

TABLE 1
FORMER L-H #1, EDWARDS 16U 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 ⁽⁴⁾ (mg/kg)	Fluorene (mg/kg)	1-M (mg/kg)	2-M (mg/kg)
Residential SSL ^(1,2)			1.2	490	5.8	58	30	27	2	500	240	18	24
Protection of Groundwater SSL ^(1,2,3)			0.0026	0.69	0.78	9.9	0.0081	0.0087	0.0038	500	0.54	0.006	0.019
AST01 @ 0-6"	7/14/2021	0-6 in. bgs	<0.0020	<0.0050	<0.0050	<0.010	<0.0050	<0.0050	<0.0038	<50	NA	NA	NA
SEP01-DL @ 4'	7/14/2021	4 ft. bgs	<0.0020	<0.0050	<0.0050	<0.010	<0.0050	<0.0050	<0.0038	<50	NA	NA	NA
SEP01-FL @ 4'	7/14/2021	4 ft. bgs	<0.0020	<0.0050	<0.0050	<0.010	<0.0050	<0.0050	<0.0038	<50	NA	NA	NA
SS01 @ 5'	7/14/2021	5 ft. bgs	0.12	<0.0050	0.37	<0.010	6.0	<0.0050	0.27	1,680	0.119	0.435	1.02
SS02 @ 20'	7/15/2021	20 ft. bgs	0.023	<0.0050	0.21	1.2	3.4	0.43	0.17	2,680	NA	NA	NA
SS03 @ 24'	8/13/2021	24 ft. bgs	<0.0020	<0.0050	<0.0050	<0.010	<0.0050	<0.0050	<0.0038	<50	NA	NA	NA
SS04 @ 29'	11/5/2021	29 ft. bgs	<0.0020	<0.0050	<0.0050	<0.010	<0.0050	<0.0050	<0.0038	<50	<0.00500	<0.00500	<0.00500
SS05 @ 29'	11/5/2021	29 ft. bgs	<0.0020	<0.0050	<0.0050	<0.010	<0.0050	<0.0050	<0.0038	<50	<0.00500	<0.00500	<0.00500
SS06 @ 29'	11/5/2021	29 ft. bgs	<0.0020	<0.0050	<0.0050	<0.010	<0.0050	<0.0050	<0.0038	<50	<0.00500	<0.00500	<0.00500
SS07 @ 8'	11/5/2021	8 ft. bgs	<0.0020	<0.0050	<0.0050	<0.010	<0.0050	<0.0050	<0.0038	<50	<0.00500	<0.00500	<0.00500
SS08 @ 18'	11/5/2021	18 ft. bgs	<0.0020	<0.0050	<0.0050	<0.010	<0.0050	<0.0050	<0.0038	<50	<0.00500	<0.00500	<0.00500
SS09 @ 28'	11/5/2021	28 ft. bgs	<0.0020	<0.0050	<0.0050	<0.010	<0.0050	<0.0050	<0.0038	<50	<0.00500	<0.00500	<0.00500
SS10 @ 8'	11/5/2021	8 ft. bgs	<0.0020	<0.0050	<0.0050	<0.010	<0.0050	<0.0050	<0.0038	<50	<0.00500	<0.00500	<0.00500
SS11 @ 18'	11/5/2021	18 ft. bgs	<0.0020	<0.0050	<0.0050	<0.010	<0.0050	<0.0050	<0.0038	<50	<0.00500	<0.00500	<0.00500
SS12 @ 28'	11/5/2021	28 ft. bgs	<0.0020	<0.0050	<0.0050	<0.010	<0.0050	<0.0050	<0.0038	<50	<0.00500	<0.00500	<0.00500
SS13 @ 8'	11/5/2021	8 ft. bgs	<0.0020	<0.0050	<0.0050	<0.010	<0.0050	<0.0050	<0.0038	<50	<0.00500	<0.00500	<0.00500
SS14 @ 18'	11/5/2021	18 ft. bgs	<0.0020	<0.0050	<0.0050	<0.010	<0.0050	<0.0050	<0.0038	<50	<0.00500	<0.00500	<0.00500
SS15 @ 28'	11/5/2021	28 ft. bgs	<0.0020	<0.0050	<0.0050	<0.010	<0.0050	<0.0050	<0.0038	<50	<0.00500	<0.00500	<0.00500
SS16 @ 8'	11/5/2021	8 ft. bgs	<0.0020	<0.0050	<0.0050	<0.010	<0.0050	<0.0050	<0.0038	<50	<0.00500	<0.00500	<0.00500
SS17 @ 18'	11/5/2021	18 ft. bgs	<0.0020	<0.0050	<0.0050	<0.010	<0.0050	<0.0050	<0.0038	<50	<0.00500	<0.00500	<0.00500
SS18 @ 28'	11/5/2021	28 ft. bgs	<0.0020	<0.0050	<0.0050	<0.010	<0.0050	<0.0050	<0.0038	<50	<0.00500	<0.00500	<0.00500
SS19 @ 29'	11/8/2021	29 ft. bgs	<0.0020	<0.0050	<0.0050	<0.010	<0.0050	<0.0050	<0.0038	<50	<0.00500	<0.00500	<0.00500
SS20 @ 8'	11/8/2021	8 ft. bgs	<0.0020	<0.0050	<0.0050	<0.010	<0.0050	<0.0050	<0.0038	<50	<0.00500	<0.00500	<0.00500
SS21 @ 18'	11/8/2021	18 ft. bgs	<0.0020	<0.0050	<0.0050	<0.010	<0.0050	<0.0050	<0.0038	<50	<0.00500	<0.00500	<0.00500
SS22 @ 28'	11/8/2021	28 ft. bgs	<0.0020	<0.0050	<0.0050	<0.010	<0.0050	<0.0050	<0.0038	<50	<0.00500	<0.00500	<0.00500
SS23 @ 8'	11/8/2021	8 ft. bgs	<0.0020	<0.0050	<0.0050	<0.010	<0.0050	<0.0050	<0.0038	<50	<0.00500	<0.00500	<0.00500
SS24 @ 18'	11/8/2021	18 ft. bgs	<0.0020	<0.0050	<0.0050	<0.010	<0.0050	<0.0050	<0.0038	<50	<0.00500	<0.00500	<0.00500
SS25 @ 28'	11/8/2021	28 ft. bgs	<0.0020	<0.0050	<0.0050	<0.010	<0.0050	<0.0050	<0.0038	<50	<0.00500	<0.00500	<0.00500
SS26 @ 8'	11/8/2021	8 ft. bgs	<0.0020	<0.0050	<0.0050	<0.010	<0.0050	<0.0050	<0.0038	<50	<0.00500	<0.00500	<0.00500
SS27 @ 18'	11/8/2021	18 ft. bgs	<0.0020	<0.0050	<0.0050	<0.010	<0.0050	<0.0050	<0.0038	<50	<0.00500	<0.00500	<0.00500
SS28 @ 28'	11/8/2021	28 ft. bgs	<0.0020	<0.0050	<0.0050	<0.010	<0.0050	<0.0050	<0.0038	<50	<0.00500	<0.00500	<0.00500
SS29 @ 29'	11/8/2021	29 ft. bgs	<0.0020	<0.0050	<0.0050	<0.010	<0.0050	<0.0050	<0.0038	<50	<0.00500	<0.00500	<0.00500
SS30 @ 8'	11/8/2021	8 ft. bgs	<0.0020	<0.0050	<0.0050	<0.010	<0.0050	<0.0050	<0.0038	<50	<0.00500	<0.00500	<0.00500
SS31 @ 18'	11/8/2021	18 ft. bgs	<0.0020	<0.0050	<0.0050	<0.010	<0.0050	<0.0050	<0.0038	<50	<0.00500	<0.00500	<0.00500
SS32 @ 28'	11/8/2021	28 ft. bgs	<0.0020	<0.0050	<0.0050	<0.010	<0.0050	<0.0050	<0.0038	<50	<0.00500	<0.00500	<0.00500
SS33 @ 35'	11/9/2021	35 ft. bgs	<0.0020	<0.0050	<0.0050	<0.010	<0.0050	<0.0050	<0.0038	<50	<0.00500	<0.00500	<0.00500
SS34 @ 32'	11/9/2021	32 ft. bgs	<0.0020	<0.0050	<0.0050	<0.010	<0.0050	<0.0050	<0.0038	<50	<0.00500	<0.00500	<0.00500
SS35 @ 29'	11/10/2021	29 ft. bgs	<0.0020	<0.0050	<0.0050	<0.010	<0.0050	<0.0050	<0.0038	<50	<0.00500	<0.00500	<0.00500
SS36 @ 32'	11/10/2021	32 ft. bgs	<0.0020	<0.0050	<0.0050	<0.010	<0.0050	<0.0050	<0.0038	<50	<0.00500	<0.00500	<0.00500
SS37 @ 32'	11/10/2021	32 ft. bgs	<0.0020	<0.0050	<0.0050	<0.010	<0.0050	<0.0050	<0.0038	<50	<0.00500	<0.00500	<0.00500
SS38 @ 29'	11/12/2021	29 ft. bgs	<0.0020	<0.0050	<0.0050	<0.010	<0.0050	<0.0050	<0.0038	<50	<0.00500	<0.00500	<0.00500
SS39 @ 35'	11/12/2021	35 ft. bgs	<0.0020	<0.0050	<0.0050	<0.010	<0.0050	<0.0050	<0.0038	<50	<0.00500	<0.00500	<0.00500
SS40 @ 32'	11/12/2021	32 ft. bgs	<0.0020	<0.0050	<0.0050	<0.010	<0.0050	<0.0050	<0.0038	<50	<0.00500	<0.00500	<0.00500
SS41 @ 8'	11/12/2021	8 ft. bgs	<0.0020	<0.0050	<0.0050	<0.010	<0.0050	<0.0050	<0.0038	<50	<0.00500	<0.00500	<0.00500
SS42 @ 18'	11/12/2021	18 ft. bgs	<0.0020	<0.0050	<0.0050	<0.010	<0.0050	<0.0050	<0.0038	<50	<0.00500	<0.00500	<0.00500
SS43 @ 28'	11/12/2021	28 ft. bgs	<0.0020	<0.0050	<0.0050	<0.010	<0.0050	<0.0050	<0.0038	<50	<0.00500	<0.00500	<0.00500
SS44 @ 18'	11/12/2021	18 ft. bgs	<0.0020	<0.0050	<0.0050	<0.010	<0.0050	<0.0050	<0.0038	<50	<0.00500	<0.00500	<0.00500
SS45 @ 28'	11/12/2021	28 ft. bgs	<0.0020	<0.0050	<0.0050	<0.010	<0.0050	<0.0050	<0.0038	<50	<0.00500	<0.00500	<0.00500
SS46 @ 32'	11/12/2021	32 ft. bgs	<0.0020	<0.0050	<0.0050	<0.010	<0.0050	<0.0050	<0.0038	<50	<0.00500	<0.00500	<0.00500
SS47 @ 18'	11/15/2021	18 ft. bgs	<0.0020	<0.0050	<0.0050	<0.010	<0.0050	<0.0050	<0.0038	<50	<0.00500	<0.00500	<0.00500
SS48 @ 28'	11/15/2021	28 ft. bgs	<0.0020	<0.0050	<0.0050	<0.010	<0.0050	<0.0050	<0.0038	<50	<0.00500	<0.00500	<0.00500
SS49 @ 32'	11/15/2021	32 ft. bgs	<0.0020	<0.0050	<0.0050	<0.010	<0.0050	<0.0050	<0.0038	<50	<0.00500	<0.00500	<0.00500

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.
- 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

M = Methylnaphthalene

TMB = Trimethylbenzene

= Source material characterization sample

ft. = Feet

in. = Inches

bgs = Below ground surface

BOLD = Analytical result is in exceedance of applicable standard.

NA = Constituent not analyzed

TABLE 2
FORMER L-H #1, EDWARDS 16U TANK BATTERY
SOIL ANALYTICAL RESULTS SUMMARY TABLE
INORGANIC COMPOUNDS

Sample ID	Date Sampled	Depth	pH (units)	EC (mmhos/cm)	SAR (units)	Boron (mg/L)
Soil Suitability for Reclamation Standard ⁽¹⁾			6-8.3	<4	<6	2
SS01 @ 5'	7/14/2021	5 ft. bgs	8.01	0.438	0.455	0.171
SS50 @ 2.5'	11/15/2021	2.5 ft. bgs	8.06	0.695	0.275	<0.0100

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

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

ft. = Feet

bgs = Below ground surface

 = Source material characterization sample

TABLE 3
FORMER L-H #1, EDWARDS 16U TANK BATTERY
SOIL ANALYTICAL RESULTS SUMMARY TABLE
ORGANIC COMPOUNDS - PAHs

Sample ID	Date Sampled	Depth	Acenaphthene (mg/kg)	Anthracene (mg/kg)	Benz(a) (mg/kg)	Benzo(a) (mg/kg)	Benzo(b) (mg/kg)	Benzo(k) (mg/kg)	Chrysene (mg/kg)	A,H (mg/kg)	Fluoranthene (mg/kg)	Fluorene (mg/kg)	1,2,3-CD (mg/kg)	Pyrene (mg/kg)	1-M (mg/kg)	2-M (mg/kg)
Residential SSL ^(1,2)			360	1,800	1.1	0.11	1.1	11	110	0.11	240	240	1.1	180	18	24
Protection of Groundwater SSL ^(1,2,3)			0.55	5.8	0.011	0.24	0.3	2.9	9	0.096	8.9	0.54	0.98	1.3	0.006	0.019
SS01 @ 5'	7/14/2021	5 ft. bgs	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	0.119	<0.00500	<0.00500	0.435	1.02

Notes:
1. Compounds referenced from the COGCC 2 CCR 404-1, Table 915-1, effective January 15, 2021.
2. Soil Screening Levels (SSL) referenced from EPA Regional Screening Levels (EPA RSLs) for Chemical Contaminants at Superfund Sites, effective November 2020.
3. SSLs are applicable if a pathway for communication with
COGCC = Colorado Oil and Gas Conservation Commission
(<) = Analytical result is less than the indicated laboratory reporting limit.
PAHs = Polycyclic aromatic hydrocarbons
Benz(a) = Benzantracene
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 L-H #1, EDWARDS 16U TANK BATTERY
SOIL ANALYTICAL RESULTS SUMMARY TABLE
METALS

Sample ID	Date Sampled	Depth	Arsenic (mg/kg)	Barium (mg/kg)	Cadmium (mg/kg)	Chromium (VI) (mg/kg)	Copper (mg/kg)	Lead (mg/kg)	Nickel (mg/kg)	Selenium (mg/kg)	Silver (mg/kg)	Zinc (mg/kg)
Residential SSL ^(1,2)			0.68	15,000	71	0.3	3,100	400	1,500	390	390	23,000
Protection of Groundwater SSL ^(1,2,3)			0.29	82	0.38	0.00067	46	14	26	0.26	0.8	370
SS01 @ 5'	7/14/2021	5 ft. bgs	2.27	139	<0.246	<0.30 ⁽⁴⁾	11.0	7.95	10.9	0.786	0.0343	39.6
BKG01 @ 2.5'	7/14/2021	2.5 ft. bgs	4.37	154	<0.218	<0.30 ⁽⁴⁾	11.6	7.69	13.9	0.918	0.0488	40.0

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. 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 L-H #1, EDWARDS 16U TANK BATTERY
FIELD DATA SUMMARY TABLE

Sample ID	Date Sampled	Depth	GPS Data ⁽¹⁾ Latitude / Longitude		PDOP Value	VOC Concentration ⁽²⁾ (ppm)
AST01 @ 0-6"	7/14/2021	0-6 in. bgs	40.399583	-104.888779	1.0	0.0
SEP01-DL @ 4'	7/14/2021	4 ft. bgs	40.399488	-104.889167	1.2	0.0
SEP01-FL @ 4'	7/14/2021	4 ft. bgs	40.399475	-104.889215	1.1	0.0
MH01 @ 0-6"	7/14/2021	0-6 in. bgs	40.399466	-104.889147	1.0	0.0
ECD01 @ 0-6"	7/14/2021	0-6 in. bgs	40.399602	-104.889237	1.1	0.0
BKG01 @ 2.5'	7/14/2021	2.5 ft. bgs	40.399454	-104.889429	1.1	0.0
GS03 @ 6'	7/14/2021	6 ft. bgs	40.399590	-104.888837	1.0	585.0
GS04 @ 6'	7/14/2021	6 ft. bgs	40.399620	-104.888896	1.0	556.0
GS05 @ 6'	7/14/2021	6 ft. bgs	40.399581	-104.888913	1.1	93.5
GS06 @ 6'	7/14/2021	6 ft. bgs	40.399548	-104.888872	1.0	397.0
SS01 @ 5'	7/14/2021	5 ft. bgs	NC	NC	NC	1,128
SS02 @ 20'	7/15/2021	20 ft. bgs	NC	NC	NC	548.0
SS03 @ 24'	8/13/2021	24 ft. bgs	NC	NC	NC	127.0
SS04 @ 29'	11/5/2021	29 ft. bgs	NC	NC	NC	10.6
SS05 @ 29'	11/5/2021	29 ft. bgs	NC	NC	NC	9.6
SS06 @ 29'	11/5/2021	29 ft. bgs	NC	NC	NC	2.1
SS07 @ 8'	11/5/2021	8 ft. bgs	40.399537	-104.888965	1.2	0.5
SS08 @ 18'	11/5/2021	18 ft. bgs	40.399537	-104.888965	NC	4.7
SS09 @ 28'	11/5/2021	28 ft. bgs	40.399537	-104.888965	NC	2.2
SS10 @ 8'	11/5/2021	8 ft. bgs	40.399594	-104.888987	1.2	0.2
SS11 @ 18'	11/5/2021	18 ft. bgs	40.399594	-104.888987	NC	0.6
SS12 @ 28'	11/5/2021	28 ft. bgs	40.399594	-104.888987	NC	11.4
SS13 @ 8'	11/5/2021	8 ft. bgs	40.399652	-104.888978	1.0	0.9
SS14 @ 18'	11/5/2021	18 ft. bgs	40.399652	-104.888978	NC	1.2
SS15 @ 28'	11/5/2021	28 ft. bgs	40.399652	-104.888978	NC	0.6
SS16 @ 8'	11/5/2021	8 ft. bgs	40.399685	-104.888899	1.0	0.3
SS17 @ 18'	11/5/2021	18 ft. bgs	40.399685	-104.888899	NC	0.1
SS18 @ 28'	11/5/2021	28 ft. bgs	40.399685	-104.888899	NC	0.4
SS19 @ 29'	11/8/2021	29 ft. bgs	NC	NC	NC	0.3
SS20 @ 8'	11/8/2021	8 ft. bgs	NC	NC	NC	0.0
SS21 @ 18'	11/8/2021	18 ft. bgs	NC	NC	NC	0.0
SS22 @ 28'	11/8/2021	28 ft. bgs	NC	NC	NC	0.0
SS23 @ 8'	11/8/2021	8 ft. bgs	40.399501	-104.888923	1.1	0.0
SS24 @ 18'	11/8/2021	18 ft. bgs	40.399501	-104.888923	NC	0.0
SS25 @ 28'	11/8/2021	28 ft. bgs	40.399501	-104.888923	NC	0.0
SS26 @ 8'	11/8/2021	8 ft. bgs	40.399624	-104.888807	1.1	0.3
SS27 @ 18'	11/8/2021	18 ft. bgs	40.399624	-104.888807	NC	0.0
SS28 @ 28'	11/8/2021	28 ft. bgs	40.399624	-104.888807	NC	2.4
SS29 @ 29'	11/8/2021	29 ft. bgs	NC	NC	NC	5.5
SS30 @ 8'	11/8/2021	8 ft. bgs	40.399486	-104.888852	1.3	0.2

TABLE 5
FORMER L-H #1, EDWARDS 16U TANK BATTERY
FIELD DATA SUMMARY TABLE

Sample ID	Date Sampled	Depth	GPS Data ⁽¹⁾ Latitude / Longitude		PDOP Value	VOC Concentration ⁽²⁾ (ppm)
SS31 @ 18'	11/8/2021	18 ft. bgs	40.399486	-104.888852	NC	0.6
SS32 @ 28'	11/8/2021	28 ft. bgs	40.399486	-104.888852	NC	0.9
SS33 @ 35'	11/9/2021	35 ft. bgs	NC	NC	NC	64.3
SS34 @ 32'	11/9/2021	32 ft. bgs	NC	NC	NC	5.5
SS35 @ 29'	11/10/2021	29 ft. bgs	NC	NC	NC	2.7
SS36 @ 32'	11/10/2021	32 ft. bgs	NC	NC	NC	0.8
SS37 @ 32'	11/10/2021	32 ft. bgs	NC	NC	NC	12.4
SS38 @ 29'	11/12/2021	29 ft. bgs	NC	NC	NC	2.9
SS39 @ 35'	11/12/2021	35 ft. bgs	NC	NC	NC	21.4
SS40 @ 32'	11/12/2021	32 ft. bgs	NC	NC	NC	5.8
SS41 @ 8'	11/12/2021	8 ft. bgs	40.399534	-104.888809	1.4	0.2
SS42 @ 18'	11/12/2021	18 ft. bgs	40.399534	-104.888809	NC	0.7
SS43 @ 28'	11/12/2021	28 ft. bgs	40.399534	-104.888809	NC	3.1
SS44 @ 18'	11/12/2021	18 ft. bgs	40.399598	-104.888787	1.5	0.2
SS45 @ 32'	11/12/2021	32 ft. bgs	40.399598	-104.888787	NC	7.4
SS46 @ 32'	11/12/2021	32 ft. bgs	NC	NC	NC	0.5
SS47 @ 18'	11/15/2021	18 ft. bgs	40.399558	-104.888772	1.1	0.4
SS48 @ 28'	11/15/2021	28 ft. bgs	40.399558	-104.888772	NC	12.9
SS49 @ 32'	11/15/2021	32 ft. bgs	40.399558	-104.888772	NC	3.8
SS50 @ 2.5'	11/15/2021	2.5 ft. bgs	40.399486	-104.888852	NC	0.1
BKG02 @ 2.5'	11/15/2021	2.5 ft. bgs	40.399469	-104.889353	1.0	0.1

Notes:

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

in. = Inches

bgs = Below ground surface

NC = Data not collected

Attachment A

Summit Scientific

4653 Table Mountain Drive, Golden, Colorado 80403

303.277.9310

July 22, 2021

Mark Longhurst

PDC Energy

1775 Sherman St. STE. 3000

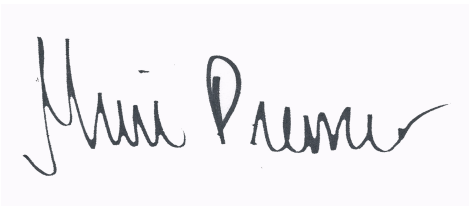
Denver, CO 80203

RE: LH#1, Edwards 16U Tank Battery

Work Order #2107181

Enclosed are the results of analyses for samples received by Summit Scientific on 07/14/21 17:55. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

A handwritten signature in black ink, appearing to read "Muri Premier", is displayed on a light purple rectangular background.

Muri Premier For Paul Shrewsbury
President



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

Project: LH#1, Edwards 16U Tank Battery
Project Number: [none]
Project Manager: Mark Longhurst

Reported:
07/22/21 11:06

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
SS01@5'	2107181-01	Soil	07/14/21 09:40	07/14/21 17:55
BKG01@2.5'	2107181-02	Soil	07/14/21 11:40	07/14/21 17:55

Summit Scientific

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

Summit Scientific

2107181

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: LH#1 - EDWARDS 164 Tank Battery
Sampler Name: AJ DALE Project Number:

ID	Sample Description	Date Sampled	Time Sampled	# of containers	Preservative				Matrix				Analysis Requested								Special Instructions
					HCl	HNO3	None	Other	Water	Soil	Air-Canister #	Other	GBTEXN - 8260B	TPH - (C6 - C36)	pH, EC, SAR	Boron - HWS	VOC - 915	PAH - 915	Metals - 915		
1	SS01 @ 5'	7/14/21	0940	3			X			X				X	X	X	X	X	X	X	
2	BK601 @ 2.5'	7/14/21	1140	1			X			X									X		
3																					
4																					
5																					
6																					
7																					
8																					
9																					
10																					

Relinquished by: AJ DALE	Date/Time: 7/14/21 1630	Received by: Tasman's Lock Box	Date/Time: 7/14/21 1630	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: 7/14/21 1755	Received by: JH [Signature]	Date/Time: 7/14/21 1755	Sample Integrity: 11	
Relinquished by:	Date/Time:	Received by:	Date/Time:	Temperature Upon Receipt: Samples Intact: <input checked="" type="checkbox"/> Yes No	

Sample Receipt Checklist

S2 Work Order 2107181

Client: PDC / Tasman Client Project ID: LH#1, Edwards 16u Tank Butting

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

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

Temp (°C) //

Thermometer ID: 61857155-K

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

Additional Comments (if any):

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

JB
Custodian Printed Name or Initials

John B...
Signature of Custodian

7/14/21
Date/Time



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

Project: LH#1, Edwards 16U Tank Battery

Project Number: [none]
Project Manager: Mark Longhurst

Reported:
07/22/21 11:06

SS01@5'
2107181-01 (Soil)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **07/14/21 09:40**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Benzene	0.12	0.0020	mg/kg	1	BEG0240	07/14/21	07/14/21	EPA 8260B	
Toluene	ND	0.0050	"	"	"	"	"	"	
Ethylbenzene	0.37	0.0050	"	"	"	"	"	"	
Xylenes (total)	ND	0.010	"	"	"	"	"	"	
1,2,4-Trimethylbenzene	6.0	0.050	"	10	"	"	"	"	
1,3,5-Trimethylbenzene	ND	0.0050	"	1	"	"	"	"	
Naphthalene	0.27	0.0038	"	"	"	"	"	"	
Gasoline Range Hydrocarbons	550	5.0	"	10	"	"	"	"	

Date Sampled: **07/14/21 09:40**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 1,2-Dichloroethane-d4		100 %	23-173		"	"	"	"	
Surrogate: Toluene-d8		90.4 %	20-170		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		169 %	21-167		"	"	"	"	S-02

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **07/14/21 09:40**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
C10-C28 (DRO)	970	50	mg/kg	1	BEG0248	"	07/14/21	EPA 8015M	
C28-C36 (ORO)	160	50	"	"	"	"	"	"	

Date Sampled: **07/14/21 09:40**

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

PAH by EPA Method 8270D SIM

Summit Scientific

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

Project: LH#1, Edwards 16U Tank Battery
Project Number: [none]
Project Manager: Mark Longhurst

Reported:
07/22/21 11:06

SS01@5'
2107181-01 (Soil)

Summit Scientific

PAH by EPA Method 8270D SIM

Date Sampled: **07/14/21 09:40**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Acenaphthene	ND	0.00500	mg/kg	1	BEG0261	07/15/21	07/16/21	EPA 8270D SIM	
Anthracene	ND	0.00500	"	"	"	"	"	"	
Benzo (a) anthracene	ND	0.00500	"	"	"	"	"	"	
Benzo (a) pyrene	ND	0.00500	"	"	"	"	"	"	
Benzo (b) fluoranthene	ND	0.00500	"	"	"	"	"	"	
Benzo (k) fluoranthene	ND	0.00500	"	"	"	"	"	"	
Chrysene	ND	0.00500	"	"	"	"	"	"	
Dibenz (a,h) anthracene	ND	0.00500	"	"	"	"	"	"	
Fluoranthene	ND	0.00500	"	"	"	"	"	"	
Fluorene	0.119	0.00500	"	"	"	"	"	"	
Indeno (1,2,3-cd) pyrene	ND	0.00500	"	"	"	"	"	"	
Pyrene	ND	0.00500	"	"	"	"	"	"	
1-Methylnaphthalene	0.435	0.00500	"	"	"	"	"	"	
2-Methylnaphthalene	1.02	0.00500	"	"	"	"	"	"	

Date Sampled: **07/14/21 09:40**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 2-Methylnaphthalene-d10		58.6 %	40-150		"	"	"	"	
Surrogate: Fluoranthene-d10		46.8 %	40-150		"	"	"	"	

Total Metals by EPA 6020B Hot Water Soluble Extraction

Date Sampled: **07/14/21 09:40**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Boron	0.171	0.0100	mg/L	1	BEG0255	07/15/21	07/17/21	EPA 6020B	

Total Metals by EPA 6020B

Date Sampled: **07/14/21 09:40**

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: LH#1, Edwards 16U Tank Battery

Project Number: [none]
Project Manager: Mark Longhurst

Reported:
07/22/21 11:06

SS01@5'
2107181-01 (Soil)

Summit Scientific

Total Metals by EPA 6020B

Arsenic	2.27	0.246	mg/kg dry	1	BEG0254	07/15/21	07/15/21	EPA 6020B
Barium	139	0.492	"	"	"	"	"	"
Cadmium	ND	0.246	"	"	"	"	"	"
Copper	11.0	0.492	"	"	"	"	"	"
Lead	7.95	0.246	"	"	"	"	"	"
Nickel	10.9	0.492	"	"	"	"	"	"
Selenium	0.786	0.320	"	"	"	"	"	"
Silver	0.0343	0.0246	"	"	"	"	"	"
Zinc	39.6	0.492	"	"	"	"	"	"

Hexavalent Chromium by EPA Method 7196

Date Sampled: **07/14/21 09:40**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Chromium, Hexavalent	ND	0.30	mg/kg dry	1	BEG0260	07/15/21	07/16/21	EPA 7196A	

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

Date Sampled: **07/14/21 09:40**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Calcium	67.7	0.0615	mg/L dry	1	BEG0267	07/15/21	07/17/21	EPA 6020B	
Magnesium	27.1	0.0615	"	"	"	"	"	"	
Sodium	17.5	0.0615	"	"	"	"	"	"	

Calculated Analysis

Date Sampled: **07/14/21 09:40**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	0.455	0.00100	units	1	BEG0336	07/20/21	07/20/21	Calculation	

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **07/14/21 09:40**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
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PDC Energy
1775 Sherman St. STE. 3000
Denver CO, 80203

Project: LH#1, Edwards 16U Tank Battery
Project Number: [none]
Project Manager: Mark Longhurst

Reported:
07/22/21 11:06

SS01@5'
2107181-01 (Soil)

Summit Scientific

Physical Parameters by APHA/ASTM/EPA Methods

% Solids	81.2	%	1	BEG0256	07/15/21	07/15/21	Calculation
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Specific Conductance by EPA Method 120.1, Saturated Paste Extraction

Date Sampled: **07/14/21 09:40**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Specific Conductance (EC)	0.438	0.0100	mmhos/cm	1	BEG0286	07/16/21	07/16/21	EPA 120.1	

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

Date Sampled: **07/14/21 09:40**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
pH	8.01		pH Units	1	BEG0285	07/16/21	07/16/21	EPA 9045D	

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

Project: LH#1, Edwards 16U Tank Battery
Project Number: [none]
Project Manager: Mark Longhurst

Reported:
07/22/21 11:06

BKG01@2.5'
2107181-02 (Soil)

Summit Scientific

Total Metals by EPA 6020B

Date Sampled: **07/14/21 11:40**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Arsenic	4.37	0.218	mg/kg dry	1	BEG0254	07/15/21	07/15/21	EPA 6020B	
Barium	154	0.436	"	"	"	"	"	"	
Cadmium	ND	0.218	"	"	"	"	"	"	
Copper	11.6	0.436	"	"	"	"	"	"	
Lead	7.69	0.218	"	"	"	"	"	"	
Nickel	13.9	0.436	"	"	"	"	"	"	
Selenium	0.918	0.283	"	"	"	"	"	"	
Silver	0.0488	0.0218	"	"	"	"	"	"	
Zinc	40.0	0.436	"	"	"	"	"	"	

