

TABLE 1
FORMER LARSON FARMS 3,4,5,6,7-24 TANK BATTERY
SEPARATOR 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)	Chrysene (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	110	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	9	0.54	0.006	0.019
SEP01-DL @ 5'	8/4/2021	5 ft. bgs	<0.0020	<0.0050	<0.0050	<0.010	<0.0050	<0.0050	<0.0038	<50	NA	NA	NA	NA
SEP03-DL @ 5'	8/4/2021	5 ft. bgs	<0.0020	<0.0050	<0.0050	<0.010	<0.0050	<0.0050	<0.0038	<50	NA	NA	NA	NA
SEP04-DL @ 5'	8/4/2021	5 ft. bgs	<0.0020	<0.0050	<0.0050	<0.010	<0.0050	<0.0050	<0.0038	<50	NA	NA	NA	NA
SEP05-DL @ 5'	8/4/2021	5 ft. bgs	<0.0020	<0.0050	<0.0050	<0.010	<0.0050	<0.0050	<0.0038	<50	NA	NA	NA	NA
SEP01-FL @ 4'	8/4/2021	4 ft. bgs	<0.0020	<0.0050	<0.0050	<0.010	<0.0050	<0.0050	<0.0038	<50	NA	NA	NA	NA
SEP02-FL @ 5'	8/4/2021	5 ft. bgs	<0.0020	<0.0050	<0.0050	<0.010	<0.0050	<0.0050	<0.0038	<50	NA	NA	NA	NA
SEP03-FL @ 5'	8/4/2021	5 ft. bgs	<0.0020	<0.0050	<0.0050	<0.010	<0.0050	<0.0050	<0.0038	<50	NA	NA	NA	NA
SEP04-FL @ 5'	8/4/2021	5 ft. bgs	<0.0020	<0.0050	<0.0050	<0.010	<0.0050	<0.0050	<0.0038	<50	NA	NA	NA	NA
SEP05-FL @ 4'	8/4/2021	4 ft. bgs	<0.0020	<0.0050	<0.0050	<0.010	<0.0050	<0.0050	<0.0038	<50	NA	NA	NA	NA
SEP02-SS01 @ 7'	8/5/2021	7 ft. bgs	0.012	0.052	0.073	0.12	0.61	0.074	0.050	560	0.0305	0.0678	0.417	0.615
SEP02-SS02 @ 8'	8/5/2021	8 ft. bgs	<0.0020	<0.0050	<0.0050	<0.010	<0.0050	<0.0050	<0.0038	<50	<0.00500	<0.00500	<0.00500	<0.00500
SEP02-SS03 @ 7'	8/6/2021	7 ft. bgs	<0.0020	<0.0050	<0.0050	<0.010	<0.0050	<0.0050	<0.0038	<50	<0.00500	<0.00500	<0.00500	<0.00500
SEP02-SS04 @ 7'	8/6/2021	7 ft. bgs	<0.0020	<0.0050	<0.0050	<0.010	<0.0050	<0.0050	<0.0038	<50	<0.00500	<0.00500	<0.00500	<0.00500
SEP02-SS05 @ 8'	8/6/2021	8 ft. bgs	<0.0020	<0.0050	<0.0050	<0.010	<0.0050	<0.0050	<0.0038	<50	<0.00500	<0.00500	<0.00500	<0.00500
SEP02-SS06 @ 7'	8/6/2021	7 ft. bgs	<0.0020	<0.0050	<0.0050	<0.010	<0.0050	<0.0050	<0.0038	<50	<0.00500	<0.00500	<0.00500	<0.00500
SEP02-SS07 @ 8'	8/6/2021	8 ft. bgs	<0.0020	<0.0050	<0.0050	<0.010	<0.0050	<0.0050	<0.0038	<50	<0.00500	<0.00500	<0.00500	<0.00500
SEP02-SS08 @ 7'	8/6/2021	7 ft. bgs	<0.0020	<0.0050	<0.0050	<0.010	<0.0050	<0.0050	<0.0038	<50	<0.00500	<0.00500	<0.00500	<0.00500
SEP02-SS09 @ 8'	8/6/2021	8 ft. bgs	<0.0020	<0.0050	<0.0050	<0.010	<0.0050	<0.0050	<0.0038	<50	<0.00500	<0.00500	<0.00500	<0.00500
SEP02-SS10 @ 7'	8/6/2021	7 ft. bgs	<0.0020	<0.0050	<0.0050	<0.010	<0.0050	<0.0050	<0.0038	<50	<0.00500	<0.00500	<0.00500	<0.00500
SEP02-SS11 @ 8'	8/6/2021	8 ft. bgs	<0.0020	<0.0050	<0.0050	<0.010	<0.0050	<0.0050	<0.0038	<50	<0.00500	<0.00500	<0.00500	<0.00500

Notes:

1. Compounds referenced from the COGCC 2 CCR 404-1, Table 915-1, effective January 15, 2021.
2. Soil Screening Levels (SSL) referenced from EPA Regional Screening Levels (EPA RSLs) for Chemical Contaminants at Superfund Sites, effective November 2020.
3. SSLs are applicable if a pathway for communication with groundwater is present.
4. Value calculated by adding TVPH-GRO, TEPH-DRO, and TEPH-ORO concentrations.

COGCC = Colorado Oil and Gas Conservation Commission

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

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

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

TEPH-ORO = Total extactable petroleum hydrocarbons - oil range organics

mg/kg = Milligrams per kilogram

TMB = Trimethylbenzene

= Source material characterization sample

ft. = Feet

bgs = Below ground surface

BOLD = Analytical result is in exceedance of applicable standard.

TABLE 2
FORMER LARSON FARMS 3,4,5,6,7-24 TANK BATTERY
SEPARATOR 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
SEP02-SS01 @ 7'	8/5/2021	7 ft. bgs	8.45	3.02	19.8	0.809
SEP02-SS12 @ 2.5'	8/6/2021	2.5 ft. bgs	8.45	3.02	19.8	0.809
BKG01 @ 5'	8/6/2021	5 ft. bgs	8.96	1.62	5.20	NA
BKG01 @ 7'	8/6/2021	7 ft. bgs	8.81	NA	26.2	NA

Notes:

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

COGCC = Colorado Oil and Gas Conservation Commission

EC = Electrical conductivity

SAR = Sodium adsorption ratio

mmhos/cm = millimhos per centimeter

mg/L = milligram per liter

 = Source material characterization sample

ft. = Feet

bgs = Below ground surface

BOLD = Analytical result is in exceedance of applicable standard.

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

NA = Constituent not analyzed

TABLE 3
FORMER LARSON FARMS 3,4,5,6,7-24 TANK BATTERY
SEPARATOR 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
SEP02-SS01 @ 7'	8/5/2021	7 ft. bgs	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	0.0305	<0.00500	<0.00500	0.0678	<0.00500	<0.00500	0.417	0.615

Notes:
1. Compounds referenced from the COGCC 2 CCR 404-1, Table 915-1, effective January 15, 2021.
2. Soil Screening Levels (SSL) referenced from EPA Regional Screening Levels (EPA RSLs) for Chemical Contaminants at Superfund Sites, effective November 2020.
3. SSLs are applicable if a pathway for communication with
COGCC = Colorado Oil and Gas Conservation Commission
(<) = Analytical result is less than the indicated laboratory reporting limit.
PAHs = Polycyclic aromatic hydrocarbons
Benz(a) = Benzanthracene
Benzo(a) = Benzopyrene
Benzo(b) = Benzofluoranthene
Benzo(k) = Benzofluoranthene
A,H = Dibenzoanthracene
1,2,3-CD = Indenopyrene
M = Methylnaphthalene
mg/kg = Milligrams per kilogram
= Source material characterization sample
ft. = Feet
bgs = Below ground surface
BOLD = Analytical result is in exceedance of applicable standard.

TABLE 4
FORMER LARSON FARMS 3,4,5,6,7-24 TANK BATTERY
SEPARATOR 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
SEP02-SS01 @ 7'	8/5/2021	7 ft. bgs	5.32	106	<0.266	<0.30 ⁽⁴⁾	10.2	8.66	7.87	0.881	0.0365	35.2
BKG01 @ 5'	8/6/2021	5 ft. bgs	4.65	177	<0.254	<0.30 ⁽⁴⁾	10.7	9.83	9.58	1.02	0.0528	40.6
BKG01 @ 7'	8/6/2021	7 ft. bgs	4.42	192	<0.265	<0.30 ⁽⁴⁾	9.52	9.39	8.85	1.01	0.0510	39.1

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 LARSON FARMS 3,4,5,6,7-24 TANK BATTERY
SEPARATOR FIELD DATA SUMMARY TABLE

