

TABLE 1  
FORMER ANDERSON 12-13 TANK BATTERY  
SOIL ANALYTICAL RESULTS SUMMARY TABLE  
CONTAMINANTS OF CONCERN

Sample ID	Date Sampled	Depth	Benzene (mg/kg)	Toluene (mg/kg)	Ethylbenzene (mg/kg)	Total Xylenes (mg/kg)	1, 2, 4-TMB (mg/kg)	1, 3, 5-TMB (mg/kg)	Naphthalene (mg/kg)	TPH <sup>(4)</sup> (mg/kg)	Anthracene (mg/kg)	1-M (mg/kg)	2-M (mg/kg)	Arsenic (mg/kg)	Selenium (mg/kg)
Residential SSL <sup>(1,2)</sup>			1.2	490	5.8	58	30	27	2	500	1,800	18	24	0.68	390
Protection of Groundwater SSL <sup>(1,2,3)</sup>			0.0026	0.69	0.78	9.9	0.0081	0.0087	0.0038	500	5.8	0.006	0.019	0.29	0.26
SS01 @ 3'	3/31/2021	3 ft. bgs	0.077	<0.0050	0.047	0.40	0.096	0.035	0.0079	3.0	NA	NA	NA	NA	NA
SS02 @ 4'	3/31/2021	4 ft. bgs	0.073	0.016	0.017	0.078	0.024	0.0055	<0.0038	1.2	NA	NA	NA	NA	NA
PWV01-B @ 4'	3/31/2021	4 ft. bgs	<0.0020	<0.0050	<0.0050	<0.010	<0.0050	<0.0050	<0.0038	<50	NA	NA	NA	NA	NA
PWV01-S @ 2.5'	3/31/2021	2.5 ft. bgs	<0.0020	<0.0050	<0.0050	<0.010	<0.0050	<0.0050	<0.0038	<50	NA	NA	NA	NA	NA
AST01 @ 0-6"	3/31/2021	0-6 in. bgs	<0.0020	<0.0050	<0.0050	<0.010	<0.0050	<0.0050	<0.0038	<50	NA	NA	NA	NA	NA
SEP01-FL @ 3'	3/31/2021	3 ft. bgs	<0.0020	<0.0050	<0.0050	<0.010	<0.0050	<0.0050	<0.0038	<50	NA	NA	NA	NA	NA
SS03 @ 4'	4/1/2021	4 ft. bgs	<0.020	<0.050	0.64	1.9	5.2	2.3	0.62	380	0.0241	0.0747	0.153	7.76	1.16
SS04 @ 6'	4/1/2021	6 ft. bgs	<0.0020	<0.0050	<0.0050	<0.010	<0.0050	<0.0050	<0.0038	<50	<0.0050	<0.0050	<0.0050	7.21	1.08
SS05 @ 5'	4/1/2021	5 ft. bgs	<0.0020	<0.0050	<0.0050	<0.010	<0.0050	<0.0050	<0.0038	<50	<0.0050	<0.0050	<0.0050	6.60	1.10
SS06 @ 6'	4/1/2021	6 ft. bgs	<0.0020	<0.0050	<0.0050	<0.010	<0.0050	<0.0050	<0.0038	<50	<0.0050	<0.0050	<0.0050	6.18	0.998
SS07 @ 5'	4/2/2021	5 ft. bgs	<0.0020	<0.0050	<0.0050	<0.010	<0.0050	<0.0050	<0.0038	<50	<0.0050	<0.0050	<0.0050	7.76	1.13
SS08 @ 3'	4/2/2021	3 ft. bgs	<0.0020	<0.0050	<0.0050	<0.010	<0.0050	<0.0050	<0.0038	<50	<0.0050	<0.0050	<0.0050	6.26	1.08
SS09 @ 6'	4/2/2021	6 ft. bgs	<0.0020	<0.0050	<0.0050	<0.010	<0.0050	<0.0050	<0.0038	<50	<0.0050	<0.0050	<0.0050	6.89	0.990
SS10 @ 5'	4/2/2021	5 ft. bgs	<0.0020	<0.0050	<0.0050	<0.010	<0.0050	<0.0050	<0.0038	<50	<0.0050	<0.0050	<0.0050	4.72	0.925
SS11 @ 3'	4/2/2021	3 ft. bgs	<0.0020	<0.0050	<0.0050	<0.010	<0.0050	<0.0050	<0.0038	<50	<0.0050	<0.0050	<0.0050	9.93	1.32
SS12 @ 5'	4/2/2021	5 ft. bgs	<0.0020	<0.0050	<0.0050	<0.010	<0.0050	<0.0050	<0.0038	<50	<0.0050	<0.0050	<0.0050	7.27	1.10
SS13 @ 3'	4/2/2021	3 ft. bgs	<0.0020	<0.0050	<0.0050	<0.010	<0.0050	<0.0050	<0.0038	<50	<0.0050	<0.0050	<0.0050	9.68	1.63
SS14 @ 7'	4/2/2021	7 ft. bgs	<0.0020	<0.0050	<0.0050	<0.010	<0.0050	<0.0050	<0.0038	<50	<0.0050	<0.0050	<0.0050	8.96	1.04
SS15 @ 6'	4/2/2021	6 ft. bgs	<0.0020	<0.0050	<0.0050	<0.010	<0.0050	<0.0050	<0.0038	<50	<0.0050	<0.0050	<0.0050	4.86	1.36
SS16 @ 3'	4/2/2021	3 ft. bgs	<0.0020	<0.0050	<0.0050	<0.010	<0.0050	<0.0050	<0.0038	0.57	<0.0050	<0.0050	<0.0050	7.76	1.39
SS17 @ 6'	4/5/2021	6 ft. bgs	<0.0020	<0.0050	<0.0050	<0.010	<0.0050	<0.0050	<0.0038	<50	<0.0050	<0.0050	<0.0050	7.76	1.15
SS18 @ 3'	4/5/2021	3 ft. bgs	<0.0020	<0.0050	<0.0050	<0.010	<0.0050	<0.0050	<0.0038	<50	<0.0050	<0.0050	<0.0050	8.47	1.47
SS19 @ 3'	4/5/2021	3 ft. bgs	<0.0020	<0.0050	<0.0050	<0.010	<0.0050	<0.0050	<0.0038	<50	<0.0050	<0.0050	<0.0050	10.2	2.03
SS20 @ 6'	4/5/2021	6 ft. bgs	<0.0020	<0.0050	<0.0050	<0.010	<0.0050	<0.0050	<0.0038	<50	<0.0050	<0.0050	<0.0050	7.80	1.26
SS21 @ 7'	4/5/2021	7 ft. bgs	<0.0020	<0.0050	<0.0050	<0.010	<0.0050	<0.0050	<0.0038	<50	<0.0050	<0.0050	<0.0050	8.02	1.11
SS22 @ 4'	4/5/2021	4 ft. bgs	<0.0020	<0.0050	<0.0050	<0.010	<0.0050	<0.0050	<0.0038	<50	<0.0050	<0.0050	<0.0050	5.68	0.825
SS23 @ 6'	4/5/2021	6 ft. bgs	<0.0020	<0.0050	<0.0050	<0.010	<0.0050	<0.0050	<0.0038	<50	<0.0050	<0.0050	<0.0050	6.37	0.718
SS24 @ 7'	4/6/2021	7 ft. bgs	<0.0020	<0.0050	<0.0050	<0.010	<0.0050	<0.0050	<0.0038	<50	<0.0050	<0.0050	<0.0050	7.72	1.09
SS25 @ 6'	4/6/2021	6 ft. bgs	<0.0020	<0.0050	<0.0050	<0.010	<0.0050	<0.0050	<0.0038	<50	<0.0050	<0.0050	<0.0050	6.68	1.00
SS26 @ 3'	4/6/2021	3 ft. bgs	<0.0020	<0.0050	<0.0050	<0.010	<0.0050	<0.0050	<0.0038	<50	<0.0050	<0.0050	<0.0050	5.80	0.904
SS27 @ 6'	4/6/2021	6 ft. bgs	<0.0020	<0.0050	<0.0050	<0.010	<0.0050	<0.0050	<0.0038	<50	<0.0050	<0.0050	<0.0050	6.33	0.856
SS28 @ 3'	4/6/2021	3 ft. bgs	<0.0020	<0.0050	<0.0050	<0.010	<0.0050	<0.0050	<0.0038	<50	<0.0050	<0.0050	<0.0050	9.36	1.01
SS29 @ 6'	4/6/2021	6 ft. bgs	<0.0020	<0.0050	<0.0050	<0.010	<0.0050	<0.0050	<0.0038	<50	<0.0050	<0.0050	<0.0050	8.36	1.25
SS30 @ 3'	4/6/2021	3 ft. bgs	<0.0020	<0.0050	<0.0050	<0.010	<0.0050	<0.0050	<0.0038	<50	<0.0050	<0.0050	<0.0050	5.62	0.723
SS32 @ 6'	4/7/2021	6 ft. bgs	<0.0020	<0.0050	<0.0050	<0.010	<0.0050	<0.0050	<0.0038	<50	<0.0050	<0.0050	<0.0050	7.48	0.813
SS33 @ 3'	4/7/2021	3 ft. bgs	<0.0020	<0.0050	<0.0050	<0.010	<0.0050	<0.0050	<0.0038	<50	<0.0050	<0.0050	<0.0050	10.8	1.05
SS34 @ 6'	4/7/2021	6 ft. bgs	<0.0020	<0.0050	<0.0050	<0.010	<0.0050	<0.0050	<0.0038	<50	<0.0050	<0.0050	<0.0050	5.93	0.843
SS35 @ 3'	4/7/2021	3 ft. bgs	<0.0020	<0.0050	<0.0050	<0.010	<0.0050	<0.0050	<0.0038	<50	<0.0050	<0.0050	<0.0050	6.51	0.789
SS36 @ 7'	4/7/2021	7 ft. bgs	<0.0020	<0.0050	<0.0050	<0.010	<0.0050	<0.0050	<0.0038	<50	<0.0050	<0.0050	<0.0050	5.07	0.987
SS37 @ 6'	4/7/2021	6 ft. bgs	<0.0020	<0.0050	<0.0050	<0.010	<0.0050	<0.0050	<0.0038	<50	<0.0050	<0.0050	<0.0050	7.35	0.718
SS38 @ 3'	4/7/2021	3 ft. bgs	<0.0020	<0.0050	<0.0050	<0.010	<0.0050	<0.0050	<0.0038	<50	<0.0050	<0.0050	<0.0050	6.14	0.942
SS39 @ 7'	4/7/2021	7 ft. bgs	<0.0020	<0.0050	<0.0050	<0.010	<0.0050	<0.0050	<0.0038	<50	<0.0050	<0.0050	<0.0050	4.77	1.06
SS40 @ 6'	4/7/2021	6 ft. bgs	<0.0020	<0.0050	<0.0050	<0.010	<0.0050	<0.0050	<0.0038	<50	<0.0050	<0.0050	<0.0050	3.34	0.378
SS41 @ 3'	4/7/2021	3 ft. bgs	<0.0020	<0.0050	<0.0050	<0.010	<0.0050	<0.0050	<0.0038	<50	<0.0050	<0.0050	<0.0050	5.94	1.03

Notes:  
1. Compounds referenced from the COGCC 2 CCR 404-1, Table 915-1, effective January 15, 2021.  
2. Soil Screening Levels (SSL) referenced from EPA Regional Screening Levels (EPA RSLs) for Chemical Contaminants at Superfund Sites, effective November 2020.  
3. SSLs are applicable if a pathway for communication with groundwater is present.  
4. Value calculated by adding TVPH-GRO, TEPH-DRO, and TEPH-ORO concentrations.  
COGCC = Colorado Oil and Gas Conservation Commission  
(<) = Analytical result is less than the indicated laboratory reporting limit.  
TVPH-GRO = Total volatile petroleum hydrocarbons - gasoline range organics  
TEPH-DRO = Total extractable petroleum hydrocarbons - diesel range organics  
TEPH-ORO = Total extactable petroleum hydrocarbons - oil range organics  
mg/kg = Milligrams per kilogram  
= Source material characterization sample  
ft. = Feet  
in. = Inches  
bgs = Below ground surface  
**BOLD** = Analytical result is in exceedance of applicable standard but within 1.25x the background soil concentration.  
**BOLD** = Analytical result is in exceedance of applicable standard and above 1.25x the background soil concentration.  
NA = Constituent not analyzed

**TABLE 2**  
**FORMER ANDERSON 12-13 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 <sup>(1)</sup>			6-8.3	<4	<6	2
SS03 @ 4'	4/1/2021	4 ft. bgs	8.28	1.98	2.11	0.462
PWV01-S @ 2.5'	3/31/2021	2.5 ft. bgs	8.22	3.80	1.39	0.444
SS31 @ 2.5'	4/6/2021	2.5 ft. bgs	8.10	<b>9.69</b>	3.27	0.672

**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

  = Source material characterization sample

ft. = Feet

bgs = Below ground surface

NA = Constituent not analyzed

**BOLD** = Analytical result is in exceedance of applicable standard.

TABLE 3  
FORMER ANDERSON 12-13 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 <sup>(1,2)</sup>			360	1,800	1.1	0.11	1.1	11	110	0.11	240	240	1.1	180	18	24
Protection of Groundwater SSL <sup>(1,2,3)</sup>			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
SS03 @ 4'	4/1/2021	4 ft. bgs	<0.00500	0.0241	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	0.0747	0.153

**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.  
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 ANDERSON 12-13 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 <sup>(1,2)</sup>			0.68	15,000	71	0.3	3,100	400	1,500	390	390	23,000
Protection of Groundwater SSL <sup>(1,2,3)</sup>			0.29	82	0.38	0.00067	46	14	26	0.26	0.8	370
SS03 @ 4'	4/1/2021	4 ft. bgs	7.76	158	0.258	<0.30 <sup>(4)</sup>	11.7	9.84	13.1	1.16	0.0540	50.6
BKG01 @ 2.5'	3/31/2021	2.5 ft. bgs	5.53	141	<0.249	<0.30 <sup>(4)</sup>	11.1	8.87	11.7	0.824	0.0420	42.4

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.

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 ANDERSON 12-13 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 <sup>(2)</sup> (ft.)	Groundwater Elevation (ft. AMSL)
<b>COGCC Table 915-1 Groundwater Standard (µg/L) <sup>(1)</sup></b>		<b>5</b>	<b>560</b>	<b>700</b>	<b>1,400</b>	<b>140</b>	<b>67</b>	<b>67</b>	<b>-</b>	<b>-</b>
GW01	4/7/2021	<1.0	<1.0	<1.0	2.3	<1.0	1.6	<1.0	6	NM

**Notes:**

- Groundwater standards referenced from 2 CCR 404-1, Table 915-1, January 15, 2021.
  - 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  
AMSL = Above Mean Sea Level  
NM = Not measured

**TABLE 6**  
**FORMER ANDERSON 12-13 TANK BATTERY**  
**FIELD DATA SUMMARY TABLE**

Sample ID	Date Sampled	Depth	GPS Data <sup>(1)</sup> Latitude / Longitude		PDOP Value	VOC Concentration <sup>(2)</sup> (ppm)
SS01 @ 3'	3/31/2021	3 ft. bgs	40.488155	-104.614703	1.3	33.6
SS02 @ 4'	3/31/2021	4 ft. bgs	40.488401	-104.614708	1.2	24.8
PWV01-B @ 4'	3/31/2021	4 ft. bgs	40.488350	-104.614733	1.2	0.0
PWV01-N @ 2.5'	3/31/2021	2.5 ft. bgs	40.488366	-104.614737	1.1	0.1
PWV01-E @ 2.5'	3/31/2021	2.5 ft. bgs	40.488354	-104.614715	1.2	0.2
PWV01-S @ 2.5'	3/31/2021	2.5 ft. bgs	40.488335	-104.614729	1.1	0.7
PWV01-W @ 2.5'	3/31/2021	2.5 ft. bgs	40.488354	-104.614759	1.1	0.1
WDL01 @ 4'	3/31/2021	4 ft. bgs	40.488338	-104.614721	1.1	0.5
AST01 @ 0-6"	3/31/2021	0-6 in. bgs	40.488374	-104.614712	1.1	0.9
MH01 @ 0-6"	3/31/2021	0-6 in. bgs	40.488374	-104.614712	1.1	1,200
SEP01-FL @ 3'	3/31/2021	3 ft. bgs	40.488116	-104.614747	1.3	2.7
BKG01 @ 2.5'	3/31/2021	2.5 ft. bgs	40.488284	-104.615067	1.0	1.0
SS03 @ 4'	4/1/2021	4 ft. bgs	40.488281	-104.614704	1.2	2,180
SS04 @ 6'	4/1/2021	6 ft. bgs	NC	NC	NC	1.7
SS05 @ 5'	4/1/2021	5 ft. bgs	40.488296	-104.614735	1.0	1.2
SS06 @ 6'	4/1/2021	6 ft. bgs	40.488349	-104.614677	1.1	1.5
SS07 @ 5'	4/2/2021	5 ft. bgs	40.488426	-104.614729	1.0	1.3
SS08 @ 3'	4/2/2021	3 ft. bgs	40.488426	-104.614729	1.0	2.1
SS09 @ 6'	4/2/2021	6 ft. bgs	40.488383	-104.614716	1.0	0.3
SS10 @ 5'	4/2/2021	5 ft. bgs	40.488393	-104.614696	1.0	0.3
SS11 @ 3'	4/2/2021	3 ft. bgs	40.488393	-104.614696	1.0	0.4
SS12 @ 5'	4/2/2021	5 ft. bgs	40.488375	-104.614737	1.0	0.7
SS13 @ 3'	4/2/2021	3 ft. bgs	40.488375	-104.614737	1.0	1.2
SS14 @ 7'	4/2/2021	7 ft. bgs	40.488330	-104.614719	1.1	0.6
SS15 @ 6'	4/2/2021	6 ft. bgs	40.488310	-104.614698	1.0	4.7
SS16 @ 3'	4/2/2021	3 ft. bgs	40.488310	-104.614698	1.0	15.2
SS17 @ 6'	4/5/2021	6 ft. bgs	40.488227	-104.614689	0.9	0.2
SS18 @ 3'	4/5/2021	3 ft. bgs	40.488227	-104.614689	0.9	1.7
SS19 @ 3'	4/5/2021	3 ft. bgs	40.488237	-104.614687	1.1	0.2
SS20 @ 6'	4/5/2021	6 ft. bgs	40.488237	-104.614687	1.1	0.0
SS21 @ 7'	4/5/2021	7 ft. bgs	NC	NC	NC	4.6
SS22 @ 4'	4/5/2021	4 ft. bgs	40.488211	-104.614749	1.0	1.1
SS23 @ 6'	4/5/2021	6 ft. bgs	40.488211	-104.614749	1.0	0.1
SS24 @ 7'	4/6/2021	7 ft. bgs	NC	NC	NC	0.8
SS25 @ 6'	4/6/2021	6 ft. bgs	40.488145	-104.614754	1.1	0.2
SS26 @ 3'	4/6/2021	3 ft. bgs	40.488145	-104.614754	1.1	0.1
SS27 @ 6'	4/6/2021	6 ft. bgs	40.488102	-104.614710	1.2	0.8
SS28 @ 3'	4/6/2021	3 ft. bgs	40.488102	-104.614710	1.2	0.1
SS29 @ 6'	4/6/2021	6 ft. bgs	40.488146	-104.614675	1.0	0.0
SS30 @ 3'	4/6/2021	3 ft. bgs	40.488146	-104.614675	1.0	0.1
SS31 @ 2.5'	4/6/2021	2.5 ft. bgs	40.488105	-104.614743	1.0	0.0

**TABLE 6**  
**FORMER ANDERSON 12-13 TANK BATTERY**  
**FIELD DATA SUMMARY TABLE**

Sample ID	Date Sampled	Depth	GPS Data <sup>(1)</sup> Latitude / Longitude		PDOP Value	VOC Concentration <sup>(2)</sup> (ppm)
SS32 @ 6'	4/7/2021	6 ft. bgs	40.488186	-104.614765	1.2	0.1
SS33 @ 3'	4/7/2021	3 ft. bgs	40.488186	-104.614765	1.2	0.1
SS34 @ 6'	4/7/2021	6 ft. bgs	40.488194	-104.614684	1.2	0.1
SS35 @ 3'	4/7/2021	3 ft. bgs	40.488194	-104.614684	1.2	0.2
SS36 @ 7'	4/7/2021	7 ft. bgs	NC	NC	NC	0.0
SS37 @ 6'	4/7/2021	6 ft. bgs	40.488261	-104.614753	1.1	0.1
SS38 @ 3'	4/7/2021	3 ft. bgs	40.488261	-104.614753	1.1	0.0
SS39 @ 7'	4/7/2021	7 ft. bgs	NC	NC	NC	0.1
SS40 @ 6'	4/7/2021	6 ft. bgs	40.488265	-104.614687	1.0	0.0
SS41 @ 3'	4/7/2021	3 ft. bgs	40.488265	-104.614687	1.0	0.2

**Notes:**

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

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

PDOP = Position Dilution of Precision

ppm = Parts per million

= Source material characterization sample

ft. = Feet

bgs = Below ground surface

NC = Data not collected

## Attachment A



# Summit Scientific

---

4653 Table Mountain Drive, Golden, Colorado 80403

303.277.9310

April 16, 2021

Mark Longhurst

PDC Energy

1775 Sherman St. STE. 3000

Denver, CO 80203

RE: Anderson 12-13 Tank Battery

Work Order #2103472

Enclosed are the results of analyses for samples received by Summit Scientific on 03/31/21 19:12. 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: Anderson 12-13 Tank Battery

Project Number: [none]  
Project Manager: Mark Longhurst

**Reported:**  
04/16/21 15:27

#### ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
PWV01-B@4'	2103472-01	Soil	03/31/21 10:55	03/31/21 19:12
PWV01-S@2.5'	2103472-02	Soil	03/31/21 10:58	03/31/21 19:12
AST01@0-6"	2103472-03	Soil	03/31/21 11:09	03/31/21 19:12
SEP01-FL@3'	2103472-04	Soil	03/31/21 12:01	03/31/21 19:12
BKG01@2.5'	2103472-05	Soil	03/31/21 15:21	03/31/21 19:12
SS01@3'	2103472-06	Soil	03/31/21 14:43	03/31/21 19:12
SS02@4'	2103472-07	Soil	03/31/21 14:59	03/31/21 19:12

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.*

2103472.1

Page 1 of 2

Project Name: Anderson 12-13 Tank Battery

					Preservative				Matrix				Analysis Requested								Special Instructions	
ID	Sample Description	Date Sampled	Time Sampled	# of containers	HCl	HNO3	None	Other	Water	Soil	Air-Canister #	Other	GBTEXN - 8260B - 915	TPH - (C6 - C36) - 915	TMB's (1,2,4 & 1,3,5) - 915	pH, EC, SAR - 915	Boron - HWS - 915	VOC - 915	PAH - 915	Metals - 915		
1	PW01-B@ 4'	3/31/21	1055	2			X			X			X	X	X							Hold pH, EC, SAR by saturated paste
2	PW01-S@ 2.5'	↓	1058	4			X			X			X	X	X	X	X					
3	AST01@ 0-6"		1109	2			X			X			X	X	X							
4	SEP01-FL@ 3'	↓	1201	2			X			X			X	X	X							
5	BKG01@ 2.5'	↓	1521	2			X			X											X	
6																						
7																						
8																						
9																						
10																						
Relinquished by: Kevin Fletcher		Date/Time: 3/31/21 1700		Received by: Tasman's Lock Box		Date/Time: 3/31/21 1700		Turn Around Time (Check)				Notes:										
								Same Day _____ 72 hours _____														
								24 hours _____ Standard <u>X</u>														
								48 hours _____														
								Sample Integrity:														
								Temperature Upon Receipt: <u>9.1</u>														
								Samples Intact: <u>Yes</u> No														

# Summit Scientific

S<sub>2</sub>

2103472.2

4653 Table Mountain Drive ♦ Golden, Colorado 80403

303-277-9310

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: Anderson 12-13 Tank Battery

Sampler Name: Kevin Fletcher

Project Number:

ID	Sample Description	Date Sampled	Time Sampled	# of containers	Preservative				Matrix				Analysis Requested										Special Instructions			
					HCl	HNO <sub>3</sub>	None	Other	Water	Soil	Air-Canister #	Other	GBTEXN - 8260B - 915	TPH - (C6 - C36) - 915	TMB's (1,2,4 & 1,3,5) - 915	pH, EC, SAR - 915	Boron - HWS - 915	VOC - 915	PAH - 915	Metals - 915						
1	SS01@3'	3/31/21	1443	4			X			X				X	X	X										pH, EC, SAR by saturated paste
2	SS02@4'	✓	1459	4			X			X				X	X	X										
3																										
4																										
5																										
6																										
7																										
8																										
9																										
10																										

Relinquished by: <u>Kevin Fletcher</u>	Date/Time: <u>3/31/21</u> <u>1700</u>	Received by: <u>Tasman's Lock Box</u>	Date/Time: <u>3/31/21</u> <u>1700</u>	<b>Turn Around Time</b> (Check) Same Day <u>X</u> 72 hours ___ 24 hours ___ Standard ___ 48 hours ___ <b>Sample Integrity:</b> Temperature Upon Receipt: <u>9.1</u> Samples Intact: <u>Yes</u> No ___	<b>Notes:</b>  <u>ON ICE</u>
Relinquished by: <u>Tasman's Lock Box</u>	Date/Time: <u>3-31-21</u> <u>18:45</u>	Received by: <u>[Signature]</u>	Date/Time: <u>3-31-21</u> <u>18:45</u>		
Relinquished by:	Date/Time:	Received by:	Date/Time:		

# Sample Receipt Checklist

S2 Work Order 2103472

Client: PDC/Tasman Client Project ID: Anderson 12-13 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)	9.1
-----------	-----

Thermometer ID: 61857155-K

	Yes	No	N/A	Comments (if any)
If samples require cooling, was the temperature at 4°C +/- 2°C <sup>(1)</sup> ? NOTE: If samples are delivered the same day of sampling, this requirement is met provided that there is evidence that cooling has begun.	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	On Ice
Were all samples received intact <sup>(1)</sup> ?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Was adequate sample volume provided <sup>(1)</sup> ?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
If custody seals are present, are they intact <sup>(1)</sup> ?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
Are samples with holding times due within 48 hours sample due within 48 hours present?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	same day
Is a chain-of-custody (COC) form present and filled out completely <sup>(1)</sup> ?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Does the COC agree with the number and type of sample bottles received <sup>(1)</sup> ?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Do the sample IDs on the bottle labels match the COC <sup>(1)</sup> ?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Is the COC properly relinquished by the client w/ date and time recorded <sup>(1)</sup> ?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
For volatiles in water – is there headspace present? If yes, contact client and note in narrative.	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
Are samples preserved that require preservation (excluding cooling) <sup>(1)</sup> ? Note the type of preservative in the Comments column – HCl, H2SO4, NaOH, HNO3, ect	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
If samples are acid preserved for metals, is the pH ≤ 2 <sup>(1)</sup> ? 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):   				
<sup>(1)</sup> If NO, then contact the client before proceeding with analysis and note in case narrative.				