Hexavalent Chromium by EPA Method 7196

Date Sampled: **07/14/21 11:40**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Chromium, Hexavalent	ND	0.30	mg/kg dry	1	BEG0260	07/15/21	07/16/21	EPA 7196A	

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **07/14/21 11:40**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
% Solids	91.8		%	1	BEG0256	07/15/21	07/15/21	Calculation	

Summit Scientific

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

Project: LH#1, Edwards 16U Tank Battery

Project Number: [none]
Project Manager: Mark Longhurst

Reported:
07/22/21 11:06

Volatile Organic Compounds by EPA Method 8260B - Quality Control

Summit Scientific

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

Batch BEG0240 - EPA 5030 Soil MS

Blank (BEG0240-BLK1)

Prepared & Analyzed: 07/14/21

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	0.0283		"	0.0400		70.7	23-173			
Surrogate: Toluene-d8	0.0518		"	0.0400		130	20-170			
Surrogate: 4-Bromofluorobenzene	0.0396		"	0.0400		98.9	21-167			

LCS (BEG0240-BS1)

Prepared & Analyzed: 07/14/21

Benzene	0.161	0.0020	mg/kg	0.150		108	70-130			
Toluene	0.128	0.0050	"	0.150		85.3	70-130			
Ethylbenzene	0.132	0.0050	"	0.150		88.3	70-130			
m,p-Xylene	0.269	0.010	"	0.300		89.7	70-130			
o-Xylene	0.137	0.0050	"	0.150		91.5	70-130			
1,2,4-Trimethylbenzene	0.140	0.0050	"	0.150		93.0	70-130			
1,3,5-Trimethylbenzene	0.135	0.0050	"	0.150		89.9	70-130			
Naphthalene	0.155	0.0038	"	0.150		103	70-130			
Surrogate: 1,2-Dichloroethane-d4	0.0446		"	0.0400		111	23-173			
Surrogate: Toluene-d8	0.0366		"	0.0400		91.4	20-170			
Surrogate: 4-Bromofluorobenzene	0.0389		"	0.0400		97.3	21-167			

Matrix Spike (BEG0240-MS1)

Source: 2107166-01

Prepared & Analyzed: 07/14/21

Benzene	0.134	0.0020	mg/kg	0.150	ND	89.4	70-130			
Toluene	0.107	0.0050	"	0.150	ND	71.6	70-130			
Ethylbenzene	0.116	0.0050	"	0.150	ND	77.5	70-130			
m,p-Xylene	0.237	0.010	"	0.300	ND	79.1	70-130			
o-Xylene	0.121	0.0050	"	0.150	ND	80.9	70-130			
1,2,4-Trimethylbenzene	0.118	0.0050	"	0.150	ND	78.9	70-130			
1,3,5-Trimethylbenzene	0.114	0.0050	"	0.150	ND	76.1	70-130			
Naphthalene	0.143	0.0038	"	0.150	0.00459	92.6	70-130			
Surrogate: 1,2-Dichloroethane-d4	0.0396		"	0.0400		99.1	23-173			
Surrogate: Toluene-d8	0.0352		"	0.0400		87.9	20-170			
Surrogate: 4-Bromofluorobenzene	0.0364		"	0.0400		91.1	21-167			

Summit Scientific

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



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

Project: LH#1, Edwards 16U Tank Battery
Project Number: [none]
Project Manager: Mark Longhurst

Reported:
07/22/21 11:06

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

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

Batch BEG0240 - EPA 5030 Soil MS

Matrix Spike Dup (BEG0240-MSD1)	Source: 2107166-01			Prepared: 07/14/21 Analyzed: 07/15/21						
Benzene	0.151	0.0020	mg/kg	0.150	ND	101	70-130	11.9	30	
Toluene	0.123	0.0050	"	0.150	ND	82.3	70-130	13.9	30	
Ethylbenzene	0.118	0.0050	"	0.150	ND	78.8	70-130	1.64	30	
m,p-Xylene	0.240	0.010	"	0.300	ND	79.8	70-130	0.931	30	
o-Xylene	0.124	0.0050	"	0.150	ND	82.4	70-130	1.84	30	
1,2,4-Trimethylbenzene	0.122	0.0050	"	0.150	ND	81.2	70-130	2.90	30	
1,3,5-Trimethylbenzene	0.118	0.0050	"	0.150	ND	78.9	70-130	3.54	30	
Naphthalene	0.142	0.0038	"	0.150	0.00459	91.8	70-130	0.819	30	
Surrogate: 1,2-Dichloroethane-d4	0.0420		"	0.0400		105	23-173			
Surrogate: Toluene-d8	0.0377		"	0.0400		94.2	20-170			
Surrogate: 4-Bromofluorobenzene	0.0395		"	0.0400		98.8	21-167			

Summit Scientific

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



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

Project: LH#1, Edwards 16U Tank Battery
Project Number: [none]
Project Manager: Mark Longhurst

Reported:
07/22/21 11:06

Extractable Petroleum Hydrocarbons by 8015 - Quality Control
Summit Scientific

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

Batch BEG0248 - EPA 3550A

Blank (BEG0248-BLK1)

Prepared & Analyzed: 07/14/21

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

LCS (BEG0248-BS1)

Prepared & Analyzed: 07/14/21

C10-C28 (DRO)	470	50	mg/kg	500	94.0	70-130
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Matrix Spike (BEG0248-MS1)

Source: 2107177-01

Prepared & Analyzed: 07/14/21

C10-C28 (DRO)	483	50	mg/kg	500	15.8	93.5	70-130
---------------	-----	----	-------	-----	------	------	--------

Matrix Spike Dup (BEG0248-MSD1)

Source: 2107177-01

Prepared & Analyzed: 07/14/21

C10-C28 (DRO)	480	50	mg/kg	500	15.8	92.9	70-130	0.607	20
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Summit Scientific

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



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

Project: LH#1, Edwards 16U Tank Battery
Project Number: [none]
Project Manager: Mark Longhurst

Reported:
07/22/21 11:06

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 BEG0261 - EPA 5030 Soil MS

Blank (BEG0261-BLK1)

Prepared: 07/15/21 Analyzed: 07/16/21

Acenaphthene	ND	0.00500	mg/kg							
Anthracene	ND	0.00500	"							
Benzo (a) anthracene	ND	0.00500	"							
Benzo (a) pyrene	ND	0.00500	"							
Benzo (b) fluoranthene	ND	0.00500	"							
Benzo (k) fluoranthene	ND	0.00500	"							
Chrysene	ND	0.00500	"							
Dibenz (a,h) anthracene	ND	0.00500	"							
Fluoranthene	ND	0.00500	"							
Fluorene	ND	0.00500	"							
Indeno (1,2,3-cd) pyrene	ND	0.00500	"							
Naphthalene	ND	0.00500	"							
Pyrene	ND	0.00500	"							
1-Methylnaphthalene	ND	0.00500	"							
2-Methylnaphthalene	ND	0.00500	"							
Surrogate: 2-Methylnaphthalene-d10	0.0187		"	0.0333		56.0	40-150			
Surrogate: Fluoranthene-d10	0.0221		"	0.0333		66.4	40-150			

LCS (BEG0261-BS1)

Prepared: 07/15/21 Analyzed: 07/16/21

Acenaphthene	0.0252	0.00500	mg/kg	0.0333		75.7	31-137			
Anthracene	0.0259	0.00500	"	0.0333		77.8	30-120			
Benzo (a) anthracene	0.0266	0.00500	"	0.0333		80.0	30-120			
Benzo (a) pyrene	0.0255	0.00500	"	0.0333		76.6	30-120			
Benzo (b) fluoranthene	0.0267	0.00500	"	0.0333		80.1	30-120			
Benzo (k) fluoranthene	0.0273	0.00500	"	0.0333		81.8	30-120			
Chrysene	0.0253	0.00500	"	0.0333		75.9	30-120			
Dibenz (a,h) anthracene	0.0179	0.00500	"	0.0333		53.7	30-120			
Fluoranthene	0.0259	0.00500	"	0.0333		77.6	30-120			
Fluorene	0.0267	0.00500	"	0.0333		80.0	30-120			
Indeno (1,2,3-cd) pyrene	0.0175	0.00500	"	0.0333		52.6	30-120			
Naphthalene	0.0258	0.00500	"	0.0333		77.4	30-120			
Pyrene	0.0243	0.00500	"	0.0333		72.9	35-142			
1-Methylnaphthalene	0.0227	0.00500	"	0.0333		68.1	35-142			
2-Methylnaphthalene	0.0212	0.00500	"	0.0333		63.6	35-142			
Surrogate: 2-Methylnaphthalene-d10	0.0239		"	0.0333		71.7	40-150			
Surrogate: Fluoranthene-d10	0.0282		"	0.0333		84.7	40-150			

Summit Scientific

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

Project: LH#1, Edwards 16U Tank Battery

Project Number: [none]
Project Manager: Mark Longhurst

Reported:
07/22/21 11:06

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 BEG0261 - EPA 5030 Soil MS

Matrix Spike (BEG0261-MS1)

Source: 2107177-01

Prepared: 07/15/21 Analyzed: 07/16/21

Acenaphthene	0.0281	0.00500	mg/kg	0.0333	ND	84.2	31-137		
Anthracene	0.0281	0.00500	"	0.0333	ND	84.3	30-120		
Benzo (a) anthracene	0.0286	0.00500	"	0.0333	ND	85.8	30-120		
Benzo (a) pyrene	0.0267	0.00500	"	0.0333	ND	80.1	30-120		
Benzo (b) fluoranthene	0.0253	0.00500	"	0.0333	ND	75.8	30-120		
Benzo (k) fluoranthene	0.0280	0.00500	"	0.0333	ND	83.9	30-120		
Chrysene	0.0266	0.00500	"	0.0333	ND	79.7	30-120		
Dibenz (a,h) anthracene	0.0192	0.00500	"	0.0333	ND	57.6	30-120		
Fluoranthene	0.0267	0.00500	"	0.0333	ND	80.1	30-120		
Fluorene	0.0285	0.00500	"	0.0333	ND	85.6	30-120		
Indeno (1,2,3-cd) pyrene	0.0184	0.00500	"	0.0333	ND	55.2	30-120		
Naphthalene	0.0284	0.00500	"	0.0333	ND	85.2	30-120		
Pyrene	0.0256	0.00500	"	0.0333	ND	76.8	35-142		
1-Methylnaphthalene	0.0256	0.00500	"	0.0333	ND	76.9	15-130		
2-Methylnaphthalene	0.0241	0.00500	"	0.0333	ND	72.3	15-130		
Surrogate: 2-Methylnaphthalene-d10	0.0280		"	0.0333		84.0	40-150		
Surrogate: Fluoranthene-d10	0.0293		"	0.0333		88.0	40-150		

Matrix Spike Dup (BEG0261-MSD1)

Source: 2107177-01

Prepared: 07/15/21 Analyzed: 07/16/21

Acenaphthene	0.0248	0.00500	mg/kg	0.0333	ND	74.4	31-137	12.3	30
Anthracene	0.0255	0.00500	"	0.0333	ND	76.6	30-120	9.52	30
Benzo (a) anthracene	0.0259	0.00500	"	0.0333	ND	77.7	30-120	9.93	30
Benzo (a) pyrene	0.0244	0.00500	"	0.0333	ND	73.3	30-120	8.91	30
Benzo (b) fluoranthene	0.0256	0.00500	"	0.0333	ND	76.9	30-120	1.42	30
Benzo (k) fluoranthene	0.0266	0.00500	"	0.0333	ND	79.7	30-120	5.08	30
Chrysene	0.0243	0.00500	"	0.0333	ND	72.8	30-120	9.13	30
Dibenz (a,h) anthracene	0.0173	0.00500	"	0.0333	ND	51.9	30-120	10.5	30
Fluoranthene	0.0254	0.00500	"	0.0333	ND	76.1	30-120	5.06	30
Fluorene	0.0258	0.00500	"	0.0333	ND	77.5	30-120	9.88	30
Indeno (1,2,3-cd) pyrene	0.0164	0.00500	"	0.0333	ND	49.3	30-120	11.4	30
Naphthalene	0.0247	0.00500	"	0.0333	ND	74.1	30-120	14.0	30
Pyrene	0.0234	0.00500	"	0.0333	ND	70.2	35-142	8.97	30
1-Methylnaphthalene	0.0234	0.00500	"	0.0333	ND	70.2	15-130	9.20	50
2-Methylnaphthalene	0.0219	0.00500	"	0.0333	ND	65.7	15-130	9.66	50
Surrogate: 2-Methylnaphthalene-d10	0.0249		"	0.0333		74.8	40-150		
Surrogate: Fluoranthene-d10	0.0275		"	0.0333		82.5	40-150		

Summit Scientific

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

Project: LH#1, Edwards 16U Tank Battery

Project Number: [none]
Project Manager: Mark Longhurst

Reported:
07/22/21 11:06

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

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

Batch BEG0255 - EPA 3050B

Blank (BEG0255-BLK1)

Prepared: 07/15/21 Analyzed: 07/17/21

Boron	ND	0.0100	mg/L
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LCS (BEG0255-BS1)

Prepared: 07/15/21 Analyzed: 07/17/21

Boron	5.90	0.0100	mg/L	5.00	118	80-120
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Duplicate (BEG0255-DUP1)

Source: 2107181-01

Prepared: 07/15/21 Analyzed: 07/17/21

Boron	0.178	0.0100	mg/L	0.171	3.81	20
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Matrix Spike (BEG0255-MS1)

Source: 2107181-01

Prepared: 07/15/21 Analyzed: 07/17/21

Boron	5.95	0.0100	mg/L	5.00	0.171	116	75-125
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Matrix Spike Dup (BEG0255-MSD1)

Source: 2107181-01

Prepared: 07/15/21 Analyzed: 07/17/21

Boron	6.16	0.0100	mg/L	5.00	0.171	120	75-125	3.46	25
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Summit Scientific

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



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

Project: LH#1, Edwards 16U Tank Battery
Project Number: [none]
Project Manager: Mark Longhurst

Reported:
07/22/21 11:06

Total Metals by EPA 6020B - Quality Control
Summit Scientific

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

Batch BEG0254 - EPA 3050B

Blank (BEG0254-BLK1)

Prepared & Analyzed: 07/15/21

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 (BEG0254-BS1)

Prepared & Analyzed: 07/15/21

Arsenic	40.9	0.200	mg/kg wet	40.0	102	80-120
Barium	40.0	0.400	"	40.0	99.9	80-120
Cadmium	1.97	0.200	"	2.00	98.4	80-120
Copper	40.1	0.400	"	40.0	100	80-120
Lead	19.7	0.200	"	20.0	98.7	80-120
Nickel	38.7	0.400	"	40.0	96.9	80-120
Selenium	3.89	0.260	"	4.00	97.2	80-120
Silver	1.95	0.0200	"	2.00	97.4	80-120
Zinc	41.2	0.400	"	40.0	103	80-120

Duplicate (BEG0254-DUP1)

Source: 2106411-01

Prepared & Analyzed: 07/15/21

Arsenic	ND	0.206	mg/kg dry	ND		20
Barium	11.8	0.411	"	13.7	15.0	20
Cadmium	0.0176	0.206	"	0.0207	16.7	20
Copper	1.58	0.411	"	1.61	1.99	20
Lead	1.49	0.206	"	1.46	1.57	20
Nickel	1.08	0.411	"	0.911	17.4	20
Selenium	ND	0.267	"	0.275	200	20
Silver	0.00992	0.0206	"	0.00825	18.4	20
Zinc	6.45	0.411	"	6.82	5.55	20

QR-01

Summit Scientific

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

Project: LH#1, Edwards 16U Tank Battery
Project Number: [none]
Project Manager: Mark Longhurst

Reported:
07/22/21 11:06

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 BEG0254 - EPA 3050B

Matrix Spike (BEG0254-MS1)			Source: 2106411-01		Prepared & Analyzed: 07/15/21					
Arsenic	36.8	0.206	mg/kg dry	41.1	ND	89.4	75-125			
Barium	49.1	0.411	"	41.1	13.7	86.2	75-125			
Cadmium	1.76	0.206	"	2.06	0.0207	84.6	75-125			
Copper	37.4	0.411	"	41.1	1.61	87.1	75-125			
Lead	18.2	0.206	"	20.6	1.46	81.5	75-125			
Nickel	35.3	0.411	"	41.1	0.911	83.6	75-125			
Selenium	3.78	0.267	"	4.11	0.275	85.2	75-125			
Silver	1.69	0.0206	"	2.06	0.00825	81.8	75-125			
Zinc	43.7	0.411	"	41.1	6.82	89.8	75-125			

Matrix Spike Dup (BEG0254-MSD1)			Source: 2106411-01		Prepared & Analyzed: 07/15/21					
Arsenic	38.0	0.206	mg/kg dry	41.1	ND	92.4	75-125	3.25	25	
Barium	59.2	0.411	"	41.1	13.7	111	75-125	18.6	25	
Cadmium	1.91	0.206	"	2.06	0.0207	92.1	75-125	8.35	25	
Copper	39.6	0.411	"	41.1	1.61	92.3	75-125	5.62	25	
Lead	21.1	0.206	"	20.6	1.46	95.3	75-125	14.4	25	
Nickel	37.2	0.411	"	41.1	0.911	88.1	75-125	5.19	25	
Selenium	4.73	0.267	"	4.11	0.275	108	75-125	22.4	25	
Silver	1.82	0.0206	"	2.06	0.00825	88.0	75-125	7.15	25	
Zinc	46.1	0.411	"	41.1	6.82	95.5	75-125	5.23	25	

Summit Scientific

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

Project: LH#1, Edwards 16U Tank Battery
Project Number: [none]
Project Manager: Mark Longhurst

Reported:
07/22/21 11:06

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 BEG0260 - 3060A Mod

Blank (BEG0260-BLK1)

Prepared: 07/15/21 Analyzed: 07/16/21

Chromium, Hexavalent ND 0.30 mg/kg wet

LCS (BEG0260-BS1)

Prepared: 07/15/21 Analyzed: 07/16/21

Chromium, Hexavalent 25.5 0.30 mg/kg wet 25.0 102 80-120

Duplicate (BEG0260-DUP1)

Source: 2107181-01

Prepared: 07/15/21 Analyzed: 07/16/21

Chromium, Hexavalent ND 0.30 mg/kg dry ND 20

Matrix Spike (BEG0260-MS1)

Source: 2107181-01

Prepared: 07/15/21 Analyzed: 07/16/21

Chromium, Hexavalent 25.8 0.30 mg/kg dry 30.8 ND 84.0 75-125

Matrix Spike Dup (BEG0260-MSD1)

Source: 2107181-01

Prepared: 07/15/21 Analyzed: 07/16/21

Chromium, Hexavalent 26.0 0.30 mg/kg dry 30.8 ND 84.4 75-125 0.475 20

Summit Scientific

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

Project: LH#1, Edwards 16U Tank Battery
Project Number: [none]
Project Manager: Mark Longhurst

Reported:
07/22/21 11:06

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

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

Batch BEG0267 - General Preparation

Blank (BEG0267-BLK1)

Prepared: 07/15/21 Analyzed: 07/17/21

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

LCS (BEG0267-BS1)

Prepared: 07/15/21 Analyzed: 07/17/21

Calcium	6.48	0.0500	mg/L wet	5.00	130	70-130
Magnesium	5.76	0.0500	"	5.00	115	70-130
Sodium	6.28	0.0500	"	5.00	126	70-130

Summit Scientific

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

Project: LH#1, Edwards 16U Tank Battery

Project Number: [none]
Project Manager: Mark Longhurst

Reported:
07/22/21 11:06

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

Summit Scientific

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

Batch BEG0256 - General Preparation

Duplicate (BEG0256-DUP1)		Source: 2106410-01			Prepared & Analyzed: 07/15/21					
% Solids	79.1		%		78.3		1.06		20	

Summit Scientific

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

Project: LH#1, Edwards 16U Tank Battery
Project Number: [none]
Project Manager: Mark Longhurst

Reported:
07/22/21 11:06

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

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

Batch BEG0286 - General Preparation

Blank (BEG0286-BLK1)

Prepared & Analyzed: 07/16/21

Specific Conductance (EC) ND 0.0100 mmhos/cm

LCS (BEG0286-BS1)

Prepared & Analyzed: 07/16/21

Specific Conductance (EC) 0.144 0.0100 mmhos/cm 0.150 96.1 90-110

Duplicate (BEG0286-DUP1)

Source: 2106379-01

Prepared & Analyzed: 07/16/21

Specific Conductance (EC) 0.492 0.0100 mmhos/cm 0.493 0.284 20

Summit Scientific

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

Project: LH#1, Edwards 16U Tank Battery
Project Number: [none]
Project Manager: Mark Longhurst

Reported:
07/22/21 11:06

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

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

Batch BEG0285 - General Preparation

LCS (BEG0285-BS1)

Prepared & Analyzed: 07/16/21

pH	9.33	pH Units	9.21	101	95-105
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Duplicate (BEG0285-DUP1)

Source: 2106379-01

Prepared & Analyzed: 07/16/21

pH	8.18	pH Units	8.17	0.122	20
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Summit Scientific

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

Project: LH#1, Edwards 16U Tank Battery

Project Number: [none]
Project Manager: Mark Longhurst

Reported:
07/22/21 11:06

Notes and Definitions

S-02	The surrogate recovery for this sample cannot be accurately quantified due to interference from coeluting organic compounds present in the sample extract.
QR-01	Analyses are not controlled on RPD values from sample concentrations less than 10 times the reporting limit. QC batch accepted based on LCS and/or LCSD QC results.
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

July 16, 2021

Mark Longhurst

PDC Energy

1775 Sherman St. STE. 3000

Denver, CO 80203

RE: LH#1, Edwards 164 Tank Battery

Work Order #2107201

Enclosed are the results of analyses for samples received by Summit Scientific on 07/15/21 16:00. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

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

Paul Shrewsbury

President



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

Project: LH#1, Edwards 164 Tank Battery
Project Number: [none]
Project Manager: Mark Longhurst

Reported:
07/16/21 02:19

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
SS02@20'	2107201-01	Soil	07/15/21 12:34	07/15/21 16:00

Summit Scientific

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

Summit Scientific

2107201

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: L-141, EDWARDS 164 Tank Battery
Sampler Name: AJ DALE Project Number:

ID	Sample Description	Date Sampled	Time Sampled	# of containers	Preservative				Matrix				Analysis Requested							Special Instructions	
					HCl	HNO3	None	Other	Water	Soil	Air-Canister #	Other	GBTEEN - 8260B	TPH - (C6 - C36)	pH, EC, SAR	Boron - HWS	VOC - 915	PAH - 915	Metals - 915		
1	SS02 @ 20'	7/15/21	1234	3			X			X				X	X	X					pH, EC, SAR by saturated paste
2																					
3																					
4																					
5																					
6																					
7																					
8																					
9																					
10																					

Relinquished by: AJ DALE	Date/Time: 7/15/21 1345	Received by: ^{JB} Tasman's Lock Box North office	Date/Time: 7/15/21 1345	Turn Around Time (Check) Same Day <input checked="" type="checkbox"/> 72 hours 24 hours 48 hours	Standard	Notes:
Relinquished by: ^{JB} Tasman's Lock Box North office	Date/Time: 7/15/21 1600	Received by: John Bm	Date/Time: 7/15/21 1600	Sample Integrity: 5		
Relinquished by:	Date/Time:	Received by:	Date/Time:	Temperature Upon Receipt:	Samples Intact: <input checked="" type="checkbox"/> Yes No	

Sample Receipt Checklist

S2 Work Order 2107201

Client: PDC / Tasman Client Project ID: L-H1, Edwards 16U 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 ⁽¹⁾ ? 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"/>	<i>On ice.</i>
Were all samples received intact ⁽¹⁾ ?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Was adequate sample volume provided ⁽¹⁾ ?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
If custody seals are present, are they intact ⁽¹⁾ ?	<input 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"/>	<i>Same day.</i>
Is a chain-of-custody (COC) form present and filled out completely ⁽¹⁾ ?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Does the COC agree with the number and type of sample bottles received ⁽¹⁾ ?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Do the sample IDs on the bottle labels match the COC ⁽¹⁾ ?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Is the COC properly relinquished by the client w/ date and time recorded ⁽¹⁾ ?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
For volatiles in water – is there headspace present? If yes, contact client and note in narrative.	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
Are samples preserved that require preservation (excluding cooling) ⁽¹⁾ ? Note the type of preservative in the Comments column – HCl, H2SO4, NaOH, HNO3, ect	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
If samples are acid preserved for metals, is the pH ≤ 2 ⁽¹⁾ ? Record the pH in Comments.	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
If dissolved metals are requested, were samples field filtered?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	

Additional Comments (if any):

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

JB
Custodian Printed Name or Initials

John B...
Signature of Custodian

7/15/21
Date/Time



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

Project: LH#1, Edwards 164 Tank Battery

Project Number: [none]
Project Manager: Mark Longhurst

Reported:
07/16/21 02:19

SS02@20'
2107201-01 (Soil)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **07/15/21 12:34**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Benzene	0.023	0.0020	mg/kg	1	BEG0273	07/15/21	07/15/21	EPA 8260B	
Toluene	ND	0.0050	"	"	"	"	"	"	
Ethylbenzene	0.21	0.0050	"	"	"	"	"	"	
Xylenes (total)	1.2	0.010	"	"	"	"	"	"	
1,2,4-Trimethylbenzene	3.4	0.050	"	10	"	"	"	"	
1,3,5-Trimethylbenzene	0.43	0.0050	"	1	"	"	"	"	
Naphthalene	0.17	0.0038	"	"	"	"	"	"	
Gasoline Range Hydrocarbons	660	5.0	"	10	"	"	"	"	

Date Sampled: **07/15/21 12:34**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 1,2-Dichloroethane-d4		71.3 %	23-173		"	"	"	"	
Surrogate: Toluene-d8		97.0 %	20-170		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		156 %	21-167		"	"	"	"	

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **07/15/21 12:34**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
C10-C28 (DRO)	1800	50	mg/kg	1	BEG0274	07/15/21	07/15/21	EPA 8015M	
C28-C36 (ORO)	220	50	"	"	"	"	"	"	

Date Sampled: **07/15/21 12:34**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: o-Terphenyl		117 %	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: LH#1, Edwards 164 Tank Battery

Project Number: [none]
Project Manager: Mark Longhurst

Reported:
07/16/21 02:19

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 BEG0273 - EPA 5030 Soil MS

Blank (BEG0273-BLK1)

Prepared & Analyzed: 07/15/21

Benzene	ND	0.0020	mg/kg							
Toluene	ND	0.0050	"							
Ethylbenzene	ND	0.0050	"							
Xylenes (total)	ND	0.010	"							
1,2,4-Trimethylbenzene	ND	0.0050	"							
1,3,5-Trimethylbenzene	ND	0.0050	"							
Naphthalene	ND	0.0038	"							
Gasoline Range Hydrocarbons	ND	0.50	"							
Surrogate: 1,2-Dichloroethane-d4	0.0394		"	0.0400		98.5	23-173			
Surrogate: Toluene-d8	0.0445		"	0.0400		111	20-170			
Surrogate: 4-Bromofluorobenzene	0.0429		"	0.0400		107	21-167			

LCS (BEG0273-BS1)

Prepared & Analyzed: 07/15/21

Benzene	0.171	0.0020	mg/kg	0.150		114	70-130			
Toluene	0.160	0.0050	"	0.150		107	70-130			
Ethylbenzene	0.138	0.0050	"	0.150		91.9	70-130			
m,p-Xylene	0.275	0.010	"	0.300		91.5	70-130			
o-Xylene	0.139	0.0050	"	0.150		92.6	70-130			
1,2,4-Trimethylbenzene	0.125	0.0050	"	0.150		83.4	70-130			
1,3,5-Trimethylbenzene	0.124	0.0050	"	0.150		82.8	70-130			
Naphthalene	0.143	0.0038	"	0.150		95.4	70-130			
Surrogate: 1,2-Dichloroethane-d4	0.0389		"	0.0400		97.4	23-173			
Surrogate: Toluene-d8	0.0457		"	0.0400		114	20-170			
Surrogate: 4-Bromofluorobenzene	0.0430		"	0.0400		108	21-167			

Matrix Spike (BEG0273-MS1)

Source: 2107202-01

Prepared & Analyzed: 07/15/21

Benzene	0.159	0.0020	mg/kg	0.150	ND	106	70-130			
Toluene	0.149	0.0050	"	0.150	ND	99.0	70-130			
Ethylbenzene	0.130	0.0050	"	0.150	ND	86.9	70-130			
m,p-Xylene	0.257	0.010	"	0.300	ND	85.7	70-130			
o-Xylene	0.130	0.0050	"	0.150	ND	86.8	70-130			
1,2,4-Trimethylbenzene	0.117	0.0050	"	0.150	ND	78.3	70-130			
1,3,5-Trimethylbenzene	0.118	0.0050	"	0.150	ND	78.5	70-130			
Naphthalene	0.145	0.0038	"	0.150	ND	96.5	70-130			
Surrogate: 1,2-Dichloroethane-d4	0.0406		"	0.0400		102	23-173			
Surrogate: Toluene-d8	0.0451		"	0.0400		113	20-170			
Surrogate: 4-Bromofluorobenzene	0.0440		"	0.0400		110	21-167			

Summit Scientific

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

Project: LH#1, Edwards 164 Tank Battery
Project Number: [none]
Project Manager: Mark Longhurst

Reported:
07/16/21 02:19

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 BEG0273 - EPA 5030 Soil MS

Matrix Spike Dup (BEG0273-MSD1)	Source: 2107202-01			Prepared & Analyzed: 07/15/21						
Benzene	0.150	0.0020	mg/kg	0.150	ND	100	70-130	5.79	30	
Toluene	0.142	0.0050	"	0.150	ND	94.5	70-130	4.67	30	
Ethylbenzene	0.122	0.0050	"	0.150	ND	81.2	70-130	6.76	30	
m,p-Xylene	0.240	0.010	"	0.300	ND	80.1	70-130	6.82	30	
o-Xylene	0.121	0.0050	"	0.150	ND	81.0	70-130	6.98	30	
1,2,4-Trimethylbenzene	0.110	0.0050	"	0.150	ND	73.4	70-130	6.46	30	
1,3,5-Trimethylbenzene	0.110	0.0050	"	0.150	ND	73.3	70-130	6.90	30	
Naphthalene	0.144	0.0038	"	0.150	ND	96.0	70-130	0.520	30	
Surrogate: 1,2-Dichloroethane-d4	0.0405		"	0.0400		101	23-173			
Surrogate: Toluene-d8	0.0459		"	0.0400		115	20-170			
Surrogate: 4-Bromofluorobenzene	0.0430		"	0.0400		107	21-167			

Summit Scientific

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



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

Project: LH#1, Edwards 164 Tank Battery
Project Number: [none]
Project Manager: Mark Longhurst

Reported:
07/16/21 02:19

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 BEG0274 - EPA 3550A

Blank (BEG0274-BLK1)

Prepared: 07/15/21 Analyzed: 07/16/21

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

LCS (BEG0274-BS1)

Prepared: 07/15/21 Analyzed: 07/16/21

C10-C28 (DRO)	491	50	mg/kg	500	98.2	70-130
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Matrix Spike (BEG0274-MS1)

Source: 2107202-01

Prepared: 07/15/21 Analyzed: 07/16/21

C10-C28 (DRO)	494	50	mg/kg	500	22.1	94.5	70-130
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Matrix Spike Dup (BEG0274-MSD1)

Source: 2107202-01

Prepared: 07/15/21 Analyzed: 07/16/21

C10-C28 (DRO)	518	50	mg/kg	500	22.1	99.1	70-130	4.59	20
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Summit Scientific