Sample ID	Date Sampled	Depth	GPS Data ⁽¹⁾ Latitude / Longitude		PDOP Value	VOC Concentration ⁽²⁾ (ppm)
SEP01-DL @ 5'	8/4/2021	5 ft. bgs	40.470907	-104.499230	0.9	0.8
SEP03-DL @ 5'	8/4/2021	5 ft. bgs	40.470941	-104.499146	0.9	4.8
SEP04-DL @ 5'	8/4/2021	5 ft. bgs	40.470958	-104.499099	0.9	5.2
SEP05-DL @ 5'	8/4/2021	5 ft. bgs	40.470974	-104.499060	0.9	2.0
SEP01-FL @ 4'	8/4/2021	4 ft. bgs	40.470940	-104.499266	1.1	1.0
SEP02-FL @ 5'	8/4/2021	5 ft. bgs	40.470959	-104.499217	1.1	0.4
SEP03-FL @ 5'	8/4/2021	5 ft. bgs	40.470977	-104.499176	1.1	0.7
SEP04-FL @ 5'	8/4/2021	5 ft. bgs	40.470992	-104.499128	1.1	0.7
SEP05-FL @ 4'	8/4/2021	4 ft. bgs	40.471007	-104.499082	1.1	0.3
SEP02-SS01 @ 7'	8/5/2021	7 ft. bgs	40.470918	-104.499193	NC	688.1
SEP02-SS02 @ 8'	8/5/2021	8 ft. bgs	40.470923	-104.499184	NC	8.5
SEP02-SS03 @ 7'	8/6/2021	7 ft. bgs	40.470935	-104.499192	NC	1.8
SEP02-SS04 @ 7'	8/6/2021	7 ft. bgs	40.470947	-104.499198	NC	0.1
SEP02-SS05 @ 8'	8/6/2021	8 ft. bgs	40.470947	-104.499198	NC	0.0
SEP02-SS06 @ 7'	8/6/2021	7 ft. bgs	40.470913	-104.499209	NC	1.3
SEP02-SS07 @ 8'	8/6/2021	8 ft. bgs	40.470913	-104.499209	NC	1.3
SEP02-SS08 @ 7'	8/6/2021	7 ft. bgs	40.470905	-104.499180	NC	0.2
SEP02-SS09 @ 8'	8/6/2021	8 ft. bgs	40.470905	-104.499180	NC	0.0
SEP02-SS10 @ 7'	8/6/2021	7 ft. bgs	40.470935	-104.499167	NC	3.3
SEP02-SS11 @ 8'	8/6/2021	8 ft. bgs	40.470935	-104.499167	NC	0.0
SEP02-SS12 @ 2.5'	8/6/2021	2.5 ft. bgs	40.470905	-104.499180	NC	0.0
BKG01 @ 5'	8/6/2021	5 ft. bgs	40.470334	-104.499261	0.9	0.0
BKG01 @ 7'	8/6/2021	7 ft. bgs	40.470334	-104.499261	0.9	0.0

Notes:

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

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

PDOP = Position Dilution of Precision

ppm = Parts per million

 = Source material characterization sample

ft. = Feet

bgs = Below ground surface

NC = Data not collected

TABLE 6
FORMER LARSON FARMS 3,4,5,6,7-24 TANK BATTERY
SEPARATOR GROUNDWATER ANALYTICAL RESULTS SUMMARY TABLE
ORGANIC COMPOUNDS

Sample ID	Date Sampled	Benzene (µg/L)	Toluene (µg/L)	Ethylbenzene (µg/L)	Total Xylenes (µg/L)	Naphthalene (µg/L)	1,2,4-TMB (µg/L)	1,3,5-TMB (µg/L)	Depth to Water ⁽²⁾ (ft.)	Groundwater Elevation (ft. AMSL)
COGCC Table 915-1 Groundwater Standard (µg/L) ⁽¹⁾		5	560	700	1,400	140	67	67	-	-
GW01	8/6/2021	<1.0	<1.0	<1.0	<2.0	<1.0	<1.0	<1.0	8	NA

Notes:

1. Groundwater standards referenced from 2 CCR 404-1, Table 915-1, January 15, 2021.
2. Depth to water measurements were measured from ground surface for excavation samples. Monitoring well measurements were collected from top of casing and adjusted using survey data to reflect depth of water from ground surface.

TMB = Trimethylbenzene

COGCC = Colorado Oil and Gas Conservation Commission

µg/L = Micrograms per liter

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

ft. = Feet

AMSL = Above Mean Sea Level

NA = Not applicable

Tank Battery Separator Attachment A

Summit Scientific

4653 Table Mountain Drive, Golden, Colorado 80403

303.277.9310

August 11, 2021

Mark Longhurst

PDC Energy

1775 Sherman St. STE. 3000

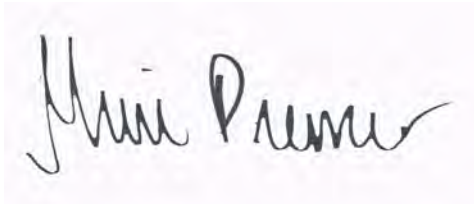
Denver, CO 80203

RE: Larson Farms 3,4,5,6,7-24 Tank Battery

Work Order #2108052

Enclosed are the results of analyses for samples received by Summit Scientific on 08/04/21 18:00. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

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

Muri Premer For Paul Shrewsbury

President



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

Project: Larson Farms 3,4,5,6,7-24 Tank Battery

Project Number: [none]
Project Manager: Mark Longhurst

Reported:
08/11/21 16:11

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
SEP01-DL@5'	2108052-01	Soil	08/04/21 11:48	08/04/21 18:00
SEP03-DL@5'	2108052-02	Soil	08/04/21 12:05	08/04/21 18:00
SEP04-DL@5'	2108052-03	Soil	08/04/21 12:06	08/04/21 18:00
SEP05-DL@5'	2108052-04	Soil	08/04/21 12:07	08/04/21 18:00
SEP01-FL@4'	2108052-05	Soil	08/04/21 12:55	08/04/21 18:00
SEP02-FL@5'	2108052-06	Soil	08/04/21 13:04	08/04/21 18:00
SEP03-FL@5'	2108052-07	Soil	08/04/21 13:12	08/04/21 18:00
SEP04-FL@5'	2108052-08	Soil	08/04/21 13:33	08/04/21 18:00
SEP05-FL@5'	2108052-09	Soil	08/04/21 13:34	08/04/21 18:00

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


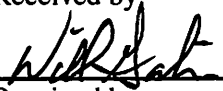
2108052

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: Larson Farms 3, 4, 5, 6, 7-24 Tank Battery
Sampler Name: J. Marcus Project Number: 11/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		
1	SEPO1-DLQS'	8/4/21	1148	2			X			X			X	X	X				pH, EC, SAR by saturated paste
2	SEPO2-DLQS'		1205	2			X			X			X	X	X				
3	SEPO4-DLQS'		1206	2			X			X			X	X	X				
4	SEPO5-DLQS'		1207	2			X			X			X	X	X				
5	SEPO1-FLQ4'		1255	2			X			X			X	X	X				
6	SEPO2-FLQ5'		1304	2			X			X			X	X	X				
7	SEPO3-FLQ5'		1312	2			X			X			X	X	X				
8	SEPO4-FLQ5'		1333	2			X			X			X	X	X				
9	SEPO5-FLQ4'		1334	2			X			X			X	X	X				
10																			

Relinquished by: 	Date/Time: 8/4/21 1745	Received by: Tasman's Lock Box	Date/Time: 8/4/21 1745	Turn Around Time (Check) Same Day <input type="checkbox"/> 72 hours <input type="checkbox"/> 24 hours <input type="checkbox"/> Standard <input checked="" type="checkbox"/> 48 hours <input type="checkbox"/>	Notes: on ice
Relinquished by: Tasman's Lock Box	Date/Time: 8/4/21 1800	Received by: 	Date/Time: 8/4/21 1800	Sample Integrity: Temperature Upon Receipt: 20 Samples Intact: <input checked="" type="radio"/> Yes <input type="radio"/> No	
Relinquished by:	Date/Time:	Received by:	Date/Time:		

Sample Receipt Checklist

S2 Work Order 2108052

Client: PDC/Tasman

Client Project ID: Larson farms 3,4,5,6,7-24 TB

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

Airbill #:

☐ ☒ ☐ ☐ ☐

Matrix (check all that apply):

☐ Air

☒ Soil/Solid

☐ Water

☐ Other:

(Describe)

Temp (°C)	20.0
-----------	------

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"/>	
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 type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
Is a chain-of-custody (COC) form present and filled out completely ⁽¹⁾ ?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
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.

WG

Custodian Printed Name or Initials

Signature of Custodian

8/4/21

Date/Time



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

Project: Larson Farms 3,4,5,6,7-24 Tank Battery
Project Number: [none]
Project Manager: Mark Longhurst

Reported:
08/11/21 16:11

SEP01-DL@5'
2108052-01 (Soil)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **08/04/21 11:48**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Benzene	ND	0.0020	mg/kg	1	BEH0088	08/05/21	08/06/21	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: **08/04/21 11:48**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 1,2-Dichloroethane-d4		105 %	23-173		"	"	"	"	
Surrogate: Toluene-d8		97.2 %	20-170		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		92.7 %	21-167		"	"	"	"	

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **08/04/21 11:48**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
C10-C28 (DRO)	ND	50	mg/kg	1	BEH0089	08/05/21	08/06/21	EPA 8015M	
C28-C36 (ORO)	ND	50	"	"	"	"	"	"	

Date Sampled: **08/04/21 11:48**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: o-Terphenyl		77.4 %	30-150		"	"	"	"	

Summit Scientific

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

Project: Larson Farms 3,4,5,6,7-24 Tank Battery
Project Number: [none]
Project Manager: Mark Longhurst

Reported:
08/11/21 16:11

SEP03-DL@5'
2108052-02 (Soil)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **08/04/21 12:05**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Benzene	ND	0.0020	mg/kg	1	BEH0088	08/05/21	08/06/21	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: **08/04/21 12:05**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 1,2-Dichloroethane-d4		108 %	23-173		"	"	"	"	
Surrogate: Toluene-d8		100 %	20-170		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		94.1 %	21-167		"	"	"	"	

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **08/04/21 12:05**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
C10-C28 (DRO)	ND	50	mg/kg	1	BEH0089	08/05/21	08/10/21	EPA 8015M	
C28-C36 (ORO)	ND	50	"	"	"	"	"	"	

Date Sampled: **08/04/21 12:05**

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

Summit Scientific

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

Project: Larson Farms 3,4,5,6,7-24 Tank Battery
Project Number: [none]
Project Manager: Mark Longhurst

Reported:
08/11/21 16:11

SEP04-DL@5'
2108052-03 (Soil)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **08/04/21 12:06**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Benzene	ND	0.0020	mg/kg	1	BEH0088	08/05/21	08/06/21	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: **08/04/21 12:06**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: 1,2-Dichloroethane-d4		104 %	23-173		"	"	"	"	
Surrogate: Toluene-d8		96.5 %	20-170		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		94.6 %	21-167		"	"	"	"	

