0.100	ND	80.2	70-130			
1,3,5-Trimethylbenzene	0.0753	0.0050	"	0.100	ND	75.3	70-130			
Naphthalene	0.0774	0.0038	"	0.100	ND	77.4	70-130			
Surrogate: 1,2-Dichloroethane-d4	0.0413		"	0.0400		103	23-173			
Surrogate: Toluene-d8	0.0416		"	0.0400		104	20-170			
Surrogate: 4-Bromofluorobenzene	0.0402		"	0.0400		100	21-167			

Summit Scientific

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.



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

Project: Loloff 35-5,6 Tank Battery
Project Number: [none]
Project Manager: Mark Longhurst

Reported:
12/17/21 11:05

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

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

Batch BEL0044 - EPA 5030 Soil MS

Matrix Spike Dup (BEL0044-MSD1)	Source: 2112034-01			Prepared: 12/02/21 Analyzed: 12/03/21						
Benzene	0.0966	0.0020	mg/kg	0.100	ND	96.6	70-130	2.00	30	
Toluene	0.0908	0.0050	"	0.100	ND	90.8	70-130	1.83	30	
Ethylbenzene	0.0812	0.0050	"	0.100	ND	81.2	70-130	4.41	30	
m,p-Xylene	0.160	0.010	"	0.200	ND	79.9	70-130	3.49	30	
o-Xylene	0.0782	0.0050	"	0.100	ND	78.2	70-130	4.75	30	
1,2,4-Trimethylbenzene	0.0764	0.0050	"	0.100	ND	76.4	70-130	4.91	30	
1,3,5-Trimethylbenzene	0.0722	0.0050	"	0.100	ND	72.2	70-130	4.23	30	
Naphthalene	0.0710	0.0038	"	0.100	ND	71.0	70-130	8.61	30	
Surrogate: 1,2-Dichloroethane-d4	0.0410		"	0.0400		102	23-173			
Surrogate: Toluene-d8	0.0418		"	0.0400		104	20-170			
Surrogate: 4-Bromofluorobenzene	0.0401		"	0.0400		100	21-167			

Summit Scientific

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.



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

Project: Loloff 35-5,6 Tank Battery
Project Number: [none]
Project Manager: Mark Longhurst

Reported:
12/17/21 11:05

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 BEL0045 - EPA 3550A

Blank (BEL0045-BLK1)

Prepared: 12/02/21 Analyzed: 12/03/21

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

LCS (BEL0045-BS1)

Prepared: 12/02/21 Analyzed: 12/03/21

C10-C28 (DRO)	487	50	mg/kg	500	97.5	70-130
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Matrix Spike (BEL0045-MS1)

Source: 2112034-01

Prepared: 12/02/21 Analyzed: 12/03/21

C10-C28 (DRO)	595	50	mg/kg	500	28.0	113	70-130
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Matrix Spike Dup (BEL0045-MSD1)

Source: 2112034-01

Prepared: 12/02/21 Analyzed: 12/03/21

C10-C28 (DRO)	515	50	mg/kg	500	28.0	97.5	70-130	14.3	20
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Summit Scientific

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.



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

Project: Loloff 35-5,6 Tank Battery
Project Number: [none]
Project Manager: Mark Longhurst

Reported:
12/17/21 11:05

PAH by EPA Method 8270D SIM - Quality Control

Summit Scientific

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

Batch BEL0046 - EPA 5030 Soil MS

Blank (BEL0046-BLK1)

Prepared: 12/03/21 Analyzed: 12/05/21

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	"							
Surrogate: 2-Methylnaphthalene-d10	0.0242		"	0.0333		72.7	40-150			
Surrogate: Fluoranthene-d10	0.0285		"	0.0333		85.4	40-150			

LCS (BEL0046-BS1)

Prepared: 12/03/21 Analyzed: 12/05/21

Acenaphthene	0.0300	0.00500	mg/kg	0.0333		89.9	31-137			
Anthracene	0.0306	0.00500	"	0.0333		91.7	30-120			
Benzo (a) anthracene	0.0286	0.00500	"	0.0333		85.8	30-120			
Benzo (a) pyrene	0.0300	0.00500	"	0.0333		90.0	30-120			
Benzo (b) fluoranthene	0.0319	0.00500	"	0.0333		95.7	30-120			
Benzo (k) fluoranthene	0.0322	0.00500	"	0.0333		96.5	30-120			
Chrysene	0.0292	0.00500	"	0.0333		87.6	30-120			
Dibenz (a,h) anthracene	0.0260	0.00500	"	0.0333		78.1	30-120			
Fluoranthene	0.0306	0.00500	"	0.0333		91.9	30-120			
Fluorene	0.0313	0.00500	"	0.0333		93.9	30-120			
Indeno (1,2,3-cd) pyrene	0.0248	0.00500	"	0.0333		74.4	30-120			
Pyrene	0.0315	0.00500	"	0.0333		94.4	35-142			
1-Methylnaphthalene	0.0244	0.00500	"	0.0333		73.1	35-142			
2-Methylnaphthalene	0.0255	0.00500	"	0.0333		76.5	35-142			
Surrogate: 2-Methylnaphthalene-d10	0.0263		"	0.0333		78.8	40-150			
Surrogate: Fluoranthene-d10	0.0323		"	0.0333		96.9	40-150			