MP  
Custodian Printed Name or Initials

Muri Premer  
Signature of Custodian

3/31/21  
Date/Time





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

Project: Anderson 12-13 Tank Battery  
Project Number: [none]  
Project Manager: Mark Longhurst

**Reported:**  
04/16/21 15:27

**PWV01-B@4'**  
**2103472-01 (Soil)**

**Summit Scientific**

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

Date Sampled: **03/31/21 10:55**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Benzene	ND	0.0020	mg/kg	1	BED0080	04/06/21	04/07/21	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: **03/31/21 10:55**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 1,2-Dichloroethane-d4		114 %	23-173		"	"	"	"	
Surrogate: Toluene-d8		91.5 %	20-170		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		99.8 %	21-167		"	"	"	"	

**Extractable Petroleum Hydrocarbons by 8015**

Date Sampled: **03/31/21 10:55**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
C10-C28 (DRO)	ND	50	mg/kg	1	BED0105	04/07/21	04/08/21	EPA 8015M	
C28-C36 (ORO)	ND	50	"	"	"	"	"	"	

Date Sampled: **03/31/21 10:55**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: o-Terphenyl		62.3 %	30-150		"	"	"	"	

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: Anderson 12-13 Tank Battery  
Project Number: [none]  
Project Manager: Mark Longhurst

**Reported:**  
04/16/21 15:27

**PWV01-S@2.5'**  
**2103472-02 (Soil)**

**Summit Scientific**

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

Date Sampled: **03/31/21 10:58**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Benzene	ND	0.0020	mg/kg	1	BED0080	04/06/21	04/07/21	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: **03/31/21 10:58**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: 1,2-Dichloroethane-d4		104 %	23-173		"	"	"	"	
Surrogate: Toluene-d8		91.1 %	20-170		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		97.0 %	21-167		"	"	"	"	

**Extractable Petroleum Hydrocarbons by 8015**

Date Sampled: **03/31/21 10:58**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
C10-C28 (DRO)	ND	50	mg/kg	1	BED0105	04/07/21	04/08/21	EPA 8015M	
C28-C36 (ORO)	ND	50	"	"	"	"	"	"	

Date Sampled: **03/31/21 10:58**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: o-Terphenyl		89.9 %	30-150		"	"	"	"	

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

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: Anderson 12-13 Tank Battery  
Project Number: [none]  
Project Manager: Mark Longhurst

**Reported:**  
04/16/21 15:27

**PWV01-S@2.5'**  
**2103472-02 (Soil)**

**Summit Scientific**

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

Date Sampled: **03/31/21 10:58**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Boron	0.444	0.0100	mg/L	1	BED0051	04/05/21	04/06/21	EPA 6020B	

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

Date Sampled: **03/31/21 10:58**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Calcium	506	0.0611	mg/L dry	1	BED0084	04/06/21	04/08/21	EPA 6020B	
Magnesium	283	0.0611	"	"	"	"	"	"	
Sodium	157	0.0611	"	"	"	"	"	"	

**Calculated Analysis**

Date Sampled: **03/31/21 10:58**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	1.39	0.100	units	1	BED0149	04/08/21	04/08/21	Calculation	

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

Date Sampled: **03/31/21 10:58**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
% Solids	81.8		%	1	BED0053	04/05/21	04/06/21	Calculation	

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

Date Sampled: **03/31/21 10:58**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Specific Conductance (EC)	3.80	0.0100	mmhos/cm	1	BED0119	04/07/21	04/07/21	EPA 120.1	

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

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: Anderson 12-13 Tank Battery  
Project Number: [none]  
Project Manager: Mark Longhurst

**Reported:**  
04/16/21 15:27

**PWV01-S@2.5'**  
**2103472-02 (Soil)**

**Summit Scientific**

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

Date Sampled: **03/31/21 10:58**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
<b>pH</b>	<b>8.22</b>			pH Units	1	BED0120	04/07/21	04/07/21	EPA 9045D	

Summit Scientific

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

Project: Anderson 12-13 Tank Battery  
Project Number: [none]  
Project Manager: Mark Longhurst

**Reported:**  
04/16/21 15:27

**AST01@0-6"**  
**2103472-03 (Soil)**

**Summit Scientific**

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

Date Sampled: **03/31/21 11:09**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Benzene	ND	0.0020	mg/kg	1	BED0080	04/06/21	04/07/21	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: **03/31/21 11:09**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: 1,2-Dichloroethane-d4		105 %	23-173		"	"	"	"	
Surrogate: Toluene-d8		90.5 %	20-170		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		95.8 %	21-167		"	"	"	"	

**Extractable Petroleum Hydrocarbons by 8015**

Date Sampled: **03/31/21 11:09**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
C10-C28 (DRO)	ND	50	mg/kg	1	BED0105	04/07/21	04/08/21	EPA 8015M	
C28-C36 (ORO)	ND	50	"	"	"	"	"	"	

Date Sampled: **03/31/21 11:09**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: o-Terphenyl		84.8 %	30-150		"	"	"	"	

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: Anderson 12-13 Tank Battery  
Project Number: [none]  
Project Manager: Mark Longhurst

**Reported:**  
04/16/21 15:27

**SEP01-FL@3'**  
**2103472-04 (Soil)**

**Summit Scientific**

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

Date Sampled: **03/31/21 12:01**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Benzene	ND	0.0020	mg/kg	1	BED0080	04/06/21	04/07/21	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: **03/31/21 12:01**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: 1,2-Dichloroethane-d4		104 %	23-173		"	"	"	"	
Surrogate: Toluene-d8		92.0 %	20-170		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		96.8 %	21-167		"	"	"	"	

**Extractable Petroleum Hydrocarbons by 8015**

Date Sampled: **03/31/21 12:01**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
C10-C28 (DRO)	ND	50	mg/kg	1	BED0105	04/07/21	04/08/21	EPA 8015M	
C28-C36 (ORO)	ND	50	"	"	"	"	"	"	

Date Sampled: **03/31/21 12:01**

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

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: Anderson 12-13 Tank Battery  
Project Number: [none]  
Project Manager: Mark Longhurst

**Reported:**  
04/16/21 15:27

**BKG01@2.5'**  
**2103472-05 (Soil)**

**Summit Scientific**

**Total Metals by EPA 6020B**

Date Sampled: **03/31/21 15:21**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Arsenic	5.53	0.249	mg/kg dry	1	BED0226	04/13/21	04/15/21	EPA 6020B	
Barium	141	0.497	"	"	"	"	"	"	
Cadmium	ND	0.249	"	"	"	"	"	"	
Copper	11.1	0.497	"	"	"	"	"	"	
Lead	8.87	0.249	"	"	"	"	"	"	
Nickel	11.7	0.497	"	"	"	"	"	"	
Selenium	0.824	0.323	"	"	"	"	"	"	
Silver	0.0420	0.0249	"	"	"	"	"	"	
Zinc	42.4	0.497	"	"	"	"	"	"	

**Hexavalent Chromium by EPA Method 7196**

Date Sampled: **03/31/21 15:21**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Chromium, Hexavalent	ND	0.30	mg/kg dry	1	BED0273	04/15/21	04/16/21	EPA 7196A	

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

Date Sampled: **03/31/21 15:21**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
% Solids	80.5		%	1	BED0227	04/13/21	04/14/21	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: Anderson 12-13 Tank Battery  
Project Number: [none]  
Project Manager: Mark Longhurst

**Reported:**  
04/16/21 15:27

**SS01@3'**  
**2103472-06 (Soil)**

**Summit Scientific**

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

Date Sampled: **03/31/21 14:43**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
<b>Benzene</b>	<b>0.0077</b>	0.0020	mg/kg	1	BEC0548	03/31/21	03/31/21	EPA 8260B	
Toluene	ND	0.0050	"	"	"	"	"	"	
<b>Ethylbenzene</b>	<b>0.047</b>	0.0050	"	"	"	"	"	"	
<b>Xylenes (total)</b>	<b>0.40</b>	0.010	"	"	"	"	"	"	
<b>1,2,4-Trimethylbenzene</b>	<b>0.096</b>	0.0050	"	"	"	"	"	"	
<b>1,3,5-Trimethylbenzene</b>	<b>0.035</b>	0.0050	"	"	"	"	"	"	
<b>Naphthalene</b>	<b>0.0079</b>	0.0038	"	"	"	"	"	"	
<b>Gasoline Range Hydrocarbons</b>	<b>3.0</b>	0.50	"	"	"	"	"	"	

Date Sampled: **03/31/21 14:43**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: 1,2-Dichloroethane-d4		78.5 %	23-173		"	"	"	"	
Surrogate: Toluene-d8		91.0 %	20-170		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		104 %	21-167		"	"	"	"	

**Extractable Petroleum Hydrocarbons by 8015**

Date Sampled: **03/31/21 14:43**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
C10-C28 (DRO)	ND	50	mg/kg	1	BEC0549	"	03/31/21	EPA 8015M	
C28-C36 (ORO)	ND	50	"	"	"	"	"	"	

Date Sampled: **03/31/21 14:43**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: o-Terphenyl		94.9 %	30-150		"	"	"	"	

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: Anderson 12-13 Tank Battery  
Project Number: [none]  
Project Manager: Mark Longhurst

**Reported:**  
04/16/21 15:27

**SS02@4'**  
**2103472-07 (Soil)**

**Summit Scientific**

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

Date Sampled: **03/31/21 14:59**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
<b>Benzene</b>	<b>0.073</b>	0.0020	mg/kg	1	BEC0548	03/31/21	03/31/21	EPA 8260B	
<b>Toluene</b>	<b>0.016</b>	0.0050	"	"	"	"	"	"	
<b>Ethylbenzene</b>	<b>0.017</b>	0.0050	"	"	"	"	"	"	
<b>Xylenes (total)</b>	<b>0.078</b>	0.010	"	"	"	"	"	"	
<b>1,2,4-Trimethylbenzene</b>	<b>0.024</b>	0.0050	"	"	"	"	"	"	
<b>1,3,5-Trimethylbenzene</b>	<b>0.0055</b>	0.0050	"	"	"	"	"	"	
Naphthalene	ND	0.0038	"	"	"	"	"	"	
<b>Gasoline Range Hydrocarbons</b>	<b>1.2</b>	0.50	"	"	"	"	"	"	

Date Sampled: **03/31/21 14:59**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: 1,2-Dichloroethane-d4		89.4 %	23-173		"	"	"	"	
Surrogate: Toluene-d8		98.2 %	20-170		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		105 %	21-167		"	"	"	"	

**Extractable Petroleum Hydrocarbons by 8015**

Date Sampled: **03/31/21 14:59**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
C10-C28 (DRO)	ND	50	mg/kg	1	BEC0549	"	03/31/21	EPA 8015M	
C28-C36 (ORO)	ND	50	"	"	"	"	"	"	

Date Sampled: **03/31/21 14:59**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: o-Terphenyl		91.7 %	30-150		"	"	"	"	

Summit Scientific

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

Project: Anderson 12-13 Tank Battery

Project Number: [none]  
Project Manager: Mark Longhurst

**Reported:**  
04/16/21 15:27

## 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 BEC0548 - EPA 5030 Soil MS

##### Blank (BEC0548-BLK1)

Prepared & Analyzed: 03/31/21

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	0.0344	"	0.0400	86.0	23-173
Surrogate: Toluene-d8	0.0464	"	0.0400	116	20-170
Surrogate: 4-Bromofluorobenzene	0.0433	"	0.0400	108	21-167

##### LCS (BEC0548-BS1)

Prepared & Analyzed: 03/31/21

Benzene	0.0833	0.0020	mg/kg	0.100	83.3	70-130
Toluene	0.109	0.0050	"	0.100	109	70-130
Ethylbenzene	0.0973	0.0050	"	0.100	97.3	70-130
m,p-Xylene	0.173	0.010	"	0.200	86.7	70-130
o-Xylene	0.0885	0.0050	"	0.100	88.5	70-130
1,2,4-Trimethylbenzene	0.0928	0.0050	"	0.100	92.8	70-130
1,3,5-Trimethylbenzene	0.0880	0.0050	"	0.100	88.0	70-130
Naphthalene	0.0833	0.0038	"	0.100	83.3	70-130

Surrogate: 1,2-Dichloroethane-d4	0.0273	"	0.0400	68.2	23-173
Surrogate: Toluene-d8	0.0438	"	0.0400	110	20-170
Surrogate: 4-Bromofluorobenzene	0.0401	"	0.0400	100	21-167

##### Matrix Spike (BEC0548-MS1)

Source: 2103466-01

Prepared & Analyzed: 03/31/21

Benzene	0.0729	0.0020	mg/kg	0.100	ND	72.9	70-130
Toluene	0.0883	0.0050	"	0.100	ND	88.3	70-130
Ethylbenzene	0.0860	0.0050	"	0.100	ND	86.0	70-130
m,p-Xylene	0.155	0.010	"	0.200	0.00336	75.9	70-130
o-Xylene	0.0792	0.0050	"	0.100	ND	79.2	70-130
1,2,4-Trimethylbenzene	0.0840	0.0050	"	0.100	ND	84.0	70-130
1,3,5-Trimethylbenzene	0.0795	0.0050	"	0.100	ND	79.5	70-130
Naphthalene	0.0923	0.0038	"	0.100	ND	92.3	70-130

Surrogate: 1,2-Dichloroethane-d4	0.0305	"	0.0400	76.3	23-173
Surrogate: Toluene-d8	0.0432	"	0.0400	108	20-170
Surrogate: 4-Bromofluorobenzene	0.0391	"	0.0400	97.8	21-167

Summit Scientific

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

Project: Anderson 12-13 Tank Battery

Project Number: [none]  
Project Manager: Mark Longhurst

**Reported:**  
04/16/21 15:27

**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 BEC0548 - EPA 5030 Soil MS**

Matrix Spike Dup (BEC0548-MSD1)			Source: 2103466-01		Prepared & Analyzed: 03/31/21					
Benzene	0.0884	0.0020	mg/kg	0.100	ND	88.4	70-130	19.2	30	
Toluene	0.100	0.0050	"	0.100	ND	100	70-130	12.5	30	
Ethylbenzene	0.100	0.0050	"	0.100	ND	100	70-130	15.1	30	
m,p-Xylene	0.176	0.010	"	0.200	0.00336	86.1	70-130	12.3	30	
o-Xylene	0.0895	0.0050	"	0.100	ND	89.5	70-130	12.2	30	
1,2,4-Trimethylbenzene	0.0934	0.0050	"	0.100	ND	93.4	70-130	10.6	30	
1,3,5-Trimethylbenzene	0.0881	0.0050	"	0.100	ND	88.1	70-130	10.3	30	
Naphthalene	0.0986	0.0038	"	0.100	ND	98.6	70-130	6.66	30	
Surrogate: 1,2-Dichloroethane-d4	0.0329		"	0.0400		82.2	23-173			
Surrogate: Toluene-d8	0.0398		"	0.0400		99.6	20-170			
Surrogate: 4-Bromofluorobenzene	0.0394		"	0.0400		98.4	21-167			

**Batch BED0080 - EPA 5030 Soil MS**

Blank (BED0080-BLK1)			Prepared: 04/06/21 Analyzed: 04/07/21							
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	0.0353		"	0.0400		88.2	23-173			
Surrogate: Toluene-d8	0.0411		"	0.0400		103	20-170			
Surrogate: 4-Bromofluorobenzene	0.0394		"	0.0400		98.4	21-167			

Summit Scientific

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

Project: Anderson 12-13 Tank Battery  
Project Number: [none]  
Project Manager: Mark Longhurst

**Reported:**  
04/16/21 15:27

## 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 BED0080 - EPA 5030 Soil MS

##### LCS (BED0080-BS1)

Prepared: 04/06/21 Analyzed: 04/07/21

Benzene	0.0779	0.0020	mg/kg	0.100		77.9	70-130			
Toluene	0.0825	0.0050	"	0.100		82.5	70-130			
Ethylbenzene	0.0891	0.0050	"	0.100		89.1	70-130			
m,p-Xylene	0.155	0.010	"	0.200		77.5	70-130			
o-Xylene	0.0776	0.0050	"	0.100		77.6	70-130			
1,2,4-Trimethylbenzene	0.0820	0.0050	"	0.100		82.0	70-130			
1,3,5-Trimethylbenzene	0.0771	0.0050	"	0.100		77.1	70-130			
Naphthalene	0.0865	0.0038	"	0.100		86.5	70-130			
Surrogate: 1,2-Dichloroethane-d4	0.0313		"	0.0400		78.2	23-173			
Surrogate: Toluene-d8	0.0382		"	0.0400		95.6	20-170			
Surrogate: 4-Bromofluorobenzene	0.0380		"	0.0400		94.9	21-167			

##### Matrix Spike (BED0080-MS1)

Source: 2103472-01

Prepared: 04/06/21 Analyzed: 04/07/21

Benzene	0.0854	0.0020	mg/kg	0.100	ND	85.4	70-130			
Toluene	0.0826	0.0050	"	0.100	ND	82.6	70-130			
Ethylbenzene	0.0969	0.0050	"	0.100	ND	96.9	70-130			
m,p-Xylene	0.166	0.010	"	0.200	ND	83.0	70-130			
o-Xylene	0.0833	0.0050	"	0.100	ND	83.3	70-130			
1,2,4-Trimethylbenzene	0.0851	0.0050	"	0.100	ND	85.1	70-130			
1,3,5-Trimethylbenzene	0.0801	0.0050	"	0.100	ND	80.1	70-130			
Naphthalene	0.0931	0.0038	"	0.100	ND	93.1	70-130			
Surrogate: 1,2-Dichloroethane-d4	0.0332		"	0.0400		83.0	23-173			
Surrogate: Toluene-d8	0.0344		"	0.0400		86.0	20-170			
Surrogate: 4-Bromofluorobenzene	0.0374		"	0.0400		93.5	21-167			

##### Matrix Spike Dup (BED0080-MSD1)

Source: 2103472-01

Prepared: 04/06/21 Analyzed: 04/07/21

Benzene	0.0878	0.0020	mg/kg	0.100	ND	87.8	70-130	2.77	30	
Toluene	0.0856	0.0050	"	0.100	ND	85.6	70-130	3.57	30	
Ethylbenzene	0.0973	0.0050	"	0.100	ND	97.3	70-130	0.463	30	
m,p-Xylene	0.165	0.010	"	0.200	ND	82.7	70-130	0.435	30	
o-Xylene	0.0848	0.0050	"	0.100	ND	84.8	70-130	1.75	30	
1,2,4-Trimethylbenzene	0.0874	0.0050	"	0.100	ND	87.4	70-130	2.64	30	
1,3,5-Trimethylbenzene	0.0819	0.0050	"	0.100	ND	81.9	70-130	2.15	30	
Naphthalene	0.0946	0.0038	"	0.100	ND	94.6	70-130	1.57	30	
Surrogate: 1,2-Dichloroethane-d4	0.0364		"	0.0400		91.0	23-173			
Surrogate: Toluene-d8	0.0351		"	0.0400		87.8	20-170			
Surrogate: 4-Bromofluorobenzene	0.0382		"	0.0400		95.5	21-167			

Summit Scientific

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

Project: Anderson 12-13 Tank Battery  
Project Number: [none]  
Project Manager: Mark Longhurst

**Reported:**  
04/16/21 15:27

**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 BEC0549 - EPA 3550A**

**Blank (BEC0549-BLK1)**

Prepared & Analyzed: 03/31/21

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

**LCS (BEC0549-BS1)**

Prepared: 03/31/21 Analyzed: 04/01/21

C10-C28 (DRO)	396	50	mg/kg	500	79.1	70-130
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**Matrix Spike (BEC0549-MS1)**

Source: 2103466-01

Prepared: 03/31/21 Analyzed: 04/01/21

C10-C28 (DRO)	411	50	mg/kg	500	20.6	78.1	70-130
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**Matrix Spike Dup (BEC0549-MSD1)**

Source: 2103466-01

Prepared: 03/31/21 Analyzed: 04/01/21

C10-C28 (DRO)	419	50	mg/kg	500	20.6	79.7	70-130	1.96	20
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**Batch BED0105 - EPA 3550A**

**Blank (BED0105-BLK1)**

Prepared: 04/07/21 Analyzed: 04/08/21

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

**LCS (BED0105-BS1)**

Prepared: 04/07/21 Analyzed: 04/08/21

C10-C28 (DRO)	419	50	mg/kg	500	83.8	70-130
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**Matrix Spike (BED0105-MS1)**

Source: 2103472-01

Prepared: 04/07/21 Analyzed: 04/08/21

C10-C28 (DRO)	455	50	mg/kg	500	13.2	88.3	70-130
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**Matrix Spike Dup (BED0105-MSD1)**

Source: 2103472-01

Prepared: 04/07/21 Analyzed: 04/08/21

C10-C28 (DRO)	494	50	mg/kg	500	13.2	96.1	70-130	8.24	20
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Summit Scientific

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

Project: Anderson 12-13 Tank Battery  
Project Number: [none]  
Project Manager: Mark Longhurst

**Reported:**  
04/16/21 15:27

**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 BED0051 - EPA 3050B**

**Blank (BED0051-BLK1)**

Prepared & Analyzed: 04/05/21

Boron ND 0.0100 mg/L

**LCS (BED0051-BS1)**

Prepared & Analyzed: 04/05/21

Boron 5.35 0.0100 mg/L 5.00 107 80-120

**Duplicate (BED0051-DUP1)**

**Source: 2103403-16**

Prepared & Analyzed: 04/05/21

Boron 0.128 0.0100 mg/L 0.133 3.49 20

**Matrix Spike (BED0051-MS1)**

**Source: 2103403-16**

Prepared & Analyzed: 04/05/21

Boron 4.97 0.0100 mg/L 5.00 0.133 96.7 75-125

**Matrix Spike Dup (BED0051-MSD1)**

**Source: 2103403-16**

Prepared & Analyzed: 04/05/21

Boron 5.33 0.0100 mg/L 5.00 0.133 104 75-125 7.02 25

Summit Scientific

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

Project: Anderson 12-13 Tank Battery

Project Number: [none]  
Project Manager: Mark Longhurst

**Reported:**  
04/16/21 15:27

**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 BED0226 - EPA 3050B**

**Blank (BED0226-BLK1)**

Prepared: 04/13/21 Analyzed: 04/15/21

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 (BED0226-BS1)**

Prepared: 04/13/21 Analyzed: 04/15/21

Arsenic	38.2	0.200	mg/kg wet	40.0	95.6	80-120
Barium	33.3	0.400	"	40.0	83.4	80-120
Cadmium	1.87	0.200	"	2.00	93.7	80-120
Copper	35.9	0.400	"	40.0	89.7	80-120
Lead	21.2	0.200	"	20.0	106	80-120
Nickel	35.5	0.400	"	40.0	88.8	80-120
Selenium	3.66	0.260	"	4.00	91.6	80-120
Silver	1.80	0.0200	"	2.00	89.8	80-120
Zinc	38.7	0.400	"	40.0	96.9	80-120

**Duplicate (BED0226-DUP1)**

Source: 2103452-02

Prepared: 04/13/21 Analyzed: 04/15/21

Arsenic	ND	0.239	mg/kg dry	ND		30
Barium	380	0.477	"	369	2.94	30
Cadmium	0.123	0.239	"	0.120	2.56	30
Copper	13.4	0.477	"	18.2	29.9	30
Lead	14.3	0.239	"	13.5	5.35	30
Nickel	8.91	0.477	"	10.3	15.0	30
Selenium	1.97	0.310	"	2.35	17.8	30
Silver	0.0817	0.0239	"	0.0832	1.88	30
Zinc	71.0	0.477	"	71.5	0.711	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.*



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

Project: Anderson 12-13 Tank Battery  
Project Number: [none]  
Project Manager: Mark Longhurst

**Reported:**  
04/16/21 15:27

**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 BED0226 - EPA 3050B**

**Matrix Spike (BED0226-MS1)**

**Source: 2103452-02**

Prepared: 04/13/21 Analyzed: 04/15/21

Arsenic	39.6	0.239	mg/kg dry	47.7	ND	83.0	75-125
Barium	417	0.477	"	47.7	369	100	75-125
Cadmium	2.09	0.239	"	2.39	0.120	82.4	75-125
Copper	68.6	0.477	"	47.7	18.2	106	75-125
Lead	38.7	0.239	"	23.9	13.5	106	75-125
Nickel	47.4	0.477	"	47.7	10.3	77.6	75-125
Selenium	6.27	0.310	"	4.77	2.35	82.0	75-125
Silver	2.01	0.0239	"	2.39	0.0832	80.6	75-125
Zinc	115	0.477	"	47.7	71.5	91.4	75-125

**Matrix Spike Dup (BED0226-MSD1)**

**Source: 2103452-02**

Prepared: 04/13/21 Analyzed: 04/15/21

Arsenic	40.4	0.239	mg/kg dry	47.7	ND	84.6	75-125	1.89	25
Barium	411	0.477	"	47.7	369	88.1	75-125	1.41	25
Cadmium	2.03	0.239	"	2.39	0.120	80.1	75-125	2.68	25
Copper	59.8	0.477	"	47.7	18.2	87.2	75-125	13.7	25
Lead	38.3	0.239	"	23.9	13.5	104	75-125	1.05	25
Nickel	46.7	0.477	"	47.7	10.3	76.2	75-125	1.44	25
Selenium	6.50	0.310	"	4.77	2.35	87.0	75-125	3.76	25
Silver	1.93	0.0239	"	2.39	0.0832	77.4	75-125	3.90	25
Zinc	114	0.477	"	47.7	71.5	89.6	75-125	0.744	25

Summit Scientific

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

Project: Anderson 12-13 Tank Battery  
Project Number: [none]  
Project Manager: Mark Longhurst

**Reported:**  
04/16/21 15:27

**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 BED0273 - 3060A Mod**

**Blank (BED0273-BLK1)**

Prepared: 04/15/21 Analyzed: 04/16/21

Chromium, Hexavalent ND 0.30 mg/kg wet

**LCS (BED0273-BS1)**

Prepared: 04/15/21 Analyzed: 04/16/21

Chromium, Hexavalent 23.2 0.30 mg/kg wet 25.0 93.0 80-120

**Duplicate (BED0273-DUP1)**

**Source: 2103472-05**

Prepared: 04/15/21 Analyzed: 04/16/21

Chromium, Hexavalent ND 0.30 mg/kg dry ND 20

**Matrix Spike (BED0273-MS1)**

**Source: 2103472-05**

Prepared: 04/15/21 Analyzed: 04/16/21

Chromium, Hexavalent 28.6 0.30 mg/kg dry 31.1 ND 92.0 75-125

**Matrix Spike Dup (BED0273-MSD1)**

**Source: 2103472-05**

Prepared: 04/15/21 Analyzed: 04/16/21

Chromium, Hexavalent 28.5 0.30 mg/kg dry 31.1 ND 91.6 75-125 0.436 20

Summit Scientific

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

Project: Anderson 12-13 Tank Battery

Project Number: [none]  
Project Manager: Mark Longhurst

**Reported:**  
04/16/21 15:27

**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 BED0084 - General Preparation**

**Blank (BED0084-BLK1)**

Prepared: 04/06/21 Analyzed: 04/08/21

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

**LCS (BED0084-BS1)**

Prepared: 04/06/21 Analyzed: 04/08/21

Calcium	5.70	0.0500	mg/L wet	5.00	114	70-130
Magnesium	6.43	0.0500	"	5.00	129	70-130
Sodium	5.97	0.0500	"	5.00	119	70-130

Summit Scientific

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

Project: Anderson 12-13 Tank Battery

Project Number: [none]  
Project Manager: Mark Longhurst

**Reported:**  
04/16/21 15:27

**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 BED0053 - General Preparation**

<b>Duplicate (BED0053-DUP1)</b>		<b>Source: 2103388-07</b>			Prepared: 04/05/21 Analyzed: 04/06/21					
% Solids	95.5		%		95.5			0.00469	20	

**Batch BED0227 - General Preparation**

<b>Duplicate (BED0227-DUP1)</b>		<b>Source: 2103375-01</b>			Prepared: 04/13/21 Analyzed: 04/14/21					
% Solids	86.8		%		84.8			2.24	20	

Summit Scientific

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

Project: Anderson 12-13 Tank Battery  
Project Number: [none]  
Project Manager: Mark Longhurst

**Reported:**  
04/16/21 15:27

**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 BED0119 - General Preparation**

**Blank (BED0119-BLK1)**

Prepared & Analyzed: 04/07/21

Specific Conductance (EC) ND 0.0100 mmhos/cm

**LCS (BED0119-BS1)**

Prepared & Analyzed: 04/07/21

Specific Conductance (EC) 0.150 0.0100 mmhos/cm 0.150 99.7 90-110

**Duplicate (BED0119-DUP1)**

**Source: 2103289-01**

Prepared & Analyzed: 04/07/21

Specific Conductance (EC) 0.387 0.0100 mmhos/cm 0.386 0.155 20

Summit Scientific

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

Project: Anderson 12-13 Tank Battery

Project Number: [none]  
Project Manager: Mark Longhurst

**Reported:**  
04/16/21 15:27

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

**Summit Scientific**

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

**Batch BED0120 - General Preparation**

**LCS (BED0120-BS1)**

Prepared & Analyzed: 04/07/21

pH	9.29	pH Units	9.21	101	95-105
----	------	----------	------	-----	--------

**Duplicate (BED0120-DUP1)**

Source: 2103289-01

Prepared & Analyzed: 04/07/21

pH	8.12	pH Units	8.09	0.370	20
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Summit Scientific

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

Project: Anderson 12-13 Tank Battery

Project Number: [none]  
Project Manager: Mark Longhurst

**Reported:**  
04/16/21 15:27

### 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

April 28, 2021

Mark Longhurst

PDC Energy

1775 Sherman St. STE. 3000

Denver, CO 80203

RE: Anderson 12-13

Work Order #2104008

Enclosed are the results of analyses for samples received by Summit Scientific on 04/01/21 18:50. 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: Anderson 12-13  
Project Number: [none]  
Project Manager: Mark Longhurst

**Reported:**  
04/28/21 13:45

#### ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
SS03@4'	2104008-01	Soil	04/01/21 12:24	04/01/21 18:50
SS06@6'	2104008-02	Soil	04/01/21 15:08	04/01/21 18:50
SS04@6'	2104008-03	Soil	04/01/21 12:40	04/01/21 18:50
SS05@5'	2104008-04	Soil	04/01/21 14:24	04/01/21 18:50

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

S<sub>2</sub>

2104008.1

4653 Table Mountain Drive ♦ Golden, Colorado 80403

303-277-9310

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: Anderson 12-13

Sampler Name: Kevin Fletcher

Project Number:

ID	Sample Description	Date Sampled	Time Sampled	# of containers	Preservative				Matrix				Analysis Requested								Special Instructions		
					HCl	HNO <sub>3</sub>	None	Other	Water	Soil	Air-Canister #	Other	GBTEXN - 8260B - 915	TPH - (C6 - C36) - 915	TMB's (1,2,4 & 1,3,5) - 915	pH, EC, SAR - 915	Boron - HWS - 915	VOC - 915	PAH - 915	Metals - 915			
1	3503@4'	4/1/21	1224	3			X			X				X	X	X	X		X	X	X		pH, EC, SAR by saturated paste
2	5506@6'	✓	1508	3			X			X				X	X	X							
3																							
4																							
5																							
6																							
7																							
8																							
9																							
10																							

Relinquished by: Kevin Fletcher	Date/Time: 4/1/21 1700	Received by: Tasman's Lock Box	Date/Time: 4/1/21 1700	Turn Around Time (Check) Same Day _____ 72 hours 24 hours _____ Standard <u>X</u> 48 hours _____	Notes:
Relinquished by: Tasman's Lock Box	Date/Time:	Received by: [Signature]	Date/Time: 4/1/21 18:30	Sample Integrity: Temperature Upon Receipt: 13.2 Samples Intact: <u>Yes</u> No	
Relinquished by:	Date/Time:	Received by:	Date/Time:		

# Summit Scientific

S<sub>2</sub>

2104008.2

4653 Table Mountain Drive ♦ Golden, Colorado 80403

303-277-9310

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: Anderson 12-13

Sampler Name: Kevin Fletcher

Project Number:

ID	Sample Description	Date Sampled	Time Sampled	# of containers	Preservative				Matrix				Analysis Requested								Special Instructions		
					HCl	HNO <sub>3</sub>	None	Other	Water	Soil	Air-Canister #	Other	GBTEXN - 8260B - 915	TPH - (C6 - C36) - 915	TMIB's (1,2,4 & 1,3,5) - 915	pH, EC, SAR - 915	Boron - HWS - 915	VOC - 915	PAH - 915	Metals - 915			
1	SS04@6'	4/1/21	1240	3			X			X				X	X	X							pH, EC, SAR by saturated paste
2	SS05@5'	4/1/21	1424	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:
Kevin Fletcher	4/1/21 1700	Tasman's Lock Box	4/1/21 1700	Same Day	X 72 hours	
Relinquished by:	Date/Time:	Received by:	Date/Time:	24 hours	Standard	
Tasman's Lock Box		[Signature]	4/1/21 18:30	48 hours		
Relinquished by:	Date/Time:	Received by:	Date/Time:	Sample Integrity:		
				Temperature Upon Receipt:	13.2	
				Samples Intact:	Yes No	



# Sample Receipt Checklist

S2 Work Order 2104008

Client: PDC/Tasman Client Project ID: Anderson 12-13

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

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

Temp (°C) 13.2

Thermometer ID: 61857155-K

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

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

Jack Breer  
Custodian Printed Name or Initials

Jack Breer  
Signature of Custodian

4/1/21 19:33  
Date/Time





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

Project: Anderson 12-13  
Project Number: [none]  
Project Manager: Mark Longhurst