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **08/04/21 12:06**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
C10-C28 (DRO)	ND	50	mg/kg	1	BEH0089	08/05/21	08/10/21	EPA 8015M	
C28-C36 (ORO)	ND	50	"	"	"	"	"	"	

Date Sampled: **08/04/21 12:06**

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

Summit Scientific

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

Project: Larson Farms 3,4,5,6,7-24 Tank Battery
Project Number: [none]
Project Manager: Mark Longhurst

Reported:
08/11/21 16:11

SEP05-DL@5'
2108052-04 (Soil)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **08/04/21 12:07**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Benzene	ND	0.0020	mg/kg	1	BEH0088	08/05/21	08/06/21	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: **08/04/21 12:07**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: 1,2-Dichloroethane-d4		119 %	23-173		"	"	"	"	
Surrogate: Toluene-d8		100 %	20-170		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		92.6 %	21-167		"	"	"	"	

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **08/04/21 12:07**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
C10-C28 (DRO)	ND	50	mg/kg	1	BEH0089	08/05/21	08/10/21	EPA 8015M	
C28-C36 (ORO)	ND	50	"	"	"	"	"	"	

Date Sampled: **08/04/21 12:07**

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

Summit Scientific

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

Project: Larson Farms 3,4,5,6,7-24 Tank Battery
Project Number: [none]
Project Manager: Mark Longhurst

Reported:
08/11/21 16:11

SEP01-FL@4'
2108052-05 (Soil)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **08/04/21 12:55**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Benzene	ND	0.0020	mg/kg	1	BEH0088	08/05/21	08/06/21	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: **08/04/21 12:55**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: 1,2-Dichloroethane-d4		107 %	23-173		"	"	"	"	
Surrogate: Toluene-d8		98.2 %	20-170		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		91.7 %	21-167		"	"	"	"	

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **08/04/21 12:55**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
C10-C28 (DRO)	ND	50	mg/kg	1	BEH0089	08/05/21	08/10/21	EPA 8015M	
C28-C36 (ORO)	ND	50	"	"	"	"	"	"	

Date Sampled: **08/04/21 12:55**

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

Summit Scientific

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

Project: Larson Farms 3,4,5,6,7-24 Tank Battery
Project Number: [none]
Project Manager: Mark Longhurst

Reported:
08/11/21 16:11

SEP02-FL@5'
2108052-06 (Soil)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **08/04/21 13:04**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Benzene	ND	0.0020	mg/kg	1	BEH0088	08/05/21	08/06/21	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: **08/04/21 13:04**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: 1,2-Dichloroethane-d4		119 %	23-173		"	"	"	"	
Surrogate: Toluene-d8		99.2 %	20-170		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		93.9 %	21-167		"	"	"	"	

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **08/04/21 13:04**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
C10-C28 (DRO)	ND	50	mg/kg	1	BEH0089	08/05/21	08/10/21	EPA 8015M	
C28-C36 (ORO)	ND	50	"	"	"	"	"	"	

Date Sampled: **08/04/21 13:04**

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

Summit Scientific

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

Project: Larson Farms 3,4,5,6,7-24 Tank Battery
Project Number: [none]
Project Manager: Mark Longhurst

Reported:
08/11/21 16:11

SEP03-FL@5'
2108052-07 (Soil)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **08/04/21 13:12**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Benzene	ND	0.0020	mg/kg	1	BEH0088	08/05/21	08/06/21	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: **08/04/21 13:12**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: 1,2-Dichloroethane-d4		111 %	23-173		"	"	"	"	
Surrogate: Toluene-d8		99.2 %	20-170		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		89.4 %	21-167		"	"	"	"	

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **08/04/21 13:12**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
C10-C28 (DRO)	ND	50	mg/kg	1	BEH0089	08/05/21	08/10/21	EPA 8015M	
C28-C36 (ORO)	ND	50	"	"	"	"	"	"	

Date Sampled: **08/04/21 13:12**

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

Summit Scientific

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

Project: Larson Farms 3,4,5,6,7-24 Tank Battery
Project Number: [none]
Project Manager: Mark Longhurst

Reported:
08/11/21 16:11

SEP04-FL@5'
2108052-08 (Soil)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **08/04/21 13:33**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Benzene	ND	0.0020	mg/kg	1	BEH0088	08/05/21	08/06/21	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: **08/04/21 13:33**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: 1,2-Dichloroethane-d4		109 %	23-173		"	"	"	"	
Surrogate: Toluene-d8		98.5 %	20-170		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		92.0 %	21-167		"	"	"	"	

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **08/04/21 13:33**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
C10-C28 (DRO)	ND	50	mg/kg	1	BEH0089	08/05/21	08/10/21	EPA 8015M	
C28-C36 (ORO)	ND	50	"	"	"	"	"	"	

Date Sampled: **08/04/21 13:33**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: o-Terphenyl		112 %	30-150		"	"	"	"	

Summit Scientific

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

Project: Larson Farms 3,4,5,6,7-24 Tank Battery
Project Number: [none]
Project Manager: Mark Longhurst

Reported:
08/11/21 16:11

SEP05-FL@5'
2108052-09 (Soil)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **08/04/21 13:34**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Benzene	ND	0.0020	mg/kg	1	BEH0088	08/05/21	08/06/21	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: **08/04/21 13:34**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: 1,2-Dichloroethane-d4		114 %	23-173		"	"	"	"	
Surrogate: Toluene-d8		98.3 %	20-170		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		91.6 %	21-167		"	"	"	"	

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **08/04/21 13:34**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
C10-C28 (DRO)	ND	50	mg/kg	1	BEH0089	08/05/21	08/10/21	EPA 8015M	
C28-C36 (ORO)	ND	50	"	"	"	"	"	"	

Date Sampled: **08/04/21 13:34**

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

Summit Scientific

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

Project: Larson Farms 3,4,5,6,7-24 Tank Battery

Project Number: [none]
Project Manager: Mark Longhurst

Reported:
08/11/21 16:11

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 BEH0088 - EPA 5030 Soil MS

Blank (BEH0088-BLK1)

Prepared: 08/05/21 Analyzed: 08/06/21

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	0.0420		"	0.0400		105	23-173			
Surrogate: Toluene-d8	0.0387		"	0.0400		96.8	20-170			
Surrogate: 4-Bromofluorobenzene	0.0376		"	0.0400		94.0	21-167			

LCS (BEH0088-BS1)

Prepared: 08/05/21 Analyzed: 08/06/21

Benzene	0.0679	0.0020	mg/kg	0.0750		90.5	70-130			
Toluene	0.0686	0.0050	"	0.0750		91.5	70-130			
Ethylbenzene	0.0842	0.0050	"	0.0750		112	70-130			
m,p-Xylene	0.165	0.010	"	0.150		110	70-130			
o-Xylene	0.0838	0.0050	"	0.0750		112	70-130			
1,2,4-Trimethylbenzene	0.0849	0.0050	"	0.0750		113	70-130			
1,3,5-Trimethylbenzene	0.0841	0.0050	"	0.0750		112	70-130			
Naphthalene	0.0886	0.0038	"	0.0750		118	70-130			
Surrogate: 1,2-Dichloroethane-d4	0.0416		"	0.0400		104	23-173			
Surrogate: Toluene-d8	0.0398		"	0.0400		99.5	20-170			
Surrogate: 4-Bromofluorobenzene	0.0356		"	0.0400		89.0	21-167			

Matrix Spike (BEH0088-MS1)

Source: 2108049-02

Prepared: 08/05/21 Analyzed: 08/06/21

Benzene	0.0608	0.0020	mg/kg	0.0750	ND	81.1	70-130			
Toluene	0.0886	0.0050	"	0.0750	ND	118	70-130			
Ethylbenzene	0.0699	0.0050	"	0.0750	ND	93.2	70-130			
m,p-Xylene	0.136	0.010	"	0.150	ND	90.6	70-130			
o-Xylene	0.0699	0.0050	"	0.0750	ND	93.2	70-130			
1,2,4-Trimethylbenzene	0.0641	0.0050	"	0.0750	ND	85.5	70-130			
1,3,5-Trimethylbenzene	0.0651	0.0050	"	0.0750	ND	86.8	70-130			
Naphthalene	0.0779	0.0038	"	0.0750	ND	104	70-130			
Surrogate: 1,2-Dichloroethane-d4	0.0432		"	0.0400		108	23-173			
Surrogate: Toluene-d8	0.0395		"	0.0400		98.8	20-170			
Surrogate: 4-Bromofluorobenzene	0.0368		"	0.0400		92.0	21-167			

Summit Scientific

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

Project: Larson Farms 3,4,5,6,7-24 Tank Battery
Project Number: [none]
Project Manager: Mark Longhurst

Reported:
08/11/21 16:11

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 BEH0088 - EPA 5030 Soil MS

Matrix Spike Dup (BEH0088-MSD1)	Source: 2108049-02			Prepared: 08/05/21 Analyzed: 08/06/21						
Benzene	0.0822	0.0020	mg/kg	0.0750	ND	110	70-130	29.8	30	
Toluene	0.0798	0.0050	"	0.0750	ND	106	70-130	10.4	30	
Ethylbenzene	0.0572	0.0050	"	0.0750	ND	76.3	70-130	19.9	30	
m,p-Xylene	0.111	0.010	"	0.150	ND	73.7	70-130	20.5	30	
o-Xylene	0.0579	0.0050	"	0.0750	ND	77.2	70-130	18.8	30	
1,2,4-Trimethylbenzene	0.0816	0.0050	"	0.0750	ND	109	70-130	24.0	30	
1,3,5-Trimethylbenzene	0.0823	0.0050	"	0.0750	ND	110	70-130	23.2	30	
Naphthalene	0.0868	0.0038	"	0.0750	ND	116	70-130	10.8	30	
Surrogate: 1,2-Dichloroethane-d4	0.0452		"	0.0400		113	23-173			
Surrogate: Toluene-d8	0.0398		"	0.0400		99.4	20-170			
Surrogate: 4-Bromofluorobenzene	0.0366		"	0.0400		91.5	21-167			