Summit Scientific

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

Project: Loloff 35-5,6 Tank Battery
Project Number: [none]
Project Manager: Mark Longhurst

Reported:
12/17/21 11:05

PAH by EPA Method 8270D SIM - Quality Control

Summit Scientific

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

Batch BEL0046 - EPA 5030 Soil MS

Matrix Spike (BEL0046-MS1)

Source: 2112034-01

Prepared: 12/03/21 Analyzed: 12/05/21

Acenaphthene	0.0253	0.00500	mg/kg	0.0333	ND	75.8	31-137		
Anthracene	0.0268	0.00500	"	0.0333	ND	80.3	30-120		
Benzo (a) anthracene	0.0239	0.00500	"	0.0333	ND	71.7	30-120		
Benzo (a) pyrene	0.0242	0.00500	"	0.0333	ND	72.7	30-120		
Benzo (b) fluoranthene	0.0254	0.00500	"	0.0333	ND	76.1	30-120		
Benzo (k) fluoranthene	0.0264	0.00500	"	0.0333	ND	79.1	30-120		
Chrysene	0.0263	0.00500	"	0.0333	ND	78.8	30-120		
Dibenz (a,h) anthracene	0.0194	0.00500	"	0.0333	ND	58.2	30-120		
Fluoranthene	0.0279	0.00500	"	0.0333	ND	83.7	30-120		
Fluorene	0.0260	0.00500	"	0.0333	ND	78.0	30-120		
Indeno (1,2,3-cd) pyrene	0.0174	0.00500	"	0.0333	ND	52.1	30-120		
Pyrene	0.0273	0.00500	"	0.0333	ND	81.9	35-142		
1-Methylnaphthalene	0.0225	0.00500	"	0.0333	ND	67.5	15-130		
2-Methylnaphthalene	0.0222	0.00500	"	0.0333	ND	66.5	15-130		
Surrogate: 2-Methylnaphthalene-d10	0.0215		"	0.0333		64.5	40-150		
Surrogate: Fluoranthene-d10	0.0274		"	0.0333		82.1	40-150		

Matrix Spike Dup (BEL0046-MSD1)

Source: 2112034-01

Prepared: 12/03/21 Analyzed: 12/05/21

Acenaphthene	0.0250	0.00500	mg/kg	0.0333	ND	75.0	31-137	1.07	30
Anthracene	0.0256	0.00500	"	0.0333	ND	76.8	30-120	4.42	30
Benzo (a) anthracene	0.0232	0.00500	"	0.0333	ND	69.6	30-120	2.97	30
Benzo (a) pyrene	0.0235	0.00500	"	0.0333	ND	70.6	30-120	3.03	30
Benzo (b) fluoranthene	0.0210	0.00500	"	0.0333	ND	63.0	30-120	18.8	30
Benzo (k) fluoranthene	0.0252	0.00500	"	0.0333	ND	75.6	30-120	4.54	30
Chrysene	0.0255	0.00500	"	0.0333	ND	76.6	30-120	2.78	30
Dibenz (a,h) anthracene	0.0226	0.00500	"	0.0333	ND	67.8	30-120	15.1	30
Fluoranthene	0.0231	0.00500	"	0.0333	ND	69.2	30-120	18.9	30
Fluorene	0.0219	0.00500	"	0.0333	ND	65.6	30-120	17.3	30
Indeno (1,2,3-cd) pyrene	0.0182	0.00500	"	0.0333	ND	54.7	30-120	4.81	30
Pyrene	0.0260	0.00500	"	0.0333	ND	78.1	35-142	4.81	30
1-Methylnaphthalene	0.0143	0.00500	"	0.0333	ND	43.0	15-130	44.3	50
2-Methylnaphthalene	0.0142	0.00500	"	0.0333	ND	42.7	15-130	43.6	50
Surrogate: 2-Methylnaphthalene-d10	0.0146		"	0.0333		43.7	40-150		
Surrogate: Fluoranthene-d10	0.0193		"	0.0333		57.9	40-150		

Summit Scientific

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

Project: Loloff 35-5,6 Tank Battery

Project Number: [none]
Project Manager: Mark Longhurst

Reported:
12/17/21 11:05

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 BEL0146 - EPA 3050B

Blank (BEL0146-BLK1)

Prepared: 12/07/21 Analyzed: 12/13/21

Boron ND 0.0100 mg/L

LCS (BEL0146-BS1)

Prepared: 12/07/21 Analyzed: 12/13/21

Boron 5.67 0.0100 mg/L 5.00 113 80-120

Duplicate (BEL0146-DUP1)

Source: 2111506-01

Prepared: 12/07/21 Analyzed: 12/13/21

Boron 0.0580 0.0100 mg/L 0.0563 2.99 20

Matrix Spike (BEL0146-MS1)