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



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

Project: LH#1, Edwards 164 Tank Battery

Project Number: [none]

Project Manager: Mark Longhurst

Reported:
07/16/21 02:19

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

August 15, 2021

Mark Longhurst

PDC Energy

1775 Sherman St. STE. 3000

Denver, CO 80203

RE: LH#1, Edwards 16U Tank Battery

Work Order #2108201

Enclosed are the results of analyses for samples received by Summit Scientific on 08/13/21 17:55. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

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

Paul Shrewsbury

President



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

Project: LH#1, Edwards 16U Tank Battery
Project Number: [none]
Project Manager: Mark Longhurst

Reported:
08/15/21 20:32

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
SS03@24'	2108201-01	Soil	08/13/21 09:48	08/13/21 17:55

Summit Scientific

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

2100001

 S_2

303-277-9310

Page 1 of

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	TPH - (C6 - C36)	pH, EC, SAR	Boron - HWS	VOC - 915	PAH - 915	Metals - 915	1,2,4-TM13 1,3,5-TM13	pH, EC, SAR by saturated paste				
1	SS030 24'	8/13/21	948	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:													
[Signature]		8/13/2021 12:12		Tasman's Lock Box		8/13/2021 12:15		Same Day		X												72 hours		___	
Relinquished by:		Date/Time:		Received by:		Date/Time:		24 hours		___												Standard		___	
Tasman's Lock Box		8/13/21 1755		Will [Signature]		8/13/21 1755		48 hours		___		Sample Integrity:													
Relinquished by:		Date/Time:		Received by:		Date/Time:		Temperature Upon Receipt:		15															
								Samples Intact:		Yes															

Sample Receipt Checklist

S2 Work Order 2108201

Client: PDX/TASMAN Client Project ID: L-H #1, Edwards 16V 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) 15

Thermometer ID: 61857155-K

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

Additional Comments (if any):

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

WGA
Custodian Printed Name or Initials

Will Hall
Signature of Custodian

8/13/21
Date/Time



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

Project: LH#1, Edwards 16U Tank Battery
Project Number: [none]
Project Manager: Mark Longhurst

Reported:
08/15/21 20:32

SS03@24'
2108201-01 (Soil)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **08/13/21 09:48**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Benzene	ND	0.0020	mg/kg	1	BEH0231	08/13/21	08/14/21	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: **08/13/21 09:48**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 1,2-Dichloroethane-d4		116 %	23-173		"	"	"	"	
Surrogate: Toluene-d8		109 %	20-170		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		95.4 %	21-167		"	"	"	"	

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **08/13/21 09:48**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
C10-C28 (DRO)	ND	50	mg/kg	1	BEH0232	08/13/21	08/13/21	EPA 8015M	
C28-C36 (ORO)	ND	50	"	"	"	"	"	"	

Date Sampled: **08/13/21 09:48**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: o-Terphenyl		81.9 %	30-150		"	"	"	"	

Summit Scientific

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

Project: LH#1, Edwards 16U Tank Battery
Project Number: [none]
Project Manager: Mark Longhurst

Reported:
08/15/21 20:32

Volatile Organic Compounds by EPA Method 8260B - Quality Control

Summit Scientific

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

Batch BEH0231 - EPA 5030 Soil MS

Blank (BEH0231-BLK1)

Prepared & Analyzed: 08/13/21

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	0.0432	"	0.0400	108	23-173
Surrogate: Toluene-d8	0.0434	"	0.0400	108	20-170
Surrogate: 4-Bromofluorobenzene	0.0385	"	0.0400	96.2	21-167

LCS (BEH0231-BS1)

Prepared & Analyzed: 08/13/21

Benzene	0.121	0.0020	mg/kg	0.100	121	70-130
Toluene	0.113	0.0050	"	0.100	113	70-130
Ethylbenzene	0.0981	0.0050	"	0.100	98.1	70-130
m,p-Xylene	0.194	0.010	"	0.200	96.8	70-130
o-Xylene	0.0941	0.0050	"	0.100	94.1	70-130
1,2,4-Trimethylbenzene	0.0980	0.0050	"	0.100	98.0	70-130
1,3,5-Trimethylbenzene	0.0977	0.0050	"	0.100	97.7	70-130
Naphthalene	0.114	0.0038	"	0.100	114	70-130

Surrogate: 1,2-Dichloroethane-d4	0.0461	"	0.0400	115	23-173
Surrogate: Toluene-d8	0.0442	"	0.0400	110	20-170
Surrogate: 4-Bromofluorobenzene	0.0392	"	0.0400	98.1	21-167

Matrix Spike (BEH0231-MS1)

Source: 2108199-01

Prepared & Analyzed: 08/13/21

Benzene	0.117	0.0020	mg/kg	0.100	ND	117	70-130
Toluene	0.109	0.0050	"	0.100	ND	109	70-130
Ethylbenzene	0.0952	0.0050	"	0.100	ND	95.2	70-130
m,p-Xylene	0.187	0.010	"	0.200	ND	93.4	70-130
o-Xylene	0.0900	0.0050	"	0.100	ND	90.0	70-130
1,2,4-Trimethylbenzene	0.0913	0.0050	"	0.100	ND	91.3	70-130
1,3,5-Trimethylbenzene	0.0914	0.0050	"	0.100	ND	91.4	70-130
Naphthalene	0.108	0.0038	"	0.100	ND	108	70-130

Surrogate: 1,2-Dichloroethane-d4	0.0460	"	0.0400	115	23-173
Surrogate: Toluene-d8	0.0443	"	0.0400	111	20-170
Surrogate: 4-Bromofluorobenzene	0.0394	"	0.0400	98.5	21-167

Summit Scientific

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



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

Project: LH#1, Edwards 16U Tank Battery
Project Number: [none]
Project Manager: Mark Longhurst

Reported:
08/15/21 20:32

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

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

Batch BEH0231 - EPA 5030 Soil MS

Matrix Spike Dup (BEH0231-MSD1)	Source: 2108199-01			Prepared & Analyzed: 08/13/21						
Benzene	0.117	0.0020	mg/kg	0.100	ND	117	70-130	0.359	30	
Toluene	0.109	0.0050	"	0.100	ND	109	70-130	0.220	30	
Ethylbenzene	0.0964	0.0050	"	0.100	ND	96.4	70-130	1.22	30	
m,p-Xylene	0.190	0.010	"	0.200	ND	95.0	70-130	1.67	30	
o-Xylene	0.0910	0.0050	"	0.100	ND	91.0	70-130	1.13	30	
1,2,4-Trimethylbenzene	0.0938	0.0050	"	0.100	ND	93.8	70-130	2.76	30	
1,3,5-Trimethylbenzene	0.0934	0.0050	"	0.100	ND	93.4	70-130	2.11	30	
Naphthalene	0.111	0.0038	"	0.100	ND	111	70-130	2.47	30	
Surrogate: 1,2-Dichloroethane-d4	0.0464		"	0.0400		116	23-173			
Surrogate: Toluene-d8	0.0442		"	0.0400		111	20-170			
Surrogate: 4-Bromofluorobenzene	0.0394		"	0.0400		98.6	21-167			

Summit Scientific

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



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

Project: LH#1, Edwards 16U Tank Battery
Project Number: [none]
Project Manager: Mark Longhurst

Reported:
08/15/21 20:32

Extractable Petroleum Hydrocarbons by 8015 - Quality Control
Summit Scientific

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

Batch BEH0232 - EPA 3550A

Blank (BEH0232-BLK1)

Prepared & Analyzed: 08/13/21

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

LCS (BEH0232-BS1)

Prepared: 08/13/21 Analyzed: 08/14/21

C10-C28 (DRO)	575	50	mg/kg	500	115	70-130
---------------	-----	----	-------	-----	-----	--------

Matrix Spike (BEH0232-MS1)

Source: 2108199-01

Prepared: 08/13/21 Analyzed: 08/14/21

C10-C28 (DRO)	520	50	mg/kg	500	14.3	101	70-130
---------------	-----	----	-------	-----	------	-----	--------

Matrix Spike Dup (BEH0232-MSD1)

Source: 2108199-01

Prepared: 08/13/21 Analyzed: 08/14/21

C10-C28 (DRO)	495	50	mg/kg	500	14.3	96.2	70-130	4.93	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: LH#1, Edwards 16U Tank Battery

Project Number: [none]
Project Manager: Mark Longhurst

Reported:
08/15/21 20:32

Notes and Definitions

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

Summit Scientific

4653 Table Mountain Drive, Golden, Colorado 80403

303.277.9310

November 12, 2021

Mark Longhurst

PDC Energy

1775 Sherman St. STE. 3000

Denver, CO 80203

RE: L-H#1, Edwards 16U

Work Order #2111109

Enclosed are the results of analyses for samples received by Summit Scientific on 11/05/21 16:00. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

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

Muri Premier For Paul Shrewsbury
President



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

Project: L-H#1, Edwards 16U

Project Number: [none]
Project Manager: Mark Longhurst

Reported:
11/12/21 14:06

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
SS04@29'	2111109-01	Soil	11/05/21 10:32	11/05/21 16:00
SS05@29'	2111109-02	Soil	11/05/21 10:33	11/05/21 16:00
SS06@29'	2111109-03	Soil	11/05/21 10:34	11/05/21 16:00
SS07@8'	2111109-04	Soil	11/05/21 10:41	11/05/21 16:00
SS08@18'	2111109-05	Soil	11/05/21 10:42	11/05/21 16:00
SS09@28'	2111109-06	Soil	11/05/21 10:43	11/05/21 16:00
SS10@8'	2111109-07	Soil	11/05/21 11:10	11/05/21 16:00
SS11@18'	2111109-08	Soil	11/05/21 11:11	11/05/21 16:00
SS12@28'	2111109-09	Soil	11/05/21 11:12	11/05/21 16:00
SS13@8'	2111109-10	Soil	11/05/21 11:20	11/05/21 16:00
SS14@18'	2111109-11	Soil	11/05/21 11:21	11/05/21 16:00
SS15@28'	2111109-12	Soil	11/05/21 11:22	11/05/21 16:00
SS16@8'	2111109-13	Soil	11/05/21 12:57	11/05/21 16:00
SS17@18'	2111109-14	Soil	11/05/21 12:58	11/05/21 16:00
SS18@28'	2111109-15	Soil	11/05/21 12:59	11/05/21 16:00

Summit Scientific

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

Summit Scientific

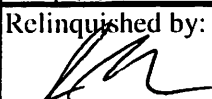
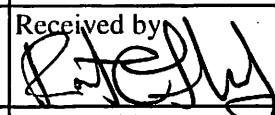
2111109.1

S2

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	L-H #1, Edwards 16U
Sampler Name:	J. Marcus	Project Number:	N/A

ID	Sample Description	Date Sampled	Time Sampled	# of containers	Preservative				Matrix				Analysis Requested								Special Instructions	
					HCl	HNO3	None	Other	Water	Soil	Air-Canister #	Other	BTEXN - 8260B	TPH - (C6 - C36)	1,2,4 & 1,3,5-TMB	Boron - HWS	pH, EC, SAR	Fluores	I-M, Z-M			
1	SS04 @ 29'	11/5/21	1032	2			X			X				X	X	X			X	X		pH, EC, SAR by saturated paste M = methyl/naphthalene
2	SS05 @ 29'		1033	2			X			X				X	X	X			X	X		
3	SS06 @ 29'		1034	2			X			X				X	X	X			X	X		
4	SS07 @ 8'		1041	2			X			X				X	X	X			X	X		
5	SS08 @ 18'		1042	2			X			X				X	X	X			X	X		
6	SS09 @ 28'		1043	2			X			X				X	X	X			X	X		
7	SS10 @ 8'		1110	2			X			X				X	X	X			X	X		
8	SS11 @ 18'		1111	2			X			X				X	X	X			X	X		
9	SS12 @ 28'		1112	2			X			X				X	X	X			X	X		
10	SS13 @ 8'		1120	2			X			X				X	X	X			X	X		
Relinquished by:		Date/Time:		Received by:		Date/Time:		Turn Around Time				(Check)				Notes:						
		11/5/21 1600		Tasman's Lock Box		11/5/21 1606		Same Day <input checked="" type="checkbox"/>				72 hours <input type="checkbox"/>										
Relinquished by:		Date/Time:		Received by:		Date/Time:		24 hours <input type="checkbox"/>				Standard <input type="checkbox"/>										
Tasman's Lock Box						11-5-21 1600		48 hours <input type="checkbox"/>														
Relinquished by:		Date/Time:		Received by:		Date/Time:		Sample Integrity:				Temperature Upon Receipt:										
												2.9										
												Samples Intact: <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No										

Summit Scientific

S₂

211109.2

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

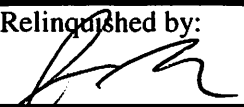

Phone: 303-487-1228

Project Name: L-17 #1, Edwards 16V

Sampler Name: J. Marcus

Project Number: 16

ID	Sample Description	Date Sampled	Time Sampled	# of containers	Preservative				Matrix				Analysis Requested								Special Instructions
					HCl	HNO ₃	None	Other	Water	Soil	Air-Canister #	Other	BTEXN - 8260B	TPH - (C6 - C36)	1,2,4 & 1,3,5-TMB	Boron - HWS	pH, EC, SAR	Fluorene	1-M, 2-M		
1	5514 @ 18'	11/5/21	1121	2			X			X				X	X	X			X	X	pH, EC, SAR by saturated paste M = methyl naphthalene
2	5515 @ 28'		1122	2			X			X				X	X	X			X	X	
3	5516 @ 8'		1257	2			X			X				X	X	X			X	X	
4	5517 @ 18'		1258	2			X			X				X	X	X			X	X	
5	5518 @ 28'		1259	2			X			X				X	X	X			X	X	
6																					
7																					
8																					
9																					
10																					

Relinquished by: 	Date/Time: 11/5/21 1600	Received by: Tasman's Lock Box	Date/Time: 11/5/21 1600	Turn Around Time (Check) Same Day <input checked="" type="checkbox"/> 72 hours 24 hours <input type="checkbox"/> Standard 48 hours <input type="checkbox"/>	Notes:
Relinquished by: Tasman's Lock Box	Date/Time:	Received by: 	Date/Time: 11/5/21 1600	Sample Integrity:	
Relinquished by:	Date/Time:	Received by:	Date/Time:	Temperature Upon Receipt: 2.9 Samples Intact: <input checked="" type="radio"/> Yes <input type="radio"/> No	

S₂

212

Sample Receipt Checklist

S2 Work Order#

211109

Client: PBC / TasmanClient Project ID: L-H#1, Edwards 16vShipped Via: H.D./P.U./FedEx/UPS/USPS/Other

Airbill #:

☐ ☒ ☐ ☐ ☐

Matrix (check all that apply):

☐ Air☒ Soil/Solid☐ Water☐ Other:

(Describe)

Temp (°C)

2.9

Thermometer ID: G86A9201901378

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

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

Custodian Printed Name or Initials

Date/Time

11.5.21



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

Project: L-H#1, Edwards 16U
Project Number: [none]
Project Manager: Mark Longhurst

Reported:
11/12/21 14:06

SS04@29'
2111109-01 (Soil)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **11/05/21 10:32**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Benzene	ND	0.0020	mg/kg	1	BEK0151	11/05/21	11/06/21	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: **11/05/21 10:32**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 1,2-Dichloroethane-d4		121 %	23-173		"	"	"	"	
Surrogate: Toluene-d8		125 %	20-170		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		104 %	21-167		"	"	"	"	

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **11/05/21 10:32**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
C10-C28 (DRO)	ND	50	mg/kg	1	BEK0150	11/05/21	11/06/21	EPA 8015M	
C28-C36 (ORO)	ND	50	"	"	"	"	"	"	

Date Sampled: **11/05/21 10:32**

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

PAH by EPA Method 8270D SIM

Summit Scientific

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



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

Project: L-H#1, Edwards 16U
Project Number: [none]
Project Manager: Mark Longhurst

Reported:
11/12/21 14:06

SS04@29'
2111109-01 (Soil)

Summit Scientific

PAH by EPA Method 8270D SIM

Date Sampled: **11/05/21 10:32**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Fluorene	ND	0.00500	mg/kg	1	BEK0157	11/08/21	11/09/21	EPA 8270D SIM	
1-Methylnaphthalene	ND	0.00500	"	"	"	"	"	"	
2-Methylnaphthalene	ND	0.00500	"	"	"	"	"	"	

Date Sampled: **11/05/21 10:32**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 2-Methylnaphthalene-d10		44.2 %	40-150		"	"	"	"	

Summit Scientific

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

Project: L-H#1, Edwards 16U

Project Number: [none]
Project Manager: Mark Longhurst

Reported:
11/12/21 14:06

SS05@29'
2111109-02 (Soil)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **11/05/21 10:33**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Benzene	ND	0.0020	mg/kg	1	BEK0151	11/05/21	11/06/21	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: **11/05/21 10:33**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: 1,2-Dichloroethane-d4		124 %	23-173		"	"	"	"	
Surrogate: Toluene-d8		128 %	20-170		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		105 %	21-167		"	"	"	"	

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **11/05/21 10:33**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
C10-C28 (DRO)	ND	50	mg/kg	1	BEK0150	11/05/21	11/06/21	EPA 8015M	
C28-C36 (ORO)	ND	50	"	"	"	"	"	"	

Date Sampled: **11/05/21 10:33**

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

PAH by EPA Method 8270D SIM

Summit Scientific

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



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

Project: L-H#1, Edwards 16U
Project Number: [none]
Project Manager: Mark Longhurst

Reported:
11/12/21 14:06

SS05@29'
2111109-02 (Soil)

Summit Scientific

PAH by EPA Method 8270D SIM

Date Sampled: **11/05/21 10:33**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Fluorene	ND	0.00500	mg/kg	1	BEK0157	11/08/21	11/09/21	EPA 8270D SIM	
1-Methylnaphthalene	ND	0.00500	"	"	"	"	"	"	
2-Methylnaphthalene	ND	0.00500	"	"	"	"	"	"	

Date Sampled: **11/05/21 10:33**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 2-Methylnaphthalene-d10		46.1 %	40-150		"	"	"	"	

Summit Scientific

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

Project: L-H#1, Edwards 16U
Project Number: [none]
Project Manager: Mark Longhurst

Reported:
11/12/21 14:06

SS06@29'
2111109-03 (Soil)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **11/05/21 10:34**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Benzene	ND	0.0020	mg/kg	1	BEK0151	11/05/21	11/06/21	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: **11/05/21 10:34**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: 1,2-Dichloroethane-d4		117 %	23-173		"	"	"	"	
Surrogate: Toluene-d8		123 %	20-170		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		105 %	21-167		"	"	"	"	

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **11/05/21 10:34**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
C10-C28 (DRO)	ND	50	mg/kg	1	BEK0150	11/05/21	11/06/21	EPA 8015M	
C28-C36 (ORO)	ND	50	"	"	"	"	"	"	

Date Sampled: **11/05/21 10:34**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: o-Terphenyl		121 %	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: L-H#1, Edwards 16U

Project Number: [none]
Project Manager: Mark Longhurst

Reported:
11/12/21 14:06

SS06@29'
2111109-03 (Soil)

Summit Scientific

PAH by EPA Method 8270D SIM

Date Sampled: **11/05/21 10:34**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Fluorene	ND	0.00500	mg/kg	1	BEK0157	11/08/21	11/09/21	EPA 8270D SIM	
1-Methylnaphthalene	ND	0.00500	"	"	"	"	"	"	
2-Methylnaphthalene	ND	0.00500	"	"	"	"	"	"	

Date Sampled: **11/05/21 10:34**

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

Summit Scientific

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



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

Project: L-H#1, Edwards 16U
Project Number: [none]
Project Manager: Mark Longhurst

Reported:
11/12/21 14:06

SS07@8'
2111109-04 (Soil)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **11/05/21 10:41**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Benzene	ND	0.0020	mg/kg	1	BEK0151	11/05/21	11/06/21	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: **11/05/21 10:41**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: 1,2-Dichloroethane-d4		121 %	23-173		"	"	"	"	
Surrogate: Toluene-d8		124 %	20-170		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		102 %	21-167		"	"	"	"	

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **11/05/21 10:41**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
C10-C28 (DRO)	ND	50	mg/kg	1	BEK0150	11/05/21	11/06/21	EPA 8015M	
C28-C36 (ORO)	ND	50	"	"	"	"	"	"	

Date Sampled: **11/05/21 10:41**

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

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: L-H#1, Edwards 16U
Project Number: [none]
Project Manager: Mark Longhurst

Reported:
11/12/21 14:06

SS07@8'
2111109-04 (Soil)

Summit Scientific

PAH by EPA Method 8270D SIM

Date Sampled: **11/05/21 10:41**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Fluorene	ND	0.00500	mg/kg	1	BEK0157	11/08/21	11/09/21	EPA 8270D SIM	
1-Methylnaphthalene	ND	0.00500	"	"	"	"	"	"	
2-Methylnaphthalene	ND	0.00500	"	"	"	"	"	"	

Date Sampled: **11/05/21 10:41**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 2-Methylnaphthalene-d10		60.8 %	40-150		"	"	"	"	

Summit Scientific

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



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

Project: L-H#1, Edwards 16U
Project Number: [none]
Project Manager: Mark Longhurst

Reported:
11/12/21 14:06

SS08@18'
2111109-05 (Soil)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **11/05/21 10:42**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Benzene	ND	0.0020	mg/kg	1	BEK0151	11/05/21	11/06/21	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: **11/05/21 10:42**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: 1,2-Dichloroethane-d4		118 %	23-173		"	"	"	"	
Surrogate: Toluene-d8		127 %	20-170		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		105 %	21-167		"	"	"	"	

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **11/05/21 10:42**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
C10-C28 (DRO)	51	50	mg/kg	1	BEK0150	11/05/21	11/06/21	EPA 8015M	
C28-C36 (ORO)	ND	50	"	"	"	"	"	"	

Date Sampled: **11/05/21 10:42**

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

PAH by EPA Method 8270D SIM

Summit Scientific

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



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

Project: L-H#1, Edwards 16U
Project Number: [none]
Project Manager: Mark Longhurst

Reported:
11/12/21 14:06

SS08@18'
2111109-05 (Soil)

Summit Scientific

PAH by EPA Method 8270D SIM

Date Sampled: **11/05/21 10:42**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Fluorene	ND	0.00500	mg/kg	1	BEK0157	11/08/21	11/09/21	EPA 8270D SIM	
1-Methylnaphthalene	ND	0.00500	"	"	"	"	"	"	
2-Methylnaphthalene	ND	0.00500	"	"	"	"	"	"	

Date Sampled: **11/05/21 10:42**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: 2-Methylnaphthalene-d10		54.2 %	40-150		"	"	"	"	

Summit Scientific

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



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

Project: L-H#1, Edwards 16U
Project Number: [none]
Project Manager: Mark Longhurst

Reported:
11/12/21 14:06

SS09@28'
2111109-06 (Soil)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **11/05/21 10:43**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Benzene	ND	0.0020	mg/kg	1	BEK0151	11/05/21	11/06/21	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: **11/05/21 10:43**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: 1,2-Dichloroethane-d4		121 %	23-173		"	"	"	"	
Surrogate: Toluene-d8		122 %	20-170		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		103 %	21-167		"	"	"	"	

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **11/05/21 10:43**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
C10-C28 (DRO)	ND	50	mg/kg	1	BEK0150	11/05/21	11/06/21	EPA 8015M	
C28-C36 (ORO)	ND	50	"	"	"	"	"	"	

Date Sampled: **11/05/21 10:43**

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

PAH by EPA Method 8270D SIM

Summit Scientific

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



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

Project: L-H#1, Edwards 16U
Project Number: [none]
Project Manager: Mark Longhurst

Reported:
11/12/21 14:06

SS09@28'
2111109-06 (Soil)

Summit Scientific

PAH by EPA Method 8270D SIM

Date Sampled: **11/05/21 10:43**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Fluorene	ND	0.00500	mg/kg	1	BEK0157	11/08/21	11/09/21	EPA 8270D SIM	
1-Methylnaphthalene	ND	0.00500	"	"	"	"	"	"	
2-Methylnaphthalene	ND	0.00500	"	"	"	"	"	"	

Date Sampled: **11/05/21 10:43**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: 2-Methylnaphthalene-d10		59.1 %	40-150		"	"	"	"	

Summit Scientific

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



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

Project: L-H#1, Edwards 16U

Project Number: [none]
Project Manager: Mark Longhurst

Reported:
11/12/21 14:06

SS10@8'
2111109-07 (Soil)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

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

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Benzene	ND	0.0020	mg/kg	1	BEK0151	11/05/21	11/06/21	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: **11/05/21 11:10**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: 1,2-Dichloroethane-d4		122 %	23-173		"	"	"	"	
Surrogate: Toluene-d8		122 %	20-170		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		103 %	21-167		"	"	"	"	

Extractable Petroleum Hydrocarbons by 8015

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

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
C10-C28 (DRO)	ND	50	mg/kg	1	BEK0150	11/05/21	11/06/21	EPA 8015M	
C28-C36 (ORO)	ND	50	"	"	"	"	"	"	

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

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
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: L-H#1, Edwards 16U
Project Number: [none]
Project Manager: Mark Longhurst

Reported:
11/12/21 14:06

SS10@8'
2111109-07 (Soil)

Summit Scientific

PAH by EPA Method 8270D SIM

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

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Fluorene	ND	0.00500	mg/kg	1	BEK0157	11/08/21	11/09/21	EPA 8270D SIM	
1-Methylnaphthalene	ND	0.00500	"	"	"	"	"	"	
2-Methylnaphthalene	ND	0.00500	"	"	"	"	"	"	

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

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: 2-Methylnaphthalene-d10		50.8 %	40-150		"	"	"	"	

Summit Scientific

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

Project: L-H#1, Edwards 16U

Project Number: [none]
Project Manager: Mark Longhurst

Reported:
11/12/21 14:06

SS11@18'
2111109-08 (Soil)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

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

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Benzene	ND	0.0020	mg/kg	1	BEK0151	11/05/21	11/06/21	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: **11/05/21 11:11**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: 1,2-Dichloroethane-d4		121 %	23-173		"	"	"	"	
Surrogate: Toluene-d8		124 %	20-170		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		101 %	21-167		"	"	"	"	

Extractable Petroleum Hydrocarbons by 8015

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

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
C10-C28 (DRO)	ND	50	mg/kg	1	BEK0150	11/05/21	11/06/21	EPA 8015M	
C28-C36 (ORO)	ND	50	"	"	"	"	"	"	

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

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
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: L-H#1, Edwards 16U
Project Number: [none]
Project Manager: Mark Longhurst

Reported:
11/12/21 14:06

SS11@18'
2111109-08 (Soil)

Summit Scientific

PAH by EPA Method 8270D SIM

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

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Fluorene	ND	0.00500	mg/kg	1	BEK0157	11/08/21	11/09/21	EPA 8270D SIM	
1-Methylnaphthalene	ND	0.00500	"	"	"	"	"	"	
2-Methylnaphthalene	ND	0.00500	"	"	"	"	"	"	

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

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Summit Scientific

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

Project: L-H#1, Edwards 16U
Project Number: [none]
Project Manager: Mark Longhurst

Reported:
11/12/21 14:06

SS12@28'
2111109-09 (Soil)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **11/05/21 11:12**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Benzene	ND	0.0020	mg/kg	1	BEK0151	11/05/21	11/06/21	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: **11/05/21 11:12**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: 1,2-Dichloroethane-d4		113 %	23-173		"	"	"	"	
Surrogate: Toluene-d8		121 %	20-170		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		98.8 %	21-167		"	"	"	"	

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **11/05/21 11:12**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
C10-C28 (DRO)	ND	50	mg/kg	1	BEK0150	11/05/21	11/06/21	EPA 8015M	
C28-C36 (ORO)	ND	50	"	"	"	"	"	"	

Date Sampled: **11/05/21 11:12**

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

PAH by EPA Method 8270D SIM

Summit Scientific

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



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

Project: L-H#1, Edwards 16U
Project Number: [none]
Project Manager: Mark Longhurst

Reported:
11/12/21 14:06

SS12@28'
2111109-09 (Soil)

Summit Scientific

PAH by EPA Method 8270D SIM

Date Sampled: **11/05/21 11:12**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Fluorene	ND	0.00500	mg/kg	1	BEK0157	11/08/21	11/09/21	EPA 8270D SIM	
1-Methylnaphthalene	ND	0.00500	"	"	"	"	"	"	
2-Methylnaphthalene	ND	0.00500	"	"	"	"	"	"	

Date Sampled: **11/05/21 11:12**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: 2-Methylnaphthalene-d10		54.4 %	40-150		"	"	"	"	

Summit Scientific

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



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

Project: L-H#1, Edwards 16U
Project Number: [none]
Project Manager: Mark Longhurst

Reported:
11/12/21 14:06

SS13@8'
2111109-10 (Soil)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **11/05/21 11:20**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Benzene	ND	0.0020	mg/kg	1	BEK0151	11/05/21	11/06/21	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: **11/05/21 11:20**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: 1,2-Dichloroethane-d4		116 %	23-173		"	"	"	"	
Surrogate: Toluene-d8		121 %	20-170		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		103 %	21-167		"	"	"	"	

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **11/05/21 11:20**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
C10-C28 (DRO)	ND	50	mg/kg	1	BEK0150	11/05/21	11/06/21	EPA 8015M	
C28-C36 (ORO)	ND	50	"	"	"	"	"	"	

Date Sampled: **11/05/21 11:20**

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

PAH by EPA Method 8270D SIM

Summit Scientific

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



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

Project: L-H#1, Edwards 16U
Project Number: [none]
Project Manager: Mark Longhurst

Reported:
11/12/21 14:06

SS13@8'
2111109-10 (Soil)

Summit Scientific

PAH by EPA Method 8270D SIM

Date Sampled: **11/05/21 11:20**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Fluorene	ND	0.00500	mg/kg	1	BEK0157	11/08/21	11/09/21	EPA 8270D SIM	
1-Methylnaphthalene	ND	0.00500	"	"	"	"	"	"	
2-Methylnaphthalene	ND	0.00500	"	"	"	"	"	"	

Date Sampled: **11/05/21 11:20**

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

Summit Scientific

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



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

Project: L-H#1, Edwards 16U
Project Number: [none]
Project Manager: Mark Longhurst

Reported:
11/12/21 14:06

SS14@18'
2111109-11 (Soil)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

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

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Benzene	ND	0.0020	mg/kg	1	BEK0151	11/05/21	11/07/21	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: **11/05/21 11:21**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: 1,2-Dichloroethane-d4		118 %	23-173		"	"	"	"	
Surrogate: Toluene-d8		124 %	20-170		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		100 %	21-167		"	"	"	"	

Extractable Petroleum Hydrocarbons by 8015

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

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
C10-C28 (DRO)	ND	50	mg/kg	1	BEK0150	11/05/21	11/06/21	EPA 8015M	
C28-C36 (ORO)	ND	50	"	"	"	"	"	"	

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

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

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: L-H#1, Edwards 16U
Project Number: [none]
Project Manager: Mark Longhurst

Reported:
11/12/21 14:06

SS14@18'
2111109-11 (Soil)

Summit Scientific

PAH by EPA Method 8270D SIM

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

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Fluorene	ND	0.00500	mg/kg	1	BEK0157	11/08/21	11/09/21	EPA 8270D SIM	
1-Methylnaphthalene	ND	0.00500	"	"	"	"	"	"	
2-Methylnaphthalene	ND	0.00500	"	"	"	"	"	"	

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

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 2-Methylnaphthalene-d10		53.9 %	40-150		"	"	"	"	

Summit Scientific

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

Project: L-H#1, Edwards 16U
Project Number: [none]
Project Manager: Mark Longhurst