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

Project: Larson Farms 3,4,5,6,7-24 Tank Battery
Project Number: [none]
Project Manager: Mark Longhurst

Reported:
08/11/21 16:11

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 BEH0089 - EPA 3550A

Blank (BEH0089-BLK1)

Prepared: 08/05/21 Analyzed: 08/06/21

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

LCS (BEH0089-BS1)

Prepared: 08/05/21 Analyzed: 08/06/21

C10-C28 (DRO)	518	50	mg/kg	500	104	70-130
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Matrix Spike (BEH0089-MS1)

Source: 2108046-01

Prepared: 08/05/21 Analyzed: 08/06/21

C10-C28 (DRO)	495	50	mg/kg	500	24.4	94.1	70-130
---------------	-----	----	-------	-----	------	------	--------

Matrix Spike Dup (BEH0089-MSD1)

Source: 2108046-01

Prepared: 08/05/21 Analyzed: 08/06/21

C10-C28 (DRO)	557	50	mg/kg	500	24.4	106	70-130	11.8	20
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PDC Energy
1775 Sherman St. STE. 3000
Denver CO, 80203

Project: Larson Farms 3,4,5,6,7-24 Tank Battery

Project Number: [none]

Project Manager: Mark Longhurst

Reported:
08/11/21 16:11

Notes and Definitions

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

Summit Scientific

4653 Table Mountain Drive, Golden, Colorado 80403

303.277.9310

November 01, 2021

Mark Longhurst

PDC Energy

1775 Sherman St. STE. 3000

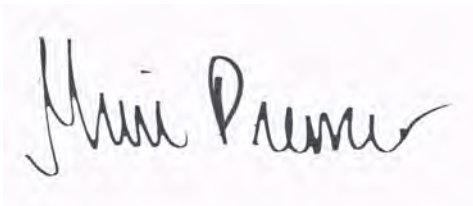
Denver, CO 80203

RE: Larson Farms 3,4,5,6,7-24 Tank Battery

Work Order #2108059

Enclosed are the results of analyses for samples received by Summit Scientific on 08/05/21 17:50. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

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

Muri Premer For Paul Shrewsbury
President



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

Project: Larson Farms 3,4,5,6,7-24 Tank Battery
Project Number: [none]
Project Manager: Mark Longhurst

Reported:
11/01/21 15:58

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
SEP02 - SS01 @ 7'	2108059-01	Soil	08/05/21 14:01	08/05/21 17:50
SEP02 - SS02 @ 8'	2108059-02	Soil	08/05/21 14:03	08/05/21 17:50

Summit Scientific

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S₂

2108059

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: Larson Farms 3, 4, 5, 6, 7-24 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	VOC-q15	PAH-q15	Metals-q15	
1	SEP02-SS01@7'	8/5/21	1401	3			X			X			X	X	X	X	X	X	X	X	pH, EC, SAR by saturated paste
2	SEP02-SS02@8'	↓	1403	3			X			X			X	X	X			X	X	X	
3																					
4																					
5																					
6																					
7																					
8																					
9																					
10																					

Relinquished by: 	Date/Time: 8/5/21 1630	Received by: Tasman's Lock Box	Date/Time: 8/5/21 1630	Turn Around Time (Check)	Notes:
Relinquished by: Tasman's Lock Box	Date/Time: 8/5/21 1750	Received by: Will Lytle	Date/Time: 8/5/21 1750	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"/>	
Relinquished by:	Date/Time:	Received by:	Date/Time:	Sample Integrity:	
				Temperature Upon Receipt: 10.2	
				Samples Intact: <input checked="" type="radio"/> Yes <input type="radio"/> No	

Sample Receipt Checklist

S2 Work Order 2108059

Client: PDC/TASMAN

Client Project ID: Larson Farms 3,4,5,6, 7-24 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) 10.2

Thermometer ID: 61857155-K

	Yes	No	N/A	Comments (if any)
If samples require cooling, was the temperature at 4°C +/- 2°C ⁽¹⁾ ? NOTE: If samples are delivered the same day of sampling, this requirement is met provided that there is evidence that cooling has begun.	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<u>on ice</u>
Were all samples received intact ⁽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"/>	<u>same day</u>
Is a chain-of-custody (COC) form present and filled out completely ⁽¹⁾ ?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Does the COC agree with the number and type of sample bottles received ⁽¹⁾ ?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Do the sample IDs on the bottle labels match the COC ⁽¹⁾ ?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Is the COC properly relinquished by the client w/ date and time recorded ⁽¹⁾ ?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
For volatiles in water – is there headspace present? If yes, contact client and note in narrative.	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
Are samples preserved that require preservation (excluding cooling) ⁽¹⁾ ? 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.

WG
Custodian Printed Name or Initials

Will Hall
Signature of Custodian

8/5/21
Date/Time



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

Project: Larson Farms 3,4,5,6,7-24 Tank Battery
Project Number: [none]
Project Manager: Mark Longhurst

Reported:
11/01/21 15:58

SEP02 - SS01 @ 7'
2108059-01 (Soil)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **08/05/21 14:01**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Benzene	0.012	0.0020	mg/kg	1	BEH0091	08/05/21	08/05/21	EPA 8260B	
Toluene	0.052	0.0050	"	"	"	"	"	"	
Ethylbenzene	0.073	0.0050	"	"	"	"	"	"	
Xylenes (total)	0.12	0.010	"	"	"	"	"	"	
1,2,4-Trimethylbenzene	0.61	0.0050	"	"	"	"	"	"	
1,3,5-Trimethylbenzene	0.074	0.0050	"	"	"	"	"	"	
Naphthalene	0.050	0.0038	"	"	"	"	"	"	
Gasoline Range Hydrocarbons	130	5.0	"	10	"	"	"	"	

Date Sampled: **08/05/21 14:01**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 1,2-Dichloroethane-d4		106 %	23-173		"	"	"	"	
Surrogate: Toluene-d8		98.6 %	20-170		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		107 %	21-167		"	"	"	"	

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **08/05/21 14:01**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
C10-C28 (DRO)	370	50	mg/kg	1	BEH0090	08/05/21	08/05/21	EPA 8015M	
C28-C36 (ORO)	60	50	"	"	"	"	"	"	

Date Sampled: **08/05/21 14:01**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: o-Terphenyl		85.2 %	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: Larson Farms 3,4,5,6,7-24 Tank Battery
Project Number: [none]
Project Manager: Mark Longhurst

Reported:
11/01/21 15:58

SEP02 - SS01 @ 7'
2108059-01 (Soil)

Summit Scientific

PAH by EPA Method 8270D SIM

Date Sampled: **08/05/21 14:01**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Acenaphthene	ND	0.00500	mg/kg	1	BEH0096	08/06/21	08/07/21	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	0.0305	0.00500	"	"	"	"	"	"	
Dibenz (a,h) anthracene	ND	0.00500	"	"	"	"	"	"	
Fluoranthene	ND	0.00500	"	"	"	"	"	"	
Fluorene	0.0678	0.00500	"	"	"	"	"	"	
Indeno (1,2,3-cd) pyrene	ND	0.00500	"	"	"	"	"	"	
Pyrene	ND	0.00500	"	"	"	"	"	"	
1-Methylnaphthalene	0.417	0.00500	"	"	"	"	"	"	
2-Methylnaphthalene	0.615	0.00500	"	"	"	"	"	"	

Date Sampled: **08/05/21 14:01**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 2-Methylnaphthalene-d10		65.5 %	40-150		"	"	"	"	
Surrogate: Fluoranthene-d10		64.8 %	40-150		"	"	"	"	

Total Metals by EPA 6020B Hot Water Soluble Extraction

Date Sampled: **08/05/21 14:01**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Boron	0.809	0.0100	mg/L	1	BEH0104	08/06/21	08/07/21	EPA 6020B	

Total Metals by EPA 6020B

Date Sampled: **08/05/21 14:01**

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: Larson Farms 3,4,5,6,7-24 Tank Battery
Project Number: [none]
Project Manager: Mark Longhurst

Reported:
11/01/21 15:58

SEP02 - SS01 @ 7'
2108059-01 (Soil)

Summit Scientific

Total Metals by EPA 6020B

Arsenic	5.32	0.266	mg/kg dry	1	BEH0105	08/06/21	08/06/21	EPA 6020B
Barium	106	0.533	"	"	"	"	"	"
Cadmium	ND	0.266	"	"	"	"	"	"
Copper	10.2	0.533	"	"	"	"	"	"
Lead	8.66	0.266	"	"	"	"	"	"
Nickel	7.87	0.533	"	"	"	"	"	"
Selenium	0.881	0.346	"	"	"	"	"	"
Silver	0.0365	0.0266	"	"	"	"	"	"
Zinc	35.2	0.533	"	"	"	"	"	"

Hexavalent Chromium by EPA Method 7196

Date Sampled: **08/05/21 14:01**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Chromium, Hexavalent	ND	0.30	mg/kg dry	1	BEH0106	08/06/21	08/10/21	EPA 7196A	

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

Date Sampled: **08/05/21 14:01**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Calcium	55.6	0.0666	mg/L dry	1	BEH0115	08/09/21	08/10/21	EPA 6020B	
Magnesium	27.3	0.0666	"	"	"	"	"	"	
Sodium	723	0.0666	"	"	"	"	"	"	

Calculated Analysis

Date Sampled: **08/05/21 14:01**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	19.8	0.00100	units	1	BEH0144	08/10/21	08/10/21	Calculation	

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **08/05/21 14:01**

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: Larson Farms 3,4,5,6,7-24 Tank Battery
Project Number: [none]
Project Manager: Mark Longhurst

Reported:
11/01/21 15:58

SEP02 - SS01 @ 7'
2108059-01 (Soil)