Source: 2111506-01

Prepared: 12/07/21 Analyzed: 12/13/21

Boron 5.63 0.0100 mg/L 5.00 0.0563 111 75-125

Matrix Spike Dup (BEL0146-MSD1)

Source: 2111506-01

Prepared: 12/07/21 Analyzed: 12/13/21

Boron 5.69 0.0100 mg/L 5.00 0.0563 113 75-125 1.05 25

Summit Scientific

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

Project: Loloff 35-5,6 Tank Battery

Project Number: [none]
Project Manager: Mark Longhurst

Reported:
12/17/21 11:05

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 BEL0034 - General Preparation

Blank (BEL0034-BLK1)

Prepared: 12/02/21 Analyzed: 12/11/21

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

LCS (BEL0034-BS1)

Prepared: 12/02/21 Analyzed: 12/11/21

Calcium	5.93	0.0500	mg/L wet	5.00	119	70-130
Magnesium	5.40	0.0500	"	5.00	108	70-130
Sodium	5.12	0.0500	"	5.00	102	70-130

Summit Scientific

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

Project: Loloff 35-5,6 Tank Battery

Project Number: [none]
Project Manager: Mark Longhurst

Reported:
12/17/21 11:05

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 BEL0169 - General Preparation

Duplicate (BEL0169-DUP1)		Source: 2112014-01		Prepared: 12/08/21 Analyzed: 12/09/21	
% Solids	92.0		%	92.1	0.189 20

Summit Scientific

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

Project: Loloff 35-5,6 Tank Battery

Project Number: [none]
Project Manager: Mark Longhurst

Reported:
12/17/21 11:05

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 BEL0055 - General Preparation

Blank (BEL0055-BLK1)

Prepared & Analyzed: 12/03/21

Specific Conductance (EC) ND 0.0100 mmhos/cm

LCS (BEL0055-BS1)

Prepared & Analyzed: 12/03/21

Specific Conductance (EC) 0.157 0.0100 mmhos/cm 0.150 105 95-105

Duplicate (BEL0055-DUP1)

Source: 2111417-01

Prepared & Analyzed: 12/03/21

Specific Conductance (EC) 3.78 0.0100 mmhos/cm 3.76 0.636 20

Summit Scientific

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

Project: Loloff 35-5,6 Tank Battery

Project Number: [none]

Project Manager: Mark Longhurst

Reported:
12/17/21 11:05

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 BEL0056 - General Preparation

LCS (BEL0056-BS1)

Prepared & Analyzed: 12/03/21

pH	9.08	pH Units	9.18	98.9	95-105
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Duplicate (BEL0056-DUP1)

Source: 2111417-01

Prepared & Analyzed: 12/03/21

pH	7.29	pH Units	7.29	0.00	20
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Summit Scientific

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

Project: Loloff 35-5,6 Tank Battery

Project Number: [none]
Project Manager: Mark Longhurst

Reported:
12/17/21 11:05

Notes and Definitions

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

Summit Scientific

4653 Table Mountain Drive, Golden, Colorado 80403

303.277.9310

December 10, 2021

Mark Longhurst

PDC Energy

1775 Sherman St. STE. 3000

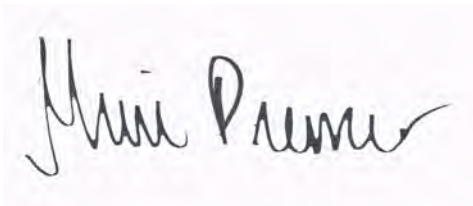
Denver, CO 80203

RE: Loloff 35-5,6 Tank Battery

Work Order #2112057

Enclosed are the results of analyses for samples received by Summit Scientific on 12/03/21 11:05. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

A handwritten signature in black ink, reading "Muri Premier". The signature is written in a cursive, flowing style. The first name "Muri" is written with a large, stylized 'M' and 'u'. The last name "Premier" is written with a large 'P' and a long, sweeping tail that extends to the right.

Muri Premier For Paul Shrewsbury
President



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

Project: Loloff 35-5,6 Tank Battery

Project Number: [none]

Project Manager: Mark Longhurst

Reported:
12/10/21 15:59

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
SS57@2.5'	2112057-01	Soil	12/03/21 09:00	12/03/21 11:05
SS58@4'	2112057-02	Soil	12/03/21 09:05	12/03/21 11:05
SS59@5'	2112057-03	Soil	12/03/21 09:10	12/03/21 11:05
SS60@2.5'	2112057-04	Soil	12/03/21 09:15	12/03/21 11:05
SS61@4'	2112057-05	Soil	12/03/21 09:20	12/03/21 11:05
SS62@5'	2112057-06	Soil	12/03/21 09:25	12/03/21 11:05

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

S₂

2112057

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


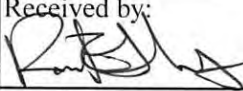
Phone: 303-487-1228

Project Name: Loloff 35-5, 6 Tank Battery

Sampler Name: David Virgil

Project Number:

ID	Sample Description	Date Sampled	Time Sampled	# of containers	Preservative				Matrix				Analysis Requested								Special Instructions
					HCl	HNO ₃	None	Other	Water	Soil	Air-Canister #	Other	BTEXN - 8260B	TPH - (C6 - C36)	pH, EC, SAR	Boron - HWS	TMBs (1,2,4)&(1,3,5)	PAH - 915	Metals - 915		
1	SS 57 @ 2.5'	12/3/21	0900	2			X			X				X	X			X	X		pH, EC, SAR by saturated paste PAHs: - Anthracene - Chrysene - Fluorene - 1-Methylnaphthalene
2	SS 58 @ 4'		0905	2			X			X				X	X			X	X		
3	SS 59 @ 5'		0910	2			X			X				X	X			X	X		
4	SS 60 @ 2.5'		0915	2			X			X				X	X			X	X		
5	SS 61 @ 4'		0920	2			X			X				X	X			X	X		
6	SS 62 @ 5'		0925	2			X			X				X	X			X	X		
7																					
8																					
9																					
10																					

Relinquished by: 	Date/Time: 12/3/21 1105	Received by: Tasman's Lock Box	Date/Time:	Turn Around Time (Check) Same Day <input checked="" type="checkbox"/> 72 hours 24 hours <input type="checkbox"/> Standard 48 hours <input type="checkbox"/>	Notes:
Relinquished by: Tasman's Lock Box	Date/Time:	Received by: 	Date/Time: 12/3/21 1105	Sample Integrity:	
Relinquished by:	Date/Time:	Received by:	Date/Time:	Temperature Upon Receipt: 11.2 Samples Intact: <input checked="" type="radio"/> Yes <input type="radio"/> No	

S₂

Sample Receipt Checklist

S2 Work Order# 2112057Client: Pbc/TasmanClient Project ID: Loloff 35-S, 6 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) 11.2

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.	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	ON ICE
Were all samples received intact ⁽¹⁾ ?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Was adequate sample volume provided ⁽¹⁾ ?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
If custody seals are present, are they intact ⁽¹⁾ ?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Are samples with holding times due within 48 hours sample due within 48 hours present?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Same day
Is a chain-of-custody (COC) form present and filled out completely ⁽¹⁾ ?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Does the COC agree with the number and type of sample bottles received ⁽¹⁾ ?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Do the sample IDs on the bottle labels match the COC ⁽¹⁾ ?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Is the COC properly relinquished by the client w/ date and time recorded ⁽¹⁾ ?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
For volatiles in water – is there headspace present? If yes, contact client and note in narrative.	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
Are samples preserved that require preservation (excluding cooling) ⁽¹⁾ ? 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 or Initials

12.3.21
Date/Time



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

Project: Loloff 35-5,6 Tank Battery

Project Number: [none]
Project Manager: Mark Longhurst

Reported:
12/10/21 15:59

SS57@2.5'
2112057-01 (Soil)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **12/03/21 09:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Benzene	ND	0.0020	mg/kg	1	BEL0073	12/03/21	12/05/21	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: **12/03/21 09:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 1,2-Dichloroethane-d4		108 %	23-173		"	"	"	"	
Surrogate: Toluene-d8		109 %	20-170		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		115 %	21-167		"	"	"	"	

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **12/03/21 09:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
C10-C28 (DRO)	ND	50	mg/kg	1	BEL0074	12/03/21	12/03/21	EPA 8015M	
C28-C36 (ORO)	ND	50	"	"	"	"	"	"	

Date Sampled: **12/03/21 09:00**

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

PAH by EPA Method 8270D SIM

Summit Scientific

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.



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

Project: Loloff 35-5,6 Tank Battery
Project Number: [none]
Project Manager: Mark Longhurst

Reported:
12/10/21 15:59

SS57@2.5'
2112057-01 (Soil)

Summit Scientific

PAH by EPA Method 8270D SIM

Date Sampled: **12/03/21 09:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Anthracene	ND	0.00500	mg/kg	1	BEL0084	12/06/21	12/08/21	EPA 8270D SIM	
Chrysene	ND	0.00500	"	"	"	"	"	"	
Fluorene	ND	0.00500	"	"	"	"	"	"	
1-Methylnaphthalene	ND	0.00500	"	"	"	"	"	"	

Date Sampled: **12/03/21 09:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 2-Methylnaphthalene-d10		75.6 %	40-150		"	"	"	"	
Surrogate: Fluoranthene-d10		75.9 %	40-150		"	"	"	"	

Summit Scientific

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

Project: Loloff 35-5,6 Tank Battery
Project Number: [none]
Project Manager: Mark Longhurst

Reported:
12/10/21 15:59

SS58@4'
2112057-02 (Soil)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **12/03/21 09:05**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Benzene	ND	0.0020	mg/kg	1	BEL0073	12/03/21	12/05/21	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: **12/03/21 09:05**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: 1,2-Dichloroethane-d4		117 %	23-173		"	"	"	"	
Surrogate: Toluene-d8		110 %	20-170		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		112 %	21-167		"	"	"	"	

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **12/03/21 09:05**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
C10-C28 (DRO)	ND	50	mg/kg	1	BEL0074	12/03/21	12/03/21	EPA 8015M	
C28-C36 (ORO)	ND	50	"	"	"	"	"	"	