**Reported:**  
04/28/21 13:45

**SS03@4'**  
**2104008-01 (Soil)**

**Summit Scientific**

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

Date Sampled: **04/01/21 12:24**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Benzene	ND	0.020	mg/kg	10	BED0048	04/02/21	04/02/21	EPA 8260B	
Toluene	ND	0.050	"	"	"	"	"	"	
Ethylbenzene	<b>0.64</b>	0.050	"	"	"	"	"	"	
Xylenes (total)	<b>1.9</b>	0.10	"	"	"	"	"	"	
1,2,4-Trimethylbenzene	<b>5.2</b>	0.050	"	"	"	"	"	"	
1,3,5-Trimethylbenzene	<b>2.3</b>	0.050	"	"	"	"	"	"	
Naphthalene	<b>0.62</b>	0.038	"	"	"	"	"	"	
Gasoline Range Hydrocarbons	<b>260</b>	5.0	"	"	"	"	"	"	

Date Sampled: **04/01/21 12:24**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 1,2-Dichloroethane-d4		107 %	23-173		"	"	"	"	
Surrogate: Toluene-d8		81.2 %	20-170		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		112 %	21-167		"	"	"	"	

**Extractable Petroleum Hydrocarbons by 8015**

Date Sampled: **04/01/21 12:24**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
C10-C28 (DRO)	<b>120</b>	50	mg/kg	1	BED0049	04/02/21	04/02/21	EPA 8015M	
C28-C36 (ORO)	ND	50	"	"	"	"	"	"	

Date Sampled: **04/01/21 12:24**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: o-Terphenyl		117 %	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: Anderson 12-13  
Project Number: [none]  
Project Manager: Mark Longhurst

**Reported:**  
04/28/21 13:45

**SS03@4'**  
**2104008-01 (Soil)**

**Summit Scientific**

**PAH by EPA Method 8270D SIM**

Date Sampled: **04/01/21 12:24**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Acenaphthene	ND	0.00500	mg/kg	1	BED0063	04/05/21	04/06/21	EPA 8270D SIM	
<b>Anthracene</b>	<b>0.0241</b>	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	"	"	"	"	"	"	
<b>1-Methylnaphthalene</b>	<b>0.0747</b>	0.00500	"	"	"	"	"	"	
<b>2-Methylnaphthalene</b>	<b>0.153</b>	0.00500	"	"	"	"	"	"	

Date Sampled: **04/01/21 12:24**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 2-Methylnaphthalene-d10		73.6 %	40-150		"	"	"	"	
Surrogate: Fluoranthene-d10		88.2 %	40-150		"	"	"	"	

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

Date Sampled: **04/01/21 12:24**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
<b>Boron</b>	<b>0.462</b>	0.0100	mg/L	1	BED0420	04/26/21	04/27/21	EPA 6020B	

**Total Metals by EPA 6020B**

Date Sampled: **04/01/21 12:24**

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: Anderson 12-13  
Project Number: [none]  
Project Manager: Mark Longhurst

**Reported:**  
04/28/21 13:45

**SS03@4'**  
**2104008-01 (Soil)**

**Summit Scientific**

**Total Metals by EPA 6020B**

Arsenic	7.76	0.248	mg/kg dry	1	BED0054	04/05/21	04/05/21	EPA 6020B
Barium	158	0.497	"	"	"	"	"	"
Cadmium	0.258	0.248	"	"	"	"	"	"
Copper	11.7	0.497	"	"	"	"	"	"
Lead	9.84	0.248	"	"	"	"	"	"
Nickel	13.1	0.497	"	"	"	"	"	"
Selenium	1.16	0.323	"	"	"	"	"	"
Silver	0.0540	0.0248	"	"	"	"	"	"
Zinc	50.6	0.497	"	"	"	"	"	"

**Hexavalent Chromium by EPA Method 7196**

Date Sampled: **04/01/21 12:24**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Chromium, Hexavalent	ND	0.30	mg/kg dry	1	BED0083	04/06/21	04/07/21	EPA 7196A	

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

Date Sampled: **04/01/21 12:24**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Calcium	209	0.0621	mg/L dry	1	BED0138	04/08/21	04/10/21	EPA 6020B	
Magnesium	111	0.0621	"	"	"	"	"	"	
Sodium	152	0.0621	"	"	"	"	"	"	

**Calculated Analysis**

Date Sampled: **04/01/21 12:24**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	2.11	0.100	units	1	BED0191	04/12/21	04/12/21	Calculation	

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

Date Sampled: **04/01/21 12:24**

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: Anderson 12-13  
Project Number: [none]  
Project Manager: Mark Longhurst

**Reported:**  
04/28/21 13:45

**SS03@4'**  
**2104008-01 (Soil)**

**Summit Scientific**

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

% Solids	80.5	%	1	BED0053	04/05/21	04/06/21	Calculation
----------	------	---	---	---------	----------	----------	-------------

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

Date Sampled: **04/01/21 12:24**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Specific Conductance (EC)	1.98	0.0100	mmhos/cm	1	BED0176	04/09/21	04/09/21	EPA 120.1	

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

Date Sampled: **04/01/21 12:24**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
pH	8.28		pH Units	1	BED0177	04/09/21	04/09/21	EPA 9045D	

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: Anderson 12-13  
Project Number: [none]  
Project Manager: Mark Longhurst

**Reported:**  
04/28/21 13:45

**SS06@6'**  
**2104008-02 (Soil)**

**Summit Scientific**

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

Date Sampled: **04/01/21 15:08**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Benzene	ND	0.0020	mg/kg	1	BED0048	04/02/21	04/02/21	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: **04/01/21 15:08**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: 1,2-Dichloroethane-d4		111 %	23-173		"	"	"	"	
Surrogate: Toluene-d8		82.8 %	20-170		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		81.4 %	21-167		"	"	"	"	

**Extractable Petroleum Hydrocarbons by 8015**

Date Sampled: **04/01/21 15:08**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
C10-C28 (DRO)	ND	50	mg/kg	1	BED0049	04/02/21	04/02/21	EPA 8015M	
C28-C36 (ORO)	ND	50	"	"	"	"	"	"	

Date Sampled: **04/01/21 15:08**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: o-Terphenyl		95.6 %	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: Anderson 12-13  
Project Number: [none]  
Project Manager: Mark Longhurst

**Reported:**  
04/28/21 13:45

**SS06@6'**  
**2104008-02 (Soil)**

**Summit Scientific**

**PAH by EPA Method 8270D SIM**

Date Sampled: **04/01/21 15:08**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Anthracene	ND	0.00500	mg/kg	1	BED0410	04/15/21	04/24/21	EPA 8270D SIM	
Fluorene	ND	0.00500	"	"	"	"	"	"	
1-Methylnaphthalene	ND	0.00500	"	"	"	"	"	"	
2-Methylnaphthalene	ND	0.00500	"	"	"	"	"	"	

Date Sampled: **04/01/21 15:08**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 2-Methylnaphthalene-d10		58.9 %	40-150		"	"	"	"	
Surrogate: Fluoranthene-d10		72.9 %	40-150		"	"	"	"	

**Total Metals by EPA 6020B**

Date Sampled: **04/01/21 15:08**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Arsenic	<b>6.18</b>	0.200	mg/kg dry	1	BED0409	04/23/21	04/23/21	EPA 6020B	
Selenium	<b>0.998</b>	0.260	"	"	"	"	"	"	

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

Date Sampled: **04/01/21 15:08**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
% Solids	<b>83.9</b>		%	1	BED0415	04/26/21	04/26/21	Calculation	

Summit Scientific

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

Project: Anderson 12-13  
Project Number: [none]  
Project Manager: Mark Longhurst

**Reported:**  
04/28/21 13:45

**SS04@6'**  
**2104008-03 (Soil)**

**Summit Scientific**

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

Date Sampled: **04/01/21 12:40**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Benzene	ND	0.0020	mg/kg	1	BED0024	04/01/21	04/01/21	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: **04/01/21 12:40**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: 1,2-Dichloroethane-d4		111 %	23-173		"	"	"	"	
Surrogate: Toluene-d8		83.0 %	20-170		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		83.6 %	21-167		"	"	"	"	

**Extractable Petroleum Hydrocarbons by 8015**

Date Sampled: **04/01/21 12:40**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
C10-C28 (DRO)	ND	50	mg/kg	1	BED0025	"	04/01/21	EPA 8015M	
C28-C36 (ORO)	ND	50	"	"	"	"	"	"	

Date Sampled: **04/01/21 12:40**

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

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: Anderson 12-13  
Project Number: [none]  
Project Manager: Mark Longhurst

**Reported:**  
04/28/21 13:45

**SS04@6'**  
**2104008-03 (Soil)**

**Summit Scientific**

**PAH by EPA Method 8270D SIM**

Date Sampled: **04/01/21 12:40**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Anthracene	ND	0.00500	mg/kg	1	BED0410	04/14/21	04/24/21	EPA 8270D SIM	
Fluorene	ND	0.00500	"	"	"	04/15/21	"	"	
1-Methylnaphthalene	ND	0.00500	"	"	"	"	"	"	
2-Methylnaphthalene	ND	0.00500	"	"	"	"	"	"	

Date Sampled: **04/01/21 12:40**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 2-Methylnaphthalene-d10		59.5 %	40-150		"	"	"	"	
Surrogate: Fluoranthene-d10		76.8 %	40-150		"	"	"	"	

**Total Metals by EPA 6020B**

Date Sampled: **04/01/21 12:40**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Arsenic	7.21	0.200	mg/kg dry	1	BED0409	04/23/21	04/24/21	EPA 6020B	
Selenium	1.08	0.260	"	"	"	"	"	"	

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

Date Sampled: **04/01/21 12:40**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
% Solids	76.3		%	1	BED0415	04/26/21	04/26/21	Calculation	

Summit Scientific

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

Project: Anderson 12-13  
Project Number: [none]  
Project Manager: Mark Longhurst

**Reported:**  
04/28/21 13:45

**SS05@5'**  
**2104008-04 (Soil)**

**Summit Scientific**

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

Date Sampled: **04/01/21 14:24**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Benzene	ND	0.0020	mg/kg	1	BED0024	04/01/21	04/01/21	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: **04/01/21 14:24**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: 1,2-Dichloroethane-d4		110 %	23-173		"	"	"	"	
Surrogate: Toluene-d8		79.7 %	20-170		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		78.4 %	21-167		"	"	"	"	

**Extractable Petroleum Hydrocarbons by 8015**

Date Sampled: **04/01/21 14:24**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
C10-C28 (DRO)	ND	50	mg/kg	1	BED0025	"	04/01/21	EPA 8015M	
C28-C36 (ORO)	ND	50	"	"	"	"	"	"	

Date Sampled: **04/01/21 14:24**

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

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

Project: Anderson 12-13  
Project Number: [none]  
Project Manager: Mark Longhurst

**Reported:**  
04/28/21 13:45

**SS05@5'**  
**2104008-04 (Soil)**

**Summit Scientific**

**PAH by EPA Method 8270D SIM**

Date Sampled: **04/01/21 14:24**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Anthracene	ND	0.00500	mg/kg	1	BED0410	04/14/21	04/24/21	EPA 8270D SIM	
Fluorene	ND	0.00500	"	"	"	04/15/21	"	"	
1-Methylnaphthalene	ND	0.00500	"	"	"	"	"	"	
2-Methylnaphthalene	ND	0.00500	"	"	"	"	"	"	

Date Sampled: **04/01/21 14:24**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 2-Methylnaphthalene-d10		48.3 %	40-150		"	"	"	"	
Surrogate: Fluoranthene-d10		62.7 %	40-150		"	"	"	"	

**Total Metals by EPA 6020B**

Date Sampled: **04/01/21 14:24**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Arsenic	<b>6.60</b>	0.200	mg/kg dry	1	BED0409	04/23/21	04/24/21	EPA 6020B	
Selenium	<b>1.10</b>	0.260	"	"	"	"	"	"	

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

Date Sampled: **04/01/21 14:24**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
% Solids	<b>79.4</b>		%	1	BED0415	04/26/21	04/26/21	Calculation	

Summit Scientific

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

Project: Anderson 12-13  
Project Number: [none]  
Project Manager: Mark Longhurst

**Reported:**  
04/28/21 13:45

## 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 BED0024 - EPA 5030 Soil MS

##### Blank (BED0024-BLK1)

Prepared & Analyzed: 04/01/21

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	0.0428		"	0.0400		107	23-173			
Surrogate: Toluene-d8	0.0327		"	0.0400		81.8	20-170			
Surrogate: 4-Bromofluorobenzene	0.0321		"	0.0400		80.3	21-167			

##### LCS (BED0024-BS1)

Prepared & Analyzed: 04/01/21

Benzene	0.131	0.0020	mg/kg	0.150		87.7	70-130			
Toluene	0.130	0.0050	"	0.150		86.3	70-130			
Ethylbenzene	0.148	0.0050	"	0.150		98.5	70-130			
m,p-Xylene	0.288	0.010	"	0.300		95.9	70-130			
o-Xylene	0.146	0.0050	"	0.150		97.2	70-130			
1,2,4-Trimethylbenzene	0.149	0.0050	"	0.150		99.5	70-130			
1,3,5-Trimethylbenzene	0.146	0.0050	"	0.150		97.2	70-130			
Naphthalene	0.152	0.0038	"	0.150		101	70-130			
Surrogate: 1,2-Dichloroethane-d4	0.0432		"	0.0400		108	23-173			
Surrogate: Toluene-d8	0.0327		"	0.0400		81.8	20-170			
Surrogate: 4-Bromofluorobenzene	0.0324		"	0.0400		81.0	21-167			

##### Matrix Spike (BED0024-MS1)

Source: 2104003-01

Prepared & Analyzed: 04/01/21

Benzene	0.123	0.0020	mg/kg	0.150	ND	81.8	70-130			
Toluene	0.122	0.0050	"	0.150	ND	81.1	70-130			
Ethylbenzene	0.131	0.0050	"	0.150	ND	87.1	70-130			
m,p-Xylene	0.253	0.010	"	0.300	0.00387	83.0	70-130			
o-Xylene	0.129	0.0050	"	0.150	ND	85.7	70-130			
1,2,4-Trimethylbenzene	0.131	0.0050	"	0.150	ND	87.3	70-130			
1,3,5-Trimethylbenzene	0.129	0.0050	"	0.150	ND	86.0	70-130			
Naphthalene	0.146	0.0038	"	0.150	ND	97.4	70-130			
Surrogate: 1,2-Dichloroethane-d4	0.0432		"	0.0400		108	23-173			
Surrogate: Toluene-d8	0.0324		"	0.0400		81.0	20-170			
Surrogate: 4-Bromofluorobenzene	0.0321		"	0.0400		80.3	21-167			

Summit Scientific

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

Project: Anderson 12-13

Project Number: [none]  
Project Manager: Mark Longhurst

**Reported:**  
04/28/21 13:45

## 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 BED0024 - EPA 5030 Soil MS

Matrix Spike Dup (BED0024-MSD1)			Source: 2104003-01		Prepared & Analyzed: 04/01/21						
Benzene	0.120	0.0020	mg/kg	0.150	ND	79.8	70-130	2.40	30		
Toluene	0.118	0.0050	"	0.150	ND	78.5	70-130	3.31	30		
Ethylbenzene	0.119	0.0050	"	0.150	ND	79.5	70-130	9.10	30		
m,p-Xylene	0.231	0.010	"	0.300	0.00387	75.6	70-130	9.22	30		
o-Xylene	0.117	0.0050	"	0.150	ND	78.2	70-130	9.12	30		
1,2,4-Trimethylbenzene	0.118	0.0050	"	0.150	ND	78.6	70-130	10.5	30		
1,3,5-Trimethylbenzene	0.117	0.0050	"	0.150	ND	77.7	70-130	10.1	30		
Naphthalene	0.161	0.0038	"	0.150	ND	107	70-130	9.74	30		
Surrogate: 1,2-Dichloroethane-d4	0.0455		"	0.0400		114	23-173				
Surrogate: Toluene-d8	0.0332		"	0.0400		83.1	20-170				
Surrogate: 4-Bromofluorobenzene	0.0315		"	0.0400		78.7	21-167				

#### Batch BED0048 - EPA 5030 Soil MS

Blank (BED0048-BLK1)			Prepared & Analyzed: 04/02/21								
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	0.0426		"	0.0400		106	23-173				
Surrogate: Toluene-d8	0.0326		"	0.0400		81.4	20-170				
Surrogate: 4-Bromofluorobenzene	0.0321		"	0.0400		80.3	21-167				

Summit Scientific

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

Project: Anderson 12-13  
Project Number: [none]  
Project Manager: Mark Longhurst

**Reported:**  
04/28/21 13:45

**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 BED0048 - EPA 5030 Soil MS**

**LCS (BED0048-BS1)**

Prepared & Analyzed: 04/02/21

Benzene	0.103	0.0020	mg/kg	0.100		103	70-130
Toluene	0.0958	0.0050	"	0.100		95.8	70-130
Ethylbenzene	0.114	0.0050	"	0.100		114	70-130
m,p-Xylene	0.224	0.010	"	0.200		112	70-130
o-Xylene	0.114	0.0050	"	0.100		114	70-130
1,2,4-Trimethylbenzene	0.108	0.0050	"	0.100		108	70-130
1,3,5-Trimethylbenzene	0.102	0.0050	"	0.100		102	70-130
Naphthalene	0.0960	0.0038	"	0.100		96.0	70-130
Surrogate: 1,2-Dichloroethane-d4	0.0430		"	0.0400		108	23-173
Surrogate: Toluene-d8	0.0331		"	0.0400		82.7	20-170
Surrogate: 4-Bromofluorobenzene	0.0297		"	0.0400		74.2	21-167

**Matrix Spike (BED0048-MS1)**

Source: 2104030-01

Prepared & Analyzed: 04/02/21

Benzene	0.104	0.0020	mg/kg	0.100	ND	104	70-130
Toluene	0.0975	0.0050	"	0.100	ND	97.5	70-130
Ethylbenzene	0.0925	0.0050	"	0.100	ND	92.5	70-130
m,p-Xylene	0.184	0.010	"	0.200	0.00423	90.1	70-130
o-Xylene	0.0950	0.0050	"	0.100	ND	95.0	70-130
1,2,4-Trimethylbenzene	0.0899	0.0050	"	0.100	ND	89.9	70-130
1,3,5-Trimethylbenzene	0.0840	0.0050	"	0.100	ND	84.0	70-130
Naphthalene	0.0880	0.0038	"	0.100	ND	88.0	70-130
Surrogate: 1,2-Dichloroethane-d4	0.0425		"	0.0400		106	23-173
Surrogate: Toluene-d8	0.0331		"	0.0400		82.7	20-170
Surrogate: 4-Bromofluorobenzene	0.0318		"	0.0400		79.4	21-167

**Matrix Spike Dup (BED0048-MSD1)**

Source: 2104030-01

Prepared & Analyzed: 04/02/21

Benzene	0.0986	0.0020	mg/kg	0.100	ND	98.6	70-130	5.13	30
Toluene	0.0933	0.0050	"	0.100	ND	93.3	70-130	4.34	30
Ethylbenzene	0.0899	0.0050	"	0.100	ND	89.9	70-130	2.83	30
m,p-Xylene	0.182	0.010	"	0.200	0.00423	88.7	70-130	1.57	30
o-Xylene	0.0912	0.0050	"	0.100	ND	91.2	70-130	4.09	30
1,2,4-Trimethylbenzene	0.0908	0.0050	"	0.100	ND	90.8	70-130	0.897	30
1,3,5-Trimethylbenzene	0.0862	0.0050	"	0.100	ND	86.2	70-130	2.64	30
Naphthalene	0.0923	0.0038	"	0.100	ND	92.3	70-130	4.79	30
Surrogate: 1,2-Dichloroethane-d4	0.0420		"	0.0400		105	23-173		
Surrogate: Toluene-d8	0.0363		"	0.0400		90.8	20-170		
Surrogate: 4-Bromofluorobenzene	0.0344		"	0.0400		86.0	21-167		

Summit Scientific

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

Project: Anderson 12-13  
Project Number: [none]  
Project Manager: Mark Longhurst

**Reported:**  
04/28/21 13:45

**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 BED0025 - EPA 3550A**

**Blank (BED0025-BLK1)**

Prepared & Analyzed: 04/01/21

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

**LCS (BED0025-BS1)**

Prepared & Analyzed: 04/01/21

C10-C28 (DRO)	444	50	mg/kg	500	88.8	70-130
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**Matrix Spike (BED0025-MS1)**

Source: 2104003-01

Prepared & Analyzed: 04/01/21

C10-C28 (DRO)	445	50	mg/kg	500	14.4	86.2	70-130
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**Matrix Spike Dup (BED0025-MSD1)**

Source: 2104003-01

Prepared: 04/01/21 Analyzed: 04/02/21

C10-C28 (DRO)	375	50	mg/kg	500	14.4	72.2	70-130	17.1	20
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**Batch BED0049 - EPA 3550A**

**Blank (BED0049-BLK1)**

Prepared & Analyzed: 04/02/21

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

**LCS (BED0049-BS1)**

Prepared & Analyzed: 04/02/21

C10-C28 (DRO)	548	50	mg/kg	500	110	70-130
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**Matrix Spike (BED0049-MS1)**

Source: 2104030-01

Prepared & Analyzed: 04/02/21

C10-C28 (DRO)	463	50	mg/kg	500	13.9	89.9	70-130
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**Matrix Spike Dup (BED0049-MSD1)**

Source: 2104030-01

Prepared & Analyzed: 04/02/21

C10-C28 (DRO)	449	50	mg/kg	500	13.9	87.0	70-130	3.11	20
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PDC Energy  
1775 Sherman St. STE. 3000  
Denver CO, 80203

Project: Anderson 12-13  
Project Number: [none]  
Project Manager: Mark Longhurst

**Reported:**  
04/28/21 13:45

## 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 BED0063 - EPA 5030 Soil MS

##### Blank (BED0063-BLK1)

Prepared & Analyzed: 04/05/21

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	0.0318		"	0.0333		95.4	40-150			
Surrogate: Fluoranthene-d10	0.0309		"	0.0333		92.8	40-150			

##### LCS (BED0063-BS1)

Prepared & Analyzed: 04/05/21

Acenaphthene	0.0359	0.00500	mg/kg	0.0333	108	31-137
Anthracene	0.0365	0.00500	"	0.0333	109	30-120
Benzo (a) anthracene	0.0323	0.00500	"	0.0333	96.8	30-120
Benzo (a) pyrene	0.0365	0.00500	"	0.0333	109	30-120
Benzo (b) fluoranthene	0.0343	0.00500	"	0.0333	103	30-120
Benzo (k) fluoranthene	0.0399	0.00500	"	0.0333	120	30-120
Chrysene	0.0346	0.00500	"	0.0333	104	30-120
Dibenz (a,h) anthracene	0.0320	0.00500	"	0.0333	96.1	30-120
Fluoranthene	0.0279	0.00500	"	0.0333	83.8	30-120
Fluorene	0.0194	0.00500	"	0.0333	58.1	30-120
Indeno (1,2,3-cd) pyrene	0.0306	0.00500	"	0.0333	91.7	30-120
Pyrene	0.0273	0.00500	"	0.0333	81.9	35-142
1-Methylnaphthalene	0.0312	0.00500	"	0.0333	93.6	35-142
2-Methylnaphthalene	0.0318	0.00500	"	0.0333	95.5	35-142
Surrogate: 2-Methylnaphthalene-d10	0.0322		"	0.0333	96.5	40-150
Surrogate: Fluoranthene-d10	0.0344		"	0.0333	103	40-150

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

Project: Anderson 12-13

Project Number: [none]  
Project Manager: Mark Longhurst

**Reported:**  
04/28/21 13:45

## 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 BED0063 - EPA 5030 Soil MS

##### Matrix Spike (BED0063-MS1)

Source: 2104030-01

Prepared & Analyzed: 04/05/21

Acenaphthene	0.0372	0.00500	mg/kg	0.0333	ND	112	31-137			
Anthracene	0.0360	0.00500	"	0.0333	ND	108	30-120			
Benzo (a) anthracene	0.0325	0.00500	"	0.0333	ND	97.6	30-120			
Benzo (a) pyrene	0.0359	0.00500	"	0.0333	ND	108	30-120			
Benzo (b) fluoranthene	0.0349	0.00500	"	0.0333	ND	105	30-120			
Benzo (k) fluoranthene	0.0322	0.00500	"	0.0333	ND	96.5	30-120			
Chrysene	0.0351	0.00500	"	0.0333	ND	105	30-120			
Dibenz (a,h) anthracene	0.0319	0.00500	"	0.0333	ND	95.8	30-120			
Fluoranthene	0.0284	0.00500	"	0.0333	ND	85.2	30-120			
Fluorene	0.0238	0.00500	"	0.0333	ND	71.4	30-120			
Indeno (1,2,3-cd) pyrene	0.0309	0.00500	"	0.0333	ND	92.6	30-120			
Pyrene	0.0270	0.00500	"	0.0333	ND	81.0	35-142			
1-Methylnaphthalene	0.0301	0.00500	"	0.0333	ND	90.2	15-130			
2-Methylnaphthalene	0.0326	0.00500	"	0.0333	ND	97.8	15-130			
Surrogate: 2-Methylnaphthalene-d10	0.0312		"	0.0333		93.5	40-150			
Surrogate: Fluoranthene-d10	0.0353		"	0.0333		106	40-150			

##### Matrix Spike Dup (BED0063-MSD1)

Source: 2104030-01

Prepared & Analyzed: 04/05/21

Acenaphthene	0.0398	0.00500	mg/kg	0.0333	ND	119	31-137	6.64	30	
Anthracene	0.0387	0.00500	"	0.0333	ND	116	30-120	7.24	30	
Benzo (a) anthracene	0.0344	0.00500	"	0.0333	ND	103	30-120	5.59	30	
Benzo (a) pyrene	0.0359	0.00500	"	0.0333	ND	108	30-120	0.0595	30	
Benzo (b) fluoranthene	0.0345	0.00500	"	0.0333	ND	104	30-120	1.05	30	
Benzo (k) fluoranthene	0.0335	0.00500	"	0.0333	ND	101	30-120	4.25	30	
Chrysene	0.0372	0.00500	"	0.0333	ND	112	30-120	5.87	30	
Dibenz (a,h) anthracene	0.0339	0.00500	"	0.0333	ND	102	30-120	6.09	30	
Fluoranthene	0.0296	0.00500	"	0.0333	ND	88.7	30-120	4.12	30	
Fluorene	0.0243	0.00500	"	0.0333	ND	72.9	30-120	2.06	30	
Indeno (1,2,3-cd) pyrene	0.0324	0.00500	"	0.0333	ND	97.3	30-120	4.98	30	
Pyrene	0.0297	0.00500	"	0.0333	ND	89.1	35-142	9.48	30	
1-Methylnaphthalene	0.0330	0.00500	"	0.0333	ND	98.9	15-130	9.23	50	
2-Methylnaphthalene	0.0351	0.00500	"	0.0333	ND	105	15-130	7.29	50	
Surrogate: 2-Methylnaphthalene-d10	0.0327		"	0.0333		98.2	40-150			
Surrogate: Fluoranthene-d10	0.0360		"	0.0333		108	40-150			

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

Project: Anderson 12-13  
Project Number: [none]  
Project Manager: Mark Longhurst

**Reported:**  
04/28/21 13:45

**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 BED0410 - EPA 5030 Soil MS**

**Blank (BED0410-BLK1)**

Prepared: 04/15/21 Analyzed: 04/24/21

Anthracene	ND	0.00500	mg/kg								
Fluorene	ND	0.00500	"								
1-Methylnaphthalene	ND	0.00500	"								
2-Methylnaphthalene	ND	0.00500	"								
Surrogate: 2-Methylnaphthalene-d10	0.0233		"	0.0333		69.9		40-150			
Surrogate: Fluoranthene-d10	0.0295		"	0.0333		88.4		40-150			

**LCS (BED0410-BS1)**

Prepared: 04/15/21 Analyzed: 04/24/21

Anthracene	0.0342	0.00500	mg/kg	0.0333		102		30-120			
Fluorene	0.0393	0.00500	"	0.0333		118		30-120			
1-Methylnaphthalene	0.0344	0.00500	"	0.0333		103		35-142			
2-Methylnaphthalene	0.0300	0.00500	"	0.0333		90.1		35-142			
Surrogate: 2-Methylnaphthalene-d10	0.0249		"	0.0333		74.7		40-150			
Surrogate: Fluoranthene-d10	0.0314		"	0.0333		94.3		40-150			

**LCS Dup (BED0410-BSD1)**

Prepared: 04/15/21 Analyzed: 04/24/21

Anthracene	0.0353	0.00500	mg/kg	0.0333		106		30-120	3.33	30	
Fluorene	0.0372	0.00500	"	0.0333		112		30-120	5.56	30	
1-Methylnaphthalene	0.0351	0.00500	"	0.0333		105		35-142	2.06	30	
2-Methylnaphthalene	0.0308	0.00500	"	0.0333		92.5		35-142	2.72	30	
Surrogate: 2-Methylnaphthalene-d10	0.0273		"	0.0333		82.0		40-150			
Surrogate: Fluoranthene-d10	0.0351		"	0.0333		105		40-150			

Summit Scientific

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

Project: Anderson 12-13  
Project Number: [none]  
Project Manager: Mark Longhurst

**Reported:**  
04/28/21 13:45

**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 BED0420 - EPA 3050B**

**Blank (BED0420-BLK1)**

Prepared: 04/26/21 Analyzed: 04/27/21

Boron ND 0.0100 mg/L

**LCS (BED0420-BS1)**

Prepared: 04/26/21 Analyzed: 04/27/21

Boron 5.67 0.0100 mg/L 5.00 113 80-120

**Duplicate (BED0420-DUP1)**

**Source: 2104008-01**

Prepared: 04/26/21 Analyzed: 04/27/21

Boron 0.454 0.0100 mg/L 0.462 1.70 20

**Matrix Spike (BED0420-MS1)**

**Source: 2104008-01**

Prepared: 04/26/21 Analyzed: 04/27/21

Boron 5.43 0.0100 mg/L 5.00 0.462 99.3 75-125

**Matrix Spike Dup (BED0420-MSD1)**

**Source: 2104008-01**

Prepared: 04/26/21 Analyzed: 04/27/21

Boron 5.74 0.0100 mg/L 5.00 0.462 106 75-125 5.65 25

Summit Scientific

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

Project: Anderson 12-13  
Project Number: [none]  
Project Manager: Mark Longhurst