Reported:
11/12/21 14:06

SS15@28'
2111109-12 (Soil)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **11/05/21 11:22**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Benzene	ND	0.0020	mg/kg	1	BEK0151	11/05/21	11/07/21	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: **11/05/21 11:22**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: 1,2-Dichloroethane-d4		114 %	23-173		"	"	"	"	
Surrogate: Toluene-d8		120 %	20-170		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		100 %	21-167		"	"	"	"	

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **11/05/21 11:22**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
C10-C28 (DRO)	ND	50	mg/kg	1	BEK0150	11/05/21	11/06/21	EPA 8015M	
C28-C36 (ORO)	ND	50	"	"	"	"	"	"	

Date Sampled: **11/05/21 11:22**

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

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

Project: L-H#1, Edwards 16U
Project Number: [none]
Project Manager: Mark Longhurst

Reported:
11/12/21 14:06

SS15@28'
2111109-12 (Soil)

Summit Scientific

PAH by EPA Method 8270D SIM

Date Sampled: **11/05/21 11:22**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Fluorene	ND	0.00500	mg/kg	1	BEK0157	11/08/21	11/09/21	EPA 8270D SIM	
1-Methylnaphthalene	ND	0.00500	"	"	"	"	"	"	
2-Methylnaphthalene	ND	0.00500	"	"	"	"	"	"	

Date Sampled: **11/05/21 11:22**

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

Summit Scientific

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

Project: L-H#1, Edwards 16U
Project Number: [none]
Project Manager: Mark Longhurst

Reported:
11/12/21 14:06

SS16@8'
2111109-13 (Soil)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **11/05/21 12:57**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Benzene	ND	0.0020	mg/kg	1	BEK0151	11/05/21	11/07/21	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: **11/05/21 12:57**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: 1,2-Dichloroethane-d4		117 %	23-173		"	"	"	"	
Surrogate: Toluene-d8		124 %	20-170		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		105 %	21-167		"	"	"	"	

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **11/05/21 12:57**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
C10-C28 (DRO)	ND	50	mg/kg	1	BEK0150	11/05/21	11/06/21	EPA 8015M	
C28-C36 (ORO)	ND	50	"	"	"	"	"	"	

Date Sampled: **11/05/21 12:57**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: o-Terphenyl		120 %	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: L-H#1, Edwards 16U
Project Number: [none]
Project Manager: Mark Longhurst

Reported:
11/12/21 14:06

SS16@8'
2111109-13 (Soil)

Summit Scientific

PAH by EPA Method 8270D SIM

Date Sampled: **11/05/21 12:57**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Fluorene	ND	0.00500	mg/kg	1	BEK0157	11/08/21	11/09/21	EPA 8270D SIM	
1-Methylnaphthalene	ND	0.00500	"	"	"	"	"	"	
2-Methylnaphthalene	ND	0.00500	"	"	"	"	"	"	

Date Sampled: **11/05/21 12:57**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: 2-Methylnaphthalene-d10		50.6 %	40-150		"	"	"	"	

Summit Scientific

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



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

Project: L-H#1, Edwards 16U
Project Number: [none]
Project Manager: Mark Longhurst

Reported:
11/12/21 14:06

SS17@18'
2111109-14 (Soil)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **11/05/21 12:58**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Benzene	ND	0.0020	mg/kg	1	BEK0151	11/05/21	11/07/21	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: **11/05/21 12:58**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: 1,2-Dichloroethane-d4		117 %	23-173		"	"	"	"	
Surrogate: Toluene-d8		122 %	20-170		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		98.0 %	21-167		"	"	"	"	

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **11/05/21 12:58**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
C10-C28 (DRO)	ND	50	mg/kg	1	BEK0150	11/05/21	11/06/21	EPA 8015M	
C28-C36 (ORO)	ND	50	"	"	"	"	"	"	

Date Sampled: **11/05/21 12:58**

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: L-H#1, Edwards 16U
Project Number: [none]
Project Manager: Mark Longhurst

Reported:
11/12/21 14:06

SS17@18'
2111109-14 (Soil)

Summit Scientific

PAH by EPA Method 8270D SIM

Date Sampled: **11/05/21 12:58**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Fluorene	ND	0.00500	mg/kg	1	BEK0157	11/08/21	11/09/21	EPA 8270D SIM	
1-Methylnaphthalene	ND	0.00500	"	"	"	"	"	"	
2-Methylnaphthalene	ND	0.00500	"	"	"	"	"	"	

Date Sampled: **11/05/21 12:58**

1. Sample Data									
Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 2-Methylnaphthalene-d10		53.4 %	40-150		"	"	"	"	

Summit Scientific

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

Project: L-H#1, Edwards 16U
Project Number: [none]
Project Manager: Mark Longhurst

Reported:
11/12/21 14:06

SS18@28'
2111109-15 (Soil)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **11/05/21 12:59**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Benzene	ND	0.0020	mg/kg	1	BEK0151	11/05/21	11/07/21	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: **11/05/21 12:59**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: 1,2-Dichloroethane-d4		111 %	23-173		"	"	"	"	
Surrogate: Toluene-d8		122 %	20-170		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		97.8 %	21-167		"	"	"	"	

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **11/05/21 12:59**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
C10-C28 (DRO)	ND	50	mg/kg	1	BEK0150	11/05/21	11/06/21	EPA 8015M	
C28-C36 (ORO)	ND	50	"	"	"	"	"	"	

Date Sampled: **11/05/21 12:59**

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

PAH by EPA Method 8270D SIM

Summit Scientific

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



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

Project: L-H#1, Edwards 16U
Project Number: [none]
Project Manager: Mark Longhurst

Reported:
11/12/21 14:06

SS18@28'
2111109-15 (Soil)

Summit Scientific

PAH by EPA Method 8270D SIM

Date Sampled: **11/05/21 12:59**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Fluorene	ND	0.00500	mg/kg	1	BEK0157	11/08/21	11/09/21	EPA 8270D SIM	
1-Methylnaphthalene	ND	0.00500	"	"	"	"	"	"	
2-Methylnaphthalene	ND	0.00500	"	"	"	"	"	"	

Date Sampled: **11/05/21 12:59**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: 2-Methylnaphthalene-d10		52.2 %	40-150		"	"	"	"	

Summit Scientific

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

Project: L-H#1, Edwards 16U

Project Number: [none]
Project Manager: Mark Longhurst

Reported:
11/12/21 14:06

Volatile Organic Compounds by EPA Method 8260B - Quality Control

Summit Scientific

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

Batch BEK0151 - EPA 5030 Soil MS

Blank (BEK0151-BLK1)

Prepared: 11/05/21 Analyzed: 11/06/21

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	0.0496		"	0.0400		124	23-173			
Surrogate: Toluene-d8	0.0513		"	0.0400		128	20-170			
Surrogate: 4-Bromofluorobenzene	0.0430		"	0.0400		108	21-167			

LCS (BEK0151-BS1)

Prepared: 11/05/21 Analyzed: 11/06/21

Benzene	0.0678	0.0020	mg/kg	0.0750		90.4	70-130			
Toluene	0.0682	0.0050	"	0.0750		91.0	70-130			
Ethylbenzene	0.0705	0.0050	"	0.0750		94.0	70-130			
m,p-Xylene	0.146	0.010	"	0.150		97.6	70-130			
o-Xylene	0.0773	0.0050	"	0.0750		103	70-130			
1,2,4-Trimethylbenzene	0.0720	0.0050	"	0.0750		96.0	70-130			
1,3,5-Trimethylbenzene	0.0689	0.0050	"	0.0750		91.9	70-130			
Naphthalene	0.0733	0.0038	"	0.0750		97.7	70-130			
Surrogate: 1,2-Dichloroethane-d4	0.0425		"	0.0400		106	23-173			
Surrogate: Toluene-d8	0.0464		"	0.0400		116	20-170			
Surrogate: 4-Bromofluorobenzene	0.0430		"	0.0400		108	21-167			

Matrix Spike (BEK0151-MS1)

Source: 2111107-01

Prepared: 11/05/21 Analyzed: 11/06/21

Benzene	0.0662	0.0020	mg/kg	0.0750	ND	88.2	70-130			
Toluene	0.0674	0.0050	"	0.0750	ND	89.9	70-130			
Ethylbenzene	0.0709	0.0050	"	0.0750	ND	94.5	70-130			
m,p-Xylene	0.146	0.010	"	0.150	ND	97.0	70-130			
o-Xylene	0.0765	0.0050	"	0.0750	ND	102	70-130			
1,2,4-Trimethylbenzene	0.0714	0.0050	"	0.0750	ND	95.2	70-130			
1,3,5-Trimethylbenzene	0.0677	0.0050	"	0.0750	ND	90.3	70-130			
Naphthalene	0.0943	0.0038	"	0.0750	ND	126	70-130			
Surrogate: 1,2-Dichloroethane-d4	0.0442		"	0.0400		110	23-173			
Surrogate: Toluene-d8	0.0464		"	0.0400		116	20-170			
Surrogate: 4-Bromofluorobenzene	0.0434		"	0.0400		109	21-167			

Summit Scientific

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



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

Project: L-H#1, Edwards 16U
Project Number: [none]
Project Manager: Mark Longhurst

Reported:
11/12/21 14:06

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

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

Batch BEK0151 - EPA 5030 Soil MS

Matrix Spike Dup (BEK0151-MSD1)	Source: 2111107-01			Prepared: 11/05/21 Analyzed: 11/06/21						
Benzene	0.0677	0.0020	mg/kg	0.0750	ND	90.3	70-130	2.33	30	
Toluene	0.0710	0.0050	"	0.0750	ND	94.7	70-130	5.16	30	
Ethylbenzene	0.0716	0.0050	"	0.0750	ND	95.4	70-130	0.969	30	
m,p-Xylene	0.148	0.010	"	0.150	ND	98.7	70-130	1.70	30	
o-Xylene	0.0772	0.0050	"	0.0750	ND	103	70-130	0.820	30	
1,2,4-Trimethylbenzene	0.0730	0.0050	"	0.0750	ND	97.4	70-130	2.33	30	
1,3,5-Trimethylbenzene	0.0688	0.0050	"	0.0750	ND	91.7	70-130	1.54	30	
Naphthalene	0.0860	0.0038	"	0.0750	ND	115	70-130	9.25	30	
Surrogate: 1,2-Dichloroethane-d4	0.0426		"	0.0400		106	23-173			
Surrogate: Toluene-d8	0.0487		"	0.0400		122	20-170			
Surrogate: 4-Bromofluorobenzene	0.0440		"	0.0400		110	21-167			

Summit Scientific

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



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

Project: L-H#1, Edwards 16U
Project Number: [none]
Project Manager: Mark Longhurst

Reported:
11/12/21 14:06

Extractable Petroleum Hydrocarbons by 8015 - Quality Control
Summit Scientific

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

Batch BEK0150 - EPA 3550A

Blank (BEK0150-BLK1)

Prepared & Analyzed: 11/05/21

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

LCS (BEK0150-BS1)

Prepared & Analyzed: 11/05/21

C10-C28 (DRO)	450	50	mg/kg	500	90.1	70-130
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Matrix Spike (BEK0150-MS1)

Source: 2111107-01

Prepared & Analyzed: 11/05/21

C10-C28 (DRO)	459	50	mg/kg	500	45.1	82.7	70-130
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Matrix Spike Dup (BEK0150-MSD1)

Source: 2111107-01

Prepared & Analyzed: 11/05/21

C10-C28 (DRO)	470	50	mg/kg	500	45.1	85.0	70-130	2.45	20
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Summit Scientific

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



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

Project: L-H#1, Edwards 16U

Project Number: [none]
Project Manager: Mark Longhurst

Reported:
11/12/21 14:06

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 BEK0157 - EPA 5030 Soil MS

Blank (BEK0157-BLK1)

Prepared: 11/08/21 Analyzed: 11/09/21

Fluorene	ND	0.00500	mg/kg							
1-Methylnaphthalene	ND	0.00500	"							
2-Methylnaphthalene	ND	0.00500	"							
Surrogate: 2-Methylnaphthalene-d10	0.0242		"	0.0333		72.5	40-150			
Surrogate: Fluoranthene-d10	0.0261		"	0.0333		78.4	40-150			

LCS (BEK0157-BS1)

Prepared: 11/08/21 Analyzed: 11/09/21

Fluorene	0.0378	0.00500	mg/kg	0.0333		113	30-120			
1-Methylnaphthalene	0.0294	0.00500	"	0.0333		88.3	35-142			
2-Methylnaphthalene	0.0276	0.00500	"	0.0333		82.9	35-142			
Surrogate: 2-Methylnaphthalene-d10	0.0266		"	0.0333		79.8	40-150			
Surrogate: Fluoranthene-d10	0.0314		"	0.0333		94.3	40-150			

Matrix Spike (BEK0157-MS1)

Source: 2111107-01

Prepared: 11/08/21 Analyzed: 11/09/21

Fluorene	0.0278	0.00500	mg/kg	0.0333	ND	83.4	30-120			
1-Methylnaphthalene	0.0221	0.00500	"	0.0333	ND	66.2	15-130			
2-Methylnaphthalene	0.0205	0.00500	"	0.0333	ND	61.6	15-130			
Surrogate: 2-Methylnaphthalene-d10	0.0198		"	0.0333		59.5	40-150			
Surrogate: Fluoranthene-d10	0.0240		"	0.0333		72.1	40-150			

Matrix Spike Dup (BEK0157-MSD1)

Source: 2111107-01

Prepared: 11/08/21 Analyzed: 11/09/21

Fluorene	0.0313	0.00500	mg/kg	0.0333	ND	94.0	30-120	11.9	30	
1-Methylnaphthalene	0.0257	0.00500	"	0.0333	ND	77.2	15-130	15.3	50	
2-Methylnaphthalene	0.0243	0.00500	"	0.0333	ND	72.8	15-130	16.8	50	
Surrogate: 2-Methylnaphthalene-d10	0.0237		"	0.0333		71.2	40-150			
Surrogate: Fluoranthene-d10	0.0254		"	0.0333		76.3	40-150			

Summit Scientific

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



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

Project: L-H#1, Edwards 16U

Project Number: [none]
Project Manager: Mark Longhurst

Reported:
11/12/21 14:06

Notes and Definitions

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

Summit Scientific

4653 Table Mountain Drive, Golden, Colorado 80403

303.277.9310

November 15, 2021

Mark Longhurst

PDC Energy

1775 Sherman St. STE. 3000

Denver, CO 80203

RE: LH#1, Edwards 16U Tank Battery

Work Order #2111145

Enclosed are the results of analyses for samples received by Summit Scientific on 11/08/21 17:00. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

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

Paul Shrewsbury

President



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

Project: LH#1, Edwards 16U Tank Battery
Project Number: [none]
Project Manager: Mark Longhurst

Reported:
11/15/21 10:50

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
SS19@29'	2111145-01	Soil	11/08/21 08:35	11/08/21 17:00
SS20@8'	2111145-02	Soil	11/08/21 08:36	11/08/21 17:00
SS21@18'	2111145-03	Soil	11/08/21 08:37	11/08/21 17:00
SS22@28'	2111145-04	Soil	11/08/21 08:38	11/08/21 17:00
SS23@8'	2111145-05	Soil	11/08/21 08:50	11/08/21 17:00
SS24@18'	2111145-06	Soil	11/08/21 08:51	11/08/21 17:00
SS25@28'	2111145-07	Soil	11/08/21 08:52	11/08/21 17:00
SS26@8'	2111145-08	Soil	11/08/21 10:45	11/08/21 17:00
SS27@18'	2111145-09	Soil	11/08/21 10:46	11/08/21 17:00
SS28@28'	2111145-10	Soil	11/08/21 10:47	11/08/21 17:00
SS29@29'	2111145-11	Soil	11/08/21 14:43	11/08/21 17:00
SS30@8'	2111145-12	Soil	11/08/21 15:12	11/08/21 17:00
SS31@18'	2111145-13	Soil	11/08/21 15:13	11/08/21 17:00
SS32@28'	2111145-14	Soil	11/08/21 15:14	11/08/21 17:00

Summit Scientific

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

Summit Scientific

2111145.1

S₂

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: 1-H #1, Edwards 16V tank Battery

Sampler Name: J. Marcus

Project Number: 9/4

ID	Sample Description	Date Sampled	Time Sampled	# of containers	Preservative				Matrix				Analysis Requested								Special Instructions	
					HCl	HNO ₃	None	Other	Water	Soil	Air-Canister #	Other	BTEXN - 8260B	TPH - (C6 - C36)	1,2,4 & 1,3,5-TMB	Boron - HWS	pH, EC, SAR	Fluorene	1-M, 2-M			
1	SS19 @ 29'	11/8/21	0835	2			X			X				X	X	X			X	X		pH, EC, SAR by saturated paste M-methyl naphthalene
2	SS20 @ 8'		0836	2			X			X				X	X	X			X	X		
3	SS21 @ 18'		0837	2			X			X				X	X	X			X	X		
4	SS22 @ 28'		0838	2			X			X				X	X	X			X	X		
5	SS23 @ 8'		0850	2			X			X				X	X	X			X	X		
6	SS24 @ 18'		0851	2			X			X				X	X	X			X	X		
7	SS25 @ 28'		0852	2			X			X				X	X	X			X	X		
8	SS26 @ 8'		1045	2			X			X				X	X	X			X	X		
9	SS27 @ 18'		1046	2			X			X				X	X	X			X	X		
10	SS28 @ 28'		1047	2			X			X				X	X	X			X	X		
Relinquished by:		Date/Time:		Received by:		Date/Time:		Turn Around Time				(Check)				Notes:						
11/8/21 1700		Tasman's Lock Box		11/8/21 1700		Same Day <input checked="" type="checkbox"/>				72 hours <input type="checkbox"/>												
Relinquished by:		Date/Time:		Received by:		Date/Time:		24 hours <input type="checkbox"/>				Standard <input type="checkbox"/>										
Tasman's Lock Box				11-8-21		1700		48 hours <input type="checkbox"/>				Sample Integrity:										
Relinquished by:		Date/Time:		Received by:		Date/Time:		Temperature Upon Receipt:				3.1										
								Samples Intact: <input checked="" type="radio"/> Yes <input type="radio"/> No														

Summit Scientific

S₂

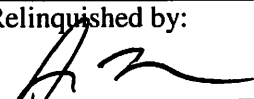

211145.2

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: L-H #1, Edwards 16 V tank Battery
Sampler Name: J. Marcus Project Number: A/G

ID	Sample Description	Date Sampled	Time Sampled	# of containers	Preservative				Matrix				Analysis Requested								Special Instructions
					HCl	HNO ₃	None	Other	Water	Soil	Air-Canister #	Other	BTEXN - 8260B	TPH - (C6 - C36)	1,2,4 & 1,3,5-TMB	Boron - HWS	pH, EC, SAR	Fluorene	1-M, 2-M		
1	5529@29'	11/8/21	1443	2			X			X			X	X	X			X	X		pH, EC, SAR by saturated paste M = methyl naphthalene
2	5530@8'		1512	2			X			X			X	X	X			X	X		
3	5531@18'		1513	2			X			X			X	X	X			X	X		
4	5532@28'		1514	2			X			X			X	X	X			X	X		
5																					
6																					
7																					
8																					
9																					
10																					

Relinquished by: 	Date/Time: 11/8/21 1700	Received by: Tasman's Lock Box	Date/Time: 11/8/21 1700	Turn Around Time (Check) Same Day <input checked="" type="checkbox"/> 72 hours ___ 24 hours ___ Standard ___ 48 hours ___ Sample Integrity: Temperature Upon Receipt: 3.1 Samples Intact: <input checked="" type="checkbox"/> Yes No	Notes:
Relinquished by: Tasman's Lock Box	Date/Time:	Received by: 	Date/Time: 11-8-21 1700		
Relinquished by:	Date/Time:	Received by:	Date/Time:		

S₂

2/2

S2 Work Order#

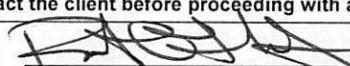
2111145

Sample Receipt Checklist

Client: POC/Tasmanian Client Project ID: L-H #1, Edwards 16vShipped Via: ☐ H.D./P.U./FedEx/UPS/USPS/Other ☒ Airbill #: _____Matrix (check all that apply): ☐ Air ☒ Soil/Solid ☐ Water ☐ Other: _____
(Describe)Temp (°C) 3.1

Thermometer ID: G86A9201901378

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

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

 Custodian Printed Name or Initials

11.8.21
 Date/Time



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

Project: LH#1, Edwards 16U Tank Battery
Project Number: [none]
Project Manager: Mark Longhurst

Reported:
11/15/21 10:50

SS19@29'
2111145-01 (Soil)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **11/08/21 08:35**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Benzene	ND	0.0020	mg/kg	1	BEK0184	11/08/21	11/08/21	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: **11/08/21 08:35**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 1,2-Dichloroethane-d4		121 %	23-173		"	"	"	"	
Surrogate: Toluene-d8		119 %	20-170		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		100 %	21-167		"	"	"	"	

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **11/08/21 08:35**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
C10-C28 (DRO)	ND	50	mg/kg	1	BEK0185	"	11/09/21	EPA 8015M	
C28-C36 (ORO)	ND	50	"	"	"	"	"	"	

Date Sampled: **11/08/21 08:35**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: o-Terphenyl		116 %	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: LH#1, Edwards 16U Tank Battery
Project Number: [none]
Project Manager: Mark Longhurst

Reported:
11/15/21 10:50

SS19@29'
2111145-01 (Soil)

Summit Scientific

PAH by EPA Method 8270D SIM

Date Sampled: **11/08/21 08:35**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Fluorene	ND	0.00500	mg/kg	1	BEK0190	11/09/21	11/11/21	EPA 8270D SIM	
1-Methylnaphthalene	ND	0.00500	"	"	"	"	"	"	
2-Methylnaphthalene	ND	0.00500	"	"	"	"	"	"	

Date Sampled: **11/08/21 08:35**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 2-Methylnaphthalene-d10		62.5 %	40-150		"	"	"	"	
Surrogate: Fluoranthene-d10		62.9 %	40-150		"	"	"	"	

Summit Scientific

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

Project: LH#1, Edwards 16U Tank Battery
Project Number: [none]
Project Manager: Mark Longhurst

Reported:
11/15/21 10:50

SS20@8'
2111145-02 (Soil)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **11/08/21 08:36**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Benzene	ND	0.0020	mg/kg	1	BEK0184	11/08/21	11/08/21	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: **11/08/21 08:36**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: 1,2-Dichloroethane-d4		115 %	23-173		"	"	"	"	
Surrogate: Toluene-d8		115 %	20-170		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		97.5 %	21-167		"	"	"	"	

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **11/08/21 08:36**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
C10-C28 (DRO)	ND	50	mg/kg	1	BEK0185	"	11/09/21	EPA 8015M	
C28-C36 (ORO)	ND	50	"	"	"	"	"	"	

Date Sampled: **11/08/21 08:36**

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: LH#1, Edwards 16U Tank Battery
Project Number: [none]
Project Manager: Mark Longhurst

Reported:
11/15/21 10:50

SS20@8'
2111145-02 (Soil)

Summit Scientific

PAH by EPA Method 8270D SIM

Date Sampled: **11/08/21 08:36**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Fluorene	ND	0.00500	mg/kg	1	BEK0190	11/09/21	11/11/21	EPA 8270D SIM	
1-Methylnaphthalene	ND	0.00500	"	"	"	"	"	"	
2-Methylnaphthalene	ND	0.00500	"	"	"	"	"	"	

Date Sampled: **11/08/21 08:36**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 2-Methylnaphthalene-d10		49.4 %	40-150		"	"	"	"	
Surrogate: Fluoranthene-d10		52.3 %	40-150		"	"	"	"	

Summit Scientific

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

Project: LH#1, Edwards 16U Tank Battery
Project Number: [none]
Project Manager: Mark Longhurst

Reported:
11/15/21 10:50

SS21@18'
2111145-03 (Soil)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **11/08/21 08:37**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Benzene	ND	0.0020	mg/kg	1	BEK0184	11/08/21	11/08/21	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: **11/08/21 08:37**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: 1,2-Dichloroethane-d4		112 %	23-173		"	"	"	"	
Surrogate: Toluene-d8		117 %	20-170		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		100 %	21-167		"	"	"	"	

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **11/08/21 08:37**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
C10-C28 (DRO)	ND	50	mg/kg	1	BEK0185	"	11/09/21	EPA 8015M	
C28-C36 (ORO)	ND	50	"	"	"	"	"	"	

Date Sampled: **11/08/21 08:37**

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

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: LH#1, Edwards 16U Tank Battery
Project Number: [none]
Project Manager: Mark Longhurst

Reported:
11/15/21 10:50

SS21@18'
2111145-03 (Soil)

Summit Scientific

PAH by EPA Method 8270D SIM

Date Sampled: **11/08/21 08:37**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Fluorene	ND	0.00500	mg/kg	1	BEK0190	11/09/21	11/11/21	EPA 8270D SIM	
1-Methylnaphthalene	ND	0.00500	"	"	"	"	"	"	
2-Methylnaphthalene	ND	0.00500	"	"	"	"	"	"	

Date Sampled: **11/08/21 08:37**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 2-Methylnaphthalene-d10		48.3 %	40-150		"	"	"	"	
Surrogate: Fluoranthene-d10		48.0 %	40-150		"	"	"	"	

Summit Scientific

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



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

Project: LH#1, Edwards 16U Tank Battery
Project Number: [none]
Project Manager: Mark Longhurst

Reported:
11/15/21 10:50

SS22@28'
2111145-04 (Soil)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **11/08/21 08:38**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Benzene	ND	0.0020	mg/kg	1	BEK0184	11/08/21	11/08/21	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: **11/08/21 08:38**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: 1,2-Dichloroethane-d4		117 %	23-173		"	"	"	"	
Surrogate: Toluene-d8		118 %	20-170		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		101 %	21-167		"	"	"	"	

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **11/08/21 08:38**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
C10-C28 (DRO)	ND	50	mg/kg	1	BEK0185	"	11/09/21	EPA 8015M	
C28-C36 (ORO)	ND	50	"	"	"	"	"	"	

Date Sampled: **11/08/21 08:38**

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

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: LH#1, Edwards 16U Tank Battery
Project Number: [none]
Project Manager: Mark Longhurst

Reported:
11/15/21 10:50

SS22@28'
2111145-04 (Soil)

Summit Scientific

PAH by EPA Method 8270D SIM

Date Sampled: **11/08/21 08:38**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Fluorene	ND	0.00500	mg/kg	1	BEK0190	11/09/21	11/11/21	EPA 8270D SIM	
1-Methylnaphthalene	ND	0.00500	"	"	"	"	"	"	
2-Methylnaphthalene	ND	0.00500	"	"	"	"	"	"	

Date Sampled: **11/08/21 08:38**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 2-Methylnaphthalene-d10		52.4 %	40-150		"	"	"	"	
Surrogate: Fluoranthene-d10		52.2 %	40-150		"	"	"	"	

Summit Scientific

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

Project: LH#1, Edwards 16U Tank Battery
Project Number: [none]
Project Manager: Mark Longhurst

Reported:
11/15/21 10:50

SS23@8'
2111145-05 (Soil)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **11/08/21 08:50**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Benzene	ND	0.0020	mg/kg	1	BEK0184	11/08/21	11/08/21	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: **11/08/21 08:50**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: 1,2-Dichloroethane-d4		114 %	23-173		"	"	"	"	
Surrogate: Toluene-d8		118 %	20-170		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		98.5 %	21-167		"	"	"	"	

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **11/08/21 08:50**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
C10-C28 (DRO)	ND	50	mg/kg	1	BEK0185	"	11/09/21	EPA 8015M	
C28-C36 (ORO)	ND	50	"	"	"	"	"	"	

Date Sampled: **11/08/21 08:50**

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: LH#1, Edwards 16U Tank Battery
Project Number: [none]
Project Manager: Mark Longhurst

Reported:
11/15/21 10:50

SS23@8'
2111145-05 (Soil)

Summit Scientific

PAH by EPA Method 8270D SIM

Date Sampled: **11/08/21 08:50**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Fluorene	ND	0.00500	mg/kg	1	BEK0190	11/09/21	11/11/21	EPA 8270D SIM	
1-Methylnaphthalene	ND	0.00500	"	"	"	"	"	"	
2-Methylnaphthalene	ND	0.00500	"	"	"	"	"	"	

Date Sampled: **11/08/21 08:50**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 2-Methylnaphthalene-d10		65.5 %	40-150		"	"	"	"	
Surrogate: Fluoranthene-d10		63.0 %	40-150		"	"	"	"	

Summit Scientific

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

Project: LH#1, Edwards 16U Tank Battery
Project Number: [none]
Project Manager: Mark Longhurst

Reported:
11/15/21 10:50

SS24@18'
2111145-06 (Soil)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **11/08/21 08:51**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Benzene	ND	0.0020	mg/kg	1	BEK0184	11/08/21	11/08/21	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: **11/08/21 08:51**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: 1,2-Dichloroethane-d4		115 %	23-173		"	"	"	"	
Surrogate: Toluene-d8		116 %	20-170		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		99.2 %	21-167		"	"	"	"	

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **11/08/21 08:51**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
C10-C28 (DRO)	ND	50	mg/kg	1	BEK0185	"	11/09/21	EPA 8015M	
C28-C36 (ORO)	ND	50	"	"	"	"	"	"	

Date Sampled: **11/08/21 08:51**

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: LH#1, Edwards 16U Tank Battery
Project Number: [none]
Project Manager: Mark Longhurst

Reported:
11/15/21 10:50

SS24@18'
2111145-06 (Soil)

Summit Scientific

PAH by EPA Method 8270D SIM

Date Sampled: **11/08/21 08:51**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Fluorene	ND	0.00500	mg/kg	1	BEK0190	11/09/21	11/11/21	EPA 8270D SIM	
1-Methylnaphthalene	ND	0.00500	"	"	"	"	"	"	
2-Methylnaphthalene	ND	0.00500	"	"	"	"	"	"	

Date Sampled: **11/08/21 08:51**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 2-Methylnaphthalene-d10		52.5 %	40-150		"	"	"	"	
Surrogate: Fluoranthene-d10		56.4 %	40-150		"	"	"	"	

Summit Scientific

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

Project: LH#1, Edwards 16U Tank Battery
Project Number: [none]
Project Manager: Mark Longhurst

Reported:
11/15/21 10:50

SS25@28'
2111145-07 (Soil)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **11/08/21 08:52**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Benzene	ND	0.0020	mg/kg	1	BEK0184	11/08/21	11/08/21	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: **11/08/21 08:52**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: 1,2-Dichloroethane-d4		116 %	23-173		"	"	"	"	
Surrogate: Toluene-d8		121 %	20-170		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		97.6 %	21-167		"	"	"	"	

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **11/08/21 08:52**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
C10-C28 (DRO)	ND	50	mg/kg	1	BEK0185	"	11/09/21	EPA 8015M	
C28-C36 (ORO)	ND	50	"	"	"	"	"	"	

Date Sampled: **11/08/21 08:52**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: o-Terphenyl		128 %	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: LH#1, Edwards 16U Tank Battery
Project Number: [none]
Project Manager: Mark Longhurst

Reported:
11/15/21 10:50

SS25@28'
2111145-07 (Soil)

Summit Scientific

PAH by EPA Method 8270D SIM

Date Sampled: **11/08/21 08:52**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Fluorene	ND	0.00500	mg/kg	1	BEK0190	11/09/21	11/11/21	EPA 8270D SIM	
1-Methylnaphthalene	ND	0.00500	"	"	"	"	"	"	
2-Methylnaphthalene	ND	0.00500	"	"	"	"	"	"	