Date Sampled: **12/03/21 09:05**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: o-Terphenyl		95.7 %	30-150		"	"	"	"	

PAH by EPA Method 8270D SIM

Summit Scientific

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

Project: Loloff 35-5,6 Tank Battery
Project Number: [none]
Project Manager: Mark Longhurst

Reported:
12/10/21 15:59

SS58@4'
2112057-02 (Soil)

Summit Scientific

PAH by EPA Method 8270D SIM

Date Sampled: **12/03/21 09:05**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Anthracene	ND	0.00500	mg/kg	1	BEL0084	12/06/21	12/08/21	EPA 8270D SIM	
Chrysene	ND	0.00500	"	"	"	"	"	"	
Fluorene	ND	0.00500	"	"	"	"	"	"	
1-Methylnaphthalene	ND	0.00500	"	"	"	"	"	"	

Date Sampled: **12/03/21 09:05**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: 2-Methylnaphthalene-d10		72.7 %	40-150		"	"	"	"	
Surrogate: Fluoranthene-d10		76.2 %	40-150		"	"	"	"	

Summit Scientific

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

Project: Loloff 35-5,6 Tank Battery
Project Number: [none]
Project Manager: Mark Longhurst

Reported:
12/10/21 15:59

SS59@5'
2112057-03 (Soil)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **12/03/21 09:10**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Benzene	ND	0.0020	mg/kg	1	BEL0073	12/03/21	12/05/21	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: **12/03/21 09:10**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: 1,2-Dichloroethane-d4		114 %	23-173		"	"	"	"	
Surrogate: Toluene-d8		111 %	20-170		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		113 %	21-167		"	"	"	"	

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **12/03/21 09:10**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
C10-C28 (DRO)	ND	50	mg/kg	1	BEL0074	12/03/21	12/03/21	EPA 8015M	
C28-C36 (ORO)	ND	50	"	"	"	"	"	"	

Date Sampled: **12/03/21 09:10**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: o-Terphenyl		89.1 %	30-150		"	"	"	"	

PAH by EPA Method 8270D SIM

Summit Scientific

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

Project: Loloff 35-5,6 Tank Battery
Project Number: [none]
Project Manager: Mark Longhurst

Reported:
12/10/21 15:59

SS59@5'
2112057-03 (Soil)

Summit Scientific

PAH by EPA Method 8270D SIM

Date Sampled: **12/03/21 09:10**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Anthracene	ND	0.00500	mg/kg	1	BEL0084	12/06/21	12/09/21	EPA 8270D SIM	
Chrysene	ND	0.00500	"	"	"	"	"	"	
Fluorene	ND	0.00500	"	"	"	"	"	"	
1-Methylnaphthalene	ND	0.00500	"	"	"	"	"	"	

Date Sampled: **12/03/21 09:10**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: 2-Methylnaphthalene-d10		66.8 %	40-150		"	"	"	"	
Surrogate: Fluoranthene-d10		72.0 %	40-150		"	"	"	"	

Summit Scientific

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

Project: Loloff 35-5,6 Tank Battery
Project Number: [none]
Project Manager: Mark Longhurst

Reported:
12/10/21 15:59

SS60@2.5'
2112057-04 (Soil)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **12/03/21 09:15**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Benzene	ND	0.0020	mg/kg	1	BEL0073	12/03/21	12/05/21	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: **12/03/21 09:15**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: 1,2-Dichloroethane-d4		118 %	23-173		"	"	"	"	
Surrogate: Toluene-d8		110 %	20-170		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		112 %	21-167		"	"	"	"	

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **12/03/21 09:15**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
C10-C28 (DRO)	ND	50	mg/kg	1	BEL0074	12/03/21	12/03/21	EPA 8015M	
C28-C36 (ORO)	ND	50	"	"	"	"	"	"	

Date Sampled: **12/03/21 09:15**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: o-Terphenyl		77.8 %	30-150		"	"	"	"	

PAH by EPA Method 8270D SIM

Summit Scientific

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

Project: Loloff 35-5,6 Tank Battery
Project Number: [none]
Project Manager: Mark Longhurst

Reported:
12/10/21 15:59

SS60@2.5'
2112057-04 (Soil)

Summit Scientific

PAH by EPA Method 8270D SIM

Date Sampled: **12/03/21 09:15**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Anthracene	ND	0.00500	mg/kg	1	BEL0084	12/06/21	12/09/21	EPA 8270D SIM	
Chrysene	ND	0.00500	"	"	"	"	"	"	
Fluorene	ND	0.00500	"	"	"	"	"	"	
1-Methylnaphthalene	ND	0.00500	"	"	"	"	"	"	

Date Sampled: **12/03/21 09:15**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 2-Methylnaphthalene-d10		62.2 %	40-150		"	"	"	"	
Surrogate: Fluoranthene-d10		68.8 %	40-150		"	"	"	"	

Summit Scientific

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

Project: Loloff 35-5,6 Tank Battery
Project Number: [none]
Project Manager: Mark Longhurst