**Reported:**  
04/28/21 13:45

**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 BED0054 - EPA 3050B**

**Blank (BED0054-BLK1)**

Prepared & Analyzed: 04/05/21

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 (BED0054-BS1)**

Prepared & Analyzed: 04/05/21

Arsenic	39.9	0.200	mg/kg wet	40.0	99.8	80-120
Barium	35.8	0.400	"	40.0	89.4	80-120
Cadmium	1.73	0.200	"	2.00	86.6	80-120
Copper	35.0	0.400	"	40.0	87.4	80-120
Lead	19.8	0.200	"	20.0	99.0	80-120
Nickel	34.9	0.400	"	40.0	87.2	80-120
Selenium	3.66	0.260	"	4.00	91.4	80-120
Silver	1.99	0.0200	"	2.00	99.4	80-120
Zinc	42.5	0.400	"	40.0	106	80-120

**Duplicate (BED0054-DUP1)**

Source: 2104053-01

Prepared & Analyzed: 04/05/21

Arsenic	0.518	0.220	mg/kg dry	0.596	13.8	30
Barium	30.4	0.440	"	35.1	14.2	30
Cadmium	0.0333	0.220	"	0.0407	20.0	30
Copper	1.40	0.440	"	1.89	29.8	30
Lead	2.75	0.220	"	3.61	26.8	30
Nickel	2.26	0.440	"	2.63	15.1	30
Selenium	0.666	0.286	"	0.638	4.28	30
Silver	0.0155	0.0220	"	0.0156	0.431	30
Zinc	10.9	0.440	"	13.3	20.2	30

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

Project: Anderson 12-13

Project Number: [none]  
Project Manager: Mark Longhurst

**Reported:**  
04/28/21 13:45

**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 BED0054 - EPA 3050B**

**Matrix Spike (BED0054-MS1)**

**Source: 2104053-01**

Prepared & Analyzed: 04/05/21

Arsenic	51.8	0.220	mg/kg dry	44.0	0.596	116	75-125
Barium	90.0	0.440	"	44.0	35.1	125	75-125
Cadmium	2.79	0.220	"	2.20	0.0407	125	75-125
Copper	51.0	0.440	"	44.0	1.89	112	75-125
Lead	28.7	0.220	"	22.0	3.61	114	75-125
Nickel	52.0	0.440	"	44.0	2.63	112	75-125
Selenium	5.12	0.286	"	4.40	0.638	102	75-125
Silver	2.56	0.0220	"	2.20	0.0156	116	75-125
Zinc	55.0	0.440	"	44.0	13.3	94.7	75-125

**Matrix Spike Dup (BED0054-MSD1)**

**Source: 2104053-01**

Prepared & Analyzed: 04/05/21

Arsenic	43.0	0.220	mg/kg dry	44.0	0.596	96.4	75-125	18.5	25
Barium	75.8	0.440	"	44.0	35.1	92.7	75-125	17.1	25
Cadmium	2.55	0.220	"	2.20	0.0407	114	75-125	8.98	25
Copper	42.7	0.440	"	44.0	1.89	92.7	75-125	17.8	25
Lead	26.0	0.220	"	22.0	3.61	102	75-125	9.92	25
Nickel	43.9	0.440	"	44.0	2.63	93.8	75-125	17.0	25
Selenium	4.05	0.286	"	4.40	0.638	77.6	75-125	23.3	25
Silver	2.36	0.0220	"	2.20	0.0156	107	75-125	8.14	25
Zinc	57.3	0.440	"	44.0	13.3	100	75-125	4.17	25

**Batch BED0409 - EPA 3050B**

**Blank (BED0409-BLK1)**

Prepared & Analyzed: 04/23/21

Arsenic	ND	0.200	mg/kg wet
Selenium	ND	0.260	"

Summit Scientific

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

Project: Anderson 12-13

Project Number: [none]  
Project Manager: Mark Longhurst

**Reported:**  
04/28/21 13:45

**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 BED0409 - EPA 3050B**

**LCS (BED0409-BS1)**

Prepared & Analyzed: 04/23/21

Arsenic	38.6	0.200	mg/kg wet	40.0		96.4	80-120
Selenium	3.56	0.260	"	4.00		89.0	80-120

**Duplicate (BED0409-DUP1)**

Source: 2104008-02

Prepared & Analyzed: 04/23/21

Arsenic	5.46	0.200	mg/kg dry		6.18		12.2	20
Selenium	0.917	0.260	"		0.998		8.38	20

**Matrix Spike (BED0409-MS1)**

Source: 2104008-02

Prepared: 04/23/21 Analyzed: 04/24/21

Arsenic	50.4	0.200	mg/kg dry	47.7	6.18	92.7	75-125
Selenium	4.81	0.260	"	4.77	0.998	80.0	75-125

**Matrix Spike Dup (BED0409-MSD1)**

Source: 2104008-02

Prepared: 04/23/21 Analyzed: 04/24/21

Arsenic	50.0	0.200	mg/kg dry	47.7	6.18	91.9	75-125	0.765	25
Selenium	5.17	0.260	"	4.77	0.998	87.5	75-125	7.10	25

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

Project: Anderson 12-13  
Project Number: [none]  
Project Manager: Mark Longhurst

**Reported:**  
04/28/21 13:45

**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 BED0083 - 3060A Mod**

**Blank (BED0083-BLK1)**

Prepared: 04/06/21 Analyzed: 04/07/21

Chromium, Hexavalent ND 0.30 mg/kg wet

**LCS (BED0083-BS1)**

Prepared: 04/06/21 Analyzed: 04/07/21

Chromium, Hexavalent 24.2 0.30 mg/kg wet 25.0 97.0 80-120

**Duplicate (BED0083-DUP1)**

**Source: 2103424-03**

Prepared: 04/06/21 Analyzed: 04/07/21

Chromium, Hexavalent ND 0.30 mg/kg dry ND 20

**Matrix Spike (BED0083-MS1)**

**Source: 2103424-03**

Prepared: 04/06/21 Analyzed: 04/07/21

Chromium, Hexavalent 25.6 0.30 mg/kg dry 26.9 ND 95.0 75-125

**Matrix Spike Dup (BED0083-MSD1)**

**Source: 2103424-03**

Prepared: 04/06/21 Analyzed: 04/07/21

Chromium, Hexavalent 25.6 0.30 mg/kg dry 26.9 ND 95.2 75-125 0.210 20

Summit Scientific

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

Project: Anderson 12-13

Project Number: [none]

Project Manager: Mark Longhurst

**Reported:**

04/28/21 13:45

**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 BED0138 - General Preparation**

**Blank (BED0138-BLK1)**

Prepared: 04/08/21 Analyzed: 04/10/21

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

**LCS (BED0138-BS1)**

Prepared: 04/08/21 Analyzed: 04/10/21

Calcium	5.51	0.0500	mg/L wet	5.00	110	70-130
Magnesium	6.40	0.0500	"	5.00	128	70-130
Sodium	5.43	0.0500	"	5.00	109	70-130

Summit Scientific

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

Project: Anderson 12-13

Project Number: [none]

Project Manager: Mark Longhurst

**Reported:**  
04/28/21 13:45

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

**Summit Scientific**

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

**Batch BED0053 - General Preparation**

<b>Duplicate (BED0053-DUP1)</b>		<b>Source: 2103388-07</b>			Prepared: 04/05/21 Analyzed: 04/06/21						
% Solids	95.5		%		95.5			0.00469		20	

**Batch BED0415 - General Preparation**

<b>Duplicate (BED0415-DUP1)</b>		<b>Source: 2104008-02</b>			Prepared & Analyzed: 04/26/21						
% Solids	83.8		%		83.9			0.135		20	

Summit Scientific

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

Project: Anderson 12-13

Project Number: [none]  
Project Manager: Mark Longhurst

**Reported:**  
04/28/21 13:45

**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 BED0176 - General Preparation**

**Blank (BED0176-BLK1)**

Prepared & Analyzed: 04/09/21

Specific Conductance (EC) ND 0.0100 mmhos/cm

**LCS (BED0176-BS1)**

Prepared & Analyzed: 04/09/21

Specific Conductance (EC) 0.158 0.0100 mmhos/cm 0.150 105 90-110

**Duplicate (BED0176-DUP1)**

**Source: 2103468-01**

Prepared & Analyzed: 04/09/21

Specific Conductance (EC) 2.12 0.0100 mmhos/cm 2.08 2.05 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: Anderson 12-13

Project Number: [none]

Project Manager: Mark Longhurst

**Reported:**

04/28/21 13:45

**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 BED0177 - General Preparation**

**LCS (BED0177-BS1)**

Prepared & Analyzed: 04/09/21

pH	9.30	pH Units	9.21	101	95-105
----	------	----------	------	-----	--------

**Duplicate (BED0177-DUP1)**

**Source: 2103468-01**

Prepared & Analyzed: 04/09/21

pH	8.47	pH Units	8.73	3.02	20
----	------	----------	------	------	----

Summit Scientific

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

Project: Anderson 12-13

Project Number: [none]

Project Manager: Mark Longhurst

**Reported:**  
04/28/21 13:45

### 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

April 28, 2021

Mark Longhurst

PDC Energy

1775 Sherman St. STE. 3000

Denver, CO 80203

RE: Anderson 12-13 Tank Battery

Work Order #2104032

Enclosed are the results of analyses for samples received by Summit Scientific on 04/02/21 18:04. 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: Anderson 12-13 Tank Battery

Project Number: [none]  
Project Manager: Mark Longhurst

**Reported:**  
04/28/21 14:33

### ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
SS07@5'	2104032-01	Soil	04/02/21 11:28	04/02/21 18:04
SS08@3'	2104032-02	Soil	04/02/21 11:33	04/02/21 18:04
SS09@6'	2104032-03	Soil	04/02/21 11:47	04/02/21 18:04
SS10@5'	2104032-04	Soil	04/02/21 12:01	04/02/21 18:04
SS11@3'	2104032-05	Soil	04/02/21 12:03	04/02/21 18:04
SS12@5'	2104032-06	Soil	04/02/21 12:17	04/02/21 18:04
SS13@3'	2104032-07	Soil	04/02/21 12:20	04/02/21 18:04
SS14@7'	2104032-08	Soil	04/02/21 12:46	04/02/21 18:04
SS15@6'	2104032-09	Soil	04/02/21 13:43	04/02/21 18:04
SS16@3'	2104032-10	Soil	04/02/21 13:46	04/02/21 18:04

Summit Scientific

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# Summit Scientific

S<sub>2</sub>

2104032

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

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	Project Name:	Anderson 12-13 Tank Battery
Phone:	303-487-1228	Project Number:	
Sampler Name:	Kevin Fletcher		

ID	Sample Description	Date Sampled	Time Sampled	# of containers	Preservative				Matrix				Analysis Requested										Special Instructions			
					HCl	HNO <sub>3</sub>	None	Other	Water	Soil	Air-Canister #	Other	GBTEXN - 8260B - 915	TPH - (C6 - C36) - 915	TMB's (1,2,4 & 1,3,5) - 915	pH, EC, SAR - 915	Boron - HWS - 915	VOC - 915	PAH - 915	Metals - 915						
1	SS07@5'	4/2/21	1128	4			X			X				X	X	X										
2	SS08@3'		1133	4																						
3	SS09@6'		1147	4																						
4	SS10@5'		1206	4																						
5	SS11@3'		1203	4																						
6	SS12@5'		1217	4																						
7	SS13@3'		1220	4																						
8	SS14@7'		1246	4																						
9	SS15@6'		1343	4																						
10	SS16@3'		1346	4																						

Relinquished by:	Date/Time:	Received by:	Date/Time:	<b>Turn Around Time</b> (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"/> <b>Sample Integrity:</b> Temperature Upon Receipt: 12.5 Samples Intact: <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	<b>Notes:</b>
Kevin Fletcher	4/2/21 1545	Tasman's Lock Box	4/2/21 1545		
Relinquished by:	Date/Time:	Received by:	Date/Time:		
Tasman's Lock Box	4/2/21 17:20	John Burr	4/2/21 17:20		
Relinquished by:	Date/Time:	Received by:	Date/Time:		

# Sample Receipt Checklist

S2 Work Order 2104032

Client: PDC / Tasman Client Project ID: Anderson 12-13 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)	<u>12.5</u>
-----------	-------------

Thermometer ID: 61857155-K

	Yes	No	N/A	Comments (if any)
If samples require cooling, was the temperature at 4°C +/- 2°C <sup>(1)</sup> ? NOTE: If samples are delivered the same day of sampling, this requirement is met provided that there is evidence that cooling has begun.	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<u>On ice.</u>
Were all samples received intact <sup>(1)</sup> ?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Was adequate sample volume provided <sup>(1)</sup> ?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
If custody seals are present, are they intact <sup>(1)</sup> ?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
Are samples with holding times due within 48 hours sample due within 48 hours present?	<input 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 <sup>(1)</sup> ?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Does the COC agree with the number and type of sample bottles received <sup>(1)</sup> ?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Do the sample IDs on the bottle labels match the COC <sup>(1)</sup> ?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Is the COC properly relinquished by the client w/ date and time recorded <sup>(1)</sup> ?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
For volatiles in water – is there headspace present? If yes, contact client and note in narrative.	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
Are samples preserved that require preservation (excluding cooling) <sup>(1)</sup> ? Note the type of preservative in the Comments column – HCl, H2SO4, NaOH, HNO3, ect	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
If samples are acid preserved for metals, is the pH ≤ 2 <sup>(1)</sup> ? 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):

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

JB  
Custodian Printed Name or Initials

[Signature]  
Signature of Custodian

4/2/21 18:50  
Date/Time



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

Project: Anderson 12-13 Tank Battery  
Project Number: [none]  
Project Manager: Mark Longhurst

**Reported:**  
04/28/21 14:33

**SS07@5'**  
**2104032-01 (Soil)**

**Summit Scientific**

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

Date Sampled: **04/02/21 11:28**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Benzene	ND	0.0020	mg/kg	1	BED0048	04/02/21	04/03/21	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: **04/02/21 11:28**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 1,2-Dichloroethane-d4		109 %	23-173		"	"	"	"	
Surrogate: Toluene-d8		82.5 %	20-170		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		75.1 %	21-167		"	"	"	"	

**Extractable Petroleum Hydrocarbons by 8015**

Date Sampled: **04/02/21 11:28**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
C10-C28 (DRO)	ND	50	mg/kg	1	BED0049	"	04/03/21	EPA 8015M	
C28-C36 (ORO)	ND	50	"	"	"	"	"	"	

Date Sampled: **04/02/21 11:28**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: o-Terphenyl		117 %	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: Anderson 12-13 Tank Battery  
Project Number: [none]  
Project Manager: Mark Longhurst

**Reported:**  
04/28/21 14:33

**SS07@5'**  
**2104032-01 (Soil)**

**Summit Scientific**

**PAH by EPA Method 8270D SIM**

Date Sampled: **04/02/21 11:28**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Anthracene	ND	0.00500	mg/kg	1	BED0410	04/14/21	04/24/21	EPA 8270D SIM	
Fluorene	ND	0.00500	"	"	"	04/15/21	"	"	
1-Methylnaphthalene	ND	0.00500	"	"	"	"	"	"	
2-Methylnaphthalene	ND	0.00500	"	"	"	"	"	"	

Date Sampled: **04/02/21 11:28**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 2-Methylnaphthalene-d10		67.6 %	40-150		"	"	"	"	
Surrogate: Fluoranthene-d10		84.2 %	40-150		"	"	"	"	

**Total Metals by EPA 6020B**

Date Sampled: **04/02/21 11:28**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Arsenic	<b>7.76</b>	0.200	mg/kg dry	1	BED0409	04/23/21	04/24/21	EPA 6020B	
Selenium	<b>1.13</b>	0.260	"	"	"	"	"	"	

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

Date Sampled: **04/02/21 11:28**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
% Solids	<b>83.2</b>		%	1	BED0415	04/26/21	04/26/21	Calculation	

Summit Scientific

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

Project: Anderson 12-13 Tank Battery

Project Number: [none]  
Project Manager: Mark Longhurst

**Reported:**  
04/28/21 14:33

**SS08@3'**  
**2104032-02 (Soil)**

**Summit Scientific**

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

Date Sampled: **04/02/21 11:33**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Benzene	ND	0.0020	mg/kg	1	BED0048	04/02/21	04/03/21	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: **04/02/21 11:33**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: 1,2-Dichloroethane-d4		109 %	23-173		"	"	"	"	
Surrogate: Toluene-d8		79.4 %	20-170		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		79.2 %	21-167		"	"	"	"	

**Extractable Petroleum Hydrocarbons by 8015**

Date Sampled: **04/02/21 11:33**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
C10-C28 (DRO)	ND	50	mg/kg	1	BED0049	"	04/03/21	EPA 8015M	
C28-C36 (ORO)	ND	50	"	"	"	"	"	"	

Date Sampled: **04/02/21 11:33**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: o-Terphenyl		111 %	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: Anderson 12-13 Tank Battery  
Project Number: [none]  
Project Manager: Mark Longhurst

**Reported:**  
04/28/21 14:33

**SS08@3'**  
**2104032-02 (Soil)**

**Summit Scientific**

**PAH by EPA Method 8270D SIM**

Date Sampled: **04/02/21 11:33**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Anthracene	ND	0.00500	mg/kg	1	BED0410	04/14/21	04/24/21	EPA 8270D SIM	
Fluorene	ND	0.00500	"	"	"	04/15/21	"	"	
1-Methylnaphthalene	ND	0.00500	"	"	"	"	"	"	
2-Methylnaphthalene	ND	0.00500	"	"	"	"	"	"	

Date Sampled: **04/02/21 11:33**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 2-Methylnaphthalene-d10		68.8 %	40-150		"	"	"	"	
Surrogate: Fluoranthene-d10		88.5 %	40-150		"	"	"	"	

**Total Metals by EPA 6020B**

Date Sampled: **04/02/21 11:33**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Arsenic	<b>6.26</b>	0.200	mg/kg dry	1	BED0409	04/23/21	04/24/21	EPA 6020B	
Selenium	<b>1.08</b>	0.260	"	"	"	"	"	"	

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

Date Sampled: **04/02/21 11:33**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
% Solids	<b>81.3</b>		%	1	BED0415	04/26/21	04/26/21	Calculation	

Summit Scientific

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

Project: Anderson 12-13 Tank Battery  
Project Number: [none]  
Project Manager: Mark Longhurst

**Reported:**  
04/28/21 14:33

**SS09@6'**  
**2104032-03 (Soil)**

**Summit Scientific**

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

Date Sampled: **04/02/21 11:47**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Benzene	ND	0.0020	mg/kg	1	BED0048	04/02/21	04/03/21	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: **04/02/21 11:47**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: 1,2-Dichloroethane-d4		105 %	23-173		"	"	"	"	
Surrogate: Toluene-d8		80.5 %	20-170		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		76.3 %	21-167		"	"	"	"	

**Extractable Petroleum Hydrocarbons by 8015**

Date Sampled: **04/02/21 11:47**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
C10-C28 (DRO)	ND	50	mg/kg	1	BED0049	"	04/03/21	EPA 8015M	
C28-C36 (ORO)	ND	50	"	"	"	"	"	"	

Date Sampled: **04/02/21 11:47**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: o-Terphenyl		111 %	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: Anderson 12-13 Tank Battery  
Project Number: [none]  
Project Manager: Mark Longhurst

**Reported:**  
04/28/21 14:33

**SS09@6'**  
**2104032-03 (Soil)**

**Summit Scientific**

**PAH by EPA Method 8270D SIM**

Date Sampled: **04/02/21 11:47**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Anthracene	ND	0.00500	mg/kg	1	BED0410	04/14/21	04/24/21	EPA 8270D SIM	
Fluorene	ND	0.00500	"	"	"	04/15/21	"	"	
1-Methylnaphthalene	ND	0.00500	"	"	"	"	"	"	
2-Methylnaphthalene	ND	0.00500	"	"	"	"	"	"	

Date Sampled: **04/02/21 11:47**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 2-Methylnaphthalene-d10		69.8 %	40-150		"	"	"	"	
Surrogate: Fluoranthene-d10		86.3 %	40-150		"	"	"	"	

**Total Metals by EPA 6020B**

Date Sampled: **04/02/21 11:47**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Arsenic	<b>6.89</b>	0.200	mg/kg dry	1	BED0409	04/23/21	04/24/21	EPA 6020B	
Selenium	<b>0.990</b>	0.260	"	"	"	"	"	"	

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

Date Sampled: **04/02/21 11:47**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
% Solids	<b>83.6</b>		%	1	BED0415	04/26/21	04/26/21	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: Anderson 12-13 Tank Battery  
Project Number: [none]  
Project Manager: Mark Longhurst

**Reported:**  
04/28/21 14:33

**SS10@5'**  
**2104032-04 (Soil)**

**Summit Scientific**

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

Date Sampled: **04/02/21 12:01**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Benzene	ND	0.0020	mg/kg	1	BED0048	04/02/21	04/03/21	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: **04/02/21 12:01**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: 1,2-Dichloroethane-d4		104 %	23-173		"	"	"	"	
Surrogate: Toluene-d8		79.0 %	20-170		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		75.3 %	21-167		"	"	"	"	

**Extractable Petroleum Hydrocarbons by 8015**

Date Sampled: **04/02/21 12:01**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
C10-C28 (DRO)	ND	50	mg/kg	1	BED0049	"	04/03/21	EPA 8015M	
C28-C36 (ORO)	ND	50	"	"	"	"	"	"	

Date Sampled: **04/02/21 12:01**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: o-Terphenyl		114 %	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: Anderson 12-13 Tank Battery  
Project Number: [none]  
Project Manager: Mark Longhurst

**Reported:**  
04/28/21 14:33

**SS10@5'**  
**2104032-04 (Soil)**

**Summit Scientific**

**PAH by EPA Method 8270D SIM**

Date Sampled: **04/02/21 12:01**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Anthracene	ND	0.00500	mg/kg	1	BED0410	04/14/21	04/24/21	EPA 8270D SIM	
Fluorene	ND	0.00500	"	"	"	04/15/21	"	"	
1-Methylnaphthalene	ND	0.00500	"	"	"	"	"	"	
2-Methylnaphthalene	ND	0.00500	"	"	"	"	"	"	

Date Sampled: **04/02/21 12:01**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 2-Methylnaphthalene-d10		62.3 %	40-150		"	"	"	"	
Surrogate: Fluoranthene-d10		78.3 %	40-150		"	"	"	"	

**Total Metals by EPA 6020B**

Date Sampled: **04/02/21 12:01**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Arsenic	<b>4.72</b>	0.200	mg/kg dry	1	BED0409	04/23/21	04/24/21	EPA 6020B	
Selenium	<b>0.925</b>	0.260	"	"	"	"	"	"	

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

Date Sampled: **04/02/21 12:01**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
% Solids	<b>85.5</b>		%	1	BED0415	04/26/21	04/26/21	Calculation	

Summit Scientific

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

Project: Anderson 12-13 Tank Battery  
Project Number: [none]  
Project Manager: Mark Longhurst

**Reported:**  
04/28/21 14:33

**SS11@3'**  
**2104032-05 (Soil)**

**Summit Scientific**

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

Date Sampled: **04/02/21 12:03**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Benzene	ND	0.0020	mg/kg	1	BED0048	04/02/21	04/03/21	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: **04/02/21 12:03**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: 1,2-Dichloroethane-d4		106 %	23-173		"	"	"	"	
Surrogate: Toluene-d8		80.4 %	20-170		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		77.7 %	21-167		"	"	"	"	

**Extractable Petroleum Hydrocarbons by 8015**

Date Sampled: **04/02/21 12:03**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
C10-C28 (DRO)	ND	50	mg/kg	1	BED0049	"	04/03/21	EPA 8015M	
C28-C36 (ORO)	ND	50	"	"	"	"	"	"	

Date Sampled: **04/02/21 12:03**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: o-Terphenyl		118 %	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: Anderson 12-13 Tank Battery  
Project Number: [none]  
Project Manager: Mark Longhurst

**Reported:**  
04/28/21 14:33

**SS11@3'**  
**2104032-05 (Soil)**

**Summit Scientific**

**PAH by EPA Method 8270D SIM**

Date Sampled: **04/02/21 12:03**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Anthracene	ND	0.00500	mg/kg	1	BED0410	04/14/21	04/24/21	EPA 8270D SIM	
Fluorene	ND	0.00500	"	"	"	04/15/21	"	"	
1-Methylnaphthalene	ND	0.00500	"	"	"	"	"	"	
2-Methylnaphthalene	ND	0.00500	"	"	"	"	"	"	

Date Sampled: **04/02/21 12:03**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 2-Methylnaphthalene-d10		63.9 %	40-150		"	"	"	"	
Surrogate: Fluoranthene-d10		81.9 %	40-150		"	"	"	"	

**Total Metals by EPA 6020B**

Date Sampled: **04/02/21 12:03**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Arsenic	<b>9.93</b>	0.200	mg/kg dry	1	BED0409	04/23/21	04/25/21	EPA 6020B	
Selenium	<b>1.32</b>	0.260	"	"	"	"	"	"	

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

Date Sampled: **04/02/21 12:03**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
% Solids	<b>80.4</b>		%	1	BED0415	04/26/21	04/26/21	Calculation	

Summit Scientific

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

Project: Anderson 12-13 Tank Battery  
Project Number: [none]  
Project Manager: Mark Longhurst

**Reported:**  
04/28/21 14:33

**SS12@5'**  
**2104032-06 (Soil)**

**Summit Scientific**

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

Date Sampled: **04/02/21 12:17**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Benzene	ND	0.0020	mg/kg	1	BED0048	04/02/21	04/03/21	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: **04/02/21 12:17**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: 1,2-Dichloroethane-d4		107 %	23-173		"	"	"	"	
Surrogate: Toluene-d8		82.0 %	20-170		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		77.6 %	21-167		"	"	"	"	

**Extractable Petroleum Hydrocarbons by 8015**

Date Sampled: **04/02/21 12:17**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
C10-C28 (DRO)	ND	50	mg/kg	1	BED0049	"	04/03/21	EPA 8015M	
C28-C36 (ORO)	ND	50	"	"	"	"	"	"	

Date Sampled: **04/02/21 12:17**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
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: Anderson 12-13 Tank Battery  
Project Number: [none]  
Project Manager: Mark Longhurst

**Reported:**  
04/28/21 14:33

**SS12@5'**  
**2104032-06 (Soil)**

**Summit Scientific**

**PAH by EPA Method 8270D SIM**

Date Sampled: **04/02/21 12:17**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Anthracene	ND	0.00500	mg/kg	1	BED0410	04/14/21	04/24/21	EPA 8270D SIM	
Fluorene	ND	0.00500	"	"	"	04/15/21	"	"	
1-Methylnaphthalene	ND	0.00500	"	"	"	"	"	"	
2-Methylnaphthalene	ND	0.00500	"	"	"	"	"	"	

Date Sampled: **04/02/21 12:17**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 2-Methylnaphthalene-d10		47.4 %	40-150		"	"	"	"	
Surrogate: Fluoranthene-d10		64.6 %	40-150		"	"	"	"	

**Total Metals by EPA 6020B**

Date Sampled: **04/02/21 12:17**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Arsenic	<b>7.27</b>	0.200	mg/kg dry	1	BED0409	04/23/21	04/25/21	EPA 6020B	
Selenium	<b>1.10</b>	0.260	"	"	"	"	"	"	

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

Date Sampled: **04/02/21 12:17**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
% Solids	<b>85.3</b>		%	1	BED0415	04/26/21	04/26/21	Calculation	

Summit Scientific

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

Project: Anderson 12-13 Tank Battery

Project Number: [none]  
Project Manager: Mark Longhurst

**Reported:**  
04/28/21 14:33

**SS13@3'**  
**2104032-07 (Soil)**

### Summit Scientific

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

Date Sampled: **04/02/21 12:20**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Benzene	ND	0.0020	mg/kg	1	BED0048	04/02/21	04/03/21	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: **04/02/21 12:20**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 1,2-Dichloroethane-d4		105 %	23-173		"	"	"	"	
Surrogate: Toluene-d8		80.8 %	20-170		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		77.8 %	21-167		"	"	"	"	

#### Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **04/02/21 12:20**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
C10-C28 (DRO)	ND	50	mg/kg	1	BED0049	"	04/03/21	EPA 8015M	
C28-C36 (ORO)	ND	50	"	"	"	"	"	"	

Date Sampled: **04/02/21 12:20**

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

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

Project: Anderson 12-13 Tank Battery  
Project Number: [none]  
Project Manager: Mark Longhurst

**Reported:**  
04/28/21 14:33

**SS13@3'**  
**2104032-07 (Soil)**

**Summit Scientific**

**PAH by EPA Method 8270D SIM**

Date Sampled: **04/02/21 12:20**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Anthracene	ND	0.00500	mg/kg	1	BED0410	04/14/21	04/24/21	EPA 8270D SIM	
Fluorene	ND	0.00500	"	"	"	04/15/21	"	"	
1-Methylnaphthalene	ND	0.00500	"	"	"	"	"	"	
2-Methylnaphthalene	ND	0.00500	"	"	"	"	"	"	

Date Sampled: **04/02/21 12:20**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 2-Methylnaphthalene-d10		68.7 %	40-150		"	"	"	"	
Surrogate: Fluoranthene-d10		84.0 %	40-150		"	"	"	"	

**Total Metals by EPA 6020B**

Date Sampled: **04/02/21 12:20**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Arsenic	<b>9.68</b>	0.200	mg/kg dry	1	BED0409	04/23/21	04/25/21	EPA 6020B	
Selenium	<b>1.63</b>	0.260	"	"	"	"	"	"	

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

Date Sampled: **04/02/21 12:20**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
% Solids	<b>81.4</b>		%	1	BED0415	04/26/21	04/26/21	Calculation	

Summit Scientific

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

Project: Anderson 12-13 Tank Battery

Project Number: [none]  
Project Manager: Mark Longhurst

**Reported:**  
04/28/21 14:33

**SS14@7'**  
**2104032-08 (Soil)**

### Summit Scientific

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

Date Sampled: **04/02/21 12:46**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Benzene	ND	0.0020	mg/kg	1	BED0048	04/02/21	04/03/21	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: **04/02/21 12:46**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 1,2-Dichloroethane-d4		108 %	23-173		"	"	"	"	
Surrogate: Toluene-d8		79.8 %	20-170		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		75.8 %	21-167		"	"	"	"	

#### Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **04/02/21 12:46**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
C10-C28 (DRO)	ND	50	mg/kg	1	BED0049	"	04/03/21	EPA 8015M	
C28-C36 (ORO)	ND	50	"	"	"	"	"	"	

Date Sampled: **04/02/21 12:46**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: o-Terphenyl		117 %	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: Anderson 12-13 Tank Battery  
Project Number: [none]  
Project Manager: Mark Longhurst

**Reported:**  
04/28/21 14:33

**SS14@7'**  
**2104032-08 (Soil)**

**Summit Scientific**

**PAH by EPA Method 8270D SIM**

Date Sampled: **04/02/21 12:46**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Anthracene	ND	0.00500	mg/kg	1	BED0410	04/14/21	04/24/21	EPA 8270D SIM	
Fluorene	ND	0.00500	"	"	"	04/15/21	"	"	
1-Methylnaphthalene	ND	0.00500	"	"	"	"	"	"	
2-Methylnaphthalene	ND	0.00500	"	"	"	"	"	"	

Date Sampled: **04/02/21 12:46**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: 2-Methylnaphthalene-d10		66.5 %	40-150		"	"	"	"	
Surrogate: Fluoranthene-d10		78.6 %	40-150		"	"	"	"	

**Total Metals by EPA 6020B**

Date Sampled: **04/02/21 12:46**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Arsenic	<b>8.96</b>	0.200	mg/kg dry	1	BED0409	04/23/21	04/25/21	EPA 6020B	
Selenium	<b>1.04</b>	0.260	"	"	"	"	"	"	

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

Date Sampled: **04/02/21 12:46**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
% Solids	<b>78.8</b>		%	1	BED0415	04/26/21	04/26/21	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: Anderson 12-13 Tank Battery  
Project Number: [none]  
Project Manager: Mark Longhurst

**Reported:**  
04/28/21 14:33

**SS15@6'**  
**2104032-09 (Soil)**

**Summit Scientific**

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

Date Sampled: **04/02/21 13:43**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Benzene	ND	0.0020	mg/kg	1	BED0048	04/02/21	04/03/21	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: **04/02/21 13:43**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: 1,2-Dichloroethane-d4		105 %	23-173		"	"	"	"	
Surrogate: Toluene-d8		80.9 %	20-170		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		77.2 %	21-167		"	"	"	"	

**Extractable Petroleum Hydrocarbons by 8015**

Date Sampled: **04/02/21 13:43**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
C10-C28 (DRO)	ND	50	mg/kg	1	BED0049	"	04/03/21	EPA 8015M	
C28-C36 (ORO)	ND	50	"	"	"	"	"	"	

Date Sampled: **04/02/21 13:43**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: o-Terphenyl		112 %	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: Anderson 12-13 Tank Battery  
Project Number: [none]  
Project Manager: Mark Longhurst

**Reported:**  
04/28/21 14:33

**SS15@6'**  
**2104032-09 (Soil)**

**Summit Scientific**

**PAH by EPA Method 8270D SIM**

Date Sampled: **04/02/21 13:43**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Anthracene	ND	0.00500	mg/kg	1	BED0410	04/14/21	04/24/21	EPA 8270D SIM	
Fluorene	ND	0.00500	"	"	"	04/15/21	"	"	
1-Methylnaphthalene	ND	0.00500	"	"	"	"	"	"	
2-Methylnaphthalene	ND	0.00500	"	"	"	"	"	"	

Date Sampled: **04/02/21 13:43**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: 2-Methylnaphthalene-d10		67.1 %	40-150		"	"	"	"	
Surrogate: Fluoranthene-d10		81.6 %	40-150		"	"	"	"	

**Total Metals by EPA 6020B**

Date Sampled: **04/02/21 13:43**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Arsenic	<b>4.86</b>	0.200	mg/kg dry	1	BED0409	04/23/21	04/25/21	EPA 6020B	
Selenium	<b>1.36</b>	0.260	"	"	"	"	"	"	

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

Date Sampled: **04/02/21 13:43**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
% Solids	<b>86.5</b>		%	1	BED0415	04/26/21	04/26/21	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: Anderson 12-13 Tank Battery

Project Number: [none]  
Project Manager: Mark Longhurst

**Reported:**  
04/28/21 14:33

**SS16@3'**  
**2104032-10 (Soil)**

**Summit Scientific**

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

Date Sampled: **04/02/21 13:46**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Benzene	ND	0.0020	mg/kg	1	BED0048	04/02/21	04/03/21	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	"	"	"	"	"	"	
<b>Gasoline Range Hydrocarbons</b>	<b>0.57</b>	0.50	"	"	"	"	"	"	

Date Sampled: **04/02/21 13:46**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 1,2-Dichloroethane-d4		109 %	23-173		"	"	"	"	
Surrogate: Toluene-d8		82.3 %	20-170		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		79.2 %	21-167		"	"	"	"	

**Extractable Petroleum Hydrocarbons by 8015**

Date Sampled: **04/02/21 13:46**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
C10-C28 (DRO)	ND	50	mg/kg	1	BED0049	"	04/03/21	EPA 8015M	
C28-C36 (ORO)	ND	50	"	"	"	"	"	"	

Date Sampled: **04/02/21 13:46**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: o-Terphenyl		117 %	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: Anderson 12-13 Tank Battery  
Project Number: [none]  
Project Manager: Mark Longhurst

**Reported:**  
04/28/21 14:33

**SS16@3'**  
**2104032-10 (Soil)**

**Summit Scientific**

**PAH by EPA Method 8270D SIM**

Date Sampled: **04/02/21 13:46**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Anthracene	ND	0.00500	mg/kg	1	BED0410	04/14/21	04/24/21	EPA 8270D SIM	
Fluorene	ND	0.00500	"	"	"	04/15/21	"	"	
1-Methylnaphthalene	ND	0.00500	"	"	"	"	"	"	
2-Methylnaphthalene	ND	0.00500	"	"	"	"	"	"	

Date Sampled: **04/02/21 13:46**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 2-Methylnaphthalene-d10		66.1 %	40-150		"	"	"	"	
Surrogate: Fluoranthene-d10		81.3 %	40-150		"	"	"	"	

**Total Metals by EPA 6020B**

Date Sampled: **04/02/21 13:46**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Arsenic	<b>7.76</b>	0.200	mg/kg dry	1	BED0409	04/23/21	04/25/21	EPA 6020B	
Selenium	<b>1.39</b>	0.260	"	"	"	"	"	"	

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

Date Sampled: **04/02/21 13:46**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
% Solids	<b>84.5</b>		%	1	BED0415	04/26/21	04/26/21	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: Anderson 12-13 Tank Battery

Project Number: [none]  
Project Manager: Mark Longhurst

**Reported:**  
04/28/21 14:33

## 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 BED0048 - EPA 5030 Soil MS

##### Blank (BED0048-BLK1)

Prepared & Analyzed: 04/02/21

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	0.0426		"	0.0400		106	23-173			
Surrogate: Toluene-d8	0.0326		"	0.0400		81.4	20-170			
Surrogate: 4-Bromofluorobenzene	0.0321		"	0.0400		80.3	21-167			

##### LCS (BED0048-BS1)

Prepared & Analyzed: 04/02/21

Benzene	0.103	0.0020	mg/kg	0.100		103	70-130			
Toluene	0.0958	0.0050	"	0.100		95.8	70-130			
Ethylbenzene	0.114	0.0050	"	0.100		114	70-130			
m,p-Xylene	0.224	0.010	"	0.200		112	70-130			
o-Xylene	0.114	0.0050	"	0.100		114	70-130			
1,2,4-Trimethylbenzene	0.108	0.0050	"	0.100		108	70-130			
1,3,5-Trimethylbenzene	0.102	0.0050	"	0.100		102	70-130			
Naphthalene	0.0960	0.0038	"	0.100		96.0	70-130			
Surrogate: 1,2-Dichloroethane-d4	0.0430		"	0.0400		108	23-173			
Surrogate: Toluene-d8	0.0331		"	0.0400		82.7	20-170			
Surrogate: 4-Bromofluorobenzene	0.0297		"	0.0400		74.2	21-167			

##### Matrix Spike (BED0048-MS1)

Source: 2104030-01

Prepared & Analyzed: 04/02/21

Benzene	0.104	0.0020	mg/kg	0.100	ND	104	70-130			
Toluene	0.0975	0.0050	"	0.100	ND	97.5	70-130			
Ethylbenzene	0.0925	0.0050	"	0.100	ND	92.5	70-130			
m,p-Xylene	0.184	0.010	"	0.200	0.00423	90.1	70-130			
o-Xylene	0.0950	0.0050	"	0.100	ND	95.0	70-130			
1,2,4-Trimethylbenzene	0.0899	0.0050	"	0.100	ND	89.9	70-130			
1,3,5-Trimethylbenzene	0.0840	0.0050	"	0.100	ND	84.0	70-130			
Naphthalene	0.0880	0.0038	"	0.100	ND	88.0	70-130			
Surrogate: 1,2-Dichloroethane-d4	0.0425		"	0.0400		106	23-173			
Surrogate: Toluene-d8	0.0331		"	0.0400		82.7	20-170			
Surrogate: 4-Bromofluorobenzene	0.0318		"	0.0400		79.4	21-167			

Summit Scientific

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

Project: Anderson 12-13 Tank Battery  
Project Number: [none]  
Project Manager: Mark Longhurst

**Reported:**  
04/28/21 14:33

**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 BED0048 - EPA 5030 Soil MS**

Matrix Spike Dup (BED0048-MSD1)	Source: 2104030-01			Prepared & Analyzed: 04/02/21						
Benzene	0.0986	0.0020	mg/kg	0.100	ND	98.6	70-130	5.13	30	
Toluene	0.0933	0.0050	"	0.100	ND	93.3	70-130	4.34	30	
Ethylbenzene	0.0899	0.0050	"	0.100	ND	89.9	70-130	2.83	30	
m,p-Xylene	0.182	0.010	"	0.200	0.00423	88.7	70-130	1.57	30	
o-Xylene	0.0912	0.0050	"	0.100	ND	91.2	70-130	4.09	30	
1,2,4-Trimethylbenzene	0.0908	0.0050	"	0.100	ND	90.8	70-130	0.897	30	
1,3,5-Trimethylbenzene	0.0862	0.0050	"	0.100	ND	86.2	70-130	2.64	30	
Naphthalene	0.0923	0.0038	"	0.100	ND	92.3	70-130	4.79	30	
Surrogate: 1,2-Dichloroethane-d4	0.0420		"	0.0400		105	23-173			
Surrogate: Toluene-d8	0.0363		"	0.0400		90.8	20-170			
Surrogate: 4-Bromofluorobenzene	0.0344		"	0.0400		86.0	21-167			

Summit Scientific

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

Project: Anderson 12-13 Tank Battery  
Project Number: [none]  
Project Manager: Mark Longhurst

**Reported:**  
04/28/21 14:33

**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 BED0049 - EPA 3550A**

**Blank (BED0049-BLK1)**

Prepared & Analyzed: 04/02/21

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

**LCS (BED0049-BS1)**

Prepared & Analyzed: 04/02/21

C10-C28 (DRO)	548	50	mg/kg	500	110	70-130
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**Matrix Spike (BED0049-MS1)**

Source: 2104030-01

Prepared & Analyzed: 04/02/21

C10-C28 (DRO)	463	50	mg/kg	500	13.9	89.9	70-130
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**Matrix Spike Dup (BED0049-MSD1)**

Source: 2104030-01

Prepared & Analyzed: 04/02/21

C10-C28 (DRO)	449	50	mg/kg	500	13.9	87.0	70-130	3.11	20
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Summit Scientific

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

Project: Anderson 12-13 Tank Battery

Project Number: [none]  
Project Manager: Mark Longhurst

**Reported:**  
04/28/21 14:33

## 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 BED0410 - EPA 5030 Soil MS

##### Blank (BED0410-BLK1)

Prepared: 04/15/21 Analyzed: 04/24/21

Anthracene	ND	0.00500	mg/kg							
Fluorene	ND	0.00500	"							
1-Methylnaphthalene	ND	0.00500	"							
2-Methylnaphthalene	ND	0.00500	"							
Surrogate: 2-Methylnaphthalene-d10	0.0233		"	0.0333		69.9	40-150			
Surrogate: Fluoranthene-d10	0.0295		"	0.0333		88.4	40-150			

##### LCS (BED0410-BS1)

Prepared: 04/15/21 Analyzed: 04/24/21

Anthracene	0.0342	0.00500	mg/kg	0.0333		102	30-120			
Fluorene	0.0393	0.00500	"	0.0333		118	30-120			
1-Methylnaphthalene	0.0344	0.00500	"	0.0333		103	35-142			
2-Methylnaphthalene	0.0300	0.00500	"	0.0333		90.1	35-142			
Surrogate: 2-Methylnaphthalene-d10	0.0249		"	0.0333		74.7	40-150			
Surrogate: Fluoranthene-d10	0.0314		"	0.0333		94.3	40-150			

##### LCS Dup (BED0410-BSD1)

Prepared: 04/15/21 Analyzed: 04/24/21

Anthracene	0.0353	0.00500	mg/kg	0.0333		106	30-120	3.33	30	
Fluorene	0.0372	0.00500	"	0.0333		112	30-120	5.56	30	
1-Methylnaphthalene	0.0351	0.00500	"	0.0333		105	35-142	2.06	30	
2-Methylnaphthalene	0.0308	0.00500	"	0.0333		92.5	35-142	2.72	30	
Surrogate: 2-Methylnaphthalene-d10	0.0273		"	0.0333		82.0	40-150			
Surrogate: Fluoranthene-d10	0.0351		"	0.0333		105	40-150			

Summit Scientific

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

Project: Anderson 12-13 Tank Battery

Project Number: [none]  
Project Manager: Mark Longhurst

**Reported:**  
04/28/21 14:33

**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 BED0409 - EPA 3050B**

**Blank (BED0409-BLK1)**

Prepared & Analyzed: 04/23/21

Arsenic	ND	0.200	mg/kg wet
Selenium	ND	0.260	"

**LCS (BED0409-BS1)**

Prepared & Analyzed: 04/23/21

Arsenic	38.6	0.200	mg/kg wet	40.0	96.4	80-120
Selenium	3.56	0.260	"	4.00	89.0	80-120

**Duplicate (BED0409-DUP1)**

Source: 2104008-02

Prepared & Analyzed: 04/23/21

Arsenic	5.46	0.200	mg/kg dry	6.18	12.2	20
Selenium	0.917	0.260	"	0.998	8.38	20

**Matrix Spike (BED0409-MS1)**

Source: 2104008-02

Prepared: 04/23/21 Analyzed: 04/24/21

Arsenic	50.4	0.200	mg/kg dry	47.7	6.18	92.7	75-125
Selenium	4.81	0.260	"	4.77	0.998	80.0	75-125

**Matrix Spike Dup (BED0409-MSD1)**

Source: 2104008-02

Prepared: 04/23/21 Analyzed: 04/24/21

Arsenic	50.0	0.200	mg/kg dry	47.7	6.18	91.9	75-125	0.765	25
Selenium	5.17	0.260	"	4.77	0.998	87.5	75-125	7.10	25

Summit Scientific

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

Project: Anderson 12-13 Tank Battery

Project Number: [none]

Project Manager: Mark Longhurst

**Reported:**  
04/28/21 14:33

**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 BED0415 - General Preparation**

**Duplicate (BED0415-DUP1)**

**Source: 2104008-02**

**Prepared & Analyzed: 04/26/21**

% Solids	83.8	%		83.9		0.135	20
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Summit Scientific

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

Project: Anderson 12-13 Tank Battery

Project Number: [none]  
Project Manager: Mark Longhurst

**Reported:**  
04/28/21 14:33

### 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

April 28, 2021

Mark Longhurst

PDC Energy

1775 Sherman St. STE. 3000

Denver, CO 80203

RE: Anderson 12-13 Tank Battery

Work Order #2104063

Enclosed are the results of analyses for samples received by Summit Scientific on 04/05/21 18:13. 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: Anderson 12-13 Tank Battery  
Project Number: [none]  
Project Manager: Mark Longhurst

**Reported:**  
04/28/21 14:38

#### ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
SS17@6'	2104063-01	Soil	04/05/21 10:09	04/05/21 18:13
SS18@3'	2104063-02	Soil	04/05/21 10:12	04/05/21 18:13
SS19@3'	2104063-03	Soil	04/05/21 10:28	04/05/21 18:13
SS20@6'	2104063-04	Soil	04/05/21 10:32	04/05/21 18:13
SS21@7'	2104063-05	Soil	04/05/21 10:37	04/05/21 18:13
SS22@4'	2104063-06	Soil	04/05/21 10:44	04/05/21 18:13
SS23@6'	2104063-07	Soil	04/05/21 10:49	04/05/21 18:13

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

S<sub>2</sub>

2104063

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: Anderson 12-13 Tank Battery

Sampler Name: Kevin Fletcher

Project Number:

ID	Sample Description	Date Sampled	Time Sampled	# of containers	Preservative				Matrix				Analysis Requested								Special Instructions			
					HCl	HNO <sub>3</sub>	None	Other	Water	Soil	Air-Canister #	Other	GBTEXN - 8260B - 915	TPH - (C6 - C36) - 915	TMB's (1,2,4 & 1,3,5) - 915	pH, EC, SAR - 915	Boron - HWS - 915	VOC - 915	PAH - 915	Metals - 915				
1	SS17@6'	4/5/21	1009	4			X			X				X	X	X							pH, EC, SAR by saturated paste	
2	SS18@3'	↓	1912	4																				
3	SS19@3'		1028	4																				
4	SS20@6'		1032	4																				
5	SS21@7'		1037	4																				
6	SS22@4'		1044	4																				
7	SS23@6'		1049	4																				
8																								
9																								
10																								

Relinquished by: Kevin Fletcher	Date/Time: 4/5/21 1530	Received by: Tasman's Lock Box	Date/Time: 4/5/21 1530	Turn Around Time (Check) Same Day <input checked="" type="checkbox"/> 72 hours 24 hours 48 hours	Notes:
Relinquished by: Tasman's Lock Box	Date/Time:	Received by: [Signature]	Date/Time: 4/5/21 17:20	Sample Integrity: Temperature Upon Receipt: 8 Samples Intact: <input checked="" type="radio"/> Yes <input type="radio"/> No	
Relinquished by:	Date/Time:	Received by:	Date/Time:		

# Sample Receipt Checklist

S2 Work Order 2104063

Client: PDC / Tasman

Client Project ID: Anderson 12-13 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)	<u>8</u>
-----------	----------

Thermometer ID: 61857155-K

	Yes	No	N/A	Comments (if any)
If samples require cooling, was the temperature at 4°C +/- 2°C <sup>(1)</sup> ? NOTE: If samples are delivered the same day of sampling, this requirement is met provided that there is evidence that cooling has begun.	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<u>On ice.</u>
Were all samples received intact <sup>(1)</sup> ?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Was adequate sample volume provided <sup>(1)</sup> ?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
If custody seals are present, are they intact <sup>(1)</sup> ?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
Are samples with holding times due within 48 hours sample due within 48 hours present?	<input 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 <sup>(1)</sup> ?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Does the COC agree with the number and type of sample bottles received <sup>(1)</sup> ?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Do the sample IDs on the bottle labels match the COC <sup>(1)</sup> ?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Is the COC properly relinquished by the client w/ date and time recorded <sup>(1)</sup> ?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
For volatiles in water – is there headspace present? If yes, contact client and note in narrative.	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
Are samples preserved that require preservation (excluding cooling) <sup>(1)</sup> ? Note the type of preservative in the Comments column – HCl, H2SO4, NaOH, HNO3, ect	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
If samples are acid preserved for metals, is the pH ≤ 2 <sup>(1)</sup> ? 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):				

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

JB  
Custodian Printed Name or Initials

John B...  
Signature of Custodian

4/5/21 19:20  
Date/Time



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

Project: Anderson 12-13 Tank Battery  
Project Number: [none]  
Project Manager: Mark Longhurst

**Reported:**  
04/28/21 14:38

**SS17@6'**  
**2104063-01 (Soil)**

**Summit Scientific**

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

Date Sampled: **04/05/21 10:09**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Benzene	ND	0.0020	mg/kg	1	BED0067	04/05/21	04/05/21	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: **04/05/21 10:09**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 1,2-Dichloroethane-d4		80.9 %	23-173		"	"	"	"	
Surrogate: Toluene-d8		104 %	20-170		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		96.4 %	21-167		"	"	"	"	

**Extractable Petroleum Hydrocarbons by 8015**

Date Sampled: **04/05/21 10:09**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
C10-C28 (DRO)	ND	50	mg/kg	1	BED0068	04/05/21	04/05/21	EPA 8015M	
C28-C36 (ORO)	ND	50	"	"	"	"	"	"	

Date Sampled: **04/05/21 10:09**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: o-Terphenyl		127 %	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: Anderson 12-13 Tank Battery  
Project Number: [none]  
Project Manager: Mark Longhurst

**Reported:**  
04/28/21 14:38

**SS17@6'**  
**2104063-01 (Soil)**

**Summit Scientific**

**PAH by EPA Method 8270D SIM**

Date Sampled: **04/05/21 10:09**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Anthracene	ND	0.00500	mg/kg	1	BED0410	04/15/21	04/24/21	EPA 8270D SIM	
Fluorene	ND	0.00500	"	"	"	"	"	"	
1-Methylnaphthalene	ND	0.00500	"	"	"	"	"	"	
2-Methylnaphthalene	ND	0.00500	"	"	"	"	"	"	

Date Sampled: **04/05/21 10:09**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 2-Methylnaphthalene-d10		46.8 %	40-150		"	"	"	"	
Surrogate: Fluoranthene-d10		55.0 %	40-150		"	"	"	"	

**Total Metals by EPA 6020B**

Date Sampled: **04/05/21 10:09**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Arsenic	<b>7.76</b>	0.200	mg/kg dry	1	BED0417	04/26/21	04/26/21	EPA 6020B	
Selenium	<b>1.15</b>	0.260	"	"	"	"	"	"	

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

Date Sampled: **04/05/21 10:09**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
% Solids	<b>79.7</b>		%	1	BED0415	04/26/21	04/26/21	Calculation	

Summit Scientific

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

Project: Anderson 12-13 Tank Battery

Project Number: [none]  
Project Manager: Mark Longhurst

**Reported:**  
04/28/21 14:38

**SS18@3'**  
**2104063-02 (Soil)**

**Summit Scientific**

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

Date Sampled: **04/05/21 10:12**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Benzene	ND	0.0020	mg/kg	1	BED0067	04/05/21	04/05/21	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: **04/05/21 10:12**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 1,2-Dichloroethane-d4		93.8 %	23-173		"	"	"	"	
Surrogate: Toluene-d8		106 %	20-170		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		103 %	21-167		"	"	"	"	

**Extractable Petroleum Hydrocarbons by 8015**

Date Sampled: **04/05/21 10:12**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
C10-C28 (DRO)	ND	50	mg/kg	1	BED0068	04/05/21	04/05/21	EPA 8015M	
C28-C36 (ORO)	ND	50	"	"	"	"	"	"	

Date Sampled: **04/05/21 10:12**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: o-Terphenyl		121 %	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: Anderson 12-13 Tank Battery  
Project Number: [none]  
Project Manager: Mark Longhurst

**Reported:**  
04/28/21 14:38

**SS18@3'**  
**2104063-02 (Soil)**

**Summit Scientific**

**PAH by EPA Method 8270D SIM**

Date Sampled: **04/05/21 10:12**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Anthracene	ND	0.00500	mg/kg	1	BED0410	04/15/21	04/24/21	EPA 8270D SIM	
Fluorene	ND	0.00500	"	"	"	"	"	"	
1-Methylnaphthalene	ND	0.00500	"	"	"	"	"	"	
2-Methylnaphthalene	ND	0.00500	"	"	"	"	"	"	

Date Sampled: **04/05/21 10:12**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 2-Methylnaphthalene-d10		48.0 %	40-150		"	"	"	"	
Surrogate: Fluoranthene-d10		58.6 %	40-150		"	"	"	"	

**Total Metals by EPA 6020B**

Date Sampled: **04/05/21 10:12**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Arsenic	<b>8.47</b>	0.200	mg/kg dry	1	BED0417	04/26/21	04/26/21	EPA 6020B	
Selenium	<b>1.47</b>	0.260	"	"	"	"	"	"	

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

Date Sampled: **04/05/21 10:12**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
% Solids	<b>80.2</b>		%	1	BED0415	04/26/21	04/26/21	Calculation	

Summit Scientific

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

Project: Anderson 12-13 Tank Battery  
Project Number: [none]  
Project Manager: Mark Longhurst

**Reported:**  
04/28/21 14:38

**SS19@3'**  
**2104063-03 (Soil)**

**Summit Scientific**

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

Date Sampled: **04/05/21 10:28**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Benzene	ND	0.0020	mg/kg	1	BED0067	04/05/21	04/05/21	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: **04/05/21 10:28**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: 1,2-Dichloroethane-d4		90.3 %	23-173		"	"	"	"	
Surrogate: Toluene-d8		105 %	20-170		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		102 %	21-167		"	"	"	"	

**Extractable Petroleum Hydrocarbons by 8015**

Date Sampled: **04/05/21 10:28**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
C10-C28 (DRO)	ND	50	mg/kg	1	BED0068	04/05/21	04/05/21	EPA 8015M	
C28-C36 (ORO)	ND	50	"	"	"	"	"	"	

Date Sampled: **04/05/21 10:28**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: o-Terphenyl		122 %	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: Anderson 12-13 Tank Battery  
Project Number: [none]  
Project Manager: Mark Longhurst

**Reported:**  
04/28/21 14:38

**SS19@3'**  
**2104063-03 (Soil)**

**Summit Scientific**

**PAH by EPA Method 8270D SIM**

Date Sampled: **04/05/21 10:28**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Anthracene	ND	0.00500	mg/kg	1	BED0410	04/15/21	04/24/21	EPA 8270D SIM	
Fluorene	ND	0.00500	"	"	"	"	"	"	
1-Methylnaphthalene	ND	0.00500	"	"	"	"	"	"	
2-Methylnaphthalene	ND	0.00500	"	"	"	"	"	"	

Date Sampled: **04/05/21 10:28**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 2-Methylnaphthalene-d10		47.6 %	40-150		"	"	"	"	
Surrogate: Fluoranthene-d10		56.7 %	40-150		"	"	"	"	

**Total Metals by EPA 6020B**

Date Sampled: **04/05/21 10:28**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Arsenic	<b>10.2</b>	0.200	mg/kg dry	1	BED0417	04/26/21	04/26/21	EPA 6020B	
Selenium	<b>2.03</b>	0.260	"	"	"	"	"	"	

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

Date Sampled: **04/05/21 10:28**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
% Solids	<b>75.2</b>		%	1	BED0415	04/26/21	04/26/21	Calculation	

Summit Scientific

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

Project: Anderson 12-13 Tank Battery  
Project Number: [none]  
Project Manager: Mark Longhurst

**Reported:**  
04/28/21 14:38

**SS20@6'**  
**2104063-04 (Soil)**

**Summit Scientific**

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

Date Sampled: **04/05/21 10:32**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Benzene	ND	0.0020	mg/kg	1	BED0067	04/05/21	04/05/21	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: **04/05/21 10:32**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: 1,2-Dichloroethane-d4		88.3 %	23-173		"	"	"	"	
Surrogate: Toluene-d8		100 %	20-170		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		102 %	21-167		"	"	"	"	

**Extractable Petroleum Hydrocarbons by 8015**

Date Sampled: **04/05/21 10:32**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
C10-C28 (DRO)	ND	50	mg/kg	1	BED0068	04/05/21	04/05/21	EPA 8015M	
C28-C36 (ORO)	ND	50	"	"	"	"	"	"	

Date Sampled: **04/05/21 10:32**

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

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

Project: Anderson 12-13 Tank Battery  
Project Number: [none]  
Project Manager: Mark Longhurst

**Reported:**  
04/28/21 14:38

**SS20@6'**  
**2104063-04 (Soil)**

**Summit Scientific**

**PAH by EPA Method 8270D SIM**

Date Sampled: **04/05/21 10:32**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Anthracene	ND	0.00500	mg/kg	1	BED0410	04/15/21	04/24/21	EPA 8270D SIM	
Fluorene	ND	0.00500	"	"	"	"	"	"	
1-Methylnaphthalene	ND	0.00500	"	"	"	"	"	"	
2-Methylnaphthalene	ND	0.00500	"	"	"	"	"	"	

Date Sampled: **04/05/21 10:32**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 2-Methylnaphthalene-d10		47.0 %	40-150		"	"	"	"	
Surrogate: Fluoranthene-d10		52.5 %	40-150		"	"	"	"	

**Total Metals by EPA 6020B**

Date Sampled: **04/05/21 10:32**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Arsenic	<b>7.80</b>	0.200	mg/kg dry	1	BED0417	04/26/21	04/26/21	EPA 6020B	
Selenium	<b>1.26</b>	0.260	"	"	"	"	"	"	

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

Date Sampled: **04/05/21 10:32**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
% Solids	<b>82.1</b>		%	1	BED0415	04/26/21	04/26/21	Calculation	

Summit Scientific

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

Project: Anderson 12-13 Tank Battery  
Project Number: [none]  
Project Manager: Mark Longhurst

**Reported:**  
04/28/21 14:38

**SS21@7'**  
**2104063-05 (Soil)**

**Summit Scientific**

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

Date Sampled: **04/05/21 10:37**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Benzene	ND	0.0020	mg/kg	1	BED0067	04/05/21	04/05/21	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: **04/05/21 10:37**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: 1,2-Dichloroethane-d4		91.8 %	23-173		"	"	"	"	
Surrogate: Toluene-d8		101 %	20-170		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		96.0 %	21-167		"	"	"	"	

**Extractable Petroleum Hydrocarbons by 8015**

Date Sampled: **04/05/21 10:37**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
C10-C28 (DRO)	ND	50	mg/kg	1	BED0068	04/05/21	04/05/21	EPA 8015M	
C28-C36 (ORO)	ND	50	"	"	"	"	"	"	

Date Sampled: **04/05/21 10:37**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: o-Terphenyl		124 %	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: Anderson 12-13 Tank Battery  
Project Number: [none]  
Project Manager: Mark Longhurst