Date Sampled: **11/08/21 08:52**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 2-Methylnaphthalene-d10		56.5 %	40-150		"	"	"	"	
Surrogate: Fluoranthene-d10		55.6 %	40-150		"	"	"	"	

Summit Scientific

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

Project: LH#1, Edwards 16U Tank Battery
Project Number: [none]
Project Manager: Mark Longhurst

Reported:
11/15/21 10:50

SS26@8'
2111145-08 (Soil)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **11/08/21 10:45**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Benzene	ND	0.0020	mg/kg	1	BEK0184	11/08/21	11/09/21	EPA 8260B	
Toluene	ND	0.0050	"	"	"	"	"	"	
Ethylbenzene	ND	0.0050	"	"	"	"	"	"	
Xylenes (total)	ND	0.010	"	"	"	"	"	"	
1,2,4-Trimethylbenzene	ND	0.0050	"	"	"	"	"	"	
1,3,5-Trimethylbenzene	ND	0.0050	"	"	"	"	"	"	
Naphthalene	ND	0.0038	"	"	"	"	"	"	
Gasoline Range Hydrocarbons	ND	0.50	"	"	"	"	"	"	

Date Sampled: **11/08/21 10:45**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: 1,2-Dichloroethane-d4		125 %	23-173		"	"	"	"	
Surrogate: Toluene-d8		122 %	20-170		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		106 %	21-167		"	"	"	"	

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **11/08/21 10:45**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
C10-C28 (DRO)	ND	50	mg/kg	1	BEK0185	"	11/09/21	EPA 8015M	
C28-C36 (ORO)	ND	50	"	"	"	"	"	"	

Date Sampled: **11/08/21 10:45**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: o-Terphenyl		121 %	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: LH#1, Edwards 16U Tank Battery
Project Number: [none]
Project Manager: Mark Longhurst

Reported:
11/15/21 10:50

SS26@8'
2111145-08 (Soil)

Summit Scientific

PAH by EPA Method 8270D SIM

Date Sampled: **11/08/21 10:45**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Fluorene	ND	0.00500	mg/kg	1	BEK0190	11/09/21	11/11/21	EPA 8270D SIM	
1-Methylnaphthalene	ND	0.00500	"	"	"	"	"	"	
2-Methylnaphthalene	ND	0.00500	"	"	"	"	"	"	

Date Sampled: **11/08/21 10:45**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 2-Methylnaphthalene-d10		55.7 %	40-150		"	"	"	"	
Surrogate: Fluoranthene-d10		49.5 %	40-150		"	"	"	"	

Summit Scientific

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

Project: LH#1, Edwards 16U Tank Battery
Project Number: [none]
Project Manager: Mark Longhurst

Reported:
11/15/21 10:50

SS27@18'
2111145-09 (Soil)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **11/08/21 10:46**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Benzene	ND	0.0020	mg/kg	1	BEK0184	11/08/21	11/09/21	EPA 8260B	
Toluene	ND	0.0050	"	"	"	"	"	"	
Ethylbenzene	ND	0.0050	"	"	"	"	"	"	
Xylenes (total)	ND	0.010	"	"	"	"	"	"	
1,2,4-Trimethylbenzene	ND	0.0050	"	"	"	"	"	"	
1,3,5-Trimethylbenzene	ND	0.0050	"	"	"	"	"	"	
Naphthalene	ND	0.0038	"	"	"	"	"	"	
Gasoline Range Hydrocarbons	ND	0.50	"	"	"	"	"	"	

Date Sampled: **11/08/21 10:46**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: 1,2-Dichloroethane-d4		110 %	23-173		"	"	"	"	
Surrogate: Toluene-d8		120 %	20-170		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		98.6 %	21-167		"	"	"	"	

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **11/08/21 10:46**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
C10-C28 (DRO)	ND	50	mg/kg	1	BEK0185	"	11/09/21	EPA 8015M	
C28-C36 (ORO)	ND	50	"	"	"	"	"	"	

Date Sampled: **11/08/21 10:46**

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

PAH by EPA Method 8270D SIM

Summit Scientific

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



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

Project: LH#1, Edwards 16U Tank Battery
Project Number: [none]
Project Manager: Mark Longhurst

Reported:
11/15/21 10:50

SS27@18'
2111145-09 (Soil)

Summit Scientific

PAH by EPA Method 8270D SIM

Date Sampled: **11/08/21 10:46**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Fluorene	ND	0.00500	mg/kg	1	BEK0190	11/09/21	11/11/21	EPA 8270D SIM	
1-Methylnaphthalene	ND	0.00500	"	"	"	"	"	"	
2-Methylnaphthalene	ND	0.00500	"	"	"	"	"	"	

Date Sampled: **11/08/21 10:46**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 2-Methylnaphthalene-d10		56.4 %	40-150		"	"	"	"	
Surrogate: Fluoranthene-d10		59.1 %	40-150		"	"	"	"	

Summit Scientific

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



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

Project: LH#1, Edwards 16U Tank Battery
Project Number: [none]
Project Manager: Mark Longhurst

Reported:
11/15/21 10:50

SS28@28'
2111145-10 (Soil)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **11/08/21 10:47**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Benzene	ND	0.0020	mg/kg	1	BEK0184	11/08/21	11/09/21	EPA 8260B	
Toluene	ND	0.0050	"	"	"	"	"	"	
Ethylbenzene	ND	0.0050	"	"	"	"	"	"	
Xylenes (total)	ND	0.010	"	"	"	"	"	"	
1,2,4-Trimethylbenzene	ND	0.0050	"	"	"	"	"	"	
1,3,5-Trimethylbenzene	ND	0.0050	"	"	"	"	"	"	
Naphthalene	ND	0.0038	"	"	"	"	"	"	
Gasoline Range Hydrocarbons	ND	0.50	"	"	"	"	"	"	

Date Sampled: **11/08/21 10:47**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: 1,2-Dichloroethane-d4		115 %	23-173		"	"	"	"	
Surrogate: Toluene-d8		120 %	20-170		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		100 %	21-167		"	"	"	"	

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **11/08/21 10:47**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
C10-C28 (DRO)	ND	50	mg/kg	1	BEK0185	"	11/09/21	EPA 8015M	
C28-C36 (ORO)	ND	50	"	"	"	"	"	"	

Date Sampled: **11/08/21 10:47**

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

PAH by EPA Method 8270D SIM

Summit Scientific

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



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

Project: LH#1, Edwards 16U Tank Battery
Project Number: [none]
Project Manager: Mark Longhurst

Reported:
11/15/21 10:50

SS28@28'
2111145-10 (Soil)

Summit Scientific

PAH by EPA Method 8270D SIM

Date Sampled: **11/08/21 10:47**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Fluorene	ND	0.00500	mg/kg	1	BEK0190	11/09/21	11/11/21	EPA 8270D SIM	
1-Methylnaphthalene	ND	0.00500	"	"	"	"	"	"	
2-Methylnaphthalene	ND	0.00500	"	"	"	"	"	"	

Date Sampled: **11/08/21 10:47**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 2-Methylnaphthalene-d10		45.1 %	40-150		"	"	"	"	
Surrogate: Fluoranthene-d10		47.3 %	40-150		"	"	"	"	

Summit Scientific

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



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

Project: LH#1, Edwards 16U Tank Battery
Project Number: [none]
Project Manager: Mark Longhurst

Reported:
11/15/21 10:50

SS29@29'
2111145-11 (Soil)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **11/08/21 14:43**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Benzene	ND	0.0020	mg/kg	1	BEK0184	11/08/21	11/09/21	EPA 8260B	
Toluene	ND	0.0050	"	"	"	"	"	"	
Ethylbenzene	ND	0.0050	"	"	"	"	"	"	
Xylenes (total)	ND	0.010	"	"	"	"	"	"	
1,2,4-Trimethylbenzene	ND	0.0050	"	"	"	"	"	"	
1,3,5-Trimethylbenzene	ND	0.0050	"	"	"	"	"	"	
Naphthalene	ND	0.0038	"	"	"	"	"	"	
Gasoline Range Hydrocarbons	ND	0.50	"	"	"	"	"	"	

Date Sampled: **11/08/21 14:43**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: 1,2-Dichloroethane-d4		114 %	23-173		"	"	"	"	
Surrogate: Toluene-d8		122 %	20-170		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		98.2 %	21-167		"	"	"	"	

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **11/08/21 14:43**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
C10-C28 (DRO)	ND	50	mg/kg	1	BEK0185	"	11/09/21	EPA 8015M	
C28-C36 (ORO)	ND	50	"	"	"	"	"	"	

Date Sampled: **11/08/21 14:43**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: o-Terphenyl		120 %	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: LH#1, Edwards 16U Tank Battery
Project Number: [none]
Project Manager: Mark Longhurst

Reported:
11/15/21 10:50

SS29@29'
2111145-11 (Soil)

Summit Scientific

PAH by EPA Method 8270D SIM

Date Sampled: **11/08/21 14:43**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Fluorene	ND	0.00500	mg/kg	1	BEK0190	11/09/21	11/11/21	EPA 8270D SIM	
1-Methylnaphthalene	ND	0.00500	"	"	"	"	"	"	
2-Methylnaphthalene	ND	0.00500	"	"	"	"	"	"	

Date Sampled: **11/08/21 14:43**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 2-Methylnaphthalene-d10		49.5 %	40-150		"	"	"	"	
Surrogate: Fluoranthene-d10		50.9 %	40-150		"	"	"	"	

Summit Scientific

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

Project: LH#1, Edwards 16U Tank Battery
Project Number: [none]
Project Manager: Mark Longhurst

Reported:
11/15/21 10:50

SS30@8'
2111145-12 (Soil)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **11/08/21 15:12**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Benzene	ND	0.0020	mg/kg	1	BEK0184	11/08/21	11/09/21	EPA 8260B	
Toluene	ND	0.0050	"	"	"	"	"	"	
Ethylbenzene	ND	0.0050	"	"	"	"	"	"	
Xylenes (total)	ND	0.010	"	"	"	"	"	"	
1,2,4-Trimethylbenzene	ND	0.0050	"	"	"	"	"	"	
1,3,5-Trimethylbenzene	ND	0.0050	"	"	"	"	"	"	
Naphthalene	ND	0.0038	"	"	"	"	"	"	
Gasoline Range Hydrocarbons	ND	0.50	"	"	"	"	"	"	

Date Sampled: **11/08/21 15:12**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: 1,2-Dichloroethane-d4		120 %	23-173		"	"	"	"	
Surrogate: Toluene-d8		118 %	20-170		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		99.4 %	21-167		"	"	"	"	

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **11/08/21 15:12**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
C10-C28 (DRO)	ND	50	mg/kg	1	BEK0185	"	11/09/21	EPA 8015M	
C28-C36 (ORO)	ND	50	"	"	"	"	"	"	

Date Sampled: **11/08/21 15:12**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: o-Terphenyl		119 %	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: LH#1, Edwards 16U Tank Battery
Project Number: [none]
Project Manager: Mark Longhurst

Reported:
11/15/21 10:50

SS30@8'
2111145-12 (Soil)

Summit Scientific

PAH by EPA Method 8270D SIM

Date Sampled: **11/08/21 15:12**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Fluorene	ND	0.00500	mg/kg	1	BEK0190	11/09/21	11/11/21	EPA 8270D SIM	
1-Methylnaphthalene	ND	0.00500	"	"	"	"	"	"	
2-Methylnaphthalene	ND	0.00500	"	"	"	"	"	"	

Date Sampled: **11/08/21 15:12**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 2-Methylnaphthalene-d10		54.2 %	40-150		"	"	"	"	
Surrogate: Fluoranthene-d10		55.0 %	40-150		"	"	"	"	

Summit Scientific

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

Project: LH#1, Edwards 16U Tank Battery
Project Number: [none]
Project Manager: Mark Longhurst

Reported:
11/15/21 10:50

SS31@18'
2111145-13 (Soil)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **11/08/21 15:13**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Benzene	ND	0.0020	mg/kg	1	BEK0184	11/08/21	11/09/21	EPA 8260B	
Toluene	ND	0.0050	"	"	"	"	"	"	
Ethylbenzene	ND	0.0050	"	"	"	"	"	"	
Xylenes (total)	ND	0.010	"	"	"	"	"	"	
1,2,4-Trimethylbenzene	ND	0.0050	"	"	"	"	"	"	
1,3,5-Trimethylbenzene	ND	0.0050	"	"	"	"	"	"	
Naphthalene	ND	0.0038	"	"	"	"	"	"	
Gasoline Range Hydrocarbons	ND	0.50	"	"	"	"	"	"	

Date Sampled: **11/08/21 15:13**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: 1,2-Dichloroethane-d4		115 %	23-173		"	"	"	"	
Surrogate: Toluene-d8		116 %	20-170		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		102 %	21-167		"	"	"	"	

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **11/08/21 15:13**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
C10-C28 (DRO)	ND	50	mg/kg	1	BEK0185	"	11/09/21	EPA 8015M	
C28-C36 (ORO)	ND	50	"	"	"	"	"	"	

Date Sampled: **11/08/21 15:13**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: o-Terphenyl		120 %	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: LH#1, Edwards 16U Tank Battery
Project Number: [none]
Project Manager: Mark Longhurst

Reported:
11/15/21 10:50

SS31@18'
2111145-13 (Soil)

Summit Scientific

PAH by EPA Method 8270D SIM

Date Sampled: **11/08/21 15:13**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Fluorene	ND	0.00500	mg/kg	1	BEK0190	11/09/21	11/11/21	EPA 8270D SIM	
1-Methylnaphthalene	ND	0.00500	"	"	"	"	"	"	
2-Methylnaphthalene	ND	0.00500	"	"	"	"	"	"	

Date Sampled: **11/08/21 15:13**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 2-Methylnaphthalene-d10		59.2 %	40-150		"	"	"	"	
Surrogate: Fluoranthene-d10		58.2 %	40-150		"	"	"	"	

Summit Scientific

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

Project: LH#1, Edwards 16U Tank Battery
Project Number: [none]
Project Manager: Mark Longhurst

Reported:
11/15/21 10:50

SS32@28'
2111145-14 (Soil)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **11/08/21 15:14**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Benzene	ND	0.0020	mg/kg	1	BEK0184	11/08/21	11/09/21	EPA 8260B	
Toluene	ND	0.0050	"	"	"	"	"	"	
Ethylbenzene	ND	0.0050	"	"	"	"	"	"	
Xylenes (total)	ND	0.010	"	"	"	"	"	"	
1,2,4-Trimethylbenzene	ND	0.0050	"	"	"	"	"	"	
1,3,5-Trimethylbenzene	ND	0.0050	"	"	"	"	"	"	
Naphthalene	ND	0.0038	"	"	"	"	"	"	
Gasoline Range Hydrocarbons	ND	0.50	"	"	"	"	"	"	

Date Sampled: **11/08/21 15:14**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: 1,2-Dichloroethane-d4		112 %	23-173		"	"	"	"	
Surrogate: Toluene-d8		118 %	20-170		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		100 %	21-167		"	"	"	"	

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **11/08/21 15:14**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
C10-C28 (DRO)	ND	50	mg/kg	1	BEK0185	"	11/09/21	EPA 8015M	
C28-C36 (ORO)	ND	50	"	"	"	"	"	"	

Date Sampled: **11/08/21 15:14**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: o-Terphenyl		128 %	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: LH#1, Edwards 16U Tank Battery
Project Number: [none]
Project Manager: Mark Longhurst

Reported:
11/15/21 10:50

SS32@28'
2111145-14 (Soil)

Summit Scientific

PAH by EPA Method 8270D SIM

Date Sampled: **11/08/21 15:14**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Fluorene	ND	0.00500	mg/kg	1	BEK0190	11/09/21	11/11/21	EPA 8270D SIM	
1-Methylnaphthalene	ND	0.00500	"	"	"	"	"	"	
2-Methylnaphthalene	ND	0.00500	"	"	"	"	"	"	

Date Sampled: **11/08/21 15:14**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 2-Methylnaphthalene-d10		54.5 %	40-150		"	"	"	"	
Surrogate: Fluoranthene-d10		52.1 %	40-150		"	"	"	"	

Summit Scientific

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

Project: LH#1, Edwards 16U Tank Battery
Project Number: [none]
Project Manager: Mark Longhurst

Reported:
11/15/21 10:50

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 BEK0184 - EPA 5030 Soil MS

Blank (BEK0184-BLK1)

Prepared: 11/08/21 Analyzed: 11/09/21

Benzene	ND	0.0020	mg/kg							
Toluene	ND	0.0050	"							
Ethylbenzene	ND	0.0050	"							
Xylenes (total)	ND	0.010	"							
1,2,4-Trimethylbenzene	ND	0.0050	"							
1,3,5-Trimethylbenzene	ND	0.0050	"							
Naphthalene	ND	0.0038	"							
Gasoline Range Hydrocarbons	ND	0.50	"							
Surrogate: 1,2-Dichloroethane-d4	0.0412		"	0.0400		103	23-173			
Surrogate: Toluene-d8	0.0401		"	0.0400		100	20-170			
Surrogate: 4-Bromofluorobenzene	0.0410		"	0.0400		102	21-167			

LCS (BEK0184-BS1)

Prepared: 11/08/21 Analyzed: 11/09/21

Benzene	0.104	0.0020	mg/kg	0.125		83.2	70-130			
Toluene	0.122	0.0050	"	0.125		97.7	70-130			
Ethylbenzene	0.162	0.0050	"	0.125		129	70-130			
m,p-Xylene	0.279	0.010	"	0.250		111	70-130			
o-Xylene	0.125	0.0050	"	0.125		100	70-130			
1,2,4-Trimethylbenzene	0.131	0.0050	"	0.125		105	70-130			
1,3,5-Trimethylbenzene	0.152	0.0050	"	0.125		121	70-130			
Naphthalene	0.123	0.0038	"	0.125		98.0	70-130			
Surrogate: 1,2-Dichloroethane-d4	0.0395		"	0.0400		98.8	23-173			
Surrogate: Toluene-d8	0.0405		"	0.0400		101	20-170			
Surrogate: 4-Bromofluorobenzene	0.0404		"	0.0400		101	21-167			

Matrix Spike (BEK0184-MS1)

Source: 2111129-02

Prepared: 11/08/21 Analyzed: 11/09/21

Benzene	0.103	0.0020	mg/kg	0.125	ND	82.1	70-130			
Toluene	0.121	0.0050	"	0.125	ND	96.8	70-130			
Ethylbenzene	0.161	0.0050	"	0.125	ND	129	70-130			
m,p-Xylene	0.281	0.010	"	0.250	ND	112	70-130			
o-Xylene	0.124	0.0050	"	0.125	ND	99.3	70-130			
1,2,4-Trimethylbenzene	0.129	0.0050	"	0.125	ND	103	70-130			
1,3,5-Trimethylbenzene	0.150	0.0050	"	0.125	ND	120	70-130			
Naphthalene	0.133	0.0038	"	0.125	ND	106	70-130			
Surrogate: 1,2-Dichloroethane-d4	0.0413		"	0.0400		103	23-173			
Surrogate: Toluene-d8	0.0404		"	0.0400		101	20-170			
Surrogate: 4-Bromofluorobenzene	0.0410		"	0.0400		102	21-167			

Summit Scientific

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



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

Project: LH#1, Edwards 16U Tank Battery
Project Number: [none]
Project Manager: Mark Longhurst

Reported:
11/15/21 10:50

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 BEK0184 - EPA 5030 Soil MS

Matrix Spike Dup (BEK0184-MSD1)	Source: 2111129-02			Prepared: 11/08/21 Analyzed: 11/09/21						
Benzene	0.104	0.0020	mg/kg	0.125	ND	82.8	70-130	0.844	30	
Toluene	0.124	0.0050	"	0.125	ND	98.8	70-130	2.09	30	
Ethylbenzene	0.163	0.0050	"	0.125	ND	130	70-130	1.46	30	
m,p-Xylene	0.284	0.010	"	0.250	ND	114	70-130	1.23	30	
o-Xylene	0.127	0.0050	"	0.125	ND	101	70-130	2.22	30	
1,2,4-Trimethylbenzene	0.137	0.0050	"	0.125	ND	109	70-130	5.68	30	
1,3,5-Trimethylbenzene	0.154	0.0050	"	0.125	ND	123	70-130	2.25	30	
Naphthalene	0.137	0.0038	"	0.125	ND	109	70-130	2.80	30	
Surrogate: 1,2-Dichloroethane-d4	0.0410		"	0.0400		103	23-173			
Surrogate: Toluene-d8	0.0412		"	0.0400		103	20-170			
Surrogate: 4-Bromofluorobenzene	0.0404		"	0.0400		101	21-167			

Summit Scientific

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



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

Project: LH#1, Edwards 16U Tank Battery
Project Number: [none]
Project Manager: Mark Longhurst

Reported:
11/15/21 10:50

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 BEK0185 - EPA 3550A

Blank (BEK0185-BLK1)

Prepared: 11/08/21 Analyzed: 11/09/21

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

LCS (BEK0185-BS1)

Prepared: 11/08/21 Analyzed: 11/09/21

C10-C28 (DRO)	586	50	mg/kg	500	117	70-130
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Matrix Spike (BEK0185-MS1)

Source: 2111129-02

Prepared: 11/08/21 Analyzed: 11/09/21

C10-C28 (DRO)	525	50	mg/kg	500	ND	105	70-130
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Matrix Spike Dup (BEK0185-MSD1)

Source: 2111129-02

Prepared: 11/08/21 Analyzed: 11/09/21

C10-C28 (DRO)	539	50	mg/kg	500	ND	108	70-130	2.63	20
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Summit Scientific

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



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

Project: LH#1, Edwards 16U Tank Battery
Project Number: [none]
Project Manager: Mark Longhurst

Reported:
11/15/21 10:50

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 BEK0190 - EPA 5030 Soil MS

Blank (BEK0190-BLK1)

Prepared: 11/09/21 Analyzed: 11/10/21

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	0.0273		"	0.0333		82.0	40-150			
Surrogate: Fluoranthene-d10	0.0266		"	0.0333		79.8	40-150			

LCS (BEK0190-BS1)

Prepared: 11/09/21 Analyzed: 11/10/21

Acenaphthene	0.0315	0.00500	mg/kg	0.0333		94.5	31-137			
Anthracene	0.0299	0.00500	"	0.0333		89.8	30-120			
Benzo (a) anthracene	0.0274	0.00500	"	0.0333		82.3	30-120			
Benzo (a) pyrene	0.0303	0.00500	"	0.0333		90.9	30-120			
Benzo (b) fluoranthene	0.0347	0.00500	"	0.0333		104	30-120			
Benzo (k) fluoranthene	0.0399	0.00500	"	0.0333		120	30-120			
Chrysene	0.0277	0.00500	"	0.0333		83.1	30-120			
Dibenz (a,h) anthracene	0.0202	0.00500	"	0.0333		60.5	30-120			
Fluoranthene	0.0361	0.00500	"	0.0333		108	30-120			
Fluorene	0.0365	0.00500	"	0.0333		110	30-120			
Indeno (1,2,3-cd) pyrene	0.0106	0.00500	"	0.0333		31.9	30-120			
Pyrene	0.0293	0.00500	"	0.0333		87.9	35-142			
1-Methylnaphthalene	0.0355	0.00500	"	0.0333		107	35-142			
2-Methylnaphthalene	0.0366	0.00500	"	0.0333		110	35-142			
Surrogate: 2-Methylnaphthalene-d10	0.0289		"	0.0333		86.8	40-150			
Surrogate: Fluoranthene-d10	0.0321		"	0.0333		96.3	40-150			

Summit Scientific

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



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

Project: LH#1, Edwards 16U Tank Battery

Project Number: [none]
Project Manager: Mark Longhurst

Reported:
11/15/21 10:50

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 BEK0190 - EPA 5030 Soil MS

Matrix Spike (BEK0190-MS1)

Source: 2111070-01

Prepared: 11/09/21 Analyzed: 11/10/21

Acenaphthene	0.0368	0.00500	mg/kg	0.0333	ND	110	31-137		
Anthracene	0.0283	0.00500	"	0.0333	ND	84.8	30-120		
Benzo (a) anthracene	0.0240	0.00500	"	0.0333	ND	72.1	30-120		
Benzo (a) pyrene	0.0269	0.00500	"	0.0333	ND	80.8	30-120		
Benzo (b) fluoranthene	0.0319	0.00500	"	0.0333	ND	95.6	30-120		
Benzo (k) fluoranthene	0.0365	0.00500	"	0.0333	ND	109	30-120		
Chrysene	0.0277	0.00500	"	0.0333	ND	83.2	30-120		
Dibenz (a,h) anthracene	0.0135	0.00500	"	0.0333	ND	40.5	30-120		
Fluoranthene	0.0293	0.00500	"	0.0333	ND	87.8	30-120		
Fluorene	0.0346	0.00500	"	0.0333	ND	104	30-120		
Indeno (1,2,3-cd) pyrene	0.0182	0.00500	"	0.0333	ND	54.7	30-120		
Pyrene	0.0301	0.00500	"	0.0333	ND	90.4	35-142		
1-Methylnaphthalene	0.0381	0.00500	"	0.0333	ND	114	15-130		
2-Methylnaphthalene	0.0368	0.00500	"	0.0333	ND	111	15-130		
Surrogate: 2-Methylnaphthalene-d10	0.0254		"	0.0333		76.1	40-150		
Surrogate: Fluoranthene-d10	0.0242		"	0.0333		72.5	40-150		

Matrix Spike Dup (BEK0190-MSD1)

Source: 2111070-01

Prepared: 11/09/21 Analyzed: 11/10/21

Acenaphthene	0.0294	0.00500	mg/kg	0.0333	ND	88.2	31-137	22.2	30
Anthracene	0.0250	0.00500	"	0.0333	ND	75.1	30-120	12.1	30
Benzo (a) anthracene	0.0224	0.00500	"	0.0333	ND	67.1	30-120	7.16	30
Benzo (a) pyrene	0.0243	0.00500	"	0.0333	ND	73.0	30-120	10.1	30
Benzo (b) fluoranthene	0.0298	0.00500	"	0.0333	ND	89.3	30-120	6.77	30
Benzo (k) fluoranthene	0.0347	0.00500	"	0.0333	ND	104	30-120	5.05	30
Chrysene	0.0261	0.00500	"	0.0333	ND	78.3	30-120	6.13	30
Dibenz (a,h) anthracene	0.0120	0.00500	"	0.0333	ND	36.1	30-120	11.5	30
Fluoranthene	0.0248	0.00500	"	0.0333	ND	74.4	30-120	16.5	30
Fluorene	0.0304	0.00500	"	0.0333	ND	91.1	30-120	13.2	30
Indeno (1,2,3-cd) pyrene	0.0172	0.00500	"	0.0333	ND	51.6	30-120	5.82	30
Pyrene	0.0290	0.00500	"	0.0333	ND	87.1	35-142	3.67	30
1-Methylnaphthalene	0.0309	0.00500	"	0.0333	ND	92.6	15-130	20.9	50
2-Methylnaphthalene	0.0273	0.00500	"	0.0333	ND	82.0	15-130	29.6	50
Surrogate: 2-Methylnaphthalene-d10	0.0211		"	0.0333		63.3	40-150		
Surrogate: Fluoranthene-d10	0.0214		"	0.0333		64.1	40-150		

Summit Scientific

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

Project: LH#1, Edwards 16U Tank Battery

Project Number: [none]
Project Manager: Mark Longhurst

Reported:
11/15/21 10:50

Notes and Definitions

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

Summit Scientific

4653 Table Mountain Drive, Golden, Colorado 80403

303.277.9310

November 23, 2021

Mark Longhurst

PDC Energy

1775 Sherman St. STE. 3000

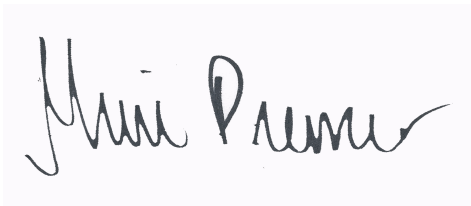
Denver, CO 80203

RE: LH#1, Edwards 16U Tank Battery

Work Order #2111264

Enclosed are the results of analyses for samples received by Summit Scientific on 11/15/21 16:00. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

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

Muri Premier For Paul Shrewsbury
President

Summit Scientific

4653 Table Mountain Drive, Golden, Colorado 80403

303.277.9310

November 15, 2021

Mark Longhurst

PDC Energy

1775 Sherman St. STE. 3000

Denver, CO 80203

RE: LH#1, Edwards 16U Tank Battery

Work Order #2111169

Enclosed are the results of analyses for samples received by Summit Scientific on 11/09/21 16:40. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

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

Paul Shrewsbury

President



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

Project: LH#1, Edwards 16U Tank Battery
Project Number: [none]
Project Manager: Mark Longhurst

Reported:
11/15/21 11:02

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
SS33@35'	2111169-01	Soil	11/09/21 14:13	11/09/21 16:40
SS34@32'	2111169-02	Soil	11/09/21 14:14	11/09/21 16:40

Summit Scientific

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

Summit Scientific

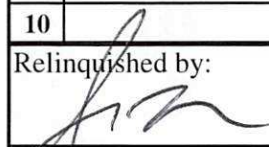
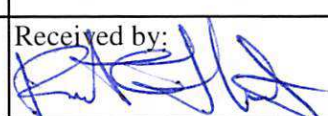
S₂

2111/69

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: L-H #1, Edwards 16V Tank Battery
Sampler Name: J. Marcus Project Number: 1/9

ID	Sample Description	Date Sampled	Time Sampled	# of containers	Preservative				Matrix				Analysis Requested								Special Instructions
					HCl	HNO ₃	None	Other	Water	Soil	Air-Canister #	Other	BTEXN - 8260B	TPH - (C6 - C36)	1,2,4 & 1,3,5-TMB	Boron - HWS	pH, EC, SAR	Fluorene	1-M, 2-M		
1	5533 @ 35'	11/9/21	1413	2			X			X				X	X	X			X	X	pH, EC, SAR by saturated paste M = methylnaphthalene
2	5534 @ 32'	11/9/21	1414	2			X			X				X	X	X			X	X	
3																					
4																					
5																					
6																					
7																					
8																					
9																					
10																					
Relinquished by: 		Date/Time: 11/9/21 1540		Received by: Tasman's Lock Box		Date/Time: 11/9/21 1540		Turn Around Time (Check)				Notes:									
Relinquished by: Tasman's Lock Box		Date/Time:		Received by: 		Date/Time: 11/9/21 1540		Same Day <input checked="" type="checkbox"/> 72 hours <input type="checkbox"/>													
Relinquished by:		Date/Time:		Received by:		Date/Time:		24 hours <input type="checkbox"/> Standard <input type="checkbox"/>													
Relinquished by:		Date/Time:		Received by:		Date/Time:		48 hours <input type="checkbox"/>				Sample Integrity: 3.9									
Relinquished by:		Date/Time:		Received by:		Date/Time:		Temperature Upon Receipt: 3.9				Samples Intact: <input checked="" type="radio"/> Yes <input type="radio"/> No									

S₂

Sample Receipt Checklist

S2 Work Order#

2111169

Client: Pbc/Tasman Client Project ID: L-H #1, Edwards 11kV Tank BatteryShipped Via: ☐ H.D./P.U./FedEx/UPS/USPS/Other ☐ Airbill #: ☐Matrix (check all that apply): ☐ Air ☒ Soil/Solid ☐ Water ☐ Other: ☐ (Describe)Temp (°C) 3.9

Thermometer ID: G86A9201901378

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

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

Custodian Printed Name or Initials

Date/Time



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

Project: LH#1, Edwards 16U Tank Battery
Project Number: [none]
Project Manager: Mark Longhurst