Reported:
12/10/21 15:59

SS61@4'
2112057-05 (Soil)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **12/03/21 09:20**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Benzene	ND	0.0020	mg/kg	1	BEL0073	12/03/21	12/05/21	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: **12/03/21 09:20**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: 1,2-Dichloroethane-d4		116 %	23-173		"	"	"	"	
Surrogate: Toluene-d8		111 %	20-170		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		112 %	21-167		"	"	"	"	

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **12/03/21 09:20**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
C10-C28 (DRO)	ND	50	mg/kg	1	BEL0074	12/03/21	12/03/21	EPA 8015M	
C28-C36 (ORO)	ND	50	"	"	"	"	"	"	

Date Sampled: **12/03/21 09:20**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: o-Terphenyl		86.3 %	30-150		"	"	"	"	

PAH by EPA Method 8270D SIM

Summit Scientific

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

Project: Loloff 35-5,6 Tank Battery
Project Number: [none]
Project Manager: Mark Longhurst

Reported:
12/10/21 15:59

SS61@4'
2112057-05 (Soil)

Summit Scientific

PAH by EPA Method 8270D SIM

Date Sampled: **12/03/21 09:20**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Anthracene	ND	0.00500	mg/kg	1	BEL0084	12/06/21	12/09/21	EPA 8270D SIM	
Chrysene	ND	0.00500	"	"	"	"	"	"	
Fluorene	ND	0.00500	"	"	"	"	"	"	
1-Methylnaphthalene	ND	0.00500	"	"	"	"	"	"	

Date Sampled: **12/03/21 09:20**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: 2-Methylnaphthalene-d10		78.2 %	40-150		"	"	"	"	
Surrogate: Fluoranthene-d10		82.7 %	40-150		"	"	"	"	

Summit Scientific

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

Project: Loloff 35-5,6 Tank Battery

Project Number: [none]
Project Manager: Mark Longhurst

Reported:
12/10/21 15:59

SS62@5'
2112057-06 (Soil)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **12/03/21 09:25**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Benzene	ND	0.0020	mg/kg	1	BEL0073	12/03/21	12/05/21	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: **12/03/21 09:25**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: 1,2-Dichloroethane-d4		117 %	23-173		"	"	"	"	
Surrogate: Toluene-d8		113 %	20-170		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		113 %	21-167		"	"	"	"	

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **12/03/21 09:25**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
C10-C28 (DRO)	ND	50	mg/kg	1	BEL0074	12/03/21	12/03/21	EPA 8015M	
C28-C36 (ORO)	ND	50	"	"	"	"	"	"	

Date Sampled: **12/03/21 09:25**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: o-Terphenyl		84.1 %	30-150		"	"	"	"	

PAH by EPA Method 8270D SIM

Summit Scientific

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.



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

Project: Loloff 35-5,6 Tank Battery
Project Number: [none]
Project Manager: Mark Longhurst

Reported:
12/10/21 15:59

SS62@5'
2112057-06 (Soil)

Summit Scientific

PAH by EPA Method 8270D SIM

Date Sampled: **12/03/21 09:25**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Anthracene	ND	0.00500	mg/kg	1	BEL0084	12/06/21	12/09/21	EPA 8270D SIM	
Chrysene	ND	0.00500	"	"	"	"	"	"	
Fluorene	ND	0.00500	"	"	"	"	"	"	
1-Methylnaphthalene	ND	0.00500	"	"	"	"	"	"	

Date Sampled: **12/03/21 09:25**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: 2-Methylnaphthalene-d10		62.0 %	40-150		"	"	"	"	
Surrogate: Fluoranthene-d10		69.7 %	40-150		"	"	"	"	

Summit Scientific

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.



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

Project: Loloff 35-5,6 Tank Battery

Project Number: [none]
Project Manager: Mark Longhurst

Reported:
12/10/21 15:59

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 BEL0073 - EPA 5030 Soil MS

Blank (BEL0073-BLK1)

Prepared: 12/03/21 Analyzed: 12/04/21

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	0.0449		"	0.0400		112	23-173			
Surrogate: Toluene-d8	0.0449		"	0.0400		112	20-170			
Surrogate: 4-Bromofluorobenzene	0.0440		"	0.0400		110	21-167			

LCS (BEL0073-BS1)

Prepared: 12/03/21 Analyzed: 12/04/21

Benzene	0.107	0.0020	mg/kg	0.100		107	70-130			
Toluene	0.108	0.0050	"	0.100		108	70-130			
Ethylbenzene	0.0938	0.0050	"	0.100		93.8	70-130			
m,p-Xylene	0.191	0.010	"	0.200		95.5	70-130			
o-Xylene	0.0993	0.0050	"	0.100		99.3	70-130			
1,2,4-Trimethylbenzene	0.0986	0.0050	"	0.100		98.6	70-130			
1,3,5-Trimethylbenzene	0.0922	0.0050	"	0.100		92.2	70-130			
Naphthalene	0.0812	0.0038	"	0.100		81.2	70-130			
Surrogate: 1,2-Dichloroethane-d4	0.0464		"	0.0400		116	23-173			
Surrogate: Toluene-d8	0.0434		"	0.0400		109	20-170			
Surrogate: 4-Bromofluorobenzene	0.0419		"	0.0400		105	21-167			