**Reported:**  
04/28/21 14:38

**SS21@7'**  
**2104063-05 (Soil)**

**Summit Scientific**

**PAH by EPA Method 8270D SIM**

Date Sampled: **04/05/21 10:37**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Anthracene	ND	0.00500	mg/kg	1	BED0410	04/15/21	04/25/21	EPA 8270D SIM	
Fluorene	ND	0.00500	"	"	"	"	"	"	
1-Methylnaphthalene	ND	0.00500	"	"	"	"	"	"	
2-Methylnaphthalene	ND	0.00500	"	"	"	"	"	"	

Date Sampled: **04/05/21 10:37**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 2-Methylnaphthalene-d10		50.2 %	40-150		"	"	"	"	
Surrogate: Fluoranthene-d10		55.2 %	40-150		"	"	"	"	

**Total Metals by EPA 6020B**

Date Sampled: **04/05/21 10:37**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Arsenic	<b>8.02</b>	0.200	mg/kg dry	1	BED0417	04/26/21	04/26/21	EPA 6020B	
Selenium	<b>1.11</b>	0.260	"	"	"	"	"	"	

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

Date Sampled: **04/05/21 10:37**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
% Solids	<b>82.8</b>		%	1	BED0415	04/26/21	04/26/21	Calculation	

Summit Scientific

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

Project: Anderson 12-13 Tank Battery

Project Number: [none]  
Project Manager: Mark Longhurst

**Reported:**  
04/28/21 14:38

**SS22@4'**  
**2104063-06 (Soil)**

**Summit Scientific**

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

Date Sampled: **04/05/21 10:44**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Benzene	ND	0.0020	mg/kg	1	BED0067	04/05/21	04/05/21	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: **04/05/21 10:44**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: 1,2-Dichloroethane-d4		87.5 %	23-173		"	"	"	"	
Surrogate: Toluene-d8		104 %	20-170		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		101 %	21-167		"	"	"	"	

**Extractable Petroleum Hydrocarbons by 8015**

Date Sampled: **04/05/21 10:44**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
C10-C28 (DRO)	ND	50	mg/kg	1	BED0068	04/05/21	04/05/21	EPA 8015M	
C28-C36 (ORO)	ND	50	"	"	"	"	"	"	

Date Sampled: **04/05/21 10:44**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: o-Terphenyl		126 %	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: Anderson 12-13 Tank Battery  
Project Number: [none]  
Project Manager: Mark Longhurst

**Reported:**  
04/28/21 14:38

**SS22@4'**  
**2104063-06 (Soil)**

**Summit Scientific**

**PAH by EPA Method 8270D SIM**

Date Sampled: **04/05/21 10:44**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Anthracene	ND	0.00500	mg/kg	1	BED0410	04/15/21	04/25/21	EPA 8270D SIM	
Fluorene	ND	0.00500	"	"	"	"	"	"	
1-Methylnaphthalene	ND	0.00500	"	"	"	"	"	"	
2-Methylnaphthalene	ND	0.00500	"	"	"	"	"	"	

Date Sampled: **04/05/21 10:44**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 2-Methylnaphthalene-d10		44.8 %	40-150		"	"	"	"	
Surrogate: Fluoranthene-d10		53.6 %	40-150		"	"	"	"	

**Total Metals by EPA 6020B**

Date Sampled: **04/05/21 10:44**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Arsenic	<b>5.68</b>	0.200	mg/kg dry	1	BED0417	04/26/21	04/27/21	EPA 6020B	
Selenium	<b>0.825</b>	0.260	"	"	"	"	"	"	

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

Date Sampled: **04/05/21 10:44**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
% Solids	<b>85.1</b>		%	1	BED0415	04/26/21	04/26/21	Calculation	

Summit Scientific

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

Project: Anderson 12-13 Tank Battery  
Project Number: [none]  
Project Manager: Mark Longhurst

**Reported:**  
04/28/21 14:38

**SS23@6'**  
**2104063-07 (Soil)**

**Summit Scientific**

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

Date Sampled: **04/05/21 10:49**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Benzene	ND	0.0020	mg/kg	1	BED0067	04/05/21	04/05/21	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: **04/05/21 10:49**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: 1,2-Dichloroethane-d4		92.6 %	23-173		"	"	"	"	
Surrogate: Toluene-d8		99.4 %	20-170		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		96.9 %	21-167		"	"	"	"	

**Extractable Petroleum Hydrocarbons by 8015**

Date Sampled: **04/05/21 10:49**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
C10-C28 (DRO)	ND	50	mg/kg	1	BED0068	04/05/21	04/05/21	EPA 8015M	
C28-C36 (ORO)	ND	50	"	"	"	"	"	"	

Date Sampled: **04/05/21 10:49**

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: Anderson 12-13 Tank Battery  
Project Number: [none]  
Project Manager: Mark Longhurst

**Reported:**  
04/28/21 14:38

**SS23@6'**  
**2104063-07 (Soil)**

**Summit Scientific**

**PAH by EPA Method 8270D SIM**

Date Sampled: **04/05/21 10:49**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Anthracene	ND	0.00500	mg/kg	1	BED0410	04/15/21	04/25/21	EPA 8270D SIM	
Fluorene	ND	0.00500	"	"	"	"	"	"	
1-Methylnaphthalene	ND	0.00500	"	"	"	"	"	"	
2-Methylnaphthalene	ND	0.00500	"	"	"	"	"	"	

Date Sampled: **04/05/21 10:49**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 2-Methylnaphthalene-d10		47.7 %	40-150		"	"	"	"	
Surrogate: Fluoranthene-d10		57.0 %	40-150		"	"	"	"	

**Total Metals by EPA 6020B**

Date Sampled: **04/05/21 10:49**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Arsenic	<b>6.37</b>	0.200	mg/kg dry	1	BED0417	04/26/21	04/27/21	EPA 6020B	
Selenium	<b>0.718</b>	0.260	"	"	"	"	"	"	

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

Date Sampled: **04/05/21 10:49**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
% Solids	<b>82.4</b>		%	1	BED0415	04/26/21	04/26/21	Calculation	

Summit Scientific

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

Project: Anderson 12-13 Tank Battery

Project Number: [none]  
Project Manager: Mark Longhurst

**Reported:**  
04/28/21 14:38

## 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 BED0067 - EPA 5030 Soil MS

##### Blank (BED0067-BLK1)

Prepared: 04/05/21 Analyzed: 04/06/21

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	0.0419		"	0.0400		105	23-173			
Surrogate: Toluene-d8	0.0322		"	0.0400		80.6	20-170			
Surrogate: 4-Bromofluorobenzene	0.0317		"	0.0400		79.3	21-167			

##### LCS (BED0067-BS1)

Prepared: 04/05/21 Analyzed: 04/06/21

Benzene	0.102	0.0020	mg/kg	0.100		102	70-130			
Toluene	0.0945	0.0050	"	0.100		94.5	70-130			
Ethylbenzene	0.115	0.0050	"	0.100		115	70-130			
m,p-Xylene	0.233	0.010	"	0.200		116	70-130			
o-Xylene	0.117	0.0050	"	0.100		117	70-130			
1,2,4-Trimethylbenzene	0.112	0.0050	"	0.100		112	70-130			
1,3,5-Trimethylbenzene	0.107	0.0050	"	0.100		107	70-130			
Naphthalene	0.114	0.0038	"	0.100		114	70-130			
Surrogate: 1,2-Dichloroethane-d4	0.0406		"	0.0400		102	23-173			
Surrogate: Toluene-d8	0.0322		"	0.0400		80.6	20-170			
Surrogate: 4-Bromofluorobenzene	0.0314		"	0.0400		78.5	21-167			

##### Matrix Spike (BED0067-MS1)

Source: 2104059-01

Prepared: 04/05/21 Analyzed: 04/06/21

Benzene	0.103	0.0020	mg/kg	0.100	ND	103	70-130			
Toluene	0.0956	0.0050	"	0.100	ND	95.6	70-130			
Ethylbenzene	0.114	0.0050	"	0.100	ND	114	70-130			
m,p-Xylene	0.229	0.010	"	0.200	0.00381	112	70-130			
o-Xylene	0.116	0.0050	"	0.100	ND	116	70-130			
1,2,4-Trimethylbenzene	0.110	0.0050	"	0.100	ND	110	70-130			
1,3,5-Trimethylbenzene	0.105	0.0050	"	0.100	ND	105	70-130			
Naphthalene	0.0964	0.0038	"	0.100	ND	96.4	70-130			
Surrogate: 1,2-Dichloroethane-d4	0.0428		"	0.0400		107	23-173			
Surrogate: Toluene-d8	0.0328		"	0.0400		82.1	20-170			
Surrogate: 4-Bromofluorobenzene	0.0305		"	0.0400		76.4	21-167			

Summit Scientific

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

Project: Anderson 12-13 Tank Battery  
Project Number: [none]  
Project Manager: Mark Longhurst

**Reported:**  
04/28/21 14:38

**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 BED0067 - EPA 5030 Soil MS**

Matrix Spike Dup (BED0067-MSD1)	Source: 2104059-01			Prepared: 04/05/21 Analyzed: 04/06/21						
Benzene	0.102	0.0020	mg/kg	0.100	ND	102	70-130	0.293	30	
Toluene	0.0959	0.0050	"	0.100	ND	95.9	70-130	0.407	30	
Ethylbenzene	0.114	0.0050	"	0.100	ND	114	70-130	0.131	30	
m,p-Xylene	0.231	0.010	"	0.200	0.00381	114	70-130	1.04	30	
o-Xylene	0.117	0.0050	"	0.100	ND	117	70-130	0.566	30	
1,2,4-Trimethylbenzene	0.114	0.0050	"	0.100	ND	114	70-130	4.07	30	
1,3,5-Trimethylbenzene	0.108	0.0050	"	0.100	ND	108	70-130	2.71	30	
Naphthalene	0.113	0.0038	"	0.100	ND	113	70-130	15.8	30	
Surrogate: 1,2-Dichloroethane-d4	0.0423		"	0.0400		106	23-173			
Surrogate: Toluene-d8	0.0326		"	0.0400		81.4	20-170			
Surrogate: 4-Bromofluorobenzene	0.0309		"	0.0400		77.2	21-167			

Summit Scientific

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

Project: Anderson 12-13 Tank Battery  
Project Number: [none]  
Project Manager: Mark Longhurst

**Reported:**  
04/28/21 14:38

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

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

**Batch BED0068 - EPA 3550A**

**Blank (BED0068-BLK1)**

Prepared: 04/05/21 Analyzed: 04/06/21

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

**LCS (BED0068-BS1)**

Prepared: 04/05/21 Analyzed: 04/06/21

C10-C28 (DRO)	482	50	mg/kg	500		96.4	70-130				
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**Matrix Spike (BED0068-MS1)**

Source: 2104059-01

Prepared: 04/05/21 Analyzed: 04/06/21

C10-C28 (DRO)	515	50	mg/kg	500	18.6	99.4	70-130				
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**Matrix Spike Dup (BED0068-MSD1)**

Source: 2104059-01

Prepared: 04/05/21 Analyzed: 04/06/21

C10-C28 (DRO)	569	50	mg/kg	500	18.6	110	70-130	9.85	20		
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Summit Scientific

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

Project: Anderson 12-13 Tank Battery

Project Number: [none]  
Project Manager: Mark Longhurst

**Reported:**  
04/28/21 14:38

### 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 BED0410 - EPA 5030 Soil MS

##### Blank (BED0410-BLK1)

Prepared: 04/15/21 Analyzed: 04/24/21

Anthracene	ND	0.00500	mg/kg							
Fluorene	ND	0.00500	"							
1-Methylnaphthalene	ND	0.00500	"							
2-Methylnaphthalene	ND	0.00500	"							
Surrogate: 2-Methylnaphthalene-d10	0.0233		"	0.0333		69.9	40-150			
Surrogate: Fluoranthene-d10	0.0295		"	0.0333		88.4	40-150			

##### LCS (BED0410-BS1)

Prepared: 04/15/21 Analyzed: 04/24/21

Anthracene	0.0342	0.00500	mg/kg	0.0333		102	30-120			
Fluorene	0.0393	0.00500	"	0.0333		118	30-120			
1-Methylnaphthalene	0.0344	0.00500	"	0.0333		103	35-142			
2-Methylnaphthalene	0.0300	0.00500	"	0.0333		90.1	35-142			
Surrogate: 2-Methylnaphthalene-d10	0.0249		"	0.0333		74.7	40-150			
Surrogate: Fluoranthene-d10	0.0314		"	0.0333		94.3	40-150			

##### LCS Dup (BED0410-BSD1)

Prepared: 04/15/21 Analyzed: 04/24/21

Anthracene	0.0353	0.00500	mg/kg	0.0333		106	30-120	3.33	30	
Fluorene	0.0372	0.00500	"	0.0333		112	30-120	5.56	30	
1-Methylnaphthalene	0.0351	0.00500	"	0.0333		105	35-142	2.06	30	
2-Methylnaphthalene	0.0308	0.00500	"	0.0333		92.5	35-142	2.72	30	
Surrogate: 2-Methylnaphthalene-d10	0.0273		"	0.0333		82.0	40-150			
Surrogate: Fluoranthene-d10	0.0351		"	0.0333		105	40-150			

Summit Scientific

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

Project: Anderson 12-13 Tank Battery

Project Number: [none]  
Project Manager: Mark Longhurst

**Reported:**  
04/28/21 14:38

**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 BED0417 - EPA 3050B**

**Blank (BED0417-BLK1)**

Prepared & Analyzed: 04/26/21

Arsenic	ND	0.200	mg/kg wet
Selenium	ND	0.260	"

**LCS (BED0417-BS1)**

Prepared & Analyzed: 04/26/21

Arsenic	37.3	0.200	mg/kg wet	40.0	93.2	80-120
Selenium	3.48	0.260	"	4.00	87.0	80-120

**Duplicate (BED0417-DUP1)**

Source: 2104063-01

Prepared & Analyzed: 04/26/21

Arsenic	7.81	0.200	mg/kg dry	7.76	0.562	20
Selenium	1.37	0.260	"	1.15	17.8	20

**Matrix Spike (BED0417-MS1)**

Source: 2104063-01

Prepared & Analyzed: 04/26/21

Arsenic	52.7	0.200	mg/kg dry	50.2	7.76	89.6	75-125
Selenium	5.47	0.260	"	5.02	1.15	86.3	75-125

**Matrix Spike Dup (BED0417-MSD1)**

Source: 2104063-01

Prepared & Analyzed: 04/26/21

Arsenic	52.3	0.200	mg/kg dry	50.2	7.76	88.8	75-125	0.772	25
Selenium	5.22	0.260	"	5.02	1.15	81.3	75-125	4.71	25

Summit Scientific

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

Project: Anderson 12-13 Tank Battery

Project Number: [none]

Project Manager: Mark Longhurst

**Reported:**  
04/28/21 14:38

**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 BED0415 - General Preparation**

**Duplicate (BED0415-DUP1)**

**Source: 2104008-02**

**Prepared & Analyzed: 04/26/21**

% Solids	83.8	%	83.9	0.135	20
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Summit Scientific

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

Project: Anderson 12-13 Tank Battery

Project Number: [none]  
Project Manager: Mark Longhurst

**Reported:**  
04/28/21 14:38

### 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

April 28, 2021

Mark Longhurst

PDC Energy

1775 Sherman St. STE. 3000

Denver, CO 80203

RE: Anderson 12-13 Tank Battery

Work Order #2104085

Enclosed are the results of analyses for samples received by Summit Scientific on 04/06/21 18:23. 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: Anderson 12-13 Tank Battery  
Project Number: [none]  
Project Manager: Mark Longhurst

**Reported:**  
04/28/21 14:42

#### ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
SS24@7'	2104085-01	Soil	04/06/21 12:45	04/06/21 18:23
SS25@6'	2104085-02	Soil	04/06/21 12:48	04/06/21 18:23
SS26@3'	2104085-03	Soil	04/06/21 12:52	04/06/21 18:23
SS27@6'	2104085-04	Soil	04/06/21 14:12	04/06/21 18:23
SS28@3'	2104085-05	Soil	04/06/21 14:15	04/06/21 18:23
SS29@6'	2104085-06	Soil	04/06/21 14:38	04/06/21 18:23
SS30@3'	2104085-07	Soil	04/06/21 14:40	04/06/21 18:23
SS31@2.5'	2104085-08	Soil	04/06/21 14:24	04/06/21 18:23

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.*

$S_2$ 

4653 Table Mountain Drive ♦ Golden, Colorado 80403

Page 4 of 4

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	GBTEXN - 8260B - 915	TPH - (C6 - C36) - 915	TMB's (1,2,4 & 1,3,5) - 915	pH, EC, SAR - 915	Boron - HWS - 915	VOC - 915	PAH - 915	Metals - 915			
1	SS24@ 7'	4/6/21	1245	4			X			X			X	X	X							pH, EC, SAR by saturated paste  Hale	
2	SS25@ 6'	↓	1248	4									X	X	X								
3	SS20@ 3'		1252	4									X	X	X								
4	SS27@ 6'		1412	4									X	X	X								
5	SS28@ 3'		1415	4									X	X	X								
6	SS29@ 6'		1438	4									X	X	X								
7	SS30@ 3'	↓	1440	4									X	X	X								
8	SS31@ 2.5'		1424	2																	X		
9																							
10																							
Relinquished by:		Date/Time:		Received by:		Date/Time:		Turn Around Time		(Check)		Notes:											
Kevin Fletcher		4/6/21 1615		Tasman's Lock Box		4/6/21 1615		Same Day <input checked="" type="checkbox"/>		72 hours <input type="checkbox"/>													
Tasman's Lock Box		4/6/21 1800		[Signature]		4/6/21 1800		24 hours <input type="checkbox"/>		Standard <input type="checkbox"/>													
								48 hours <input type="checkbox"/>															
Relinquished by:		Date/Time:		Received by:		Date/Time:		Sample Integrity:		Temperature Upon Receipt:													
								Samples Intact: <input checked="" type="radio"/> Yes <input type="radio"/> No		8													

# Sample Receipt Checklist

S2 Work Order 2104085

Client: PDC / Tasman Client Project ID: Anderson 12-13 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)	<u>8</u>
-----------	----------

Thermometer ID: 61857155-K

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

Additional Comments (if any):

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

JB  
Custodian Printed Name or Initials

John Ben  
Signature of Custodian

4/6/21 1900  
Date/Time



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

Project: Anderson 12-13 Tank Battery

Project Number: [none]  
Project Manager: Mark Longhurst

**Reported:**  
04/28/21 14:42

**SS24@7'**  
**2104085-01 (Soil)**

**Summit Scientific**

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

Date Sampled: **04/06/21 12:45**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Benzene	ND	0.0020	mg/kg	1	BED0092	04/06/21	04/06/21	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: **04/06/21 12:45**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 1,2-Dichloroethane-d4		91.0 %	23-173		"	"	"	"	
Surrogate: Toluene-d8		98.5 %	20-170		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		98.2 %	21-167		"	"	"	"	

**Extractable Petroleum Hydrocarbons by 8015**

Date Sampled: **04/06/21 12:45**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
C10-C28 (DRO)	ND	50	mg/kg	1	BED0093	04/06/21	04/06/21	EPA 8015M	
C28-C36 (ORO)	ND	50	"	"	"	"	"	"	

Date Sampled: **04/06/21 12:45**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: o-Terphenyl		90.1 %	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: Anderson 12-13 Tank Battery  
Project Number: [none]  
Project Manager: Mark Longhurst

**Reported:**  
04/28/21 14:42

**SS24@7'**  
**2104085-01 (Soil)**

**Summit Scientific**

**PAH by EPA Method 8270D SIM**

Date Sampled: **04/06/21 12:45**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Anthracene	ND	0.00500	mg/kg	1	BED0411	04/19/21	04/25/21	EPA 8270D SIM	
Fluorene	ND	0.00500	"	"	"	"	"	"	
1-Methylnaphthalene	ND	0.00500	"	"	"	"	"	"	
2-Methylnaphthalene	ND	0.00500	"	"	"	"	"	"	

Date Sampled: **04/06/21 12:45**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 2-Methylnaphthalene-d10		46.1 %	40-150		"	"	"	"	
Surrogate: Fluoranthene-d10		52.9 %	40-150		"	"	"	"	

**Total Metals by EPA 6020B**

Date Sampled: **04/06/21 12:45**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Arsenic	<b>7.72</b>	0.200	mg/kg dry	1	BED0456	04/27/21	04/28/21	EPA 6020B	
Selenium	<b>1.09</b>	0.260	"	"	"	"	"	"	

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

Date Sampled: **04/06/21 12:45**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
% Solids	<b>82.7</b>		%	1	BED0446	04/26/21	04/28/21	Calculation	

Summit Scientific

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

Project: Anderson 12-13 Tank Battery

Project Number: [none]  
Project Manager: Mark Longhurst

**Reported:**  
04/28/21 14:42

**SS25@6'**  
**2104085-02 (Soil)**

**Summit Scientific**

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

Date Sampled: **04/06/21 12:48**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Benzene	ND	0.0020	mg/kg	1	BED0092	04/06/21	04/06/21	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: **04/06/21 12:48**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 1,2-Dichloroethane-d4		111 %	23-173		"	"	"	"	
Surrogate: Toluene-d8		96.9 %	20-170		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		98.2 %	21-167		"	"	"	"	

**Extractable Petroleum Hydrocarbons by 8015**

Date Sampled: **04/06/21 12:48**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
C10-C28 (DRO)	ND	50	mg/kg	1	BED0093	04/06/21	04/06/21	EPA 8015M	
C28-C36 (ORO)	ND	50	"	"	"	"	"	"	

Date Sampled: **04/06/21 12:48**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: o-Terphenyl		98.3 %	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: Anderson 12-13 Tank Battery  
Project Number: [none]  
Project Manager: Mark Longhurst

**Reported:**  
04/28/21 14:42

**SS25@6'**  
**2104085-02 (Soil)**

**Summit Scientific**

**PAH by EPA Method 8270D SIM**

Date Sampled: **04/06/21 12:48**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Anthracene	ND	0.00500	mg/kg	1	BED0411	04/19/21	04/25/21	EPA 8270D SIM	
Fluorene	ND	0.00500	"	"	"	"	"	"	
1-Methylnaphthalene	ND	0.00500	"	"	"	"	"	"	
2-Methylnaphthalene	ND	0.00500	"	"	"	"	"	"	

Date Sampled: **04/06/21 12:48**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 2-Methylnaphthalene-d10		47.2 %	40-150		"	"	"	"	
Surrogate: Fluoranthene-d10		54.5 %	40-150		"	"	"	"	

**Total Metals by EPA 6020B**

Date Sampled: **04/06/21 12:48**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Arsenic	<b>6.68</b>	0.200	mg/kg dry	1	BED0456	04/27/21	04/28/21	EPA 6020B	
Selenium	<b>1.00</b>	0.260	"	"	"	"	"	"	

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

Date Sampled: **04/06/21 12:48**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
% Solids	<b>78.5</b>		%	1	BED0446	04/26/21	04/28/21	Calculation	

Summit Scientific

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

Project: Anderson 12-13 Tank Battery  
Project Number: [none]  
Project Manager: Mark Longhurst

**Reported:**  
04/28/21 14:42

**SS26@3'**  
**2104085-03 (Soil)**

**Summit Scientific**

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

Date Sampled: **04/06/21 12:52**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Benzene	ND	0.0020	mg/kg	1	BED0092	04/06/21	04/06/21	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: **04/06/21 12:52**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: 1,2-Dichloroethane-d4		104 %	23-173		"	"	"	"	
Surrogate: Toluene-d8		94.8 %	20-170		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		95.2 %	21-167		"	"	"	"	

**Extractable Petroleum Hydrocarbons by 8015**

Date Sampled: **04/06/21 12:52**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
C10-C28 (DRO)	ND	50	mg/kg	1	BED0093	04/06/21	04/06/21	EPA 8015M	
C28-C36 (ORO)	ND	50	"	"	"	"	"	"	

Date Sampled: **04/06/21 12:52**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: o-Terphenyl		93.7 %	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: Anderson 12-13 Tank Battery  
Project Number: [none]  
Project Manager: Mark Longhurst

**Reported:**  
04/28/21 14:42

**SS26@3'**  
**2104085-03 (Soil)**

**Summit Scientific**

**PAH by EPA Method 8270D SIM**

Date Sampled: **04/06/21 12:52**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Anthracene	ND	0.00500	mg/kg	1	BED0411	04/19/21	04/25/21	EPA 8270D SIM	
Fluorene	ND	0.00500	"	"	"	"	"	"	
1-Methylnaphthalene	ND	0.00500	"	"	"	"	"	"	
2-Methylnaphthalene	ND	0.00500	"	"	"	"	"	"	

Date Sampled: **04/06/21 12:52**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 2-Methylnaphthalene-d10		47.9 %	40-150		"	"	"	"	
Surrogate: Fluoranthene-d10		56.2 %	40-150		"	"	"	"	

**Total Metals by EPA 6020B**

Date Sampled: **04/06/21 12:52**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Arsenic	<b>5.80</b>	0.200	mg/kg dry	1	BED0456	04/27/21	04/28/21	EPA 6020B	
Selenium	<b>0.904</b>	0.260	"	"	"	"	"	"	

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

Date Sampled: **04/06/21 12:52**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
% Solids	<b>81.1</b>		%	1	BED0446	04/26/21	04/28/21	Calculation	

Summit Scientific

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

Project: Anderson 12-13 Tank Battery  
Project Number: [none]  
Project Manager: Mark Longhurst

**Reported:**  
04/28/21 14:42

**SS27@6'**  
**2104085-04 (Soil)**

**Summit Scientific**

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

Date Sampled: **04/06/21 14:12**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Benzene	ND	0.0020	mg/kg	1	BED0092	04/06/21	04/06/21	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: **04/06/21 14:12**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: 1,2-Dichloroethane-d4		107 %	23-173		"	"	"	"	
Surrogate: Toluene-d8		98.5 %	20-170		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		102 %	21-167		"	"	"	"	

**Extractable Petroleum Hydrocarbons by 8015**

Date Sampled: **04/06/21 14:12**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
C10-C28 (DRO)	ND	50	mg/kg	1	BED0093	04/06/21	04/06/21	EPA 8015M	
C28-C36 (ORO)	ND	50	"	"	"	"	"	"	

Date Sampled: **04/06/21 14:12**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: o-Terphenyl		97.3 %	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: Anderson 12-13 Tank Battery  
Project Number: [none]  
Project Manager: Mark Longhurst

**Reported:**  
04/28/21 14:42

**SS27@6'**  
**2104085-04 (Soil)**

**Summit Scientific**

**PAH by EPA Method 8270D SIM**

Date Sampled: **04/06/21 14:12**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Anthracene	ND	0.00500	mg/kg	1	BED0411	04/19/21	04/25/21	EPA 8270D SIM	
Fluorene	ND	0.00500	"	"	"	"	"	"	
1-Methylnaphthalene	ND	0.00500	"	"	"	"	"	"	
2-Methylnaphthalene	ND	0.00500	"	"	"	"	"	"	

Date Sampled: **04/06/21 14:12**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 2-Methylnaphthalene-d10		47.8 %	40-150		"	"	"	"	
Surrogate: Fluoranthene-d10		56.0 %	40-150		"	"	"	"	

**Total Metals by EPA 6020B**

Date Sampled: **04/06/21 14:12**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Arsenic	<b>6.33</b>	0.200	mg/kg dry	1	BED0456	04/27/21	04/28/21	EPA 6020B	
Selenium	<b>0.856</b>	0.260	"	"	"	"	"	"	

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

Date Sampled: **04/06/21 14:12**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
% Solids	<b>78.8</b>		%	1	BED0446	04/26/21	04/28/21	Calculation	

Summit Scientific

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

Project: Anderson 12-13 Tank Battery  
Project Number: [none]  
Project Manager: Mark Longhurst

**Reported:**  
04/28/21 14:42

**SS28@3'**  
**2104085-05 (Soil)**

**Summit Scientific**

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

Date Sampled: **04/06/21 14:15**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Benzene	ND	0.0020	mg/kg	1	BED0092	04/06/21	04/06/21	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: **04/06/21 14:15**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: 1,2-Dichloroethane-d4		114 %	23-173		"	"	"	"	
Surrogate: Toluene-d8		93.0 %	20-170		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		102 %	21-167		"	"	"	"	

**Extractable Petroleum Hydrocarbons by 8015**

Date Sampled: **04/06/21 14:15**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
C10-C28 (DRO)	ND	50	mg/kg	1	BED0093	04/06/21	04/06/21	EPA 8015M	
C28-C36 (ORO)	ND	50	"	"	"	"	"	"	

Date Sampled: **04/06/21 14:15**

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: Anderson 12-13 Tank Battery  
Project Number: [none]  
Project Manager: Mark Longhurst

**Reported:**  
04/28/21 14:42

**SS28@3'**  
**2104085-05 (Soil)**

**Summit Scientific**

**PAH by EPA Method 8270D SIM**

Date Sampled: **04/06/21 14:15**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Anthracene	ND	0.00500	mg/kg	1	BED0411	04/19/21	04/25/21	EPA 8270D SIM	
Fluorene	ND	0.00500	"	"	"	"	"	"	
1-Methylnaphthalene	ND	0.00500	"	"	"	"	"	"	
2-Methylnaphthalene	ND	0.00500	"	"	"	"	"	"	

Date Sampled: **04/06/21 14:15**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 2-Methylnaphthalene-d10		47.5 %	40-150		"	"	"	"	
Surrogate: Fluoranthene-d10		56.9 %	40-150		"	"	"	"	

**Total Metals by EPA 6020B**

Date Sampled: **04/06/21 14:15**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Arsenic	<b>9.36</b>	0.200	mg/kg dry	1	BED0456	04/27/21	04/28/21	EPA 6020B	
Selenium	<b>1.01</b>	0.260	"	"	"	"	"	"	

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

Date Sampled: **04/06/21 14:15**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
% Solids	<b>83.3</b>		%	1	BED0446	04/26/21	04/28/21	Calculation	

Summit Scientific

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

Project: Anderson 12-13 Tank Battery  
Project Number: [none]  
Project Manager: Mark Longhurst

**Reported:**  
04/28/21 14:42

**SS29@6'**  
**2104085-06 (Soil)**

**Summit Scientific**

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

Date Sampled: **04/06/21 14:38**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Benzene	ND	0.0020	mg/kg	1	BED0092	04/06/21	04/06/21	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: **04/06/21 14:38**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: 1,2-Dichloroethane-d4		105 %	23-173		"	"	"	"	
Surrogate: Toluene-d8		94.6 %	20-170		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		99.3 %	21-167		"	"	"	"	