Reported:
11/15/21 11:02

SS33@35'
2111169-01 (Soil)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **11/09/21 14:13**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Benzene	ND	0.0020	mg/kg	1	BEK0218	11/09/21	11/09/21	EPA 8260B	
Toluene	ND	0.0050	"	"	"	"	"	"	
Ethylbenzene	ND	0.0050	"	"	"	"	"	"	
Xylenes (total)	ND	0.010	"	"	"	"	"	"	
1,2,4-Trimethylbenzene	ND	0.0050	"	"	"	"	"	"	
1,3,5-Trimethylbenzene	ND	0.0050	"	"	"	"	"	"	
Naphthalene	ND	0.0038	"	"	"	"	"	"	
Gasoline Range Hydrocarbons	ND	0.50	"	"	"	"	"	"	

Date Sampled: **11/09/21 14:13**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 1,2-Dichloroethane-d4		103 %	23-173		"	"	"	"	
Surrogate: Toluene-d8		97.6 %	20-170		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		101 %	21-167		"	"	"	"	

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **11/09/21 14:13**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
C10-C28 (DRO)	ND	50	mg/kg	1	BEK0217	11/09/21	11/10/21	EPA 8015M	
C28-C36 (ORO)	ND	50	"	"	"	"	"	"	

Date Sampled: **11/09/21 14:13**

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: LH#1, Edwards 16U Tank Battery
Project Number: [none]
Project Manager: Mark Longhurst

Reported:
11/15/21 11:02

SS33@35'
2111169-01 (Soil)

Summit Scientific

PAH by EPA Method 8270D SIM

Date Sampled: **11/09/21 14:13**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Fluorene	ND	0.00500	mg/kg	1	BEK0219	11/10/21	11/13/21	EPA 8270D SIM	
1-Methylnaphthalene	ND	0.00500	"	"	"	"	"	"	
2-Methylnaphthalene	ND	0.00500	"	"	"	"	"	"	

Date Sampled: **11/09/21 14:13**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 2-Methylnaphthalene-d10		58.8 %	40-150		"	"	"	"	
Surrogate: Fluoranthene-d10		56.1 %	40-150		"	"	"	"	

Summit Scientific

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

Project: LH#1, Edwards 16U Tank Battery
Project Number: [none]
Project Manager: Mark Longhurst

Reported:
11/15/21 11:02

SS34@32'
2111169-02 (Soil)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **11/09/21 14:14**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Benzene	ND	0.0020	mg/kg	1	BEK0218	11/09/21	11/09/21	EPA 8260B	
Toluene	ND	0.0050	"	"	"	"	"	"	
Ethylbenzene	ND	0.0050	"	"	"	"	"	"	
Xylenes (total)	ND	0.010	"	"	"	"	"	"	
1,2,4-Trimethylbenzene	ND	0.0050	"	"	"	"	"	"	
1,3,5-Trimethylbenzene	ND	0.0050	"	"	"	"	"	"	
Naphthalene	ND	0.0038	"	"	"	"	"	"	
Gasoline Range Hydrocarbons	ND	0.50	"	"	"	"	"	"	

Date Sampled: **11/09/21 14:14**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: 1,2-Dichloroethane-d4		105 %	23-173		"	"	"	"	
Surrogate: Toluene-d8		101 %	20-170		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		102 %	21-167		"	"	"	"	

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **11/09/21 14:14**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
C10-C28 (DRO)	ND	50	mg/kg	1	BEK0217	11/09/21	11/10/21	EPA 8015M	
C28-C36 (ORO)	ND	50	"	"	"	"	"	"	

Date Sampled: **11/09/21 14:14**

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

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: LH#1, Edwards 16U Tank Battery
Project Number: [none]
Project Manager: Mark Longhurst

Reported:
11/15/21 11:02

SS34@32'
2111169-02 (Soil)

Summit Scientific

PAH by EPA Method 8270D SIM

Date Sampled: **11/09/21 14:14**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Fluorene	ND	0.00500	mg/kg	1	BEK0219	11/10/21	11/13/21	EPA 8270D SIM	
1-Methylnaphthalene	ND	0.00500	"	"	"	"	"	"	
2-Methylnaphthalene	ND	0.00500	"	"	"	"	"	"	

Date Sampled: **11/09/21 14:14**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 2-Methylnaphthalene-d10		41.1 %	40-150		"	"	"	"	
Surrogate: Fluoranthene-d10		47.5 %	40-150		"	"	"	"	

Summit Scientific

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



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

Project: LH#1, Edwards 16U Tank Battery

Project Number: [none]
Project Manager: Mark Longhurst

Reported:
11/15/21 11:02

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 BEK0218 - EPA 5030 Soil MS

Blank (BEK0218-BLK1)

Prepared: 11/09/21 Analyzed: 11/10/21

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	0.0302		"	0.0400		75.6	23-173			
Surrogate: Toluene-d8	0.0521		"	0.0400		130	20-170			
Surrogate: 4-Bromofluorobenzene	0.0388		"	0.0400		97.0	21-167			

LCS (BEK0218-BS1)

Prepared: 11/09/21 Analyzed: 11/10/21

Benzene	0.0695	0.0020	mg/kg	0.0750		92.7	70-130			
Toluene	0.0652	0.0050	"	0.0750		87.0	70-130			
Ethylbenzene	0.0724	0.0050	"	0.0750		96.6	70-130			
m,p-Xylene	0.150	0.010	"	0.150		100	70-130			
o-Xylene	0.0774	0.0050	"	0.0750		103	70-130			
1,2,4-Trimethylbenzene	0.0708	0.0050	"	0.0750		94.4	70-130			
1,3,5-Trimethylbenzene	0.0675	0.0050	"	0.0750		90.0	70-130			
Naphthalene	0.0682	0.0038	"	0.0750		91.0	70-130			
Surrogate: 1,2-Dichloroethane-d4	0.0397		"	0.0400		99.3	23-173			
Surrogate: Toluene-d8	0.0446		"	0.0400		112	20-170			
Surrogate: 4-Bromofluorobenzene	0.0425		"	0.0400		106	21-167			

Matrix Spike (BEK0218-MS1)

Source: 2111154-01

Prepared: 11/09/21 Analyzed: 11/10/21

Benzene	0.0681	0.0020	mg/kg	0.0750	ND	90.8	70-130			
Toluene	0.0715	0.0050	"	0.0750	ND	95.4	70-130			
Ethylbenzene	0.0709	0.0050	"	0.0750	ND	94.5	70-130			
m,p-Xylene	0.146	0.010	"	0.150	ND	97.4	70-130			
o-Xylene	0.0771	0.0050	"	0.0750	ND	103	70-130			
1,2,4-Trimethylbenzene	0.0712	0.0050	"	0.0750	ND	95.0	70-130			
1,3,5-Trimethylbenzene	0.0681	0.0050	"	0.0750	ND	90.8	70-130			
Naphthalene	0.0803	0.0038	"	0.0750	ND	107	70-130			
Surrogate: 1,2-Dichloroethane-d4	0.0434		"	0.0400		109	23-173			
Surrogate: Toluene-d8	0.0478		"	0.0400		119	20-170			
Surrogate: 4-Bromofluorobenzene	0.0427		"	0.0400		107	21-167			

Summit Scientific

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



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

Project: LH#1, Edwards 16U Tank Battery
Project Number: [none]
Project Manager: Mark Longhurst

Reported:
11/15/21 11:02

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 BEK0218 - EPA 5030 Soil MS

Matrix Spike Dup (BEK0218-MSD1)	Source: 2111154-01			Prepared: 11/09/21 Analyzed: 11/10/21						
Benzene	0.0685	0.0020	mg/kg	0.0750	ND	91.4	70-130	0.571	30	
Toluene	0.0708	0.0050	"	0.0750	ND	94.4	70-130	1.01	30	
Ethylbenzene	0.0729	0.0050	"	0.0750	ND	97.2	70-130	2.84	30	
m,p-Xylene	0.149	0.010	"	0.150	ND	99.2	70-130	1.85	30	
o-Xylene	0.0800	0.0050	"	0.0750	ND	107	70-130	3.67	30	
1,2,4-Trimethylbenzene	0.0736	0.0050	"	0.0750	ND	98.2	70-130	3.27	30	
1,3,5-Trimethylbenzene	0.0700	0.0050	"	0.0750	ND	93.3	70-130	2.69	30	
Naphthalene	0.0883	0.0038	"	0.0750	ND	118	70-130	9.46	30	
Surrogate: 1,2-Dichloroethane-d4	0.0431		"	0.0400		108	23-173			
Surrogate: Toluene-d8	0.0473		"	0.0400		118	20-170			
Surrogate: 4-Bromofluorobenzene	0.0428		"	0.0400		107	21-167			

Summit Scientific

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



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

Project: LH#1, Edwards 16U Tank Battery
Project Number: [none]
Project Manager: Mark Longhurst

Reported:
11/15/21 11:02

Extractable Petroleum Hydrocarbons by 8015 - Quality Control
Summit Scientific

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

Batch BEK0217 - EPA 3550A

Blank (BEK0217-BLK1)

Prepared: 11/09/21 Analyzed: 11/10/21

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

LCS (BEK0217-BS1)

Prepared: 11/09/21 Analyzed: 11/10/21

C10-C28 (DRO)	561	50	mg/kg	500	112	70-130
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Matrix Spike (BEK0217-MS1)

Source: 2111154-01

Prepared: 11/09/21 Analyzed: 11/10/21

C10-C28 (DRO)	554	50	mg/kg	500	ND	111	70-130
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Matrix Spike Dup (BEK0217-MSD1)

Source: 2111154-01

Prepared: 11/09/21 Analyzed: 11/10/21

C10-C28 (DRO)	573	50	mg/kg	500	ND	115	70-130	3.38	20
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Summit Scientific

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



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

Project: LH#1, Edwards 16U Tank Battery
Project Number: [none]
Project Manager: Mark Longhurst

Reported:
11/15/21 11:02

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 BEK0219 - EPA 5030 Soil MS

Blank (BEK0219-BLK1)

Prepared: 11/10/21 Analyzed: 11/13/21

Fluorene	ND	0.00500	mg/kg						
1-Methylnaphthalene	ND	0.00500	"						
2-Methylnaphthalene	ND	0.00500	"						
Surrogate: 2-Methylnaphthalene-d10	0.0232		"	0.0333		69.5	40-150		
Surrogate: Fluoranthene-d10	0.0228		"	0.0333		68.3	40-150		

LCS (BEK0219-BS1)

Prepared: 11/10/21 Analyzed: 11/13/21

Fluorene	0.0289	0.00500	mg/kg	0.0333		86.7	30-120		
1-Methylnaphthalene	0.0267	0.00500	"	0.0333		80.2	35-142		
2-Methylnaphthalene	0.0257	0.00500	"	0.0333		77.1	35-142		
Surrogate: 2-Methylnaphthalene-d10	0.0246		"	0.0333		73.7	40-150		
Surrogate: Fluoranthene-d10	0.0264		"	0.0333		79.2	40-150		

Matrix Spike (BEK0219-MS1)

Source: 2111094-01

Prepared: 11/10/21 Analyzed: 11/13/21

Fluorene	0.0294	0.00500	mg/kg	0.0333	ND	88.1	30-120		
1-Methylnaphthalene	0.0287	0.00500	"	0.0333	ND	86.0	15-130		
2-Methylnaphthalene	0.0284	0.00500	"	0.0333	ND	85.3	15-130		
Surrogate: 2-Methylnaphthalene-d10	0.0250		"	0.0333		74.9	40-150		
Surrogate: Fluoranthene-d10	0.0259		"	0.0333		77.8	40-150		

Matrix Spike Dup (BEK0219-MSD1)

Source: 2111094-01

Prepared: 11/10/21 Analyzed: 11/13/21

Fluorene	0.0296	0.00500	mg/kg	0.0333	ND	88.7	30-120	0.724	30
1-Methylnaphthalene	0.0285	0.00500	"	0.0333	ND	85.6	15-130	0.458	50
2-Methylnaphthalene	0.0292	0.00500	"	0.0333	ND	87.5	15-130	2.54	50
Surrogate: 2-Methylnaphthalene-d10	0.0247		"	0.0333		74.1	40-150		
Surrogate: Fluoranthene-d10	0.0281		"	0.0333		84.3	40-150		

Summit Scientific

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

Project: LH#1, Edwards 16U Tank Battery
Project Number: [none]
Project Manager: Mark Longhurst

Reported:
11/15/21 11:02

Notes and Definitions

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

Summit Scientific

4653 Table Mountain Drive, Golden, Colorado 80403

303.277.9310

November 16, 2021

Mark Longhurst

PDC Energy

1775 Sherman St. STE. 3000

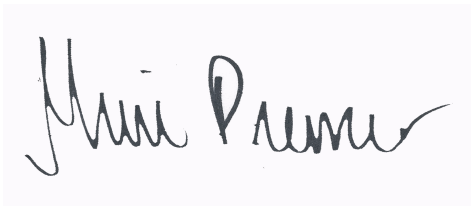
Denver, CO 80203

RE: LH#1, Edwards 16U Tank Battery

Work Order #2111206

Enclosed are the results of analyses for samples received by Summit Scientific on 11/10/21 16:30. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

A handwritten signature in black ink, appearing to read "Muri Premier", is displayed on a light purple rectangular background.

Muri Premier For Paul Shrewsbury
President



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

Project: LH#1, Edwards 16U Tank Battery
Project Number: [none]
Project Manager: Mark Longhurst

Reported:
11/16/21 18:04

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
SS35@29'	2111206-01	Soil	11/10/21 09:25	11/10/21 16:30
SS36@32'	2111206-02	Soil	11/10/21 09:45	11/10/21 16:30
SS37@32'	2111206-03	Soil	11/10/21 10:18	11/10/21 16:30

Summit Scientific

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

Summit Scientific

S₂

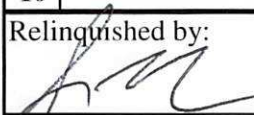
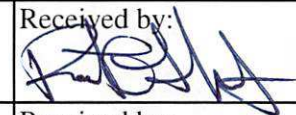
2111206

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: L-1#1, Edwards 16V Tank Battery
Sampler Name: J. Marcus Project Number: 2/9

ID	Sample Description	Date Sampled	Time Sampled	# of containers	Preservative				Matrix				Analysis Requested								Special Instructions	
					HCl	HNO ₃	None	Other	Water	Soil	Air-Canister #	Other	BTEXN - 8260B	TPH - (C6 - C36)	1,2,4 & 1,3,5-TMB	Boron - HWS	pH, EC, SAR	Fluorene	1-M, 2-M			
1	5535@29'	11/10/21	0925	2			X			X				X	X	X			X	X		pH, EC, SAR by saturated paste M = methylphthalene
2	5536@32'	↓	0945	2			X			X				X	X	X			X	X		
3	5537@32'	↓	1018	2			X			X				X	X	X			X	X		
4																						
5																						
6																						
7																						
8																						
9																						
10																						

Relinquished by: 	Date/Time: 11/10/21 1630	Received by: Tasman's Lock Box	Date/Time: 11/10/21 1630	Turn Around Time (Check) Same Day <input checked="" type="checkbox"/> 72 hours ___ 24 hours ___ Standard ___ 48 hours ___	Notes:
Relinquished by: Tasman's Lock Box	Date/Time:	Received by: 	Date/Time: 11-10-21 1630	Sample Integrity:	
Relinquished by:	Date/Time:	Received by:	Date/Time:	Temperature Upon Receipt: 10.1 Samples Intact: <input checked="" type="radio"/> Yes <input type="radio"/> No	

S₂

2111206

Sample Receipt Checklist

S2 Work Order# _____

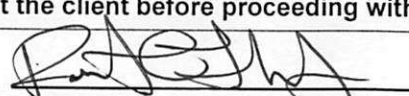
Client: PDC / TasmanClient Project ID: LH#1, Edwards Low Tank BatteryShipped Via: ☐ H.D. ☒ P.U. ☐ FedEx ☐ UPS ☐ USPS ☐ Other _____ Airbill #: _____Matrix (check all that apply): ☐ Air ☒ Soil/Solid ☐ Water ☐ Other: _____
(Describe)

Temp (°C)	10.1
-----------	------

Thermometer ID: G86A9201901378

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

Additional Comments (if any):

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

 Custodian Printed Name or Initials

11.10.21
 Date/Time



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

Project: LH#1, Edwards 16U Tank Battery
Project Number: [none]
Project Manager: Mark Longhurst

Reported:
11/16/21 18:04

SS35@29'
2111206-01 (Soil)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **11/10/21 09:25**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Benzene	ND	0.0020	mg/kg	1	BEK0248	11/10/21	11/10/21	EPA 8260B	
Toluene	ND	0.0050	"	"	"	"	"	"	
Ethylbenzene	ND	0.0050	"	"	"	"	"	"	
Xylenes (total)	ND	0.010	"	"	"	"	"	"	
1,2,4-Trimethylbenzene	ND	0.0050	"	"	"	"	"	"	
1,3,5-Trimethylbenzene	ND	0.0050	"	"	"	"	"	"	
Naphthalene	ND	0.0038	"	"	"	"	"	"	
Gasoline Range Hydrocarbons	ND	0.50	"	"	"	"	"	"	

Date Sampled: **11/10/21 09:25**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 1,2-Dichloroethane-d4		117 %	23-173		"	"	"	"	
Surrogate: Toluene-d8		120 %	20-170		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		101 %	21-167		"	"	"	"	

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **11/10/21 09:25**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
C10-C28 (DRO)	ND	50	mg/kg	1	BEK0249	11/10/21	11/10/21	EPA 8015M	
C28-C36 (ORO)	ND	50	"	"	"	"	"	"	

Date Sampled: **11/10/21 09:25**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: o-Terphenyl		115 %	30-150		"	"	"	"	

PAH by EPA Method 8270D SIM

Summit Scientific

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

Project: LH#1, Edwards 16U Tank Battery
Project Number: [none]
Project Manager: Mark Longhurst

Reported:
11/16/21 18:04

SS35@29'
2111206-01 (Soil)

Summit Scientific

PAH by EPA Method 8270D SIM

Date Sampled: **11/10/21 09:25**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Fluorene	ND	0.00500	mg/kg	1	BEK0306	11/15/21	11/16/21	EPA 8270D SIM	
1-Methylnaphthalene	ND	0.00500	"	"	"	"	"	"	
2-Methylnaphthalene	ND	0.00500	"	"	"	"	"	"	

Date Sampled: **11/10/21 09:25**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: 2-Methylnaphthalene-d10		66.7 %	40-150		"	"	"	"	
Surrogate: Fluoranthene-d10		71.4 %	40-150		"	"	"	"	

Summit Scientific

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



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

Project: LH#1, Edwards 16U Tank Battery
Project Number: [none]
Project Manager: Mark Longhurst

Reported:
11/16/21 18:04

SS36@32'
2111206-02 (Soil)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **11/10/21 09:45**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Benzene	ND	0.0020	mg/kg	1	BEK0248	11/10/21	11/10/21	EPA 8260B	
Toluene	ND	0.0050	"	"	"	"	"	"	
Ethylbenzene	ND	0.0050	"	"	"	"	"	"	
Xylenes (total)	ND	0.010	"	"	"	"	"	"	
1,2,4-Trimethylbenzene	ND	0.0050	"	"	"	"	"	"	
1,3,5-Trimethylbenzene	ND	0.0050	"	"	"	"	"	"	
Naphthalene	ND	0.0038	"	"	"	"	"	"	
Gasoline Range Hydrocarbons	ND	0.50	"	"	"	"	"	"	

Date Sampled: **11/10/21 09:45**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: 1,2-Dichloroethane-d4		118 %	23-173		"	"	"	"	
Surrogate: Toluene-d8		124 %	20-170		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		101 %	21-167		"	"	"	"	

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **11/10/21 09:45**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
C10-C28 (DRO)	ND	50	mg/kg	1	BEK0249	11/10/21	11/11/21	EPA 8015M	
C28-C36 (ORO)	ND	50	"	"	"	"	"	"	

Date Sampled: **11/10/21 09:45**

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: LH#1, Edwards 16U Tank Battery
Project Number: [none]
Project Manager: Mark Longhurst

Reported:
11/16/21 18:04

SS36@32'
2111206-02 (Soil)

Summit Scientific

PAH by EPA Method 8270D SIM

Date Sampled: **11/10/21 09:45**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Fluorene	ND	0.00500	mg/kg	1	BEK0306	11/15/21	11/16/21	EPA 8270D SIM	
1-Methylnaphthalene	ND	0.00500	"	"	"	"	"	"	
2-Methylnaphthalene	ND	0.00500	"	"	"	"	"	"	

Date Sampled: **11/10/21 09:45**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: 2-Methylnaphthalene-d10		62.7 %	40-150		"	"	"	"	
Surrogate: Fluoranthene-d10		61.2 %	40-150		"	"	"	"	

Summit Scientific

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



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

Project: LH#1, Edwards 16U Tank Battery

Project Number: [none]
Project Manager: Mark Longhurst

Reported:
11/16/21 18:04

SS37@32'
2111206-03 (Soil)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **11/10/21 10:18**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Benzene	ND	0.0020	mg/kg	1	BEK0248	11/10/21	11/10/21	EPA 8260B	
Toluene	ND	0.0050	"	"	"	"	"	"	
Ethylbenzene	ND	0.0050	"	"	"	"	"	"	
Xylenes (total)	ND	0.010	"	"	"	"	"	"	
1,2,4-Trimethylbenzene	ND	0.0050	"	"	"	"	"	"	
1,3,5-Trimethylbenzene	ND	0.0050	"	"	"	"	"	"	
Naphthalene	ND	0.0038	"	"	"	"	"	"	
Gasoline Range Hydrocarbons	ND	0.50	"	"	"	"	"	"	

Date Sampled: **11/10/21 10:18**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: 1,2-Dichloroethane-d4		121 %	23-173		"	"	"	"	
Surrogate: Toluene-d8		126 %	20-170		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		103 %	21-167		"	"	"	"	

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **11/10/21 10:18**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
C10-C28 (DRO)	ND	50	mg/kg	1	BEK0249	11/10/21	11/11/21	EPA 8015M	
C28-C36 (ORO)	ND	50	"	"	"	"	"	"	

Date Sampled: **11/10/21 10:18**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: o-Terphenyl		116 %	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: LH#1, Edwards 16U Tank Battery
Project Number: [none]
Project Manager: Mark Longhurst

Reported:
11/16/21 18:04

SS37@32'
2111206-03 (Soil)

Summit Scientific

PAH by EPA Method 8270D SIM

Date Sampled: **11/10/21 10:18**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Fluorene	ND	0.00500	mg/kg	1	BEK0306	11/15/21	11/16/21	EPA 8270D SIM	
1-Methylnaphthalene	ND	0.00500	"	"	"	"	"	"	
2-Methylnaphthalene	ND	0.00500	"	"	"	"	"	"	

Date Sampled: **11/10/21 10:18**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: 2-Methylnaphthalene-d10		68.3 %	40-150		"	"	"	"	
Surrogate: Fluoranthene-d10		69.8 %	40-150		"	"	"	"	

Summit Scientific

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



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

Project: LH#1, Edwards 16U Tank Battery

Project Number: [none]
Project Manager: Mark Longhurst

Reported:
11/16/21 18:04

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 BEK0248 - EPA 5030 Soil MS

Blank (BEK0248-BLK1)

Prepared: 11/10/21 Analyzed: 11/11/21

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	0.0447		"	0.0400		112	23-173			
Surrogate: Toluene-d8	0.0491		"	0.0400		123	20-170			
Surrogate: 4-Bromofluorobenzene	0.0402		"	0.0400		100	21-167			

LCS (BEK0248-BS1)

Prepared: 11/10/21 Analyzed: 11/11/21

Benzene	0.141	0.0020	mg/kg	0.150		93.8	70-130			
Toluene	0.126	0.0050	"	0.150		83.8	70-130			
Ethylbenzene	0.137	0.0050	"	0.150		91.4	70-130			
m,p-Xylene	0.292	0.010	"	0.300		97.4	70-130			
o-Xylene	0.153	0.0050	"	0.150		102	70-130			
1,2,4-Trimethylbenzene	0.140	0.0050	"	0.150		93.5	70-130			
1,3,5-Trimethylbenzene	0.138	0.0050	"	0.150		91.7	70-130			
Naphthalene	0.157	0.0038	"	0.150		105	70-130			
Surrogate: 1,2-Dichloroethane-d4	0.0371		"	0.0400		92.7	23-173			
Surrogate: Toluene-d8	0.0363		"	0.0400		90.7	20-170			
Surrogate: 4-Bromofluorobenzene	0.0412		"	0.0400		103	21-167			

Matrix Spike (BEK0248-MS1)

Source: 2111176-01

Prepared: 11/10/21 Analyzed: 11/11/21

Benzene	0.145	0.0020	mg/kg	0.150	ND	97.0	70-130			
Toluene	0.144	0.0050	"	0.150	ND	96.1	70-130			
Ethylbenzene	0.141	0.0050	"	0.150	ND	93.8	70-130			
m,p-Xylene	0.302	0.010	"	0.300	ND	101	70-130			
o-Xylene	0.156	0.0050	"	0.150	ND	104	70-130			
1,2,4-Trimethylbenzene	0.142	0.0050	"	0.150	ND	94.9	70-130			
1,3,5-Trimethylbenzene	0.141	0.0050	"	0.150	ND	94.3	70-130			
Naphthalene	0.167	0.0038	"	0.150	ND	111	70-130			
Surrogate: 1,2-Dichloroethane-d4	0.0432		"	0.0400		108	23-173			
Surrogate: Toluene-d8	0.0402		"	0.0400		101	20-170			
Surrogate: 4-Bromofluorobenzene	0.0422		"	0.0400		105	21-167			

Summit Scientific

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



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

Project: LH#1, Edwards 16U Tank Battery
Project Number: [none]
Project Manager: Mark Longhurst

Reported:
11/16/21 18:04

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 BEK0248 - EPA 5030 Soil MS

Matrix Spike Dup (BEK0248-MSD1)	Source: 2111176-01			Prepared: 11/10/21 Analyzed: 11/11/21						
Benzene	0.147	0.0020	mg/kg	0.150	ND	98.1	70-130	1.19	30	
Toluene	0.147	0.0050	"	0.150	ND	98.3	70-130	2.24	30	
Ethylbenzene	0.141	0.0050	"	0.150	ND	94.0	70-130	0.170	30	
m,p-Xylene	0.300	0.010	"	0.300	ND	99.9	70-130	0.639	30	
o-Xylene	0.156	0.0050	"	0.150	ND	104	70-130	0.0769	30	
1,2,4-Trimethylbenzene	0.140	0.0050	"	0.150	ND	93.6	70-130	1.42	30	
1,3,5-Trimethylbenzene	0.140	0.0050	"	0.150	ND	93.2	70-130	1.19	30	
Naphthalene	0.166	0.0038	"	0.150	ND	111	70-130	0.757	30	
Surrogate: 1,2-Dichloroethane-d4	0.0419		"	0.0400		105	23-173			
Surrogate: Toluene-d8	0.0416		"	0.0400		104	20-170			
Surrogate: 4-Bromofluorobenzene	0.0430		"	0.0400		107	21-167			

Summit Scientific

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



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

Project: LH#1, Edwards 16U Tank Battery
Project Number: [none]
Project Manager: Mark Longhurst

Reported:
11/16/21 18:04

Extractable Petroleum Hydrocarbons by 8015 - Quality Control
Summit Scientific

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

Batch BEK0249 - EPA 3550A

Blank (BEK0249-BLK1)

Prepared: 11/10/21 Analyzed: 11/11/21

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

LCS (BEK0249-BS1)

Prepared: 11/10/21 Analyzed: 11/11/21

C10-C28 (DRO)	433	50	mg/kg	500	86.6	70-130
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Matrix Spike (BEK0249-MS1)

Source: 2111176-01

Prepared: 11/10/21 Analyzed: 11/11/21

C10-C28 (DRO)	432	50	mg/kg	500	48.5	76.8	70-130
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Matrix Spike Dup (BEK0249-MSD1)

Source: 2111176-01

Prepared: 11/10/21 Analyzed: 11/11/21

C10-C28 (DRO)	414	50	mg/kg	500	48.5	73.1	70-130	4.36	20
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Summit Scientific

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



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

Project: LH#1, Edwards 16U Tank Battery
Project Number: [none]
Project Manager: Mark Longhurst

Reported:
11/16/21 18:04

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 BEK0306 - EPA 5030 Soil MS

Blank (BEK0306-BLK1)

Prepared & Analyzed: 11/15/21

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	0.0269		"	0.0333		80.8	40-150			
Surrogate: Fluoranthene-d10	0.0270		"	0.0333		80.9	40-150			

LCS (BEK0306-BS1)

Prepared & Analyzed: 11/15/21

Acenaphthene	0.0324	0.00500	mg/kg	0.0333		97.1	31-137			
Anthracene	0.0317	0.00500	"	0.0333		95.0	30-120			
Benzo (a) anthracene	0.0327	0.00500	"	0.0333		98.0	30-120			
Benzo (a) pyrene	0.0316	0.00500	"	0.0333		94.9	30-120			
Benzo (b) fluoranthene	0.0314	0.00500	"	0.0333		94.3	30-120			
Benzo (k) fluoranthene	0.0321	0.00500	"	0.0333		96.3	30-120			
Chrysene	0.0309	0.00500	"	0.0333		92.8	30-120			
Dibenz (a,h) anthracene	0.0350	0.00500	"	0.0333		105	30-120			
Fluoranthene	0.0326	0.00500	"	0.0333		97.7	30-120			
Fluorene	0.0342	0.00500	"	0.0333		103	30-120			
Indeno (1,2,3-cd) pyrene	0.0238	0.00500	"	0.0333		71.6	30-120			
Pyrene	0.0328	0.00500	"	0.0333		98.5	35-142			
1-Methylnaphthalene	0.0325	0.00500	"	0.0333		97.6	35-142			
2-Methylnaphthalene	0.0328	0.00500	"	0.0333		98.3	35-142			
Surrogate: 2-Methylnaphthalene-d10	0.0333		"	0.0333		100	40-150			
Surrogate: Fluoranthene-d10	0.0349		"	0.0333		105	40-150			

Summit Scientific

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



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

Project: LH#1, Edwards 16U Tank Battery
Project Number: [none]
Project Manager: Mark Longhurst

Reported:
11/16/21 18:04

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 BEK0306 - EPA 5030 Soil MS

Matrix Spike (BEK0306-MS1)

Source: 2111122-01

Prepared & Analyzed: 11/15/21

Acenaphthene	0.0267	0.00500	mg/kg	0.0333	ND	80.2	31-137				
Anthracene	0.0268	0.00500	"	0.0333	ND	80.4	30-120				
Benzo (a) anthracene	0.0281	0.00500	"	0.0333	ND	84.3	30-120				
Benzo (a) pyrene	0.0269	0.00500	"	0.0333	ND	80.7	30-120				
Benzo (b) fluoranthene	0.0270	0.00500	"	0.0333	ND	81.1	30-120				
Benzo (k) fluoranthene	0.0277	0.00500	"	0.0333	ND	83.2	30-120				
Chrysene	0.0264	0.00500	"	0.0333	ND	79.2	30-120				
Dibenz (a,h) anthracene	0.0287	0.00500	"	0.0333	ND	86.0	30-120				
Fluoranthene	0.0287	0.00500	"	0.0333	ND	86.1	30-120				
Fluorene	0.0292	0.00500	"	0.0333	ND	87.5	30-120				
Indeno (1,2,3-cd) pyrene	0.0197	0.00500	"	0.0333	ND	59.0	30-120				
Pyrene	0.0286	0.00500	"	0.0333	ND	85.9	35-142				
1-Methylnaphthalene	0.0278	0.00500	"	0.0333	ND	83.5	15-130				
2-Methylnaphthalene	0.0303	0.00500	"	0.0333	ND	90.9	15-130				
Surrogate: 2-Methylnaphthalene-d10	0.0293		"	0.0333		87.9	40-150				
Surrogate: Fluoranthene-d10	0.0304		"	0.0333		91.3	40-150				

Matrix Spike Dup (BEK0306-MSD1)

Source: 2111122-01

Prepared & Analyzed: 11/15/21

Acenaphthene	0.0264	0.00500	mg/kg	0.0333	ND	79.2	31-137	1.26	30
Anthracene	0.0287	0.00500	"	0.0333	ND	86.2	30-120	7.00	30
Benzo (a) anthracene	0.0288	0.00500	"	0.0333	ND	86.3	30-120	2.34	30
Benzo (a) pyrene	0.0282	0.00500	"	0.0333	ND	84.7	30-120	4.82	30
Benzo (b) fluoranthene	0.0280	0.00500	"	0.0333	ND	84.1	30-120	3.64	30
Benzo (k) fluoranthene	0.0287	0.00500	"	0.0333	ND	86.0	30-120	3.33	30
Chrysene	0.0272	0.00500	"	0.0333	ND	81.7	30-120	3.03	30
Dibenz (a,h) anthracene	0.0308	0.00500	"	0.0333	ND	92.5	30-120	7.20	30
Fluoranthene	0.0301	0.00500	"	0.0333	ND	90.3	30-120	4.80	30
Fluorene	0.0292	0.00500	"	0.0333	ND	87.7	30-120	0.224	30
Indeno (1,2,3-cd) pyrene	0.0203	0.00500	"	0.0333	ND	60.8	30-120	3.15	30
Pyrene	0.0299	0.00500	"	0.0333	ND	89.6	35-142	4.30	30
1-Methylnaphthalene	0.0282	0.00500	"	0.0333	ND	84.6	15-130	1.23	50
2-Methylnaphthalene	0.0288	0.00500	"	0.0333	ND	86.3	15-130	5.27	50
Surrogate: 2-Methylnaphthalene-d10	0.0307		"	0.0333		92.1	40-150		
Surrogate: Fluoranthene-d10	0.0329		"	0.0333		98.6	40-150		

Summit Scientific

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



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

Project: LH#1, Edwards 16U Tank Battery

Project Number: [none]
Project Manager: Mark Longhurst

Reported:
11/16/21 18:04

Notes and Definitions

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

Summit Scientific

4653 Table Mountain Drive, Golden, Colorado 80403

303.277.9310

November 19, 2021

Mark Longhurst

PDC Energy

1775 Sherman St. STE. 3000

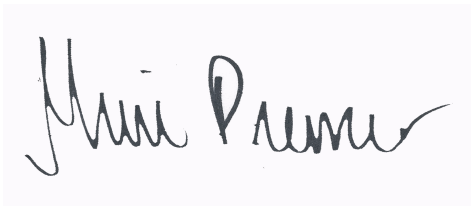
Denver, CO 80203

RE: LH#1, Edwards 16U Tank Battery

Work Order #2111236

Enclosed are the results of analyses for samples received by Summit Scientific on 11/12/21 16:20. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

A handwritten signature in black ink, appearing to read "Muri Premier", is displayed on a light purple rectangular background.