Summit Scientific

Physical Parameters by APHA/ASTM/EPA Methods

% Solids	75.1	%	1	BEH0093	08/06/21	08/06/21	Calculation
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Specific Conductance by EPA Method 120.1, Saturated Paste Extraction

Date Sampled: **08/05/21 14:01**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Specific Conductance (EC)	3.02	0.0100	mmhos/cm	1	BEH0118	08/09/21	08/09/21	EPA 120.1	

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

Date Sampled: **08/05/21 14:01**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
pH	8.45		pH Units	1	BEH0117	08/09/21	08/09/21	EPA 9045D	

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Denver CO, 80203

Project: Larson Farms 3,4,5,6,7-24 Tank Battery
Project Number: [none]
Project Manager: Mark Longhurst

Reported:
11/01/21 15:58

SEP02 - SS02 @ 8'
2108059-02 (Soil)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **08/05/21 14:03**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Benzene	ND	0.0020	mg/kg	1	BEH0091	08/05/21	08/05/21	EPA 8260B	
Toluene	ND	0.0050	"	"	"	"	"	"	
Ethylbenzene	ND	0.0050	"	"	"	"	"	"	
Xylenes (total)	ND	0.010	"	"	"	"	"	"	
1,2,4-Trimethylbenzene	ND	0.0050	"	"	"	"	"	"	
1,3,5-Trimethylbenzene	ND	0.0050	"	"	"	"	"	"	
Naphthalene	ND	0.0038	"	"	"	"	"	"	
Gasoline Range Hydrocarbons	ND	0.50	"	"	"	"	"	"	

Date Sampled: **08/05/21 14:03**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: 1,2-Dichloroethane-d4		110 %	23-173		"	"	"	"	
Surrogate: Toluene-d8		98.2 %	20-170		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		92.3 %	21-167		"	"	"	"	

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **08/05/21 14:03**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
C10-C28 (DRO)	ND	50	mg/kg	1	BEH0090	08/05/21	08/05/21	EPA 8015M	
C28-C36 (ORO)	ND	50	"	"	"	"	"	"	

Date Sampled: **08/05/21 14:03**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: o-Terphenyl		80.0 %	30-150		"	"	"	"	

PAH by EPA Method 8270D SIM

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

Project: Larson Farms 3,4,5,6,7-24 Tank Battery
Project Number: [none]
Project Manager: Mark Longhurst

Reported:
11/01/21 15:58

SEP02 - SS02 @ 8'
2108059-02 (Soil)

Summit Scientific

PAH by EPA Method 8270D SIM

Date Sampled: **08/05/21 14:03**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Chrysene	ND	0.00500	mg/kg	1	BEI0139	09/08/21	09/10/21	EPA 8270D SIM	
Fluorene	ND	0.00500	"	"	"	"	"	"	
1-Methylnaphthalene	ND	0.00500	"	"	"	"	"	"	
2-Methylnaphthalene	ND	0.00500	"	"	"	"	"	"	

Date Sampled: **08/05/21 14:03**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 2-Methylnaphthalene-d10		60.7 %	40-150		"	"	"	"	
Surrogate: Fluoranthene-d10		41.4 %	40-150		"	"	"	"	

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

Project: Larson Farms 3,4,5,6,7-24 Tank Battery

Project Number: [none]
Project Manager: Mark Longhurst

Reported:
11/01/21 15:58

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 BEH0091 - EPA 5030 Soil MS

Blank (BEH0091-BLK1)

Prepared & Analyzed: 08/05/21

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	0.0187		"	0.0400		46.8	23-173			
Surrogate: Toluene-d8	0.0542		"	0.0400		136	20-170			
Surrogate: 4-Bromofluorobenzene	0.0403		"	0.0400		101	21-167			

LCS (BEH0091-BS1)

Prepared & Analyzed: 08/05/21

Benzene	0.0955	0.0020	mg/kg	0.100		95.5	70-130			
Toluene	0.110	0.0050	"	0.100		110	70-130			
Ethylbenzene	0.116	0.0050	"	0.100		116	70-130			
m,p-Xylene	0.226	0.010	"	0.200		113	70-130			
o-Xylene	0.102	0.0050	"	0.100		102	70-130			
1,2,4-Trimethylbenzene	0.117	0.0050	"	0.100		117	70-130			
1,3,5-Trimethylbenzene	0.0879	0.0050	"	0.100		87.9	70-130			
Naphthalene	0.0782	0.0038	"	0.100		78.2	70-130			
Surrogate: 1,2-Dichloroethane-d4	0.0152		"	0.0400		37.9	23-173			
Surrogate: Toluene-d8	0.0470		"	0.0400		117	20-170			
Surrogate: 4-Bromofluorobenzene	0.0400		"	0.0400		99.9	21-167			

Matrix Spike (BEH0091-MS1)

Source: 2108056-01

Prepared & Analyzed: 08/05/21

Benzene	0.0999	0.0020	mg/kg	0.100	ND	99.9	70-130			
Toluene	0.0988	0.0050	"	0.100	ND	98.8	70-130			
Ethylbenzene	0.112	0.0050	"	0.100	ND	112	70-130			
m,p-Xylene	0.215	0.010	"	0.200	ND	108	70-130			
o-Xylene	0.100	0.0050	"	0.100	ND	100	70-130			
1,2,4-Trimethylbenzene	0.113	0.0050	"	0.100	ND	113	70-130			
1,3,5-Trimethylbenzene	0.0900	0.0050	"	0.100	ND	90.0	70-130			
Naphthalene	0.0916	0.0038	"	0.100	ND	91.6	70-130			
Surrogate: 1,2-Dichloroethane-d4	0.0177		"	0.0400		44.2	23-173			
Surrogate: Toluene-d8	0.0423		"	0.0400		106	20-170			
Surrogate: 4-Bromofluorobenzene	0.0391		"	0.0400		97.6	21-167			

Summit Scientific

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

Project: Larson Farms 3,4,5,6,7-24 Tank Battery
Project Number: [none]
Project Manager: Mark Longhurst

Reported:
11/01/21 15:58

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 BEH0091 - EPA 5030 Soil MS

Matrix Spike Dup (BEH0091-MSD1)	Source: 2108056-01			Prepared: 08/05/21 Analyzed: 08/06/21						
Benzene	0.0916	0.0020	mg/kg	0.100	ND	91.6	70-130	8.74	30	
Toluene	0.0849	0.0050	"	0.100	ND	84.9	70-130	15.1	30	
Ethylbenzene	0.101	0.0050	"	0.100	ND	101	70-130	10.7	30	
m,p-Xylene	0.195	0.010	"	0.200	ND	97.6	70-130	9.71	30	
o-Xylene	0.0922	0.0050	"	0.100	ND	92.2	70-130	8.44	30	
1,2,4-Trimethylbenzene	0.101	0.0050	"	0.100	ND	101	70-130	11.2	30	
1,3,5-Trimethylbenzene	0.0955	0.0050	"	0.100	ND	95.5	70-130	5.85	30	
Naphthalene	0.0883	0.0038	"	0.100	ND	88.3	70-130	3.60	30	
Surrogate: 1,2-Dichloroethane-d4	0.0192		"	0.0400		48.0	23-173			
Surrogate: Toluene-d8	0.0412		"	0.0400		103	20-170			
Surrogate: 4-Bromofluorobenzene	0.0380		"	0.0400		94.9	21-167			

Summit Scientific

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

Project: Larson Farms 3,4,5,6,7-24 Tank Battery
Project Number: [none]
Project Manager: Mark Longhurst

Reported:
11/01/21 15:58

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 BEH0090 - EPA 3550A

Blank (BEH0090-BLK1)

Prepared: 08/05/21 Analyzed: 08/06/21

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

LCS (BEH0090-BS1)

Prepared: 08/05/21 Analyzed: 08/06/21

C10-C28 (DRO)	494	50	mg/kg	500	98.8	70-130
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Matrix Spike (BEH0090-MS1)

Source: 2108056-01

Prepared: 08/05/21 Analyzed: 08/06/21

C10-C28 (DRO)	494	50	mg/kg	500	13.9	96.0	70-130
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Matrix Spike Dup (BEH0090-MSD1)

Source: 2108056-01

Prepared: 08/05/21 Analyzed: 08/06/21

C10-C28 (DRO)	502	50	mg/kg	500	13.9	97.6	70-130	1.60	20
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Summit Scientific

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

Project: Larson Farms 3,4,5,6,7-24 Tank Battery
Project Number: [none]
Project Manager: Mark Longhurst

Reported:
11/01/21 15:58

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 BEH0096 - EPA 5030 Soil MS

Blank (BEH0096-BLK1)

Prepared: 08/06/21 Analyzed: 08/07/21

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	0.0203		"	0.0333		60.8		40-150			
Surrogate: Fluoranthene-d10	0.0262		"	0.0333		78.5		40-150			

LCS (BEH0096-BS1)

Prepared: 08/06/21 Analyzed: 08/07/21

Acenaphthene	0.0263	0.00500	mg/kg	0.0333		79.0		31-137			
Anthracene	0.0271	0.00500	"	0.0333		81.3		30-120			
Benzo (a) anthracene	0.0227	0.00500	"	0.0333		68.2		30-120			
Benzo (a) pyrene	0.0196	0.00500	"	0.0333		58.7		30-120			
Benzo (b) fluoranthene	0.0210	0.00500	"	0.0333		62.9		30-120			
Benzo (k) fluoranthene	0.0276	0.00500	"	0.0333		82.7		30-120			
Chrysene	0.0227	0.00500	"	0.0333		68.1		30-120			
Dibenz (a,h) anthracene	0.0177	0.00500	"	0.0333		53.2		30-120			
Fluoranthene	0.0271	0.00500	"	0.0333		81.3		30-120			
Fluorene	0.0280	0.00500	"	0.0333		83.9		30-120			
Indeno (1,2,3-cd) pyrene	0.0165	0.00500	"	0.0333		49.6		30-120			
Naphthalene	0.0275	0.00500	"	0.0333		82.5		30-120			
Pyrene	0.0200	0.00500	"	0.0333		60.0		35-142			
1-Methylnaphthalene	0.0267	0.00500	"	0.0333		80.0		35-142			
2-Methylnaphthalene	0.0273	0.00500	"	0.0333		81.8		35-142			
Surrogate: 2-Methylnaphthalene-d10	0.0239		"	0.0333		71.8		40-150			
Surrogate: Fluoranthene-d10	0.0279		"	0.0333		83.7		40-150			