**Extractable Petroleum Hydrocarbons by 8015**

Date Sampled: **04/06/21 14:38**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
C10-C28 (DRO)	ND	50	mg/kg	1	BED0093	04/06/21	04/06/21	EPA 8015M	
C28-C36 (ORO)	ND	50	"	"	"	"	"	"	

Date Sampled: **04/06/21 14:38**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: o-Terphenyl		87.0 %	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: Anderson 12-13 Tank Battery  
Project Number: [none]  
Project Manager: Mark Longhurst

**Reported:**  
04/28/21 14:42

**SS29@6'**  
**2104085-06 (Soil)**

**Summit Scientific**

**PAH by EPA Method 8270D SIM**

Date Sampled: **04/06/21 14:38**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Anthracene	ND	0.00500	mg/kg	1	BED0411	04/19/21	04/25/21	EPA 8270D SIM	
Fluorene	ND	0.00500	"	"	"	"	"	"	
1-Methylnaphthalene	ND	0.00500	"	"	"	"	"	"	
2-Methylnaphthalene	ND	0.00500	"	"	"	"	"	"	

Date Sampled: **04/06/21 14:38**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 2-Methylnaphthalene-d10		46.3 %	40-150		"	"	"	"	
Surrogate: Fluoranthene-d10		56.3 %	40-150		"	"	"	"	

**Total Metals by EPA 6020B**

Date Sampled: **04/06/21 14:38**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Arsenic	<b>8.36</b>	0.200	mg/kg dry	1	BED0456	04/27/21	04/28/21	EPA 6020B	
Selenium	<b>1.25</b>	0.260	"	"	"	"	"	"	

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

Date Sampled: **04/06/21 14:38**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
% Solids	<b>82.4</b>		%	1	BED0446	04/26/21	04/28/21	Calculation	

Summit Scientific

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

Project: Anderson 12-13 Tank Battery  
Project Number: [none]  
Project Manager: Mark Longhurst

**Reported:**  
04/28/21 14:42

**SS30@3'**  
**2104085-07 (Soil)**

**Summit Scientific**

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

Date Sampled: **04/06/21 14:40**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Benzene	ND	0.0020	mg/kg	1	BED0092	04/06/21	04/06/21	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: **04/06/21 14:40**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: 1,2-Dichloroethane-d4		112 %	23-173		"	"	"	"	
Surrogate: Toluene-d8		99.6 %	20-170		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		95.7 %	21-167		"	"	"	"	

**Extractable Petroleum Hydrocarbons by 8015**

Date Sampled: **04/06/21 14:40**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
C10-C28 (DRO)	ND	50	mg/kg	1	BED0093	04/06/21	04/06/21	EPA 8015M	
C28-C36 (ORO)	ND	50	"	"	"	"	"	"	

Date Sampled: **04/06/21 14:40**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: o-Terphenyl		95.2 %	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: Anderson 12-13 Tank Battery  
Project Number: [none]  
Project Manager: Mark Longhurst

**Reported:**  
04/28/21 14:42

**SS30@3'**  
**2104085-07 (Soil)**

**Summit Scientific**

**PAH by EPA Method 8270D SIM**

Date Sampled: **04/06/21 14:40**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Anthracene	ND	0.00500	mg/kg	1	BED0411	04/19/21	04/25/21	EPA 8270D SIM	
Fluorene	ND	0.00500	"	"	"	"	"	"	
1-Methylnaphthalene	ND	0.00500	"	"	"	"	"	"	
2-Methylnaphthalene	ND	0.00500	"	"	"	"	"	"	

Date Sampled: **04/06/21 14:40**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 2-Methylnaphthalene-d10		44.1 %	40-150		"	"	"	"	
Surrogate: Fluoranthene-d10		57.2 %	40-150		"	"	"	"	

**Total Metals by EPA 6020B**

Date Sampled: **04/06/21 14:40**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Arsenic	<b>5.62</b>	0.200	mg/kg dry	1	BED0456	04/27/21	04/28/21	EPA 6020B	
Selenium	<b>0.723</b>	0.260	"	"	"	"	"	"	

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

Date Sampled: **04/06/21 14:40**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
% Solids	<b>82.6</b>		%	1	BED0446	04/26/21	04/28/21	Calculation	

Summit Scientific

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

Project: Anderson 12-13 Tank Battery  
Project Number: [none]  
Project Manager: Mark Longhurst

**Reported:**  
04/28/21 14:42

**SS31@2.5'**  
**2104085-08 (Soil)**

**Summit Scientific**

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

Date Sampled: **04/06/21 14:24**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Boron	0.672	0.0100	mg/L	1	BED0420	04/26/21	04/27/21	EPA 6020B	

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

Date Sampled: **04/06/21 14:24**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Calcium	501	0.0650	mg/L dry	1	BED0439	04/26/21	04/27/21	EPA 6020B	
Magnesium	562	0.0650	"	"	"	"	"	"	
Sodium	512	0.0650	"	"	"	"	"	"	

**Calculated Analysis**

Date Sampled: **04/06/21 14:24**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	3.27	0.00100	units	1	BED0475	04/28/21	04/28/21	Calculation	

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

Date Sampled: **04/06/21 14:24**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
% Solids	76.9		%	1	BED0446	04/26/21	04/28/21	Calculation	

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

Date Sampled: **04/06/21 14:24**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Specific Conductance (EC)	9.69	0.0100	mmhos/cm	1	BED0465	04/27/21	04/27/21	EPA 120.1	

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

Summit Scientific

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

Project: Anderson 12-13 Tank Battery  
Project Number: [none]  
Project Manager: Mark Longhurst

**Reported:**  
04/28/21 14:42

**SS31@2.5'**  
**2104085-08 (Soil)**

**Summit Scientific**

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

Date Sampled: **04/06/21 14:24**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
<b>pH</b>	<b>8.10</b>			pH Units	1	BED0466	04/27/21	04/27/21	EPA 9045D	

Summit Scientific

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

Project: Anderson 12-13 Tank Battery

Project Number: [none]  
Project Manager: Mark Longhurst

**Reported:**  
04/28/21 14:42

## 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 BED0092 - EPA 5030 Soil MS

##### Blank (BED0092-BLK1)

Prepared & Analyzed: 04/06/21

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	0.0406		"	0.0400		102	23-173			
Surrogate: Toluene-d8	0.0328		"	0.0400		82.0	20-170			
Surrogate: 4-Bromofluorobenzene	0.0308		"	0.0400		76.9	21-167			

##### LCS (BED0092-BS1)

Prepared: 04/06/21 Analyzed: 04/07/21

Benzene	0.102	0.0020	mg/kg	0.100		102	70-130			
Toluene	0.0955	0.0050	"	0.100		95.5	70-130			
Ethylbenzene	0.115	0.0050	"	0.100		115	70-130			
m,p-Xylene	0.229	0.010	"	0.200		115	70-130			
o-Xylene	0.119	0.0050	"	0.100		119	70-130			
1,2,4-Trimethylbenzene	0.112	0.0050	"	0.100		112	70-130			
1,3,5-Trimethylbenzene	0.107	0.0050	"	0.100		107	70-130			
Naphthalene	0.0940	0.0038	"	0.100		94.0	70-130			
Surrogate: 1,2-Dichloroethane-d4	0.0429		"	0.0400		107	23-173			
Surrogate: Toluene-d8	0.0329		"	0.0400		82.3	20-170			
Surrogate: 4-Bromofluorobenzene	0.0306		"	0.0400		76.4	21-167			

##### Matrix Spike (BED0092-MS1)

Source: 2104082-01

Prepared: 04/06/21 Analyzed: 04/07/21

Benzene	0.102	0.0020	mg/kg	0.100	ND	102	70-130			
Toluene	0.0961	0.0050	"	0.100	ND	96.1	70-130			
Ethylbenzene	0.114	0.0050	"	0.100	ND	114	70-130			
m,p-Xylene	0.229	0.010	"	0.200	0.00396	113	70-130			
o-Xylene	0.120	0.0050	"	0.100	ND	120	70-130			
1,2,4-Trimethylbenzene	0.115	0.0050	"	0.100	ND	115	70-130			
1,3,5-Trimethylbenzene	0.107	0.0050	"	0.100	ND	107	70-130			
Naphthalene	0.115	0.0038	"	0.100	ND	115	70-130			
Surrogate: 1,2-Dichloroethane-d4	0.0433		"	0.0400		108	23-173			
Surrogate: Toluene-d8	0.0329		"	0.0400		82.2	20-170			
Surrogate: 4-Bromofluorobenzene	0.0300		"	0.0400		75.1	21-167			

Summit Scientific

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

Project: Anderson 12-13 Tank Battery  
Project Number: [none]  
Project Manager: Mark Longhurst

**Reported:**  
04/28/21 14:42

**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 BED0092 - EPA 5030 Soil MS**

Matrix Spike Dup (BED0092-MSD1)	Source: 2104082-01			Prepared: 04/06/21 Analyzed: 04/07/21						
Benzene	0.102	0.0020	mg/kg	0.100	ND	102	70-130	0.206	30	
Toluene	0.0961	0.0050	"	0.100	ND	96.1	70-130	0.0312	30	
Ethylbenzene	0.112	0.0050	"	0.100	ND	112	70-130	1.25	30	
m,p-Xylene	0.226	0.010	"	0.200	0.00396	111	70-130	1.53	30	
o-Xylene	0.117	0.0050	"	0.100	ND	117	70-130	2.50	30	
1,2,4-Trimethylbenzene	0.114	0.0050	"	0.100	ND	114	70-130	1.34	30	
1,3,5-Trimethylbenzene	0.108	0.0050	"	0.100	ND	108	70-130	0.837	30	
Naphthalene	0.0990	0.0038	"	0.100	ND	99.0	70-130	14.9	30	
Surrogate: 1,2-Dichloroethane-d4	0.0452		"	0.0400		113	23-173			
Surrogate: Toluene-d8	0.0333		"	0.0400		83.2	20-170			
Surrogate: 4-Bromofluorobenzene	0.0307		"	0.0400		76.7	21-167			

Summit Scientific

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

Project: Anderson 12-13 Tank Battery

Project Number: [none]  
Project Manager: Mark Longhurst

**Reported:**  
04/28/21 14:42

**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 BED0093 - EPA 3550A**

**Blank (BED0093-BLK1)**

Prepared: 04/06/21 Analyzed: 04/07/21

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

**LCS (BED0093-BS1)**

Prepared: 04/06/21 Analyzed: 04/07/21

C10-C28 (DRO)	588	50	mg/kg	500	118	70-130
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**Matrix Spike (BED0093-MS1)**

Source: 2104082-01

Prepared: 04/06/21 Analyzed: 04/07/21

C10-C28 (DRO)	477	50	mg/kg	500	ND	95.5	70-130
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**Matrix Spike Dup (BED0093-MSD1)**

Source: 2104082-01

Prepared: 04/06/21 Analyzed: 04/07/21

C10-C28 (DRO)	532	50	mg/kg	500	ND	106	70-130	10.8	20
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Summit Scientific

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

Project: Anderson 12-13 Tank Battery  
Project Number: [none]  
Project Manager: Mark Longhurst

**Reported:**  
04/28/21 14:42

**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 BED0411 - EPA 5030 Soil MS**

**Blank (BED0411-BLK1)**

Prepared: 04/19/21 Analyzed: 04/24/21

Anthracene	ND	0.00500	mg/kg							
Fluorene	ND	0.00500	"							
1-Methylnaphthalene	ND	0.00500	"							
2-Methylnaphthalene	ND	0.00500	"							
Surrogate: 2-Methylnaphthalene-d10	0.0157		"	0.0333		47.0	40-150			
Surrogate: Fluoranthene-d10	0.0192		"	0.0333		57.7	40-150			

**LCS (BED0411-BS1)**

Prepared: 04/19/21 Analyzed: 04/24/21

Anthracene	0.0319	0.00500	mg/kg	0.0333		95.8	30-120			
Fluorene	0.0333	0.00500	"	0.0333		99.8	30-120			
1-Methylnaphthalene	0.0379	0.00500	"	0.0333		114	35-142			
2-Methylnaphthalene	0.0317	0.00500	"	0.0333		95.2	35-142			
Surrogate: 2-Methylnaphthalene-d10	0.0176		"	0.0333		52.8	40-150			
Surrogate: Fluoranthene-d10	0.0211		"	0.0333		63.4	40-150			

**LCS Dup (BED0411-BSD1)**

Prepared: 04/19/21 Analyzed: 04/24/21

Anthracene	0.0338	0.00500	mg/kg	0.0333		101	30-120	5.55	30	
Fluorene	0.0333	0.00500	"	0.0333		100	30-120	0.170	30	
1-Methylnaphthalene	0.0373	0.00500	"	0.0333		112	35-142	1.85	30	
2-Methylnaphthalene	0.0329	0.00500	"	0.0333		98.7	35-142	3.66	30	
Surrogate: 2-Methylnaphthalene-d10	0.0198		"	0.0333		59.5	40-150			
Surrogate: Fluoranthene-d10	0.0236		"	0.0333		70.9	40-150			

Summit Scientific

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

Project: Anderson 12-13 Tank Battery  
Project Number: [none]  
Project Manager: Mark Longhurst

**Reported:**  
04/28/21 14:42

**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 BED0420 - EPA 3050B**

**Blank (BED0420-BLK1)**

Prepared: 04/26/21 Analyzed: 04/27/21

Boron ND 0.0100 mg/L

**LCS (BED0420-BS1)**

Prepared: 04/26/21 Analyzed: 04/27/21

Boron 5.67 0.0100 mg/L 5.00 113 80-120

**Duplicate (BED0420-DUP1)**

**Source: 2104008-01**

Prepared: 04/26/21 Analyzed: 04/27/21

Boron 0.454 0.0100 mg/L 0.462 1.70 20

**Matrix Spike (BED0420-MS1)**

**Source: 2104008-01**

Prepared: 04/26/21 Analyzed: 04/27/21

Boron 5.43 0.0100 mg/L 5.00 0.462 99.3 75-125

**Matrix Spike Dup (BED0420-MSD1)**

**Source: 2104008-01**

Prepared: 04/26/21 Analyzed: 04/27/21

Boron 5.74 0.0100 mg/L 5.00 0.462 106 75-125 5.65 25

Summit Scientific

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

Project: Anderson 12-13 Tank Battery  
Project Number: [none]  
Project Manager: Mark Longhurst

**Reported:**  
04/28/21 14:42

**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 BED0456 - EPA 3050B**

**Blank (BED0456-BLK1)**

Prepared: 04/27/21 Analyzed: 04/28/21

Arsenic	ND	0.200	mg/kg wet
Selenium	ND	0.260	"

**LCS (BED0456-BS1)**

Prepared: 04/27/21 Analyzed: 04/28/21

Arsenic	39.1	0.200	mg/kg wet	40.0	97.6	80-120
Selenium	3.33	0.260	"	4.00	83.2	80-120

**Duplicate (BED0456-DUP1)**

Source: 2104085-01

Prepared: 04/27/21 Analyzed: 04/28/21

Arsenic	8.22	0.200	mg/kg dry	7.72	6.25	20
Selenium	0.989	0.260	"	1.09	9.72	20

**Matrix Spike (BED0456-MS1)**

Source: 2104085-01

Prepared: 04/27/21 Analyzed: 04/28/21

Arsenic	52.1	0.200	mg/kg dry	48.4	7.72	91.7	75-125
Selenium	4.81	0.260	"	4.84	1.09	76.9	75-125

**Matrix Spike Dup (BED0456-MSD1)**

Source: 2104085-01

Prepared: 04/27/21 Analyzed: 04/28/21

Arsenic	53.0	0.200	mg/kg dry	48.4	7.72	93.7	75-125	1.84	25
Selenium	4.83	0.260	"	4.84	1.09	77.4	75-125	0.495	25

Summit Scientific

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

Project: Anderson 12-13 Tank Battery

Project Number: [none]  
Project Manager: Mark Longhurst

**Reported:**  
04/28/21 14:42

**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 BED0439 - General Preparation**

**Blank (BED0439-BLK1)**

Prepared: 04/26/21 Analyzed: 04/27/21

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

**LCS (BED0439-BS1)**

Prepared: 04/26/21 Analyzed: 04/27/21

Calcium	4.96	0.0500	mg/L wet	5.00	99.2	70-130
Magnesium	5.51	0.0500	"	5.00	110	70-130
Sodium	5.46	0.0500	"	5.00	109	70-130

Summit Scientific

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

Project: Anderson 12-13 Tank Battery

Project Number: [none]  
Project Manager: Mark Longhurst

**Reported:**  
04/28/21 14:42

**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 BED0446 - General Preparation**

Duplicate (BED0446-DUP1)		Source: 2104085-01		Prepared: 04/26/21 Analyzed: 04/28/21	
% Solids	82.5		%	82.7	0.253 20

Summit Scientific

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

Project: Anderson 12-13 Tank Battery

Project Number: [none]  
Project Manager: Mark Longhurst

**Reported:**  
04/28/21 14:42

**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 BED0465 - General Preparation**

**Blank (BED0465-BLK1)**

Prepared & Analyzed: 04/27/21

Specific Conductance (EC) ND 0.0100 mmhos/cm

**LCS (BED0465-BS1)**

Prepared & Analyzed: 04/27/21

Specific Conductance (EC) 0.154 0.0100 mmhos/cm 0.150 103 90-110

**Duplicate (BED0465-DUP1)**

**Source: 2104085-08**

Prepared & Analyzed: 04/27/21

Specific Conductance (EC) 9.72 0.0100 mmhos/cm 9.69 0.350 20

Summit Scientific

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

Project: Anderson 12-13 Tank Battery

Project Number: [none]

Project Manager: Mark Longhurst

**Reported:**

04/28/21 14:42

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

**Summit Scientific**

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

**Batch BED0466 - General Preparation**

**LCS (BED0466-BS1)**

Prepared & Analyzed: 04/27/21

pH	9.26	pH Units	9.21	101	95-105
----	------	----------	------	-----	--------

**Duplicate (BED0466-DUP1)**

**Source: 2104085-08**

Prepared & Analyzed: 04/27/21

pH	8.12	pH Units	8.10	0.247	20
----	------	----------	------	-------	----

Summit Scientific

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

Project: Anderson 12-13 Tank Battery

Project Number: [none]  
Project Manager: Mark Longhurst

**Reported:**  
04/28/21 14:42

### 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

April 28, 2021

Mark Longhurst

PDC Energy

1775 Sherman St. STE. 3000

Denver, CO 80203

RE: Anderson 12-13 Tank Battery

Work Order #2104106

Enclosed are the results of analyses for samples received by Summit Scientific on 04/07/21 18:51. 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: Anderson 12-13 Tank Battery

Project Number: [none]  
Project Manager: Mark Longhurst

**Reported:**  
04/28/21 14:46

#### ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
SS32@6'	2104106-01	Soil	04/07/21 09:11	04/07/21 18:51
SS33@3'	2104106-02	Soil	04/07/21 09:14	04/07/21 18:51
SS34@6'	2104106-03	Soil	04/07/21 09:32	04/07/21 18:51
SS35@3'	2104106-04	Soil	04/07/21 09:35	04/07/21 18:51
SS36@7'	2104106-05	Soil	04/07/21 09:52	04/07/21 18:51
SS37@6'	2104106-06	Soil	04/07/21 10:01	04/07/21 18:51
SS38@3'	2104106-07	Soil	04/07/21 10:07	04/07/21 18:51
SS39@7'	2104106-08	Soil	04/07/21 10:23	04/07/21 18:51
SS40@6'	2104106-09	Soil	04/07/21 10:33	04/07/21 18:51
SS41@3'	2104106-10	Soil	04/07/21 10:36	04/07/21 18:51
GW01	2104106-11	Water	04/07/21 08:40	04/07/21 18:51

Summit Scientific

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# Summit Scientific

S<sub>2</sub>

2104106.1

4653 Table Mountain Drive ♦ Golden, Colorado 80403

303-277-9310

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: Anderson 12-13 Tank Battery

Sampler Name: Kevin Fletcher

Project Number:

ID	Sample Description	Date Sampled	Time Sampled	# of containers	Preservative				Matrix				Analysis Requested								Special Instructions		
					HCl	HNO <sub>3</sub>	None	Other	Water	Soil	Air-Canister #	Other	GBTEXN - 8260B - 915	TPH - (C6 - C36) - 915	TMB's (1,2,4 & 1,3,5) - 915	pH, EC, SAR - 915	Boron - HWS - 915	VOC - 915	PAH - 915	Metals - 915			
1	SS32@6'	4/7/21	911	4			X			X				X	X	X							pH, EC, SAR by saturated paste
2	SS33@3'		914	4																			
3	SS34@6'		932	4																			
4	SS35@3'		935	4																			
5	SS36@7'		952	4																			
6	SS37@6'		1001	4																			
7	SS38@3'		1007	4																			
8	SS39@7'		1023	4																			
9	SS40@6'		1033	4																			
10	SS41@3'		1036	4																			

Relinquished by:	Date/Time:	Received by:	Date/Time:	Turn Around Time	(Check)	Notes:
Kevin Fletcher	4/7/21 1445	Tasman's Lock Box	4/7/21 1445	Same Day	X 72 hours	
Relinquished by:	Date/Time:	Received by:	Date/Time:	24 hours	Standard	
Tasman's Lock Box	4/7/21 1830	John Ben	4/7/21 1830	48 hours		
Relinquished by:	Date/Time:	Received by:	Date/Time:	Sample Integrity:		
				Temperature Upon Receipt: 5		
				Samples Intact: Yes No		

# Summit Scientific

S<sub>2</sub>

2104106-2

4653 Table Mountain Drive ♦ Golden, Colorado 80403

303-277-9310

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:	Anderson 12-13 Tank Battery
Sampler Name:		Project Number:	

ID	Sample Description	Date Sampled	Time Sampled	# of containers	Preservative				Matrix				Analysis Requested						Special Instructions		
					HCl	HNO <sub>3</sub>	None	Other	Water	Soil	Air-Canister #	Other	8260 BTEX 915	8260B GBTEXN	8015 DRO	pH, EC	Naphthalene 915	TMB <sub>5</sub> (1,2,4,1,3,5)915			
1	GW91	4/7/21	840	3			X		X					X				X	X		
2																					
3																					
4																					
5																					
6																					
7																					
8																					
9																					
10																					

Relinquished by:	Date/Time:	Received by:	Date/Time:	Turn Around Time	(Check)	Notes:
Kevin Fletcher	4/7/21 1445	Tasman's Lock Box	4/7/21 1445	Same Day	X 72 hours	
Relinquished by:	Date/Time:	Received by:	Date/Time:	24 hours	Standard	
Tasman's Lock Box	4/7/21 1830	Josh Ben	4/7/21 1830	48 hours		
Relinquished by:	Date/Time:	Received by:	Date/Time:	Sample Integrity:	Temperature Upon Receipt:	
				Samples Intact:	Yes No	



# Sample Receipt Checklist

S2 Work Order 2104106

Client: PDC / Tasman

Client Project ID: Anderson 12-13 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)	5
-----------	---

Thermometer ID: 61857155-K

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

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

JB  
Custodian Printed Name or Initials

[Signature]  
Signature of Custodian

4/7/21 1950  
Date/Time



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

Project: Anderson 12-13 Tank Battery  
Project Number: [none]  
Project Manager: Mark Longhurst

**Reported:**  
04/28/21 14:46

**SS32@6'**  
**2104106-01 (Soil)**

**Summit Scientific**

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

Date Sampled: **04/07/21 09:11**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Benzene	ND	0.0020	mg/kg	1	BED0122	04/07/21	04/07/21	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: **04/07/21 09:11**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 1,2-Dichloroethane-d4		102 %	23-173		"	"	"	"	
Surrogate: Toluene-d8		81.4 %	20-170		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		77.6 %	21-167		"	"	"	"	

**Extractable Petroleum Hydrocarbons by 8015**

Date Sampled: **04/07/21 09:11**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
C10-C28 (DRO)	ND	50	mg/kg	1	BED0123	04/07/21	04/07/21	EPA 8015M	
C28-C36 (ORO)	ND	50	"	"	"	"	"	"	

Date Sampled: **04/07/21 09:11**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: o-Terphenyl		119 %	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: Anderson 12-13 Tank Battery  
Project Number: [none]  
Project Manager: Mark Longhurst

**Reported:**  
04/28/21 14:46

**SS32@6'**  
**2104106-01 (Soil)**

**Summit Scientific**

**PAH by EPA Method 8270D SIM**

Date Sampled: **04/07/21 09:11**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Anthracene	ND	0.00500	mg/kg	1	BED0411	04/19/21	04/25/21	EPA 8270D SIM	
Fluorene	ND	0.00500	"	"	"	"	"	"	
1-Methylnaphthalene	ND	0.00500	"	"	"	"	"	"	
2-Methylnaphthalene	ND	0.00500	"	"	"	"	"	"	

Date Sampled: **04/07/21 09:11**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 2-Methylnaphthalene-d10		49.1 %	40-150		"	"	"	"	
Surrogate: Fluoranthene-d10		56.1 %	40-150		"	"	"	"	

**Total Metals by EPA 6020B**

Date Sampled: **04/07/21 09:11**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Arsenic	<b>7.48</b>	0.200	mg/kg dry	1	BED0456	04/27/21	04/28/21	EPA 6020B	
Selenium	<b>0.813</b>	0.260	"	"	"	"	"	"	

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

Date Sampled: **04/07/21 09:11**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
% Solids	<b>81.4</b>		%	1	BED0446	04/26/21	04/28/21	Calculation	

Summit Scientific

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

Project: Anderson 12-13 Tank Battery  
Project Number: [none]  
Project Manager: Mark Longhurst

**Reported:**  
04/28/21 14:46

**SS33@3'**  
**2104106-02 (Soil)**

**Summit Scientific**

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

Date Sampled: **04/07/21 09:14**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Benzene	ND	0.0020	mg/kg	1	BED0122	04/07/21	04/07/21	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: **04/07/21 09:14**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: 1,2-Dichloroethane-d4		109 %	23-173		"	"	"	"	
Surrogate: Toluene-d8		80.9 %	20-170		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		76.1 %	21-167		"	"	"	"	

**Extractable Petroleum Hydrocarbons by 8015**

Date Sampled: **04/07/21 09:14**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
C10-C28 (DRO)	ND	50	mg/kg	1	BED0123	04/07/21	04/07/21	EPA 8015M	
C28-C36 (ORO)	ND	50	"	"	"	"	"	"	

Date Sampled: **04/07/21 09:14**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: o-Terphenyl		114 %	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: Anderson 12-13 Tank Battery  
Project Number: [none]  
Project Manager: Mark Longhurst

**Reported:**  
04/28/21 14:46

**SS33@3'**  
**2104106-02 (Soil)**

**Summit Scientific**

**PAH by EPA Method 8270D SIM**

Date Sampled: **04/07/21 09:14**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Anthracene	ND	0.00500	mg/kg	1	BED0411	04/19/21	04/25/21	EPA 8270D SIM	
Fluorene	ND	0.00500	"	"	"	"	"	"	
1-Methylnaphthalene	ND	0.00500	"	"	"	"	"	"	
2-Methylnaphthalene	ND	0.00500	"	"	"	"	"	"	

Date Sampled: **04/07/21 09:14**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 2-Methylnaphthalene-d10		48.8 %	40-150		"	"	"	"	
Surrogate: Fluoranthene-d10		56.1 %	40-150		"	"	"	"	

**Total Metals by EPA 6020B**

Date Sampled: **04/07/21 09:14**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Arsenic	<b>10.8</b>	0.200	mg/kg dry	1	BED0456	04/27/21	04/28/21	EPA 6020B	
Selenium	<b>1.05</b>	0.260	"	"	"	"	"	"	

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

Date Sampled: **04/07/21 09:14**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
% Solids	<b>79.9</b>		%	1	BED0446	04/26/21	04/28/21	Calculation	

Summit Scientific

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

Project: Anderson 12-13 Tank Battery  
Project Number: [none]  
Project Manager: Mark Longhurst

**Reported:**  
04/28/21 14:46

**SS34@6'**  
**2104106-03 (Soil)**

**Summit Scientific**

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

Date Sampled: **04/07/21 09:32**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Benzene	ND	0.0020	mg/kg	1	BED0122	04/07/21	04/07/21	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: **04/07/21 09:32**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: 1,2-Dichloroethane-d4		104 %	23-173		"	"	"	"	
Surrogate: Toluene-d8		81.4 %	20-170		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		76.1 %	21-167		"	"	"	"	

**Extractable Petroleum Hydrocarbons by 8015**

Date Sampled: **04/07/21 09:32**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
C10-C28 (DRO)	ND	50	mg/kg	1	BED0123	04/07/21	04/07/21	EPA 8015M	
C28-C36 (ORO)	ND	50	"	"	"	"	"	"	

Date Sampled: **04/07/21 09:32**

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: Anderson 12-13 Tank Battery  
Project Number: [none]  
Project Manager: Mark Longhurst

**Reported:**  
04/28/21 14:46

**SS34@6'**  
**2104106-03 (Soil)**

**Summit Scientific**

**PAH by EPA Method 8270D SIM**

Date Sampled: **04/07/21 09:32**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Anthracene	ND	0.00500	mg/kg	1	BED0411	04/19/21	04/25/21	EPA 8270D SIM	
Fluorene	ND	0.00500	"	"	"	"	"	"	
1-Methylnaphthalene	ND	0.00500	"	"	"	"	"	"	
2-Methylnaphthalene	ND	0.00500	"	"	"	"	"	"	

Date Sampled: **04/07/21 09:32**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 2-Methylnaphthalene-d10		50.5 %	40-150		"	"	"	"	
Surrogate: Fluoranthene-d10		58.6 %	40-150		"	"	"	"	

**Total Metals by EPA 6020B**

Date Sampled: **04/07/21 09:32**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Arsenic	<b>5.93</b>	0.200	mg/kg dry	1	BED0456	04/27/21	04/28/21	EPA 6020B	
Selenium	<b>0.843</b>	0.260	"	"	"	"	"	"	

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

Date Sampled: **04/07/21 09:32**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
% Solids	<b>82.0</b>		%	1	BED0446	04/26/21	04/28/21	Calculation	

Summit Scientific

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

Project: Anderson 12-13 Tank Battery  
Project Number: [none]  
Project Manager: Mark Longhurst