Muri Premier For Paul Shrewsbury
President



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

Project: LH#1, Edwards 16U Tank Battery
Project Number: [none]
Project Manager: Mark Longhurst

Reported:
11/19/21 13:21

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
SS38@29'	2111236-01	Soil	11/12/21 10:00	11/12/21 16:20
SS39@35'	2111236-02	Soil	11/12/21 11:45	11/12/21 16:20
SS40@32'	2111236-03	Soil	11/12/21 13:29	11/12/21 16:20
SS41@8'	2111236-04	Soil	11/12/21 13:30	11/12/21 16:20
SS42@18'	2111236-05	Soil	11/12/21 13:31	11/12/21 16:20
SS43@28'	2111236-06	Soil	11/12/21 13:32	11/12/21 16:20
SS44@18'	2111236-07	Soil	11/12/21 14:30	11/12/21 16:20
SS45@28'	2111236-08	Soil	11/12/21 14:31	11/12/21 16:20
SS46@32'	2111236-09	Soil	11/12/21 14:52	11/12/21 16:20

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.

Summit Scientific

S₂

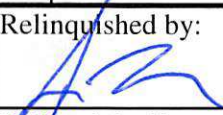
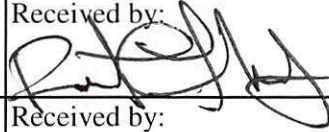
211236

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: L-H #1, Edwards 16V Tank Battery
Sampler Name: J. Marcus Project Number: 019

ID	Sample Description	Date Sampled	Time Sampled	# of containers	Preservative				Matrix				Analysis Requested							Special Instructions	
					HCl	HNO ₃	None	Other	Water	Soil	Air-Canister #	Other	BTEXN - 8260B	TPH - (C6 - C36)	1,2,4 & 1,3,5-TMB	Boron - HWS	pH, EC, SAR				
1	5538@29'	11/12/21	1000	2			X			X				X	X	X			X	X	pH, EC, SAR by saturated paste M=ethyl naphthalene
2	5539@35'		1145	2			X			X				X	X	X			X	X	
3	5540@32'		1329	2			X			X				X	X	X			X	X	
4	5541@8'		1330	2			X			X				X	X	X			X	X	
5	5542@18'		1331	2			X			X				X	X	X			X	X	
6	5543@28'		1332	2			X			X				X	X	X			X	X	
7	5544@18'		1430	2			X			X				X	X	X			X	X	
8	5545@28'		1431	2			X			X				X	X	X			X	X	
9	5546@32'		1752	2			X			X				X	X	X			X	X	
10																					

Relinquished by: 	Date/Time: 11/12/21 1620	Received by: Tasman's Lock Box	Date/Time: 11/12/21 1620	Turn Around Time (Check) Same Day <input checked="" type="checkbox"/> 72 hours ___ 24 hours ___ Standard ___ 48 hours ___ Sample Integrity: Temperature Upon Receipt: 8.6 Samples Intact: <input checked="" type="checkbox"/> Yes No	Notes:
Relinquished by: Tasman's Lock Box	Date/Time:	Received by: 	Date/Time: 11-12-21 1620		
Relinquished by:	Date/Time:	Received by:	Date/Time:		

S₂

Sample Receipt Checklist

S2 Work Order#

2111236

Client: Pbc/TasmanClient Project ID: L-H#1, Edwards 116v Tank BatteryShipped Via: ☐ H.D./P.U./FedEx/UPS/USPS/Other

Airbill #:

☐ ☒ ☐ ☐ ☐

Matrix (check all that apply):

☐

Air

☒

Soil/Solid

☐

Water

☐

Other:

(Describe)

Temp (°C)

8.6

Thermometer ID: G86A9201901378

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

Additional Comments (if any):

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

Custodian Printed Name or Initials

Date/Time

11.12.21



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

Project: LH#1, Edwards 16U Tank Battery
Project Number: [none]
Project Manager: Mark Longhurst

Reported:
11/19/21 13:21

SS38@29'
2111236-01 (Soil)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **11/12/21 10:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Benzene	ND	0.0020	mg/kg	1	BEK0301	11/12/21	11/13/21	EPA 8260B	
Toluene	ND	0.0050	"	"	"	"	"	"	
Ethylbenzene	ND	0.0050	"	"	"	"	"	"	
Xylenes (total)	ND	0.010	"	"	"	"	"	"	
1,2,4-Trimethylbenzene	ND	0.0050	"	"	"	"	"	"	
1,3,5-Trimethylbenzene	ND	0.0050	"	"	"	"	"	"	
Naphthalene	ND	0.0038	"	"	"	"	"	"	
Gasoline Range Hydrocarbons	ND	0.50	"	"	"	"	"	"	

Date Sampled: **11/12/21 10:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 1,2-Dichloroethane-d4		105 %	23-173		"	"	"	"	
Surrogate: Toluene-d8		116 %	20-170		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		97.0 %	21-167		"	"	"	"	

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **11/12/21 10:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
C10-C28 (DRO)	ND	50	mg/kg	1	BEK0300	11/12/21	11/13/21	EPA 8015M	
C28-C36 (ORO)	ND	50	"	"	"	"	"	"	

Date Sampled: **11/12/21 10:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: o-Terphenyl		97.2 %	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: LH#1, Edwards 16U Tank Battery
Project Number: [none]
Project Manager: Mark Longhurst

Reported:
11/19/21 13:21

SS38@29'
2111236-01 (Soil)

Summit Scientific

PAH by EPA Method 8270D SIM

Date Sampled: **11/12/21 10:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Fluorene	ND	0.00500	mg/kg	1	BEK0307	11/15/21	11/16/21	EPA 8270D SIM	
1-Methylnaphthalene	ND	0.00500	"	"	"	"	"	"	
2-Methylnaphthalene	ND	0.00500	"	"	"	"	"	"	

Date Sampled: **11/12/21 10:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 2-Methylnaphthalene-d10		67.9 %	40-150		"	"	"	"	
Surrogate: Fluoranthene-d10		58.4 %	40-150		"	"	"	"	

Summit Scientific

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



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

Project: LH#1, Edwards 16U Tank Battery
Project Number: [none]
Project Manager: Mark Longhurst

Reported:
11/19/21 13:21

SS39@35'
2111236-02 (Soil)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **11/12/21 11:45**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Benzene	ND	0.0020	mg/kg	1	BEK0301	11/12/21	11/13/21	EPA 8260B	
Toluene	ND	0.0050	"	"	"	"	"	"	
Ethylbenzene	ND	0.0050	"	"	"	"	"	"	
Xylenes (total)	ND	0.010	"	"	"	"	"	"	
1,2,4-Trimethylbenzene	ND	0.0050	"	"	"	"	"	"	
1,3,5-Trimethylbenzene	ND	0.0050	"	"	"	"	"	"	
Naphthalene	ND	0.0038	"	"	"	"	"	"	
Gasoline Range Hydrocarbons	ND	0.50	"	"	"	"	"	"	

Date Sampled: **11/12/21 11:45**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: 1,2-Dichloroethane-d4		117 %	23-173		"	"	"	"	
Surrogate: Toluene-d8		124 %	20-170		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		104 %	21-167		"	"	"	"	

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **11/12/21 11:45**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
C10-C28 (DRO)	ND	50	mg/kg	1	BEK0300	11/12/21	11/13/21	EPA 8015M	
C28-C36 (ORO)	ND	50	"	"	"	"	"	"	

Date Sampled: **11/12/21 11:45**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: o-Terphenyl		89.5 %	30-150		"	"	"	"	

PAH by EPA Method 8270D SIM

Summit Scientific

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



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

Project: LH#1, Edwards 16U Tank Battery
Project Number: [none]
Project Manager: Mark Longhurst

Reported:
11/19/21 13:21

SS39@35'
2111236-02 (Soil)

Summit Scientific

PAH by EPA Method 8270D SIM

Date Sampled: **11/12/21 11:45**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Fluorene	ND	0.00500	mg/kg	1	BEK0307	11/15/21	11/16/21	EPA 8270D SIM	
1-Methylnaphthalene	ND	0.00500	"	"	"	"	"	"	
2-Methylnaphthalene	ND	0.00500	"	"	"	"	"	"	

Date Sampled: **11/12/21 11:45**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: 2-Methylnaphthalene-d10		71.3 %	40-150		"	"	"	"	
Surrogate: Fluoranthene-d10		66.7 %	40-150		"	"	"	"	

Summit Scientific

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



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

Project: LH#1, Edwards 16U Tank Battery
Project Number: [none]
Project Manager: Mark Longhurst

Reported:
11/19/21 13:21

SS40@32'
2111236-03 (Soil)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **11/12/21 13:29**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Benzene	ND	0.0020	mg/kg	1	BEK0301	11/12/21	11/13/21	EPA 8260B	
Toluene	ND	0.0050	"	"	"	"	"	"	
Ethylbenzene	ND	0.0050	"	"	"	"	"	"	
Xylenes (total)	ND	0.010	"	"	"	"	"	"	
1,2,4-Trimethylbenzene	ND	0.0050	"	"	"	"	"	"	
1,3,5-Trimethylbenzene	ND	0.0050	"	"	"	"	"	"	
Naphthalene	ND	0.0038	"	"	"	"	"	"	
Gasoline Range Hydrocarbons	ND	0.50	"	"	"	"	"	"	

Date Sampled: **11/12/21 13:29**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: 1,2-Dichloroethane-d4		112 %	23-173		"	"	"	"	
Surrogate: Toluene-d8		119 %	20-170		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		101 %	21-167		"	"	"	"	

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **11/12/21 13:29**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
C10-C28 (DRO)	ND	50	mg/kg	1	BEK0300	11/12/21	11/13/21	EPA 8015M	
C28-C36 (ORO)	ND	50	"	"	"	"	"	"	

Date Sampled: **11/12/21 13:29**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: o-Terphenyl		91.1 %	30-150		"	"	"	"	

PAH by EPA Method 8270D SIM

Summit Scientific

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



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

Project: LH#1, Edwards 16U Tank Battery
Project Number: [none]
Project Manager: Mark Longhurst

Reported:
11/19/21 13:21

SS40@32'
2111236-03 (Soil)

Summit Scientific

PAH by EPA Method 8270D SIM

Date Sampled: **11/12/21 13:29**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Fluorene	ND	0.00500	mg/kg	1	BEK0307	11/15/21	11/16/21	EPA 8270D SIM	
1-Methylnaphthalene	ND	0.00500	"	"	"	"	"	"	
2-Methylnaphthalene	ND	0.00500	"	"	"	"	"	"	

Date Sampled: **11/12/21 13:29**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 2-Methylnaphthalene-d10		75.7 %	40-150		"	"	"	"	
Surrogate: Fluoranthene-d10		70.2 %	40-150		"	"	"	"	

Summit Scientific

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



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

Project: LH#1, Edwards 16U Tank Battery
Project Number: [none]
Project Manager: Mark Longhurst

Reported:
11/19/21 13:21

SS41@8'
2111236-04 (Soil)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **11/12/21 13:30**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Benzene	ND	0.0020	mg/kg	1	BEK0301	11/12/21	11/13/21	EPA 8260B	
Toluene	ND	0.0050	"	"	"	"	"	"	
Ethylbenzene	ND	0.0050	"	"	"	"	"	"	
Xylenes (total)	ND	0.010	"	"	"	"	"	"	
1,2,4-Trimethylbenzene	ND	0.0050	"	"	"	"	"	"	
1,3,5-Trimethylbenzene	ND	0.0050	"	"	"	"	"	"	
Naphthalene	ND	0.0038	"	"	"	"	"	"	
Gasoline Range Hydrocarbons	ND	0.50	"	"	"	"	"	"	

Date Sampled: **11/12/21 13:30**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: 1,2-Dichloroethane-d4		107 %	23-173		"	"	"	"	
Surrogate: Toluene-d8		117 %	20-170		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		102 %	21-167		"	"	"	"	

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **11/12/21 13:30**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
C10-C28 (DRO)	ND	50	mg/kg	1	BEK0300	11/12/21	11/13/21	EPA 8015M	
C28-C36 (ORO)	ND	50	"	"	"	"	"	"	

Date Sampled: **11/12/21 13:30**

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

PAH by EPA Method 8270D SIM

Summit Scientific

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

Project: LH#1, Edwards 16U Tank Battery
Project Number: [none]
Project Manager: Mark Longhurst

Reported:
11/19/21 13:21

SS41@8'
2111236-04 (Soil)

Summit Scientific

PAH by EPA Method 8270D SIM

Date Sampled: **11/12/21 13:30**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Fluorene	ND	0.00500	mg/kg	1	BEK0307	11/15/21	11/16/21	EPA 8270D SIM	
1-Methylnaphthalene	ND	0.00500	"	"	"	"	"	"	
2-Methylnaphthalene	ND	0.00500	"	"	"	"	"	"	

Date Sampled: **11/12/21 13:30**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: 2-Methylnaphthalene-d10		66.8 %	40-150		"	"	"	"	
Surrogate: Fluoranthene-d10		67.9 %	40-150		"	"	"	"	

Summit Scientific

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

Project: LH#1, Edwards 16U Tank Battery
Project Number: [none]
Project Manager: Mark Longhurst

Reported:
11/19/21 13:21

SS42@18'
2111236-05 (Soil)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **11/12/21 13:31**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Benzene	ND	0.0020	mg/kg	1	BEK0301	11/12/21	11/13/21	EPA 8260B	
Toluene	ND	0.0050	"	"	"	"	"	"	
Ethylbenzene	ND	0.0050	"	"	"	"	"	"	
Xylenes (total)	ND	0.010	"	"	"	"	"	"	
1,2,4-Trimethylbenzene	ND	0.0050	"	"	"	"	"	"	
1,3,5-Trimethylbenzene	ND	0.0050	"	"	"	"	"	"	
Naphthalene	ND	0.0038	"	"	"	"	"	"	
Gasoline Range Hydrocarbons	ND	0.50	"	"	"	"	"	"	

Date Sampled: **11/12/21 13:31**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: 1,2-Dichloroethane-d4		110 %	23-173		"	"	"	"	
Surrogate: Toluene-d8		118 %	20-170		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		99.4 %	21-167		"	"	"	"	

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **11/12/21 13:31**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
C10-C28 (DRO)	ND	50	mg/kg	1	BEK0300	11/12/21	11/13/21	EPA 8015M	
C28-C36 (ORO)	ND	50	"	"	"	"	"	"	

Date Sampled: **11/12/21 13:31**

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

PAH by EPA Method 8270D SIM

Summit Scientific

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

Project: LH#1, Edwards 16U Tank Battery
Project Number: [none]
Project Manager: Mark Longhurst

Reported:
11/19/21 13:21

SS42@18'
2111236-05 (Soil)

Summit Scientific

PAH by EPA Method 8270D SIM

Date Sampled: **11/12/21 13:31**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Fluorene	ND	0.00500	mg/kg	1	BEK0307	11/15/21	11/17/21	EPA 8270D SIM	
1-Methylnaphthalene	ND	0.00500	"	"	"	"	"	"	
2-Methylnaphthalene	ND	0.00500	"	"	"	"	"	"	

Date Sampled: **11/12/21 13:31**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 2-Methylnaphthalene-d10		88.7 %	40-150		"	"	"	"	
Surrogate: Fluoranthene-d10		80.5 %	40-150		"	"	"	"	

Summit Scientific

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

Project: LH#1, Edwards 16U Tank Battery
Project Number: [none]
Project Manager: Mark Longhurst

Reported:
11/19/21 13:21

SS43@28'
2111236-06 (Soil)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **11/12/21 13:32**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Benzene	ND	0.0020	mg/kg	1	BEK0301	11/12/21	11/13/21	EPA 8260B	
Toluene	ND	0.0050	"	"	"	"	"	"	
Ethylbenzene	ND	0.0050	"	"	"	"	"	"	
Xylenes (total)	ND	0.010	"	"	"	"	"	"	
1,2,4-Trimethylbenzene	ND	0.0050	"	"	"	"	"	"	
1,3,5-Trimethylbenzene	ND	0.0050	"	"	"	"	"	"	
Naphthalene	ND	0.0038	"	"	"	"	"	"	
Gasoline Range Hydrocarbons	ND	0.50	"	"	"	"	"	"	

Date Sampled: **11/12/21 13:32**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: 1,2-Dichloroethane-d4		114 %	23-173		"	"	"	"	
Surrogate: Toluene-d8		118 %	20-170		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		97.6 %	21-167		"	"	"	"	

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **11/12/21 13:32**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
C10-C28 (DRO)	ND	50	mg/kg	1	BEK0300	11/12/21	11/13/21	EPA 8015M	
C28-C36 (ORO)	ND	50	"	"	"	"	"	"	

Date Sampled: **11/12/21 13:32**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
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: LH#1, Edwards 16U Tank Battery
Project Number: [none]
Project Manager: Mark Longhurst

Reported:
11/19/21 13:21

SS43@28'
2111236-06 (Soil)

Summit Scientific

PAH by EPA Method 8270D SIM

Date Sampled: **11/12/21 13:32**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Fluorene	ND	0.00500	mg/kg	1	BEK0307	11/15/21	11/17/21	EPA 8270D SIM	
1-Methylnaphthalene	ND	0.00500	"	"	"	"	"	"	
2-Methylnaphthalene	ND	0.00500	"	"	"	"	"	"	

Date Sampled: **11/12/21 13:32**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 2-Methylnaphthalene-d10		71.0 %	40-150		"	"	"	"	
Surrogate: Fluoranthene-d10		65.7 %	40-150		"	"	"	"	

Summit Scientific

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

Project: LH#1, Edwards 16U Tank Battery
Project Number: [none]
Project Manager: Mark Longhurst

Reported:
11/19/21 13:21

SS44@18'
2111236-07 (Soil)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **11/12/21 14:30**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Benzene	ND	0.0020	mg/kg	1	BEK0301	11/12/21	11/13/21	EPA 8260B	
Toluene	ND	0.0050	"	"	"	"	"	"	
Ethylbenzene	ND	0.0050	"	"	"	"	"	"	
Xylenes (total)	ND	0.010	"	"	"	"	"	"	
1,2,4-Trimethylbenzene	ND	0.0050	"	"	"	"	"	"	
1,3,5-Trimethylbenzene	ND	0.0050	"	"	"	"	"	"	
Naphthalene	ND	0.0038	"	"	"	"	"	"	
Gasoline Range Hydrocarbons	ND	0.50	"	"	"	"	"	"	

Date Sampled: **11/12/21 14:30**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: 1,2-Dichloroethane-d4		110 %	23-173		"	"	"	"	
Surrogate: Toluene-d8		117 %	20-170		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		97.4 %	21-167		"	"	"	"	

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **11/12/21 14:30**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
C10-C28 (DRO)	ND	50	mg/kg	1	BEK0300	11/12/21	11/13/21	EPA 8015M	
C28-C36 (ORO)	ND	50	"	"	"	"	"	"	

Date Sampled: **11/12/21 14:30**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: o-Terphenyl		86.2 %	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: LH#1, Edwards 16U Tank Battery
Project Number: [none]
Project Manager: Mark Longhurst

Reported:
11/19/21 13:21

SS44@18'
2111236-07 (Soil)

Summit Scientific

PAH by EPA Method 8270D SIM

Date Sampled: **11/12/21 14:30**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Fluorene	ND	0.00500	mg/kg	1	BEK0307	11/15/21	11/17/21	EPA 8270D SIM	
1-Methylnaphthalene	ND	0.00500	"	"	"	"	"	"	
2-Methylnaphthalene	ND	0.00500	"	"	"	"	"	"	

Date Sampled: **11/12/21 14:30**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: 2-Methylnaphthalene-d10		57.1 %	40-150		"	"	"	"	
Surrogate: Fluoranthene-d10		58.1 %	40-150		"	"	"	"	

Summit Scientific

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



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

Project: LH#1, Edwards 16U Tank Battery
Project Number: [none]
Project Manager: Mark Longhurst

Reported:
11/19/21 13:21

SS45@28'
2111236-08 (Soil)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **11/12/21 14:31**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Benzene	ND	0.0020	mg/kg	1	BEK0301	11/12/21	11/13/21	EPA 8260B	
Toluene	ND	0.0050	"	"	"	"	"	"	
Ethylbenzene	ND	0.0050	"	"	"	"	"	"	
Xylenes (total)	ND	0.010	"	"	"	"	"	"	
1,2,4-Trimethylbenzene	ND	0.0050	"	"	"	"	"	"	
1,3,5-Trimethylbenzene	ND	0.0050	"	"	"	"	"	"	
Naphthalene	ND	0.0038	"	"	"	"	"	"	
Gasoline Range Hydrocarbons	ND	0.50	"	"	"	"	"	"	

Date Sampled: **11/12/21 14:31**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: 1,2-Dichloroethane-d4		110 %	23-173		"	"	"	"	
Surrogate: Toluene-d8		118 %	20-170		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		97.7 %	21-167		"	"	"	"	

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **11/12/21 14:31**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
C10-C28 (DRO)	ND	50	mg/kg	1	BEK0300	11/12/21	11/13/21	EPA 8015M	
C28-C36 (ORO)	ND	50	"	"	"	"	"	"	

Date Sampled: **11/12/21 14:31**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: o-Terphenyl		90.3 %	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: LH#1, Edwards 16U Tank Battery
Project Number: [none]
Project Manager: Mark Longhurst

Reported:
11/19/21 13:21

SS45@28'
2111236-08 (Soil)

Summit Scientific

PAH by EPA Method 8270D SIM

Date Sampled: **11/12/21 14:31**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Fluorene	ND	0.00500	mg/kg	1	BEK0307	11/15/21	11/17/21	EPA 8270D SIM	
1-Methylnaphthalene	ND	0.00500	"	"	"	"	"	"	
2-Methylnaphthalene	ND	0.00500	"	"	"	"	"	"	

Date Sampled: **11/12/21 14:31**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 2-Methylnaphthalene-d10		62.4 %	40-150		"	"	"	"	
Surrogate: Fluoranthene-d10		63.1 %	40-150		"	"	"	"	

Summit Scientific

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



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

Project: LH#1, Edwards 16U Tank Battery
Project Number: [none]
Project Manager: Mark Longhurst

Reported:
11/19/21 13:21

SS46@32'
2111236-09 (Soil)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **11/12/21 14:52**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Benzene	ND	0.0020	mg/kg	1	BEK0301	11/12/21	11/13/21	EPA 8260B	
Toluene	ND	0.0050	"	"	"	"	"	"	
Ethylbenzene	ND	0.0050	"	"	"	"	"	"	
Xylenes (total)	ND	0.010	"	"	"	"	"	"	
1,2,4-Trimethylbenzene	ND	0.0050	"	"	"	"	"	"	
1,3,5-Trimethylbenzene	ND	0.0050	"	"	"	"	"	"	
Naphthalene	ND	0.0038	"	"	"	"	"	"	
Gasoline Range Hydrocarbons	ND	0.50	"	"	"	"	"	"	

Date Sampled: **11/12/21 14:52**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 1,2-Dichloroethane-d4		109 %	23-173		"	"	"	"	
Surrogate: Toluene-d8		119 %	20-170		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		97.6 %	21-167		"	"	"	"	

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **11/12/21 14:52**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
C10-C28 (DRO)	ND	50	mg/kg	1	BEK0300	11/12/21	11/13/21	EPA 8015M	
C28-C36 (ORO)	ND	50	"	"	"	"	"	"	

Date Sampled: **11/12/21 14:52**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: o-Terphenyl		98.9 %	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: LH#1, Edwards 16U Tank Battery
Project Number: [none]
Project Manager: Mark Longhurst

Reported:
11/19/21 13:21

SS46@32'
2111236-09 (Soil)

Summit Scientific

PAH by EPA Method 8270D SIM

Date Sampled: **11/12/21 14:52**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Fluorene	ND	0.00500	mg/kg	1	BEK0307	11/15/21	11/17/21	EPA 8270D SIM	
1-Methylnaphthalene	ND	0.00500	"	"	"	"	"	"	
2-Methylnaphthalene	ND	0.00500	"	"	"	"	"	"	

Date Sampled: **11/12/21 14:52**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 2-Methylnaphthalene-d10		71.3 %	40-150		"	"	"	"	
Surrogate: Fluoranthene-d10		70.4 %	40-150		"	"	"	"	

Summit Scientific

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

Project: LH#1, Edwards 16U Tank Battery

Project Number: [none]
Project Manager: Mark Longhurst

Reported:
11/19/21 13:21

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 BEK0301 - EPA 5030 Soil MS

Blank (BEK0301-BLK1)

Prepared & Analyzed: 11/12/21

Benzene	ND	0.0020	mg/kg							
Toluene	ND	0.0050	"							
Ethylbenzene	ND	0.0050	"							
Xylenes (total)	ND	0.010	"							
1,2,4-Trimethylbenzene	ND	0.0050	"							
1,3,5-Trimethylbenzene	ND	0.0050	"							
Naphthalene	ND	0.0038	"							
Gasoline Range Hydrocarbons	ND	0.50	"							
Surrogate: 1,2-Dichloroethane-d4	0.0393		"	0.0400		98.2	23-173			
Surrogate: Toluene-d8	0.0465		"	0.0400		116	20-170			
Surrogate: 4-Bromofluorobenzene	0.0389		"	0.0400		97.3	21-167			

LCS (BEK0301-BS1)

Prepared & Analyzed: 11/12/21

Benzene	0.0663	0.0020	mg/kg	0.0750		88.4	70-130			
Toluene	0.0969	0.0050	"	0.0750		129	70-130			
Ethylbenzene	0.0742	0.0050	"	0.0750		99.0	70-130			
m,p-Xylene	0.152	0.010	"	0.150		102	70-130			
o-Xylene	0.0746	0.0050	"	0.0750		99.5	70-130			
1,2,4-Trimethylbenzene	0.0731	0.0050	"	0.0750		97.5	70-130			
1,3,5-Trimethylbenzene	0.0728	0.0050	"	0.0750		97.0	70-130			
Naphthalene	0.0644	0.0038	"	0.0750		85.9	70-130			
Surrogate: 1,2-Dichloroethane-d4	0.0407		"	0.0400		102	23-173			
Surrogate: Toluene-d8	0.0462		"	0.0400		115	20-170			
Surrogate: 4-Bromofluorobenzene	0.0406		"	0.0400		101	21-167			

Matrix Spike (BEK0301-MS1)

Source: 2111232-02

Prepared & Analyzed: 11/12/21

Benzene	0.0663	0.0020	mg/kg	0.0750	ND	88.4	70-130			
Toluene	0.0924	0.0050	"	0.0750	ND	123	70-130			
Ethylbenzene	0.0724	0.0050	"	0.0750	ND	96.6	70-130			
m,p-Xylene	0.147	0.010	"	0.150	ND	97.9	70-130			
o-Xylene	0.0742	0.0050	"	0.0750	ND	98.9	70-130			
1,2,4-Trimethylbenzene	0.0736	0.0050	"	0.0750	ND	98.2	70-130			
1,3,5-Trimethylbenzene	0.0715	0.0050	"	0.0750	ND	95.3	70-130			
Naphthalene	0.0745	0.0038	"	0.0750	ND	99.4	70-130			
Surrogate: 1,2-Dichloroethane-d4	0.0406		"	0.0400		101	23-173			
Surrogate: Toluene-d8	0.0470		"	0.0400		117	20-170			
Surrogate: 4-Bromofluorobenzene	0.0432		"	0.0400		108	21-167			

Summit Scientific

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



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

Project: LH#1, Edwards 16U Tank Battery
Project Number: [none]
Project Manager: Mark Longhurst

Reported:
11/19/21 13:21

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 BEK0301 - EPA 5030 Soil MS

Matrix Spike Dup (BEK0301-MSD1)	Source: 2111232-02			Prepared & Analyzed: 11/12/21						
Benzene	0.0664	0.0020	mg/kg	0.0750	ND	88.6	70-130	0.271	30	
Toluene	0.0908	0.0050	"	0.0750	ND	121	70-130	1.83	30	
Ethylbenzene	0.0752	0.0050	"	0.0750	ND	100	70-130	3.70	30	
m,p-Xylene	0.153	0.010	"	0.150	ND	102	70-130	4.14	30	
o-Xylene	0.0766	0.0050	"	0.0750	ND	102	70-130	3.18	30	
1,2,4-Trimethylbenzene	0.0783	0.0050	"	0.0750	ND	104	70-130	6.20	30	
1,3,5-Trimethylbenzene	0.0756	0.0050	"	0.0750	ND	101	70-130	5.55	30	
Naphthalene	0.0778	0.0038	"	0.0750	ND	104	70-130	4.26	30	
Surrogate: 1,2-Dichloroethane-d4	0.0414		"	0.0400		104	23-173			
Surrogate: Toluene-d8	0.0472		"	0.0400		118	20-170			
Surrogate: 4-Bromofluorobenzene	0.0440		"	0.0400		110	21-167			