Summit Scientific

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

Project: Larson Farms 3,4,5,6,7-24 Tank Battery

Project Number: [none]
Project Manager: Mark Longhurst

Reported:
11/01/21 15:58

PAH by EPA Method 8270D SIM - Quality Control

Summit Scientific

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

Batch BEH0096 - EPA 5030 Soil MS

Matrix Spike (BEH0096-MS1)

Source: 2106486-02

Prepared: 08/06/21 Analyzed: 08/07/21

Acenaphthene	0.0282	0.00500	mg/kg	0.0333	ND	84.5	31-137				
Anthracene	0.0307	0.00500	"	0.0333	ND	92.1	30-120				
Benzo (a) anthracene	0.0259	0.00500	"	0.0333	ND	77.7	30-120				
Benzo (a) pyrene	0.0217	0.00500	"	0.0333	ND	65.1	30-120				
Benzo (b) fluoranthene	0.0227	0.00500	"	0.0333	ND	68.1	30-120				
Benzo (k) fluoranthene	0.0301	0.00500	"	0.0333	ND	90.2	30-120				
Chrysene	0.0259	0.00500	"	0.0333	ND	77.7	30-120				
Dibenz (a,h) anthracene	0.0183	0.00500	"	0.0333	ND	54.9	30-120				
Fluoranthene	0.0303	0.00500	"	0.0333	ND	90.8	30-120				
Fluorene	0.0298	0.00500	"	0.0333	ND	89.5	30-120				
Indeno (1,2,3-cd) pyrene	0.0171	0.00500	"	0.0333	ND	51.4	30-120				
Naphthalene	0.0266	0.00500	"	0.0333	ND	79.9	30-120				
Pyrene	0.0236	0.00500	"	0.0333	ND	70.7	35-142				
1-Methylnaphthalene	0.0259	0.00500	"	0.0333	ND	77.8	15-130				
2-Methylnaphthalene	0.0277	0.00500	"	0.0333	ND	83.1	15-130				
Surrogate: 2-Methylnaphthalene-d10	0.0237		"	0.0333		71.2	40-150				
Surrogate: Fluoranthene-d10	0.0311		"	0.0333		93.3	40-150				

Matrix Spike Dup (BEH0096-MSD1)

Source: 2106486-02

Prepared: 08/06/21 Analyzed: 08/07/21

Acenaphthene	0.0294	0.00500	mg/kg	0.0333	ND	88.2	31-137	4.31	30		
Anthracene	0.0291	0.00500	"	0.0333	ND	87.2	30-120	5.48	30		
Benzo (a) anthracene	0.0246	0.00500	"	0.0333	ND	73.7	30-120	5.33	30		
Benzo (a) pyrene	0.0212	0.00500	"	0.0333	ND	63.5	30-120	2.46	30		
Benzo (b) fluoranthene	0.0213	0.00500	"	0.0333	ND	63.9	30-120	6.47	30		
Benzo (k) fluoranthene	0.0285	0.00500	"	0.0333	ND	85.6	30-120	5.29	30		
Chrysene	0.0245	0.00500	"	0.0333	ND	73.6	30-120	5.40	30		
Dibenz (a,h) anthracene	0.0194	0.00500	"	0.0333	ND	58.3	30-120	6.00	30		
Fluoranthene	0.0293	0.00500	"	0.0333	ND	87.9	30-120	3.23	30		
Fluorene	0.0307	0.00500	"	0.0333	ND	92.2	30-120	2.96	30		
Indeno (1,2,3-cd) pyrene	0.0187	0.00500	"	0.0333	ND	56.0	30-120	8.51	30		
Naphthalene	0.0292	0.00500	"	0.0333	ND	87.7	30-120	9.33	30		
Pyrene	0.0216	0.00500	"	0.0333	ND	64.9	35-142	8.61	30		
1-Methylnaphthalene	0.0290	0.00500	"	0.0333	ND	87.1	15-130	11.2	50		
2-Methylnaphthalene	0.0311	0.00500	"	0.0333	ND	93.2	15-130	11.4	50		
Surrogate: 2-Methylnaphthalene-d10	0.0258		"	0.0333		77.5	40-150				
Surrogate: Fluoranthene-d10	0.0301		"	0.0333		90.2	40-150				

Summit Scientific

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

Project: Larson Farms 3,4,5,6,7-24 Tank Battery
Project Number: [none]
Project Manager: Mark Longhurst

Reported:
11/01/21 15:58

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 BEI0139 - EPA 5030 Soil MS

Blank (BEI0139-BLK1)

Prepared: 09/08/21 Analyzed: 09/10/21

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	0.0209		"	0.0333		62.6	40-150			
Surrogate: Fluoranthene-d10	0.0143		"	0.0333		43.0	40-150			

LCS (BEI0139-BS1)

Prepared: 09/08/21 Analyzed: 09/10/21

Acenaphthene	0.0277	0.00500	mg/kg	0.0333		83.0	31-137			
Anthracene	0.0268	0.00500	"	0.0333		80.5	30-120			
Benzo (a) anthracene	0.0264	0.00500	"	0.0333		79.3	30-120			
Benzo (a) pyrene	0.0307	0.00500	"	0.0333		92.2	30-120			
Benzo (b) fluoranthene	0.0311	0.00500	"	0.0333		93.3	30-120			
Benzo (k) fluoranthene	0.0308	0.00500	"	0.0333		92.4	30-120			
Chrysene	0.0258	0.00500	"	0.0333		77.3	30-120			
Dibenz (a,h) anthracene	0.0227	0.00500	"	0.0333		68.2	30-120			
Fluoranthene	0.0289	0.00500	"	0.0333		86.6	30-120			
Fluorene	0.0292	0.00500	"	0.0333		87.6	30-120			
Indeno (1,2,3-cd) pyrene	0.0234	0.00500	"	0.0333		70.3	30-120			
Naphthalene	0.0306	0.00500	"	0.0333		91.7	30-120			
Pyrene	0.0245	0.00500	"	0.0333		73.4	35-142			
1-Methylnaphthalene	0.0289	0.00500	"	0.0333		86.7	35-142			
2-Methylnaphthalene	0.0272	0.00500	"	0.0333		81.6	35-142			
Surrogate: 2-Methylnaphthalene-d10	0.0216		"	0.0333		64.8	40-150			
Surrogate: Fluoranthene-d10	0.0152		"	0.0333		45.7	40-150			

Summit Scientific

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

Project: Larson Farms 3,4,5,6,7-24 Tank Battery

Project Number: [none]
Project Manager: Mark Longhurst

Reported:
11/01/21 15:58

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 BEI0139 - EPA 5030 Soil MS

Matrix Spike (BEI0139-MS1)

Source: 2108059-02

Prepared: 09/08/21 Analyzed: 09/10/21

Acenaphthene	0.0218	0.00500	mg/kg	0.0333	ND	65.3	31-137		
Anthracene	0.0185	0.00500	"	0.0333	ND	55.6	30-120		
Benzo (a) anthracene	0.0192	0.00500	"	0.0333	ND	57.6	30-120		
Benzo (a) pyrene	0.0217	0.00500	"	0.0333	ND	65.1	30-120		
Benzo (b) fluoranthene	0.0235	0.00500	"	0.0333	ND	70.4	30-120		
Benzo (k) fluoranthene	0.0229	0.00500	"	0.0333	ND	68.8	30-120		
Chrysene	0.0186	0.00500	"	0.0333	ND	55.9	30-120		
Dibenz (a,h) anthracene	0.0151	0.00500	"	0.0333	ND	45.4	30-120		
Fluoranthene	0.0207	0.00500	"	0.0333	ND	62.1	30-120		
Fluorene	0.0224	0.00500	"	0.0333	ND	67.1	30-120		
Indeno (1,2,3-cd) pyrene	0.0159	0.00500	"	0.0333	ND	47.8	30-120		
Naphthalene	0.0227	0.00500	"	0.0333	ND	68.0	30-120		
Pyrene	0.0185	0.00500	"	0.0333	ND	55.5	35-142		
1-Methylnaphthalene	0.0206	0.00500	"	0.0333	ND	61.7	15-130		
2-Methylnaphthalene	0.0214	0.00500	"	0.0333	ND	64.2	15-130		
Surrogate: 2-Methylnaphthalene-d10	0.0164		"	0.0333		49.2	40-150		
Surrogate: Fluoranthene-d10	0.0173		"	0.0333		52.0	40-150		

Matrix Spike Dup (BEI0139-MSD1)

Source: 2108059-02

Prepared: 09/08/21 Analyzed: 09/10/21

Acenaphthene	0.0265	0.00500	mg/kg	0.0333	ND	79.5	31-137	19.5	30
Anthracene	0.0158	0.00500	"	0.0333	ND	47.3	30-120	16.1	30
Benzo (a) anthracene	0.0254	0.00500	"	0.0333	ND	76.3	30-120	27.9	30
Benzo (a) pyrene	0.0294	0.00500	"	0.0333	ND	88.1	30-120	30.0	30
Benzo (b) fluoranthene	0.0174	0.00500	"	0.0333	ND	52.3	30-120	29.4	30
Benzo (k) fluoranthene	0.0301	0.00500	"	0.0333	ND	90.2	30-120	26.9	30
Chrysene	0.0248	0.00500	"	0.0333	ND	74.3	30-120	28.3	30
Dibenz (a,h) anthracene	0.0146	0.00500	"	0.0333	ND	43.7	30-120	3.84	30
Fluoranthene	0.0268	0.00500	"	0.0333	ND	80.4	30-120	25.6	30
Fluorene	0.0273	0.00500	"	0.0333	ND	81.8	30-120	19.8	30
Indeno (1,2,3-cd) pyrene	0.0152	0.00500	"	0.0333	ND	45.6	30-120	4.79	30
Naphthalene	0.0296	0.00500	"	0.0333	ND	88.9	30-120	26.6	30
Pyrene	0.0238	0.00500	"	0.0333	ND	71.5	35-142	25.2	30
1-Methylnaphthalene	0.0289	0.00500	"	0.0333	ND	86.8	15-130	33.8	50
2-Methylnaphthalene	0.0250	0.00500	"	0.0333	ND	74.9	15-130	15.5	50
Surrogate: 2-Methylnaphthalene-d10	0.0193		"	0.0333		58.0	40-150		
Surrogate: Fluoranthene-d10	0.0142		"	0.0333		42.6	40-150		