**Reported:**  
04/28/21 14:46

**SS35@3'**  
**2104106-04 (Soil)**

**Summit Scientific**

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

Date Sampled: **04/07/21 09:35**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Benzene	ND	0.0020	mg/kg	1	BED0122	04/07/21	04/08/21	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: **04/07/21 09:35**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: 1,2-Dichloroethane-d4		106 %	23-173		"	"	"	"	
Surrogate: Toluene-d8		81.4 %	20-170		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		77.6 %	21-167		"	"	"	"	

**Extractable Petroleum Hydrocarbons by 8015**

Date Sampled: **04/07/21 09:35**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
C10-C28 (DRO)	ND	50	mg/kg	1	BED0123	04/07/21	04/07/21	EPA 8015M	
C28-C36 (ORO)	ND	50	"	"	"	"	"	"	

Date Sampled: **04/07/21 09:35**

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: Anderson 12-13 Tank Battery  
Project Number: [none]  
Project Manager: Mark Longhurst

**Reported:**  
04/28/21 14:46

**SS35@3'**  
**2104106-04 (Soil)**

**Summit Scientific**

**PAH by EPA Method 8270D SIM**

Date Sampled: **04/07/21 09:35**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Anthracene	ND	0.00500	mg/kg	1	BED0411	04/19/21	04/25/21	EPA 8270D SIM	
Fluorene	ND	0.00500	"	"	"	"	"	"	
1-Methylnaphthalene	ND	0.00500	"	"	"	"	"	"	
2-Methylnaphthalene	ND	0.00500	"	"	"	"	"	"	

Date Sampled: **04/07/21 09:35**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 2-Methylnaphthalene-d10		44.0 %	40-150		"	"	"	"	
Surrogate: Fluoranthene-d10		55.3 %	40-150		"	"	"	"	

**Total Metals by EPA 6020B**

Date Sampled: **04/07/21 09:35**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Arsenic	<b>6.51</b>	0.200	mg/kg dry	1	BED0456	04/27/21	04/28/21	EPA 6020B	
Selenium	<b>0.789</b>	0.260	"	"	"	"	"	"	

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

Date Sampled: **04/07/21 09:35**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
% Solids	<b>81.2</b>		%	1	BED0446	04/26/21	04/28/21	Calculation	

Summit Scientific

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

Project: Anderson 12-13 Tank Battery  
Project Number: [none]  
Project Manager: Mark Longhurst

**Reported:**  
04/28/21 14:46

**SS36@7'**  
**2104106-05 (Soil)**

**Summit Scientific**

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

Date Sampled: **04/07/21 09:52**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Benzene	ND	0.0020	mg/kg	1	BED0122	04/07/21	04/08/21	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: **04/07/21 09:52**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: 1,2-Dichloroethane-d4		108 %	23-173		"	"	"	"	
Surrogate: Toluene-d8		80.8 %	20-170		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		76.7 %	21-167		"	"	"	"	

**Extractable Petroleum Hydrocarbons by 8015**

Date Sampled: **04/07/21 09:52**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
C10-C28 (DRO)	ND	50	mg/kg	1	BED0123	04/07/21	04/07/21	EPA 8015M	
C28-C36 (ORO)	ND	50	"	"	"	"	"	"	

Date Sampled: **04/07/21 09:52**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
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: Anderson 12-13 Tank Battery  
Project Number: [none]  
Project Manager: Mark Longhurst

**Reported:**  
04/28/21 14:46

**SS36@7'**  
**2104106-05 (Soil)**

**Summit Scientific**

**PAH by EPA Method 8270D SIM**

Date Sampled: **04/07/21 09:52**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Anthracene	ND	0.00500	mg/kg	1	BED0411	04/19/21	04/25/21	EPA 8270D SIM	
Fluorene	ND	0.00500	"	"	"	"	"	"	
1-Methylnaphthalene	ND	0.00500	"	"	"	"	"	"	
2-Methylnaphthalene	ND	0.00500	"	"	"	"	"	"	

Date Sampled: **04/07/21 09:52**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 2-Methylnaphthalene-d10		49.4 %	40-150		"	"	"	"	
Surrogate: Fluoranthene-d10		47.2 %	40-150		"	"	"	"	

**Total Metals by EPA 6020B**

Date Sampled: **04/07/21 09:52**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Arsenic	<b>5.07</b>	0.200	mg/kg dry	1	BED0456	04/27/21	04/28/21	EPA 6020B	
Selenium	<b>0.987</b>	0.260	"	"	"	"	"	"	

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

Date Sampled: **04/07/21 09:52**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
% Solids	<b>80.4</b>		%	1	BED0446	04/26/21	04/28/21	Calculation	

Summit Scientific

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

Project: Anderson 12-13 Tank Battery  
Project Number: [none]  
Project Manager: Mark Longhurst

**Reported:**  
04/28/21 14:46

**SS37@6'**  
**2104106-06 (Soil)**

**Summit Scientific**

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

Date Sampled: **04/07/21 10:01**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Benzene	ND	0.0020	mg/kg	1	BED0122	04/07/21	04/08/21	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: **04/07/21 10:01**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: 1,2-Dichloroethane-d4		105 %	23-173		"	"	"	"	
Surrogate: Toluene-d8		81.8 %	20-170		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		77.1 %	21-167		"	"	"	"	

**Extractable Petroleum Hydrocarbons by 8015**

Date Sampled: **04/07/21 10:01**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
C10-C28 (DRO)	ND	50	mg/kg	1	BED0123	04/07/21	04/07/21	EPA 8015M	
C28-C36 (ORO)	ND	50	"	"	"	"	"	"	

Date Sampled: **04/07/21 10:01**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: o-Terphenyl		111 %	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: Anderson 12-13 Tank Battery  
Project Number: [none]  
Project Manager: Mark Longhurst

**Reported:**  
04/28/21 14:46

**SS37@6'**  
**2104106-06 (Soil)**

**Summit Scientific**

**PAH by EPA Method 8270D SIM**

Date Sampled: **04/07/21 10:01**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Anthracene	ND	0.00500	mg/kg	1	BED0411	04/19/21	04/25/21	EPA 8270D SIM	
Fluorene	ND	0.00500	"	"	"	"	"	"	
1-Methylnaphthalene	ND	0.00500	"	"	"	"	"	"	
2-Methylnaphthalene	ND	0.00500	"	"	"	"	"	"	

Date Sampled: **04/07/21 10:01**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 2-Methylnaphthalene-d10		46.7 %	40-150		"	"	"	"	
Surrogate: Fluoranthene-d10		54.8 %	40-150		"	"	"	"	

**Total Metals by EPA 6020B**

Date Sampled: **04/07/21 10:01**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Arsenic	<b>7.35</b>	0.200	mg/kg dry	1	BED0456	04/27/21	04/28/21	EPA 6020B	
Selenium	<b>0.718</b>	0.260	"	"	"	"	"	"	

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

Date Sampled: **04/07/21 10:01**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
% Solids	<b>82.9</b>		%	1	BED0446	04/26/21	04/28/21	Calculation	

Summit Scientific

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

Project: Anderson 12-13 Tank Battery  
Project Number: [none]  
Project Manager: Mark Longhurst

**Reported:**  
04/28/21 14:46

**SS38@3'**  
**2104106-07 (Soil)**

**Summit Scientific**

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

Date Sampled: **04/07/21 10:07**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Benzene	ND	0.0020	mg/kg	1	BED0122	04/07/21	04/07/21	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: **04/07/21 10:07**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: 1,2-Dichloroethane-d4		111 %	23-173		"	"	"	"	
Surrogate: Toluene-d8		98.2 %	20-170		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		95.0 %	21-167		"	"	"	"	

**Extractable Petroleum Hydrocarbons by 8015**

Date Sampled: **04/07/21 10:07**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
C10-C28 (DRO)	ND	50	mg/kg	1	BED0123	04/07/21	04/07/21	EPA 8015M	
C28-C36 (ORO)	ND	50	"	"	"	"	"	"	

Date Sampled: **04/07/21 10:07**

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: Anderson 12-13 Tank Battery  
Project Number: [none]  
Project Manager: Mark Longhurst

**Reported:**  
04/28/21 14:46

**SS38@3'**  
**2104106-07 (Soil)**

**Summit Scientific**

**PAH by EPA Method 8270D SIM**

Date Sampled: **04/07/21 10:07**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Anthracene	ND	0.00500	mg/kg	1	BED0411	04/19/21	04/25/21	EPA 8270D SIM	
Fluorene	ND	0.00500	"	"	"	"	"	"	
1-Methylnaphthalene	ND	0.00500	"	"	"	"	"	"	
2-Methylnaphthalene	ND	0.00500	"	"	"	"	"	"	

Date Sampled: **04/07/21 10:07**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 2-Methylnaphthalene-d10		44.6 %	40-150		"	"	"	"	
Surrogate: Fluoranthene-d10		55.7 %	40-150		"	"	"	"	

**Total Metals by EPA 6020B**

Date Sampled: **04/07/21 10:07**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Arsenic	<b>6.14</b>	0.200	mg/kg dry	1	BED0456	04/27/21	04/28/21	EPA 6020B	
Selenium	<b>0.942</b>	0.260	"	"	"	"	"	"	

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

Date Sampled: **04/07/21 10:07**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
% Solids	<b>84.1</b>		%	1	BED0446	04/26/21	04/28/21	Calculation	

Summit Scientific

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

Project: Anderson 12-13 Tank Battery  
Project Number: [none]  
Project Manager: Mark Longhurst

**Reported:**  
04/28/21 14:46

**SS39@7'**  
**2104106-08 (Soil)**

**Summit Scientific**

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

Date Sampled: **04/07/21 10:23**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Benzene	ND	0.0020	mg/kg	1	BED0122	04/07/21	04/07/21	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: **04/07/21 10:23**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: 1,2-Dichloroethane-d4		110 %	23-173		"	"	"	"	
Surrogate: Toluene-d8		95.4 %	20-170		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		97.6 %	21-167		"	"	"	"	

**Extractable Petroleum Hydrocarbons by 8015**

Date Sampled: **04/07/21 10:23**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
C10-C28 (DRO)	ND	50	mg/kg	1	BED0123	04/07/21	04/07/21	EPA 8015M	
C28-C36 (ORO)	ND	50	"	"	"	"	"	"	

Date Sampled: **04/07/21 10:23**

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: Anderson 12-13 Tank Battery  
Project Number: [none]  
Project Manager: Mark Longhurst

**Reported:**  
04/28/21 14:46

**SS39@7'**  
**2104106-08 (Soil)**

**Summit Scientific**

**PAH by EPA Method 8270D SIM**

Date Sampled: **04/07/21 10:23**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Anthracene	ND	0.00500	mg/kg	1	BED0411	04/19/21	04/25/21	EPA 8270D SIM	
Fluorene	ND	0.00500	"	"	"	"	"	"	
1-Methylnaphthalene	ND	0.00500	"	"	"	"	"	"	
2-Methylnaphthalene	ND	0.00500	"	"	"	"	"	"	

Date Sampled: **04/07/21 10:23**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 2-Methylnaphthalene-d10		46.6 %	40-150		"	"	"	"	
Surrogate: Fluoranthene-d10		43.4 %	40-150		"	"	"	"	

**Total Metals by EPA 6020B**

Date Sampled: **04/07/21 10:23**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Arsenic	4.77	0.200	mg/kg dry	1	BED0456	04/27/21	04/28/21	EPA 6020B	
Selenium	1.06	0.260	"	"	"	"	"	"	

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

Date Sampled: **04/07/21 10:23**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
% Solids	79.3		%	1	BED0446	04/26/21	04/28/21	Calculation	

Summit Scientific

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

Project: Anderson 12-13 Tank Battery  
Project Number: [none]  
Project Manager: Mark Longhurst

**Reported:**  
04/28/21 14:46

**SS40@6'**  
**2104106-09 (Soil)**

**Summit Scientific**

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

Date Sampled: **04/07/21 10:33**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Benzene	ND	0.0020	mg/kg	1	BED0122	04/07/21	04/07/21	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: **04/07/21 10:33**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: 1,2-Dichloroethane-d4		105 %	23-173		"	"	"	"	
Surrogate: Toluene-d8		92.2 %	20-170		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		97.9 %	21-167		"	"	"	"	

**Extractable Petroleum Hydrocarbons by 8015**

Date Sampled: **04/07/21 10:33**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
C10-C28 (DRO)	ND	50	mg/kg	1	BED0123	04/07/21	04/08/21	EPA 8015M	
C28-C36 (ORO)	ND	50	"	"	"	"	"	"	

Date Sampled: **04/07/21 10:33**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: o-Terphenyl		110 %	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: Anderson 12-13 Tank Battery  
Project Number: [none]  
Project Manager: Mark Longhurst

**Reported:**  
04/28/21 14:46

**SS40@6'**  
**2104106-09 (Soil)**

**Summit Scientific**

**PAH by EPA Method 8270D SIM**

Date Sampled: **04/07/21 10:33**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Anthracene	ND	0.00500	mg/kg	1	BED0411	04/19/21	04/25/21	EPA 8270D SIM	
Fluorene	ND	0.00500	"	"	"	"	"	"	
1-Methylnaphthalene	ND	0.00500	"	"	"	"	"	"	
2-Methylnaphthalene	ND	0.00500	"	"	"	"	"	"	

Date Sampled: **04/07/21 10:33**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 2-Methylnaphthalene-d10		50.3 %	40-150		"	"	"	"	
Surrogate: Fluoranthene-d10		58.0 %	40-150		"	"	"	"	

**Total Metals by EPA 6020B**

Date Sampled: **04/07/21 10:33**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Arsenic	<b>3.34</b>	0.200	mg/kg dry	1	BED0456	04/27/21	04/28/21	EPA 6020B	
Selenium	<b>0.378</b>	0.260	"	"	"	"	"	"	

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

Date Sampled: **04/07/21 10:33**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
% Solids	<b>79.9</b>		%	1	BED0446	04/26/21	04/28/21	Calculation	

Summit Scientific

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

Project: Anderson 12-13 Tank Battery  
Project Number: [none]  
Project Manager: Mark Longhurst

**Reported:**  
04/28/21 14:46

**SS41@3'**  
**2104106-10 (Soil)**

**Summit Scientific**

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

Date Sampled: **04/07/21 10:36**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Benzene	ND	0.0020	mg/kg	1	BED0122	04/07/21	04/07/21	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: **04/07/21 10:36**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: 1,2-Dichloroethane-d4		106 %	23-173		"	"	"	"	
Surrogate: Toluene-d8		93.6 %	20-170		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		95.5 %	21-167		"	"	"	"	

**Extractable Petroleum Hydrocarbons by 8015**

Date Sampled: **04/07/21 10:36**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
C10-C28 (DRO)	ND	50	mg/kg	1	BED0123	04/07/21	04/08/21	EPA 8015M	
C28-C36 (ORO)	ND	50	"	"	"	"	"	"	

Date Sampled: **04/07/21 10:36**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: o-Terphenyl		111 %	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: Anderson 12-13 Tank Battery  
Project Number: [none]  
Project Manager: Mark Longhurst

**Reported:**  
04/28/21 14:46

**SS41@3'**  
**2104106-10 (Soil)**

**Summit Scientific**

**PAH by EPA Method 8270D SIM**

Date Sampled: **04/07/21 10:36**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Anthracene	ND	0.00500	mg/kg	1	BED0411	04/19/21	04/25/21	EPA 8270D SIM	
Fluorene	ND	0.00500	"	"	"	"	"	"	
1-Methylnaphthalene	ND	0.00500	"	"	"	"	"	"	
2-Methylnaphthalene	ND	0.00500	"	"	"	"	"	"	

Date Sampled: **04/07/21 10:36**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 2-Methylnaphthalene-d10		54.4 %	40-150		"	"	"	"	
Surrogate: Fluoranthene-d10		61.5 %	40-150		"	"	"	"	

**Total Metals by EPA 6020B**

Date Sampled: **04/07/21 10:36**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Arsenic	<b>5.94</b>	0.200	mg/kg dry	1	BED0456	04/27/21	04/28/21	EPA 6020B	
Selenium	<b>1.03</b>	0.260	"	"	"	"	"	"	

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

Date Sampled: **04/07/21 10:36**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
% Solids	<b>83.2</b>		%	1	BED0446	04/26/21	04/28/21	Calculation	

Summit Scientific

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

Project: Anderson 12-13 Tank Battery  
Project Number: [none]  
Project Manager: Mark Longhurst

**Reported:**  
04/28/21 14:46

**GW01**  
**2104106-11 (Water)**

**Summit Scientific**

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

Date Sampled: **04/07/21 08:40**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Benzene	ND	1.0		ug/l	1	BED0124	04/07/21	04/07/21	EPA 8260B	
Toluene	ND	1.0		"	"	"	"	"	"	
Ethylbenzene	ND	1.0		"	"	"	"	"	"	
<b>Xylenes (total)</b>	<b>2.3</b>	2.0		"	"	"	"	"	"	
Naphthalene	ND	1.0		"	"	"	"	"	"	
<b>1,2,4-Trimethylbenzene</b>	<b>1.6</b>	1.0		"	"	"	"	"	"	
1,3,5-Trimethylbenzene	ND	1.0		"	"	"	"	"	"	

Date Sampled: **04/07/21 08:40**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Surrogate: 1,2-Dichloroethane-d4		98.0 %		23-173		"	"	"	"	
Surrogate: Toluene-d8		96.8 %		20-170		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		104 %		21-167		"	"	"	"	

Summit Scientific

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

Project: Anderson 12-13 Tank Battery

Project Number: [none]  
Project Manager: Mark Longhurst

**Reported:**  
04/28/21 14:46

## 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 BED0122 - EPA 5030 Soil MS

##### Blank (BED0122-BLK1)

Prepared: 04/07/21 Analyzed: 04/08/21

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	0.0428		"	0.0400		107	23-173			
Surrogate: Toluene-d8	0.0325		"	0.0400		81.3	20-170			
Surrogate: 4-Bromofluorobenzene	0.0310		"	0.0400		77.5	21-167			

##### LCS (BED0122-BS1)

Prepared: 04/07/21 Analyzed: 04/08/21

Benzene	0.101	0.0020	mg/kg	0.100		101	70-130			
Toluene	0.0945	0.0050	"	0.100		94.5	70-130			
Ethylbenzene	0.115	0.0050	"	0.100		115	70-130			
m,p-Xylene	0.231	0.010	"	0.200		116	70-130			
o-Xylene	0.118	0.0050	"	0.100		118	70-130			
1,2,4-Trimethylbenzene	0.114	0.0050	"	0.100		114	70-130			
1,3,5-Trimethylbenzene	0.108	0.0050	"	0.100		108	70-130			
Naphthalene	0.0911	0.0038	"	0.100		91.1	70-130			
Surrogate: 1,2-Dichloroethane-d4	0.0422		"	0.0400		106	23-173			
Surrogate: Toluene-d8	0.0329		"	0.0400		82.3	20-170			
Surrogate: 4-Bromofluorobenzene	0.0304		"	0.0400		76.1	21-167			

##### Matrix Spike (BED0122-MS1)

Source: 2104104-01

Prepared: 04/07/21 Analyzed: 04/08/21

Benzene	0.101	0.0020	mg/kg	0.100	ND	101	70-130			
Toluene	0.0945	0.0050	"	0.100	ND	94.5	70-130			
Ethylbenzene	0.114	0.0050	"	0.100	ND	114	70-130			
m,p-Xylene	0.229	0.010	"	0.200	ND	115	70-130			
o-Xylene	0.117	0.0050	"	0.100	ND	117	70-130			
1,2,4-Trimethylbenzene	0.116	0.0050	"	0.100	ND	116	70-130			
1,3,5-Trimethylbenzene	0.108	0.0050	"	0.100	ND	108	70-130			
Naphthalene	0.105	0.0038	"	0.100	ND	105	70-130			
Surrogate: 1,2-Dichloroethane-d4	0.0432		"	0.0400		108	23-173			
Surrogate: Toluene-d8	0.0328		"	0.0400		82.0	20-170			
Surrogate: 4-Bromofluorobenzene	0.0311		"	0.0400		77.8	21-167			

Summit Scientific

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

Project: Anderson 12-13 Tank Battery  
Project Number: [none]  
Project Manager: Mark Longhurst

**Reported:**  
04/28/21 14:46

**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 BED0122 - EPA 5030 Soil MS**

Matrix Spike Dup (BED0122-MSD1)		Source: 2104104-01		Prepared: 04/07/21 Analyzed: 04/08/21						
Benzene	0.100	0.0020	mg/kg	0.100	ND	100	70-130	0.506	30	
Toluene	0.0951	0.0050	"	0.100	ND	95.1	70-130	0.601	30	
Ethylbenzene	0.114	0.0050	"	0.100	ND	114	70-130	0.0528	30	
m,p-Xylene	0.232	0.010	"	0.200	ND	116	70-130	1.08	30	
o-Xylene	0.120	0.0050	"	0.100	ND	120	70-130	3.17	30	
1,2,4-Trimethylbenzene	0.116	0.0050	"	0.100	ND	116	70-130	0.233	30	
1,3,5-Trimethylbenzene	0.110	0.0050	"	0.100	ND	110	70-130	1.40	30	
Naphthalene	0.112	0.0038	"	0.100	ND	112	70-130	7.02	30	
Surrogate: 1,2-Dichloroethane-d4	0.0416		"	0.0400		104	23-173			
Surrogate: Toluene-d8	0.0323		"	0.0400		80.8	20-170			
Surrogate: 4-Bromofluorobenzene	0.0303		"	0.0400		75.8	21-167			

**Batch BED0124 - EPA 5030 Water MS**

Blank (BED0124-BLK1)		Prepared & Analyzed: 04/07/21								
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	12.7		"	13.3		95.1	23-173			
Surrogate: Toluene-d8	11.9		"	13.3		89.3	20-170			
Surrogate: 4-Bromofluorobenzene	13.1		"	13.3		98.5	21-167			

LCS (BED0124-BS1)		Prepared & Analyzed: 04/07/21								
Benzene	30.3	1.0	ug/l	33.3		90.9	51-132			
Toluene	34.7	1.0	"	33.3		104	51-138			
Ethylbenzene	40.8	1.0	"	33.3		122	58-146			
m,p-Xylene	77.7	2.0	"	66.7		117	57-144			
o-Xylene	40.6	1.0	"	33.3		122	53-146			
Naphthalene	37.6	1.0	"	33.3		113	70-130			
1,2,4-Trimethylbenzene	30.6	1.0	"	33.3		91.7	70-130			
1,3,5-Trimethylbenzene	41.6	1.0	"	33.3		125	70-130			
Surrogate: 1,2-Dichloroethane-d4	12.0		"	13.3		90.2	23-173			
Surrogate: Toluene-d8	12.4		"	13.3		92.9	20-170			
Surrogate: 4-Bromofluorobenzene	12.8		"	13.3		95.9	21-167			

Summit Scientific

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

Project: Anderson 12-13 Tank Battery  
Project Number: [none]  
Project Manager: Mark Longhurst

**Reported:**  
04/28/21 14:46

**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 BED0124 - EPA 5030 Water MS**

**Matrix Spike (BED0124-MS1)**

Source: 2104108-01

Prepared: 04/07/21 Analyzed: 04/08/21

Benzene	33.0	1.0	ug/l	33.3	ND	99.2	34-141			
Toluene	35.3	1.0	"	33.3	ND	106	27-151			
Ethylbenzene	41.4	1.0	"	33.3	ND	124	29-160			
m,p-Xylene	78.1	2.0	"	66.7	ND	117	20-166			
o-Xylene	40.5	1.0	"	33.3	ND	122	33-159			
Naphthalene	40.0	1.0	"	33.3	ND	120	70-130			
1,2,4-Trimethylbenzene	30.7	1.0	"	33.3	ND	92.2	70-130			
1,3,5-Trimethylbenzene	42.2	1.0	"	33.3	ND	126	70-130			
Surrogate: 1,2-Dichloroethane-d4	12.9		"	13.3		97.0	23-173			
Surrogate: Toluene-d8	12.4		"	13.3		93.0	20-170			
Surrogate: 4-Bromofluorobenzene	13.0		"	13.3		97.2	21-167			

**Matrix Spike Dup (BED0124-MSD1)**

Source: 2104108-01

Prepared: 04/07/21 Analyzed: 04/08/21

Benzene	32.4	1.0	ug/l	33.3	ND	97.3	34-141	1.89	30	
Toluene	35.1	1.0	"	33.3	ND	105	27-151	0.540	30	
Ethylbenzene	41.2	1.0	"	33.3	ND	124	29-160	0.484	30	
m,p-Xylene	77.6	2.0	"	66.7	ND	116	20-166	0.720	30	
o-Xylene	40.5	1.0	"	33.3	ND	122	33-159	0.0987	30	
Naphthalene	42.2	1.0	"	33.3	ND	127	70-130	5.35	30	
1,2,4-Trimethylbenzene	30.6	1.0	"	33.3	ND	92.0	70-130	0.293	30	
1,3,5-Trimethylbenzene	42.0	1.0	"	33.3	ND	126	70-130	0.261	30	
Surrogate: 1,2-Dichloroethane-d4	12.8		"	13.3		96.2	23-173			
Surrogate: Toluene-d8	12.3		"	13.3		92.0	20-170			
Surrogate: 4-Bromofluorobenzene	12.9		"	13.3		96.6	21-167			

Summit Scientific

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

Project: Anderson 12-13 Tank Battery

Project Number: [none]  
Project Manager: Mark Longhurst

**Reported:**  
04/28/21 14:46

**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 BED0123 - EPA 3550A**

**Blank (BED0123-BLK1)**

Prepared: 04/07/21 Analyzed: 04/08/21

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

**LCS (BED0123-BS1)**

Prepared: 04/07/21 Analyzed: 04/08/21

C10-C28 (DRO)	488	50	mg/kg	500	97.5	70-130
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**Matrix Spike (BED0123-MS1)**

Source: 2104104-01

Prepared: 04/07/21 Analyzed: 04/08/21

C10-C28 (DRO)	461	50	mg/kg	500	17.4	88.8	70-130
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**Matrix Spike Dup (BED0123-MSD1)**

Source: 2104104-01

Prepared: 04/07/21 Analyzed: 04/08/21

C10-C28 (DRO)	450	50	mg/kg	500	17.4	86.5	70-130	2.53	20
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Summit Scientific

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

Project: Anderson 12-13 Tank Battery

Project Number: [none]  
Project Manager: Mark Longhurst

**Reported:**  
04/28/21 14:46

**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 BED0411 - EPA 5030 Soil MS**

**Blank (BED0411-BLK1)**

Prepared: 04/19/21 Analyzed: 04/24/21

Anthracene	ND	0.00500	mg/kg							
Fluorene	ND	0.00500	"							
1-Methylnaphthalene	ND	0.00500	"							
2-Methylnaphthalene	ND	0.00500	"							
Surrogate: 2-Methylnaphthalene-d10	0.0157		"	0.0333		47.0	40-150			
Surrogate: Fluoranthene-d10	0.0192		"	0.0333		57.7	40-150			

**LCS (BED0411-BS1)**

Prepared: 04/19/21 Analyzed: 04/24/21

Anthracene	0.0319	0.00500	mg/kg	0.0333		95.8	30-120			
Fluorene	0.0333	0.00500	"	0.0333		99.8	30-120			
1-Methylnaphthalene	0.0379	0.00500	"	0.0333		114	35-142			
2-Methylnaphthalene	0.0317	0.00500	"	0.0333		95.2	35-142			
Surrogate: 2-Methylnaphthalene-d10	0.0176		"	0.0333		52.8	40-150			
Surrogate: Fluoranthene-d10	0.0211		"	0.0333		63.4	40-150			

**LCS Dup (BED0411-BSD1)**

Prepared: 04/19/21 Analyzed: 04/24/21

Anthracene	0.0338	0.00500	mg/kg	0.0333		101	30-120	5.55	30	
Fluorene	0.0333	0.00500	"	0.0333		100	30-120	0.170	30	
1-Methylnaphthalene	0.0373	0.00500	"	0.0333		112	35-142	1.85	30	
2-Methylnaphthalene	0.0329	0.00500	"	0.0333		98.7	35-142	3.66	30	
Surrogate: 2-Methylnaphthalene-d10	0.0198		"	0.0333		59.5	40-150			
Surrogate: Fluoranthene-d10	0.0236		"	0.0333		70.9	40-150			

Summit Scientific

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

Project: Anderson 12-13 Tank Battery  
Project Number: [none]  
Project Manager: Mark Longhurst

**Reported:**  
04/28/21 14:46

**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 BED0456 - EPA 3050B**

**Blank (BED0456-BLK1)**

Prepared: 04/27/21 Analyzed: 04/28/21

Arsenic	ND	0.200	mg/kg wet
Selenium	ND	0.260	"

**LCS (BED0456-BS1)**

Prepared: 04/27/21 Analyzed: 04/28/21

Arsenic	39.1	0.200	mg/kg wet	40.0	97.6	80-120
Selenium	3.33	0.260	"	4.00	83.2	80-120

**Duplicate (BED0456-DUP1)**

Source: 2104085-01

Prepared: 04/27/21 Analyzed: 04/28/21

Arsenic	8.22	0.200	mg/kg dry	7.72	6.25	20
Selenium	0.989	0.260	"	1.09	9.72	20

**Matrix Spike (BED0456-MS1)**

Source: 2104085-01

Prepared: 04/27/21 Analyzed: 04/28/21

Arsenic	52.1	0.200	mg/kg dry	48.4	7.72	91.7	75-125
Selenium	4.81	0.260	"	4.84	1.09	76.9	75-125

**Matrix Spike Dup (BED0456-MSD1)**

Source: 2104085-01

Prepared: 04/27/21 Analyzed: 04/28/21

Arsenic	53.0	0.200	mg/kg dry	48.4	7.72	93.7	75-125	1.84	25
Selenium	4.83	0.260	"	4.84	1.09	77.4	75-125	0.495	25

Summit Scientific

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

Project: Anderson 12-13 Tank Battery

Project Number: [none]  
Project Manager: Mark Longhurst

**Reported:**  
04/28/21 14:46

**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 BED0446 - General Preparation**

Duplicate (BED0446-DUP1)		Source: 2104085-01		Prepared: 04/26/21 Analyzed: 04/28/21	
% Solids	82.5		%	82.7	0.253 20

Summit Scientific

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

Project: Anderson 12-13 Tank Battery

Project Number: [none]  
Project Manager: Mark Longhurst

**Reported:**  
04/28/21 14:46

### 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