Matrix Spike (BEL0073-MS1)

Source: 2112052-01

Prepared: 12/03/21 Analyzed: 12/04/21

Benzene	0.0979	0.0020	mg/kg	0.100	ND	97.9	70-130			
Toluene	0.100	0.0050	"	0.100	ND	100	70-130			
Ethylbenzene	0.0840	0.0050	"	0.100	ND	84.0	70-130			
m,p-Xylene	0.169	0.010	"	0.200	ND	84.3	70-130			
o-Xylene	0.0877	0.0050	"	0.100	ND	87.7	70-130			
1,2,4-Trimethylbenzene	0.0822	0.0050	"	0.100	ND	82.2	70-130			
1,3,5-Trimethylbenzene	0.0775	0.0050	"	0.100	ND	77.5	70-130			
Naphthalene	0.0820	0.0038	"	0.100	ND	82.0	50-130			
Surrogate: 1,2-Dichloroethane-d4	0.0458		"	0.0400		114	23-173			
Surrogate: Toluene-d8	0.0429		"	0.0400		107	20-170			
Surrogate: 4-Bromofluorobenzene	0.0427		"	0.0400		107	21-167			

Summit Scientific

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

Project: Loloff 35-5,6 Tank Battery
Project Number: [none]
Project Manager: Mark Longhurst

Reported:
12/10/21 15:59

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 BEL0073 - EPA 5030 Soil MS

Matrix Spike Dup (BEL0073-MSD1)	Source: 2112052-01			Prepared: 12/03/21 Analyzed: 12/04/21						
Benzene	0.0981	0.0020	mg/kg	0.100	ND	98.1	70-130	0.214	30	
Toluene	0.0993	0.0050	"	0.100	ND	99.3	70-130	1.11	30	
Ethylbenzene	0.0811	0.0050	"	0.100	ND	81.1	70-130	3.53	30	
m,p-Xylene	0.166	0.010	"	0.200	ND	82.8	70-130	1.78	30	
o-Xylene	0.0852	0.0050	"	0.100	ND	85.2	70-130	2.81	30	
1,2,4-Trimethylbenzene	0.0790	0.0050	"	0.100	ND	79.0	70-130	4.02	30	
1,3,5-Trimethylbenzene	0.0776	0.0050	"	0.100	ND	77.6	70-130	0.116	30	
Naphthalene	0.0799	0.0038	"	0.100	ND	79.9	50-130	2.56	30	
Surrogate: 1,2-Dichloroethane-d4	0.0469		"	0.0400		117	23-173			
Surrogate: Toluene-d8	0.0438		"	0.0400		110	20-170			
Surrogate: 4-Bromofluorobenzene	0.0430		"	0.0400		107	21-167			

Summit Scientific

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

Project: Loloff 35-5,6 Tank Battery
Project Number: [none]
Project Manager: Mark Longhurst

Reported:
12/10/21 15:59

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 BEL0074 - EPA 3550A

Blank (BEL0074-BLK1)

Prepared: 12/03/21 Analyzed: 12/04/21

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

LCS (BEL0074-BS1)

Prepared: 12/03/21 Analyzed: 12/04/21

C10-C28 (DRO)	492	50	mg/kg	500	98.5	70-130
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Matrix Spike (BEL0074-MS1)

Source: 2112052-01

Prepared: 12/03/21 Analyzed: 12/04/21

C10-C28 (DRO)	493	50	mg/kg	500	17.1	95.2	70-130
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Matrix Spike Dup (BEL0074-MSD1)

Source: 2112052-01

Prepared: 12/03/21 Analyzed: 12/04/21

C10-C28 (DRO)	497	50	mg/kg	500	17.1	96.1	70-130	0.903	20
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Summit Scientific

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

Project: Loloff 35-5,6 Tank Battery
Project Number: [none]
Project Manager: Mark Longhurst

Reported:
12/10/21 15:59

PAH by EPA Method 8270D SIM - Quality Control

Summit Scientific

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

Batch BEL0084 - EPA 5030 Soil MS

Blank (BEL0084-BLK1)

Prepared: 12/06/21 Analyzed: 12/08/21

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	"								
Surrogate: 2-Methylnaphthalene-d10	0.0217		"	0.0333		65.2		40-150			
Surrogate: Fluoranthene-d10	0.0187		"	0.0333		56.0		40-150			

LCS (BEL0084-BS1)