Summit Scientific

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



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

Project: LH#1, Edwards 16U Tank Battery
Project Number: [none]
Project Manager: Mark Longhurst

Reported:
11/19/21 13:21

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 BEK0300 - EPA 3550A

Blank (BEK0300-BLK1)

Prepared: 11/12/21 Analyzed: 11/13/21

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

LCS (BEK0300-BS1)

Prepared: 11/12/21 Analyzed: 11/13/21

C10-C28 (DRO)	407	50	mg/kg	500	81.5	70-130
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Matrix Spike (BEK0300-MS1)

Source: 2111232-02

Prepared: 11/12/21 Analyzed: 11/13/21

C10-C28 (DRO)	476	50	mg/kg	500	43.8	86.5	70-130
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Matrix Spike Dup (BEK0300-MSD1)

Source: 2111232-02

Prepared: 11/12/21 Analyzed: 11/13/21

C10-C28 (DRO)	455	50	mg/kg	500	43.8	82.2	70-130	4.66	20
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Summit Scientific

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

Project: LH#1, Edwards 16U Tank Battery
Project Number: [none]
Project Manager: Mark Longhurst

Reported:
11/19/21 13:21

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 BEK0307 - EPA 5030 Soil MS

Blank (BEK0307-BLK1)

Prepared: 11/15/21 Analyzed: 11/16/21

Fluorene	ND	0.00500	mg/kg							
1-Methylnaphthalene	ND	0.00500	"							
2-Methylnaphthalene	ND	0.00500	"							
Surrogate: 2-Methylnaphthalene-d10	0.0236		"	0.0333		70.9	40-150			
Surrogate: Fluoranthene-d10	0.0268		"	0.0333		80.5	40-150			

LCS (BEK0307-BS1)

Prepared: 11/15/21 Analyzed: 11/16/21

Fluorene	0.0364	0.00500	mg/kg	0.0333		109	30-120			
1-Methylnaphthalene	0.0328	0.00500	"	0.0333		98.5	35-142			
2-Methylnaphthalene	0.0335	0.00500	"	0.0333		100	35-142			
Surrogate: 2-Methylnaphthalene-d10	0.0353		"	0.0333		106	40-150			
Surrogate: Fluoranthene-d10	0.0373		"	0.0333		112	40-150			

Matrix Spike (BEK0307-MS1)

Source: 2111173-01

Prepared: 11/15/21 Analyzed: 11/16/21

Fluorene	0.0285	0.00500	mg/kg	0.0333	ND	85.6	30-120			
1-Methylnaphthalene	0.0265	0.00500	"	0.0333	ND	79.4	15-130			
2-Methylnaphthalene	0.0287	0.00500	"	0.0333	ND	86.2	15-130			
Surrogate: 2-Methylnaphthalene-d10	0.0290		"	0.0333		86.9	40-150			
Surrogate: Fluoranthene-d10	0.0324		"	0.0333		97.3	40-150			

Matrix Spike Dup (BEK0307-MSD1)

Source: 2111173-01

Prepared: 11/15/21 Analyzed: 11/16/21

Fluorene	0.0304	0.00500	mg/kg	0.0333	ND	91.1	30-120	6.21	30	
1-Methylnaphthalene	0.0299	0.00500	"	0.0333	ND	89.8	15-130	12.3	50	
2-Methylnaphthalene	0.0321	0.00500	"	0.0333	ND	96.4	15-130	11.2	50	
Surrogate: 2-Methylnaphthalene-d10	0.0320		"	0.0333		96.0	40-150			
Surrogate: Fluoranthene-d10	0.0309		"	0.0333		92.7	40-150			

Summit Scientific

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

Project: LH#1, Edwards 16U Tank Battery

Project Number: [none]
Project Manager: Mark Longhurst

Reported:
11/19/21 13:21

Notes and Definitions

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

Summit Scientific

4653 Table Mountain Drive, Golden, Colorado 80403

303.277.9310

November 23, 2021

Mark Longhurst

PDC Energy

1775 Sherman St. STE. 3000

Denver, CO 80203

RE: LH#1, Edwards 16U Tank Battery

Work Order #2111264

Enclosed are the results of analyses for samples received by Summit Scientific on 11/15/21 16:00. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

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

Muri Premier For Paul Shrewsbury
President



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

Project: LH#1, Edwards 16U Tank Battery
Project Number: [none]
Project Manager: Mark Longhurst

Reported:
11/23/21 16:33

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
SS47@18'	2111264-01	Soil	11/15/21 09:29	11/15/21 16:00
SS48@28'	2111264-02	Soil	11/15/21 09:30	11/15/21 16:00
SS49@32'	2111264-03	Soil	11/15/21 09:31	11/15/21 16:00
SS50@2.5'	2111264-04	Soil	11/15/21 11:11	11/15/21 16:00

Summit Scientific

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

Summit Scientific

S₂

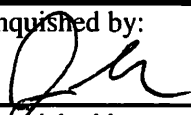
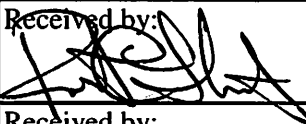
211264

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: L-H #1, Edwards 16U Tank Battery/
Sampler Name: J. Marcus Project Number: N/A

ID	Sample Description	Date Sampled	Time Sampled	# of containers	Preservative				Matrix				Analysis Requested								Special Instructions
					HCl	HNO ₃	None	Other	Water	Soil	Air-Canister #	Other	BTEXN - 8260B	TPH - (C6 - C36)	1,2,4 & 1,3,5-TMB	Boron - HWS	pH, EC, SAR	Fluorene	1-M, 2-M	ON Hold	
1	SS47@18'	11/15/21	0429	2			X			X			X	X	X			X	X		pH, EC, SAR by saturated paste M = methylnaphthalene
2	SS48@28'		0430	2			X			X			X	X	X			X	X		
3	SS49@32'		0431	2			X			X			X	X	X			X	X		
4	SS50@2.5'		1111	1			X			X						X	X				
5	BK601@2.5'		0846	1			X			X										X	
6	BK602@2.5'		1022	1			X			X										X	
7																					
8																					
9																					
10																					

Relinquished by: 	Date/Time: 11/15/21 1600	Received by: Tasman's Lock Box	Date/Time: 11/15/21 1600	Turn Around Time (Check) Same Day <input checked="" type="checkbox"/> 72 hours <input type="checkbox"/> 24 hours <input type="checkbox"/> Standard <input type="checkbox"/> 48 hours <input type="checkbox"/> Sample Integrity: Temperature Upon Receipt: 5.2 Samples Intact: <input checked="" type="radio"/> Yes <input type="radio"/> No	Notes:
Relinquished by: Tasman's Lock Box	Date/Time:	Received by: 	Date/Time: 11/15/21 1600		
Relinquished by:	Date/Time:	Received by:	Date/Time:		

S₂

Sample Receipt Checklist

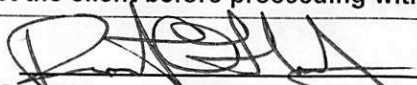
S2 Work Order# _____

2111264

Client: Pod/Tasman Client Project ID: LH#1 Edwards 11ev Tank BatteryShipped Via: ☐ H.D./P.U./FedEx/UPS/USPS/Other _____ Airbill #: _____Matrix (check all that apply): ☐ Air ☒ Soil/Solid ☐ Water ☐ Other: _____
(Describe)Temp (°C) 5.2

Thermometer ID: G86A9201901378

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


 Custodian Printed Name or Initials

11.15.21
 Date/Time



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

Project: LH#1, Edwards 16U Tank Battery
Project Number: [none]
Project Manager: Mark Longhurst

Reported:
11/23/21 16:33

SS47@18'
2111264-01 (Soil)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **11/15/21 09:29**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Benzene	ND	0.0020	mg/kg	1	BEK0338	11/15/21	11/15/21	EPA 8260B	
Toluene	ND	0.0050	"	"	"	"	"	"	
Ethylbenzene	ND	0.0050	"	"	"	"	"	"	
Xylenes (total)	ND	0.010	"	"	"	"	"	"	
1,2,4-Trimethylbenzene	ND	0.0050	"	"	"	"	"	"	
1,3,5-Trimethylbenzene	ND	0.0050	"	"	"	"	"	"	
Naphthalene	ND	0.0038	"	"	"	"	"	"	
Gasoline Range Hydrocarbons	ND	0.50	"	"	"	"	"	"	

Date Sampled: **11/15/21 09:29**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 1,2-Dichloroethane-d4		105 %	23-173		"	"	"	"	
Surrogate: Toluene-d8		112 %	20-170		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		96.1 %	21-167		"	"	"	"	

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **11/15/21 09:29**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
C10-C28 (DRO)	ND	50	mg/kg	1	BEK0339	"	11/15/21	EPA 8015M	
C28-C36 (ORO)	ND	50	"	"	"	"	"	"	

Date Sampled: **11/15/21 09:29**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: o-Terphenyl		71.0 %	30-150		"	"	"	"	

PAH by EPA Method 8270D SIM

Summit Scientific

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



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

Project: LH#1, Edwards 16U Tank Battery
Project Number: [none]
Project Manager: Mark Longhurst

Reported:
11/23/21 16:33

SS47@18'
2111264-01 (Soil)

Summit Scientific

PAH by EPA Method 8270D SIM

Date Sampled: **11/15/21 09:29**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Fluorene	ND	0.00500	mg/kg	1	BEK0341	11/16/21	11/17/21	EPA 8270D SIM	
1-Methylnaphthalene	ND	0.00500	"	"	"	"	"	"	
2-Methylnaphthalene	ND	0.00500	"	"	"	"	"	"	

Date Sampled: **11/15/21 09:29**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: 2-Methylnaphthalene-d10		70.8 %	40-150		"	"	"	"	
Surrogate: Fluoranthene-d10		62.8 %	40-150		"	"	"	"	

Summit Scientific

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



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

Project: LH#1, Edwards 16U Tank Battery
Project Number: [none]
Project Manager: Mark Longhurst

Reported:
11/23/21 16:33

SS48@28'
2111264-02 (Soil)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **11/15/21 09:30**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Benzene	ND	0.0020	mg/kg	1	BEK0338	11/15/21	11/15/21	EPA 8260B	
Toluene	ND	0.0050	"	"	"	"	"	"	
Ethylbenzene	ND	0.0050	"	"	"	"	"	"	
Xylenes (total)	ND	0.010	"	"	"	"	"	"	
1,2,4-Trimethylbenzene	ND	0.0050	"	"	"	"	"	"	
1,3,5-Trimethylbenzene	ND	0.0050	"	"	"	"	"	"	
Naphthalene	ND	0.0038	"	"	"	"	"	"	
Gasoline Range Hydrocarbons	ND	0.50	"	"	"	"	"	"	

Date Sampled: **11/15/21 09:30**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: 1,2-Dichloroethane-d4		120 %	23-173		"	"	"	"	
Surrogate: Toluene-d8		138 %	20-170		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		129 %	21-167		"	"	"	"	

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **11/15/21 09:30**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
C10-C28 (DRO)	ND	50	mg/kg	1	BEK0339	"	11/16/21	EPA 8015M	
C28-C36 (ORO)	ND	50	"	"	"	"	"	"	

Date Sampled: **11/15/21 09:30**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: o-Terphenyl		68.2 %	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: LH#1, Edwards 16U Tank Battery
Project Number: [none]
Project Manager: Mark Longhurst

Reported:
11/23/21 16:33

SS48@28'
2111264-02 (Soil)

Summit Scientific

PAH by EPA Method 8270D SIM

Date Sampled: **11/15/21 09:30**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Fluorene	ND	0.00500	mg/kg	1	BEK0341	11/16/21	11/17/21	EPA 8270D SIM	
1-Methylnaphthalene	ND	0.00500	"	"	"	"	"	"	
2-Methylnaphthalene	ND	0.00500	"	"	"	"	"	"	

Date Sampled: **11/15/21 09:30**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 2-Methylnaphthalene-d10		60.8 %	40-150		"	"	"	"	
Surrogate: Fluoranthene-d10		61.5 %	40-150		"	"	"	"	

Summit Scientific

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

Project: LH#1, Edwards 16U Tank Battery
Project Number: [none]
Project Manager: Mark Longhurst

Reported:
11/23/21 16:33

SS49@32'
2111264-03 (Soil)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **11/15/21 09:31**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Benzene	ND	0.0020	mg/kg	1	BEK0338	11/15/21	11/15/21	EPA 8260B	
Toluene	ND	0.0050	"	"	"	"	"	"	
Ethylbenzene	ND	0.0050	"	"	"	"	"	"	
Xylenes (total)	ND	0.010	"	"	"	"	"	"	
1,2,4-Trimethylbenzene	ND	0.0050	"	"	"	"	"	"	
1,3,5-Trimethylbenzene	ND	0.0050	"	"	"	"	"	"	
Naphthalene	ND	0.0038	"	"	"	"	"	"	
Gasoline Range Hydrocarbons	ND	0.50	"	"	"	"	"	"	

Date Sampled: **11/15/21 09:31**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: 1,2-Dichloroethane-d4		126 %	23-173		"	"	"	"	
Surrogate: Toluene-d8		124 %	20-170		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		128 %	21-167		"	"	"	"	

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **11/15/21 09:31**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
C10-C28 (DRO)	ND	50	mg/kg	1	BEK0339	"	11/16/21	EPA 8015M	
C28-C36 (ORO)	ND	50	"	"	"	"	"	"	

Date Sampled: **11/15/21 09:31**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: o-Terphenyl		70.8 %	30-150		"	"	"	"	

PAH by EPA Method 8270D SIM

Summit Scientific

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

Project: LH#1, Edwards 16U Tank Battery
Project Number: [none]
Project Manager: Mark Longhurst

Reported:
11/23/21 16:33

SS49@32'
2111264-03 (Soil)

Summit Scientific

PAH by EPA Method 8270D SIM

Date Sampled: **11/15/21 09:31**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Fluorene	ND	0.00500	mg/kg	1	BEK0341	11/16/21	11/17/21	EPA 8270D SIM	
1-Methylnaphthalene	ND	0.00500	"	"	"	"	"	"	
2-Methylnaphthalene	ND	0.00500	"	"	"	"	"	"	

Date Sampled: **11/15/21 09:31**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: 2-Methylnaphthalene-d10		74.1 %	40-150		"	"	"	"	
Surrogate: Fluoranthene-d10		74.0 %	40-150		"	"	"	"	

Summit Scientific

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

Project: LH#1, Edwards 16U Tank Battery
Project Number: [none]
Project Manager: Mark Longhurst

Reported:
11/23/21 16:33

SS50@2.5'
2111264-04 (Soil)

Summit Scientific

Total Metals by EPA 6020B Hot Water Soluble Extraction

Date Sampled: **11/15/21 11:11**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Boron	ND	0.0100	mg/L	1	BEK0342	11/16/21	11/21/21	EPA 6020B	

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

Date Sampled: **11/15/21 11:11**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Calcium	87.5	0.0595	mg/L dry	1	BEK0340	11/15/21	11/22/21	EPA 6020B	
Magnesium	37.6	0.0595	"	"	"	"	"	"	
Sodium	12.2	0.0595	"	"	"	"	"	"	

Calculated Analysis

Date Sampled: **11/15/21 11:11**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	0.275	0.00100	units	1	BEK0504	11/23/21	11/23/21	Calculation	

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **11/15/21 11:11**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
% Solids	84.1		%	1	BEK0347	11/16/21	11/16/21	Calculation	

Specific Conductance by EPA Method 120.1, Saturated Paste Extraction

Date Sampled: **11/15/21 11:11**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Specific Conductance (EC)	0.695	0.0100	mmhos/cm	1	BEK0381	11/17/21	11/17/21	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: LH#1, Edwards 16U Tank Battery
Project Number: [none]
Project Manager: Mark Longhurst

Reported:
11/23/21 16:33

SS50@2.5'
2111264-04 (Soil)

Summit Scientific

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

Date Sampled: **11/15/21 11:11**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
pH	8.06			pH Units	1	BEK0380	11/17/21	11/17/21	EPA 9045D	

Summit Scientific

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

Project: LH#1, Edwards 16U Tank Battery

Project Number: [none]
Project Manager: Mark Longhurst

Reported:
11/23/21 16:33

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 BEK0338 - EPA 5030 Soil MS

Blank (BEK0338-BLK1)

Prepared & Analyzed: 11/15/21

Benzene	ND	0.0020	mg/kg							
Toluene	ND	0.0050	"							
Ethylbenzene	ND	0.0050	"							
Xylenes (total)	ND	0.010	"							
1,2,4-Trimethylbenzene	ND	0.0050	"							
1,3,5-Trimethylbenzene	ND	0.0050	"							
Naphthalene	ND	0.0038	"							
Gasoline Range Hydrocarbons	ND	0.50	"							
Surrogate: 1,2-Dichloroethane-d4	0.0439		"	0.0400		110	23-173			
Surrogate: Toluene-d8	0.0464		"	0.0400		116	20-170			
Surrogate: 4-Bromofluorobenzene	0.0405		"	0.0400		101	21-167			

LCS (BEK0338-BS1)

Prepared: 11/15/21 Analyzed: 11/16/21

Benzene	0.0658	0.0020	mg/kg	0.0750		87.8	70-130			
Toluene	0.0931	0.0050	"	0.0750		124	70-130			
Ethylbenzene	0.0718	0.0050	"	0.0750		95.7	70-130			
m,p-Xylene	0.146	0.010	"	0.150		97.6	70-130			
o-Xylene	0.0738	0.0050	"	0.0750		98.4	70-130			
1,2,4-Trimethylbenzene	0.0712	0.0050	"	0.0750		95.0	70-130			
1,3,5-Trimethylbenzene	0.0694	0.0050	"	0.0750		92.6	70-130			
Naphthalene	0.0676	0.0038	"	0.0750		90.2	70-130			
Surrogate: 1,2-Dichloroethane-d4	0.0412		"	0.0400		103	23-173			
Surrogate: Toluene-d8	0.0444		"	0.0400		111	20-170			
Surrogate: 4-Bromofluorobenzene	0.0422		"	0.0400		106	21-167			

Matrix Spike (BEK0338-MS1)

Source: 2111257-01

Prepared: 11/15/21 Analyzed: 11/16/21

Benzene	0.0658	0.0020	mg/kg	0.0750	ND	87.7	70-130			
Toluene	0.0966	0.0050	"	0.0750	ND	129	70-130			
Ethylbenzene	0.0776	0.0050	"	0.0750	ND	104	70-130			
m,p-Xylene	0.154	0.010	"	0.150	ND	103	70-130			
o-Xylene	0.0778	0.0050	"	0.0750	ND	104	70-130			
1,2,4-Trimethylbenzene	0.0767	0.0050	"	0.0750	ND	102	70-130			
1,3,5-Trimethylbenzene	0.0761	0.0050	"	0.0750	ND	101	70-130			
Naphthalene	0.0790	0.0038	"	0.0750	ND	105	70-130			
Surrogate: 1,2-Dichloroethane-d4	0.0363		"	0.0400		90.7	23-173			
Surrogate: Toluene-d8	0.0449		"	0.0400		112	20-170			
Surrogate: 4-Bromofluorobenzene	0.0413		"	0.0400		103	21-167			

Summit Scientific

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

Project: LH#1, Edwards 16U Tank Battery
Project Number: [none]
Project Manager: Mark Longhurst

Reported:
11/23/21 16:33

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 BEK0338 - EPA 5030 Soil MS

Matrix Spike Dup (BEK0338-MSD1)	Source: 2111257-01			Prepared: 11/15/21 Analyzed: 11/16/21						
Benzene	0.0612	0.0020	mg/kg	0.0750	ND	81.6	70-130	7.23	30	
Toluene	0.0958	0.0050	"	0.0750	ND	128	70-130	0.873	30	
Ethylbenzene	0.0776	0.0050	"	0.0750	ND	103	70-130	0.116	30	
m,p-Xylene	0.156	0.010	"	0.150	ND	104	70-130	0.852	30	
o-Xylene	0.0769	0.0050	"	0.0750	ND	103	70-130	1.20	30	
1,2,4-Trimethylbenzene	0.0767	0.0050	"	0.0750	ND	102	70-130	0.0391	30	
1,3,5-Trimethylbenzene	0.0762	0.0050	"	0.0750	ND	102	70-130	0.0788	30	
Naphthalene	0.0826	0.0038	"	0.0750	ND	110	70-130	4.42	30	
Surrogate: 1,2-Dichloroethane-d4	0.0361		"	0.0400		90.2	23-173			
Surrogate: Toluene-d8	0.0455		"	0.0400		114	20-170			
Surrogate: 4-Bromofluorobenzene	0.0413		"	0.0400		103	21-167			

Summit Scientific

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

Project: LH#1, Edwards 16U Tank Battery
Project Number: [none]
Project Manager: Mark Longhurst

Reported:
11/23/21 16:33

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 BEK0339 - EPA 3550A

Blank (BEK0339-BLK1)

Prepared: 11/15/21 Analyzed: 11/16/21

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

LCS (BEK0339-BS1)

Prepared: 11/15/21 Analyzed: 11/16/21

C10-C28 (DRO)	451	50	mg/kg	500	90.1	70-130
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Matrix Spike (BEK0339-MS1)

Source: 2111257-01

Prepared: 11/15/21 Analyzed: 11/16/21

C10-C28 (DRO)	419	50	mg/kg	500	ND	83.8	70-130
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Matrix Spike Dup (BEK0339-MSD1)

Source: 2111257-01

Prepared: 11/15/21 Analyzed: 11/16/21

C10-C28 (DRO)	430	50	mg/kg	500	ND	86.0	70-130	2.62	20
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Summit Scientific

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

Project: LH#1, Edwards 16U Tank Battery
Project Number: [none]
Project Manager: Mark Longhurst

Reported:
11/23/21 16:33

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 BEK0341 - EPA 5030 Soil MS

Blank (BEK0341-BLK1)

Prepared: 11/16/21 Analyzed: 11/17/21

Acenaphthene	ND	0.00500	mg/kg							
Anthracene	ND	0.00500	"							
Benzo (a) anthracene	ND	0.00500	"							
Benzo (a) pyrene	ND	0.00500	"							
Benzo (b) fluoranthene	ND	0.00500	"							
Benzo (k) fluoranthene	ND	0.00500	"							
Chrysene	ND	0.00500	"							
Dibenz (a,h) anthracene	ND	0.00500	"							
Fluoranthene	ND	0.00500	"							
Fluorene	ND	0.00500	"							
Indeno (1,2,3-cd) pyrene	ND	0.00500	"							
Pyrene	ND	0.00500	"							
1-Methylnaphthalene	ND	0.00500	"							
2-Methylnaphthalene	ND	0.00500	"							
Surrogate: 2-Methylnaphthalene-d10	0.0340		"	0.0333		102	40-150			
Surrogate: Fluoranthene-d10	0.0302		"	0.0333		90.5	40-150			

LCS (BEK0341-BS1)

Prepared: 11/16/21 Analyzed: 11/17/21

Acenaphthene	0.0421	0.00500	mg/kg	0.0333	126	31-137
Anthracene	0.0349	0.00500	"	0.0333	105	30-120
Benzo (a) anthracene	0.0380	0.00500	"	0.0333	114	30-120
Benzo (a) pyrene	0.0364	0.00500	"	0.0333	109	30-120
Benzo (b) fluoranthene	0.0383	0.00500	"	0.0333	115	30-120
Benzo (k) fluoranthene	0.0352	0.00500	"	0.0333	106	30-120
Chrysene	0.0392	0.00500	"	0.0333	118	30-120
Dibenz (a,h) anthracene	0.0273	0.00500	"	0.0333	81.8	30-120
Fluoranthene	0.0397	0.00500	"	0.0333	119	30-120
Fluorene	0.0339	0.00500	"	0.0333	102	30-120
Indeno (1,2,3-cd) pyrene	0.0318	0.00500	"	0.0333	95.5	30-120
Pyrene	0.0385	0.00500	"	0.0333	116	35-142
1-Methylnaphthalene	0.0459	0.00500	"	0.0333	138	35-142
2-Methylnaphthalene	0.0402	0.00500	"	0.0333	120	35-142
Surrogate: 2-Methylnaphthalene-d10	0.0427		"	0.0333	128	40-150
Surrogate: Fluoranthene-d10	0.0425		"	0.0333	127	40-150

Summit Scientific

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

Project: LH#1, Edwards 16U Tank Battery

Project Number: [none]
Project Manager: Mark Longhurst

Reported:
11/23/21 16:33

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 BEK0341 - EPA 5030 Soil MS

Matrix Spike (BEK0341-MS1)

Source: 2111064-15

Prepared: 11/16/21 Analyzed: 11/17/21

Acenaphthene	0.0271	0.00500	mg/kg	0.0333	ND	81.2	31-137				
Anthracene	0.0273	0.00500	"	0.0333	ND	81.9	30-120				
Benzo (a) anthracene	0.0273	0.00500	"	0.0333	ND	81.8	30-120				
Benzo (a) pyrene	0.0258	0.00500	"	0.0333	ND	77.3	30-120				
Benzo (b) fluoranthene	0.0269	0.00500	"	0.0333	ND	80.8	30-120				
Benzo (k) fluoranthene	0.0280	0.00500	"	0.0333	ND	84.0	30-120				
Chrysene	0.0272	0.00500	"	0.0333	ND	81.5	30-120				
Dibenz (a,h) anthracene	0.0172	0.00500	"	0.0333	ND	51.6	30-120				
Fluoranthene	0.0297	0.00500	"	0.0333	ND	89.2	30-120				
Fluorene	0.0294	0.00500	"	0.0333	ND	88.1	30-120				
Indeno (1,2,3-cd) pyrene	0.0235	0.00500	"	0.0333	ND	70.5	30-120				
Pyrene	0.0267	0.00500	"	0.0333	ND	80.1	35-142				
1-Methylnaphthalene	0.0306	0.00500	"	0.0333	ND	91.9	15-130				
2-Methylnaphthalene	0.0272	0.00500	"	0.0333	ND	81.7	15-130				
Surrogate: 2-Methylnaphthalene-d10	0.0303		"	0.0333		90.9	40-150				
Surrogate: Fluoranthene-d10	0.0323		"	0.0333		96.9	40-150				

Matrix Spike Dup (BEK0341-MSD1)

Source: 2111064-15

Prepared: 11/16/21 Analyzed: 11/17/21

Acenaphthene	0.0243	0.00500	mg/kg	0.0333	ND	72.9	31-137	10.7	30
Anthracene	0.0268	0.00500	"	0.0333	ND	80.3	30-120	2.08	30
Benzo (a) anthracene	0.0274	0.00500	"	0.0333	ND	82.2	30-120	0.488	30
Benzo (a) pyrene	0.0253	0.00500	"	0.0333	ND	75.8	30-120	2.02	30
Benzo (b) fluoranthene	0.0263	0.00500	"	0.0333	ND	78.8	30-120	2.53	30
Benzo (k) fluoranthene	0.0273	0.00500	"	0.0333	ND	81.8	30-120	2.63	30
Chrysene	0.0270	0.00500	"	0.0333	ND	81.0	30-120	0.566	30
Dibenz (a,h) anthracene	0.0166	0.00500	"	0.0333	ND	49.7	30-120	3.81	30
Fluoranthene	0.0294	0.00500	"	0.0333	ND	88.2	30-120	1.13	30
Fluorene	0.0272	0.00500	"	0.0333	ND	81.6	30-120	7.63	30
Indeno (1,2,3-cd) pyrene	0.0231	0.00500	"	0.0333	ND	69.4	30-120	1.63	30
Pyrene	0.0276	0.00500	"	0.0333	ND	82.9	35-142	3.49	30
1-Methylnaphthalene	0.0262	0.00500	"	0.0333	ND	78.6	15-130	15.7	50
2-Methylnaphthalene	0.0245	0.00500	"	0.0333	ND	73.6	15-130	10.4	50
Surrogate: 2-Methylnaphthalene-d10	0.0274		"	0.0333		82.2	40-150		
Surrogate: Fluoranthene-d10	0.0309		"	0.0333		92.6	40-150		

Summit Scientific

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

Project: LH#1, Edwards 16U Tank Battery
Project Number: [none]
Project Manager: Mark Longhurst

Reported:
11/23/21 16:33

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 BEK0342 - EPA 3050B

Blank (BEK0342-BLK1)

Prepared: 11/16/21 Analyzed: 11/20/21

Boron ND 0.0100 mg/L

LCS (BEK0342-BS1)

Prepared: 11/16/21 Analyzed: 11/20/21

Boron 4.00 0.0100 mg/L 5.00 80.1 80-120

Duplicate (BEK0342-DUP1)

Source: 2111163-01

Prepared: 11/16/21 Analyzed: 11/21/21

Boron ND 0.0100 mg/L ND 20

Matrix Spike (BEK0342-MS1)

Source: 2111163-01

Prepared: 11/16/21 Analyzed: 11/21/21

Boron 3.96 0.0100 mg/L 5.00 ND 79.2 75-125

Matrix Spike Dup (BEK0342-MSD1)

Source: 2111163-01

Prepared: 11/16/21 Analyzed: 11/21/21

Boron 3.83 0.0100 mg/L 5.00 ND 76.7 75-125 3.21 25

Summit Scientific

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

Project: LH#1, Edwards 16U Tank Battery
Project Number: [none]
Project Manager: Mark Longhurst

Reported:
11/23/21 16:33

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

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

Batch BEK0340 - General Preparation

Blank (BEK0340-BLK1)

Prepared: 11/15/21 Analyzed: 11/22/21

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

LCS (BEK0340-BS1)

Prepared: 11/15/21 Analyzed: 11/22/21

Calcium	6.15	0.0500	mg/L wet	5.00	123	70-130
Magnesium	5.99	0.0500	"	5.00	120	70-130
Sodium	5.81	0.0500	"	5.00	116	70-130

Summit Scientific

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

Project: LH#1, Edwards 16U Tank Battery
Project Number: [none]
Project Manager: Mark Longhurst

Reported:
11/23/21 16:33

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 BEK0347 - General Preparation

Duplicate (BEK0347-DUP1)		Source: 2110397-01			Prepared & Analyzed: 11/16/21					
% Solids	96.2		%		96.7		0.520		20	

Summit Scientific

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

Project: LH#1, Edwards 16U Tank Battery
Project Number: [none]
Project Manager: Mark Longhurst

Reported:
11/23/21 16:33

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 BEK0381 - General Preparation

Blank (BEK0381-BLK1)

Prepared & Analyzed: 11/17/21

Specific Conductance (EC) ND 0.0100 mmhos/cm

LCS (BEK0381-BS1)

Prepared & Analyzed: 11/17/21

Specific Conductance (EC) 0.154 0.0100 mmhos/cm 0.150 103 95-105

Duplicate (BEK0381-DUP1)

Source: 2111137-01

Prepared & Analyzed: 11/17/21

Specific Conductance (EC) 0.236 0.0100 mmhos/cm 0.244 3.30 20

Summit Scientific

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

Project: LH#1, Edwards 16U Tank Battery

Project Number: [none]

Project Manager: Mark Longhurst

Reported:
11/23/21 16:33

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 BEK0380 - General Preparation

LCS (BEK0380-BS1)

Prepared & Analyzed: 11/17/21

pH	9.07	pH Units	9.18	98.8	95-105
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Duplicate (BEK0380-DUP1)

Source: 2111137-01

Prepared & Analyzed: 11/17/21

pH	8.09	pH Units	8.10	0.124	20
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Summit Scientific

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

Project: LH#1, Edwards 16U Tank Battery

Project Number: [none]

Project Manager: Mark Longhurst

Reported:
11/23/21 16:33

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