Summit Scientific

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

Project: Larson Farms 3,4,5,6,7-24 Tank Battery

Project Number: [none]
Project Manager: Mark Longhurst

Reported:
11/01/21 15:58

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 BEH0104 - EPA 3050B

Blank (BEH0104-BLK1)

Prepared: 08/06/21 Analyzed: 08/07/21

Boron ND 0.0100 mg/L

LCS (BEH0104-BS1)

Prepared: 08/06/21 Analyzed: 08/07/21

Boron 4.99 0.0100 mg/L 5.00 99.8 80-120

Duplicate (BEH0104-DUP1)

Source: 2108057-01

Prepared: 08/06/21 Analyzed: 08/07/21

Boron 0.517 0.0100 mg/L 0.517 0.0167 20

Matrix Spike (BEH0104-MS1)

Source: 2108057-01

Prepared: 08/06/21 Analyzed: 08/07/21

Boron 5.39 0.0100 mg/L 5.00 0.517 97.5 75-125

Matrix Spike Dup (BEH0104-MSD1)

Source: 2108057-01

Prepared: 08/06/21 Analyzed: 08/07/21

Boron 5.39 0.0100 mg/L 5.00 0.517 97.5 75-125 0.0349 25

Summit Scientific

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



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

Project: Larson Farms 3,4,5,6,7-24 Tank Battery
Project Number: [none]
Project Manager: Mark Longhurst

Reported:
11/01/21 15:58

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 BEH0105 - EPA 3050B

Blank (BEH0105-BLK1)

Prepared & Analyzed: 08/06/21

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 (BEH0105-BS1)

Prepared & Analyzed: 08/06/21

Arsenic	45.3	0.200	mg/kg wet	40.0	113	80-120
Barium	40.6	0.400	"	40.0	102	80-120
Cadmium	2.15	0.200	"	2.00	108	80-120
Copper	40.8	0.400	"	40.0	102	80-120
Lead	20.4	0.200	"	20.0	102	80-120
Nickel	39.7	0.400	"	40.0	99.2	80-120
Selenium	4.05	0.260	"	4.00	101	80-120
Silver	1.98	0.0200	"	2.00	99.2	80-120
Zinc	47.0	0.400	"	40.0	117	80-120

Duplicate (BEH0105-DUP1)

Source: 2106181-16

Prepared & Analyzed: 08/06/21

Arsenic	4.04	0.233	mg/kg dry	4.25	5.11	20
Barium	96.0	0.467	"	87.1	9.77	20
Cadmium	0.236	0.233	"	0.215	9.08	20
Copper	9.72	0.467	"	9.46	2.71	20
Lead	8.90	0.233	"	8.61	3.29	20
Nickel	12.1	0.467	"	12.3	1.64	20
Selenium	0.392	0.303	"	0.372	5.14	20
Silver	0.0652	0.0233	"	0.0632	3.17	20
Zinc	43.2	0.467	"	42.0	2.66	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: Larson Farms 3,4,5,6,7-24 Tank Battery

Project Number: [none]
Project Manager: Mark Longhurst

Reported:
11/01/21 15:58

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 BEH0105 - EPA 3050B

Matrix Spike (BEH0105-MS1)

Source: 2106181-16

Prepared & Analyzed: 08/06/21

Arsenic	52.4	0.233	mg/kg dry	46.7	4.25	103	75-125
Barium	145	0.467	"	46.7	87.1	125	75-125
Cadmium	2.62	0.233	"	2.33	0.215	103	75-125
Copper	54.1	0.467	"	46.7	9.46	95.6	75-125
Lead	30.4	0.233	"	23.3	8.61	93.2	75-125
Nickel	56.4	0.467	"	46.7	12.3	94.5	75-125
Selenium	4.48	0.303	"	4.67	0.372	88.1	75-125
Silver	2.23	0.0233	"	2.33	0.0632	93.0	75-125
Zinc	99.4	0.467	"	46.7	42.0	123	75-125

Matrix Spike Dup (BEH0105-MSD1)

Source: 2106181-16

Prepared & Analyzed: 08/06/21

Arsenic	52.1	0.233	mg/kg dry	46.7	4.25	103	75-125	0.557	25
Barium	130	0.467	"	46.7	87.1	91.0	75-125	11.4	25
Cadmium	2.53	0.233	"	2.33	0.215	99.2	75-125	3.30	25
Copper	52.4	0.467	"	46.7	9.46	92.1	75-125	3.10	25
Lead	28.7	0.233	"	23.3	8.61	86.1	75-125	5.58	25
Nickel	54.8	0.467	"	46.7	12.3	91.0	75-125	2.89	25
Selenium	4.63	0.303	"	4.67	0.372	91.1	75-125	3.12	25
Silver	2.20	0.0233	"	2.33	0.0632	91.6	75-125	1.41	25
Zinc	91.0	0.467	"	46.7	42.0	105	75-125	8.77	25

Summit Scientific

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

Project: Larson Farms 3,4,5,6,7-24 Tank Battery
Project Number: [none]
Project Manager: Mark Longhurst

Reported:
11/01/21 15:58

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 BEH0106 - 3060A Mod

Blank (BEH0106-BLK1)

Prepared: 08/06/21 Analyzed: 08/10/21

Chromium, Hexavalent ND 0.30 mg/kg wet

LCS (BEH0106-BS1)

Prepared: 08/06/21 Analyzed: 08/10/21

Chromium, Hexavalent 25.8 0.30 mg/kg wet 25.0 103 80-120

Duplicate (BEH0106-DUP1)

Source: 2108059-01

Prepared: 08/06/21 Analyzed: 08/10/21

Chromium, Hexavalent ND 0.30 mg/kg dry ND 20

Matrix Spike (BEH0106-MS1)

Source: 2108059-01

Prepared: 08/06/21 Analyzed: 08/10/21

Chromium, Hexavalent 33.6 0.30 mg/kg dry 33.3 ND 101 75-125

Matrix Spike Dup (BEH0106-MSD1)

Source: 2108059-01

Prepared: 08/06/21 Analyzed: 08/10/21

Chromium, Hexavalent 33.4 0.30 mg/kg dry 33.3 ND 100 75-125 0.596 20

Summit Scientific

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

Project: Larson Farms 3,4,5,6,7-24 Tank Battery

Project Number: [none]
Project Manager: Mark Longhurst

Reported:
11/01/21 15:58

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 BEH0115 - General Preparation

Blank (BEH0115-BLK1)

Prepared & Analyzed: 08/09/21

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

LCS (BEH0115-BS1)

Prepared & Analyzed: 08/09/21

Calcium	5.12	0.0500	mg/L wet	5.00	102	70-130
Magnesium	5.02	0.0500	"	5.00	100	70-130
Sodium	4.96	0.0500	"	5.00	99.1	70-130

Summit Scientific

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

Project: Larson Farms 3,4,5,6,7-24 Tank Battery

Project Number: [none]

Project Manager: Mark Longhurst

Reported:
11/01/21 15:58

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 BEH0093 - General Preparation

Duplicate (BEH0093-DUP1)

Source: 2108059-01

Prepared & Analyzed: 08/06/21

% Solids	75.5	%	75.1	0.531	20
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Summit Scientific

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

Project: Larson Farms 3,4,5,6,7-24 Tank Battery

Project Number: [none]
Project Manager: Mark Longhurst

Reported:
11/01/21 15:58

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 BEH0118 - General Preparation

Blank (BEH0118-BLK1)

Prepared & Analyzed: 08/09/21

Specific Conductance (EC) ND 0.0100 mmhos/cm

LCS (BEH0118-BS1)

Prepared & Analyzed: 08/09/21

Specific Conductance (EC) 0.139 0.0100 mmhos/cm 0.150 92.5 90-110

Duplicate (BEH0118-DUP1)

Source: 2108057-01

Prepared & Analyzed: 08/09/21

Specific Conductance (EC) 0.750 0.0100 mmhos/cm 0.751 0.0666 20

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

Project: Larson Farms 3,4,5,6,7-24 Tank Battery

Project Number: [none]
Project Manager: Mark Longhurst

Reported:
11/01/21 15:58

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 BEH0117 - General Preparation

LCS (BEH0117-BS1)

Prepared & Analyzed: 08/09/21

pH	9.30	pH Units	9.21	101	95-105
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Duplicate (BEH0117-DUP1)

Source: 2108057-01

Prepared & Analyzed: 08/09/21

pH	8.27	pH Units	8.27	0.00	20
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Summit Scientific

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

Project: Larson Farms 3,4,5,6,7-24 Tank Battery

Project Number: [none]
Project Manager: Mark Longhurst

Reported:
11/01/21 15:58

Notes and Definitions

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

Summit Scientific

4653 Table Mountain Drive, Golden, Colorado 80403

303.277.9310

November 01, 2021

Mark Longhurst

PDC Energy

1775 Sherman St. STE. 3000

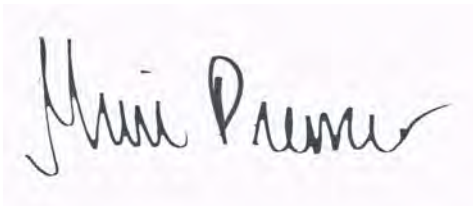
Denver, CO 80203

RE: Larson Farms 3,4,5,6,7-24 Tank Battery

Work Order #2108095

Enclosed are the results of analyses for samples received by Summit Scientific on 08/06/21 18:00. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