Prepared: 12/06/21 Analyzed: 12/08/21

Acenaphthene	0.0259	0.00500	mg/kg	0.0333		77.7		31-137			
Anthracene	0.0266	0.00500	"	0.0333		79.8		30-120			
Benzo (a) anthracene	0.0243	0.00500	"	0.0333		72.9		30-120			
Benzo (a) pyrene	0.0265	0.00500	"	0.0333		79.6		30-120			
Benzo (b) fluoranthene	0.0281	0.00500	"	0.0333		84.3		30-120			
Benzo (k) fluoranthene	0.0320	0.00500	"	0.0333		95.9		30-120			
Chrysene	0.0257	0.00500	"	0.0333		77.2		30-120			
Dibenz (a,h) anthracene	0.0201	0.00500	"	0.0333		60.3		30-120			
Fluoranthene	0.0280	0.00500	"	0.0333		83.9		30-120			
Fluorene	0.0282	0.00500	"	0.0333		84.7		30-120			
Indeno (1,2,3-cd) pyrene	0.0117	0.00500	"	0.0333		35.2		30-120			
Pyrene	0.0264	0.00500	"	0.0333		79.3		35-142			
1-Methylnaphthalene	0.0278	0.00500	"	0.0333		83.4		35-142			
2-Methylnaphthalene	0.0282	0.00500	"	0.0333		84.7		35-142			
Surrogate: 2-Methylnaphthalene-d10	0.0271		"	0.0333		81.4		40-150			
Surrogate: Fluoranthene-d10	0.0274		"	0.0333		82.2		40-150			

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

Project: Loloff 35-5,6 Tank Battery

Project Number: [none]
Project Manager: Mark Longhurst

Reported:
12/10/21 15:59

PAH by EPA Method 8270D SIM - Quality Control

Summit Scientific

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

Batch BEL0084 - EPA 5030 Soil MS

Matrix Spike (BEL0084-MS1)

Source: 2112042-01

Prepared: 12/06/21 Analyzed: 12/08/21

Acenaphthene	0.0215	0.00500	mg/kg	0.0333	ND	64.5	31-137		
Anthracene	0.0244	0.00500	"	0.0333	ND	73.1	30-120		
Benzo (a) anthracene	0.0245	0.00500	"	0.0333	ND	73.6	30-120		
Benzo (a) pyrene	0.0255	0.00500	"	0.0333	ND	76.6	30-120		
Benzo (b) fluoranthene	0.0277	0.00500	"	0.0333	ND	83.2	30-120		
Benzo (k) fluoranthene	0.0295	0.00500	"	0.0333	ND	88.6	30-120		
Chrysene	0.0238	0.00500	"	0.0333	ND	71.3	30-120		
Dibenz (a,h) anthracene	0.0185	0.00500	"	0.0333	ND	55.4	30-120		
Fluoranthene	0.0243	0.00500	"	0.0333	ND	73.0	30-120		
Fluorene	0.0234	0.00500	"	0.0333	ND	70.3	30-120		
Indeno (1,2,3-cd) pyrene	0.0119	0.00500	"	0.0333	ND	35.6	30-120		
Pyrene	0.0271	0.00500	"	0.0333	ND	81.2	35-142		
1-Methylnaphthalene	0.0227	0.00500	"	0.0333	ND	68.0	15-130		
2-Methylnaphthalene	0.0225	0.00500	"	0.0333	ND	67.6	15-130		
Surrogate: 2-Methylnaphthalene-d10	0.0234		"	0.0333		70.2	40-150		
Surrogate: Fluoranthene-d10	0.0259		"	0.0333		77.6	40-150		

Matrix Spike Dup (BEL0084-MSD1)

Source: 2112042-01

Prepared: 12/06/21 Analyzed: 12/08/21

Acenaphthene	0.0232	0.00500	mg/kg	0.0333	ND	69.7	31-137	7.72	30
Anthracene	0.0249	0.00500	"	0.0333	ND	74.8	30-120	2.31	30
Benzo (a) anthracene	0.0231	0.00500	"	0.0333	ND	69.2	30-120	6.06	30
Benzo (a) pyrene	0.0259	0.00500	"	0.0333	ND	77.6	30-120	1.27	30
Benzo (b) fluoranthene	0.0269	0.00500	"	0.0333	ND	80.7	30-120	3.08	30
Benzo (k) fluoranthene	0.0303	0.00500	"	0.0333	ND	90.8	30-120	2.50	30
Chrysene	0.0244	0.00500	"	0.0333	ND	73.2	30-120	2.62	30
Dibenz (a,h) anthracene	0.0193	0.00500	"	0.0333	ND	57.8	30-120	4.21	30
Fluoranthene	0.0269	0.00500	"	0.0333	ND	80.6	30-120	9.82	30
Fluorene	0.0255	0.00500	"	0.0333	ND	76.4	30-120	8.30	30
Indeno (1,2,3-cd) pyrene	0.0120	0.00500	"	0.0333	ND	36.0	30-120	1.21	30
Pyrene	0.0255	0.00500	"	0.0333	ND	76.4	35-142	6.06	30
1-Methylnaphthalene	0.0268	0.00500	"	0.0333	ND	80.4	15-130	16.7	50
2-Methylnaphthalene	0.0265	0.00500	"	0.0333	ND	79.4	15-130	16.1	50
Surrogate: 2-Methylnaphthalene-d10	0.0258		"	0.0333		77.3	40-150		
Surrogate: Fluoranthene-d10	0.0261		"	0.0333		78.2	40-150		

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

Project: Loloff 35-5,6 Tank Battery

Project Number: [none]
Project Manager: Mark Longhurst

Reported:
12/10/21 15:59

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