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

Muri Premer For Paul Shrewsbury
President



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

Project: Larson Farms 3,4,5,6,7-24 Tank Battery

Project Number: [none]
Project Manager: Mark Longhurst

Reported:
11/01/21 14:26

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
SEP02-SS03@8'	2108095-01	Soil	08/06/21 09:57	08/06/21 18:00
SEP02-SS04@7'	2108095-02	Soil	08/06/21 09:58	08/06/21 18:00
SEP02-SS05@8'	2108095-03	Soil	08/06/21 09:59	08/06/21 18:00
SEP02-SS06@7'	2108095-04	Soil	08/06/21 10:00	08/06/21 18:00
SEP02-SS07@8'	2108095-05	Soil	08/06/21 10:01	08/06/21 18:00
SEP02-SS08@7'	2108095-06	Soil	08/06/21 10:58	08/06/21 18:00
SEP02-SS09@8'	2108095-07	Soil	08/06/21 10:59	08/06/21 18:00
SEP02-SS10@7'	2108095-08	Soil	08/06/21 10:02	08/06/21 18:00
SEP02-SS11@8'	2108095-09	Soil	08/06/21 10:03	08/06/21 18:00
SEP02-SS12@2.5'	2108095-10	Soil	08/06/21 11:00	08/06/21 18:00
GW01	2108095-11	Water	08/06/21 11:10	08/06/21 18:00

Summit Scientific


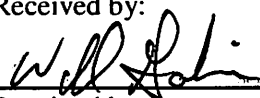
The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

2108095.1

Page 1 of 2

Project Manager: Mark Longhurst
E-Mail: mark.longhurst@PDCE.com

Project Name: Larson Farms 3, 4, 5, 6, 7-24 Tank Battery
Project Number: 11a

					Preservative				Matrix				Analysis Requested								Special Instructions					
ID	Sample Description	Date Sampled	Time Sampled	# of containers	HCl	HNO3	None	Other	Water	Soil	Air-Canister #	Other	BTEXN - 8260B	TPH - (C6 - C36)	1,2,4 & 1,3,5-TMB	Boron - HWS	pH, EC, SAR									pH, EC, SAR by saturated paste
1	SEP02-SS03@8'	8/6/21	0957	3			X			X			X	X	X											
2	SEP02-SS04@7'		0958	3			X			X			X	X	X											
3	SEP02-SS05@8'		0959	3			X			X			X	X	X											
4	SEP02-SS06@7'		1000	3			X			X			X	X	X											
5	SEP02-SS07@8'		1001	3			X			X			X	X	X											
6	SEP02-SS08@7'		1058	3			X			X			X	X	X											
7	SEP02-SS09@8'		1059	3			X			X			X	X	X											
8	SEP02-SS10@7'		1002	3			X			X			X	X	X											
9	SEP02-SS11@8'		1003	3			X			X			X	X	X											
10	SEP02-SS12@2.5'	✓	1100	3			X			X						X	X									
Relinquished by:		Date/Time:		Received by:		Date/Time:		Turn Around Time		(Check)		Notes:														
		8/6/21 1430		Tasman's Lock Box		8/6/21 1430		Same Day		X												72 hours				
Relinquished by:		Date/Time:		Received by:		Date/Time:		24 hours														Standard				
Tasman's Lock Box		8/6/21 1800				8/6/21 1800		48 hours																		
Relinquished by:		Date/Time:		Received by:		Date/Time:		Sample Integrity:																		
								Temperature Upon Receipt:		6																
								Samples Intact:		(Yes) No																

Summit Scientific
S₂

303-277-9310

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: Larson Farms 3, 4, 5, 6, 7-2-1 Tank Battery

Sampler Name: J. Marcus

Project Number: 1/a

ID	Sample Description	Date Sampled	Time Sampled	# of containers	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				Special Instructions
1	GW01	8/6/21	1110	3			X		X				X		X						pH, EC, SAR by saturated paste
2																					
3																					
4																					
5																					
6																					
7																					
8																					
9																					
10																					
Relinquished by:		Date/Time:		Received by:		Date/Time:		Turn Around Time		(Check)						Notes:					
		8/6/21 1430		Tasman's Lock Box		8/6/21 1430		Same Day		<input checked="" type="checkbox"/> X		72 hours									
								24 hours		<input type="checkbox"/>		Standard		<input type="checkbox"/>							
Relinquished by:		Date/Time:		Received by:		Date/Time:		48 hours		<input type="checkbox"/>											
Tasman's Lock Box		8/6/21 1800				8/6/21 1800		Sample Integrity:													
Relinquished by:		Date/Time:		Received by:		Date/Time:		Temperature Upon Receipt:													
								Samples Intact:		<input checked="" type="radio"/> Yes		<input type="radio"/> No									

Sample Receipt Checklist

S2 Work Order 2108095

Client: PDC/HASMAN

Client Project ID: Larson Farms 3,4,5,6, 7-24 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) 6

Thermometer ID: 61857155-K

	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 provided that 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 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⁾ ?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
Note the type of preservative in the Comments column – HCl, H2SO4, NaOH, HNO3, ect				
If samples are acid preserved for metals, is the pH ≤ 2 ⁽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.

WG
Custodian Printed Name or Initials

Will Bal
Signature of Custodian

8/6/21
Date/Time



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

Project: Larson Farms 3,4,5,6,7-24 Tank Battery
Project Number: [none]
Project Manager: Mark Longhurst

Reported:
11/01/21 14:26

SEP02-SS03@8'
2108095-01 (Soil)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **08/06/21 09:57**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Benzene	ND	0.0020	mg/kg	1	BEH0109	08/06/21	08/06/21	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: **08/06/21 09:57**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 1,2-Dichloroethane-d4		107 %	23-173		"	"	"	"	
Surrogate: Toluene-d8		100 %	20-170		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		93.2 %	21-167		"	"	"	"	

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **08/06/21 09:57**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
C10-C28 (DRO)	ND	50	mg/kg	1	BEH0110	"	08/07/21	EPA 8015M	
C28-C36 (ORO)	ND	50	"	"	"	"	"	"	

Date Sampled: **08/06/21 09:57**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: o-Terphenyl		83.4 %	30-150		"	"	"	"	

PAH by EPA Method 8270D SIM

Summit Scientific

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

Project: Larson Farms 3,4,5,6,7-24 Tank Battery
Project Number: [none]
Project Manager: Mark Longhurst

Reported:
11/01/21 14:26

SEP02-SS03@8'
2108095-01 (Soil)

Summit Scientific

PAH by EPA Method 8270D SIM

Date Sampled: **08/06/21 09:57**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Chrysene	ND	0.00500	mg/kg	1	BEI0238	09/13/21	09/14/21	EPA 8270D SIM	
Fluorene	ND	0.00500	"	"	"	"	"	"	
1-Methylnaphthalene	ND	0.00500	"	"	"	"	"	"	
2-Methylnaphthalene	ND	0.00500	"	"	"	"	"	"	

Date Sampled: **08/06/21 09:57**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: 2-Methylnaphthalene-d10		55.4 %	40-150		"	"	"	"	
Surrogate: Fluoranthene-d10		70.2 %	40-150		"	"	"	"	

Summit Scientific

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

Project: Larson Farms 3,4,5,6,7-24 Tank Battery
Project Number: [none]
Project Manager: Mark Longhurst

Reported:
11/01/21 14:26

SEP02-SS04@7'
2108095-02 (Soil)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **08/06/21 09:58**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Benzene	ND	0.0020	mg/kg	1	BEH0109	08/06/21	08/06/21	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: **08/06/21 09:58**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: 1,2-Dichloroethane-d4		107 %	23-173		"	"	"	"	
Surrogate: Toluene-d8		100 %	20-170		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		92.2 %	21-167		"	"	"	"	

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **08/06/21 09:58**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
C10-C28 (DRO)	ND	50	mg/kg	1	BEH0110	"	08/07/21	EPA 8015M	
C28-C36 (ORO)	ND	50	"	"	"	"	"	"	

Date Sampled: **08/06/21 09:58**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: o-Terphenyl		81.6 %	30-150		"	"	"	"	

PAH by EPA Method 8270D SIM

Summit Scientific

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

Project: Larson Farms 3,4,5,6,7-24 Tank Battery
Project Number: [none]
Project Manager: Mark Longhurst

Reported:
11/01/21 14:26

SEP02-SS04@7'
2108095-02 (Soil)

Summit Scientific

PAH by EPA Method 8270D SIM

Date Sampled: **08/06/21 09:58**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Chrysene	ND	0.00500	mg/kg	1	BEI0238	09/13/21	09/14/21	EPA 8270D SIM	
Fluorene	ND	0.00500	"	"	"	"	"	"	
1-Methylnaphthalene	ND	0.00500	"	"	"	"	"	"	
2-Methylnaphthalene	ND	0.00500	"	"	"	"	"	"	

Date Sampled: **08/06/21 09:58**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 2-Methylnaphthalene-d10		57.4 %	40-150		"	"	"	"	
Surrogate: Fluoranthene-d10		72.1 %	40-150		"	"	"	"	

Summit Scientific

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

Project: Larson Farms 3,4,5,6,7-24 Tank Battery
Project Number: [none]
Project Manager: Mark Longhurst

Reported:
11/01/21 14:26

SEP02-SS05@8'
2108095-03 (Soil)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **08/06/21 09:59**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Benzene	ND	0.0020	mg/kg	1	BEH0109	08/06/21	08/06/21	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: **08/06/21 09:59**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: 1,2-Dichloroethane-d4		108 %	23-173		"	"	"	"	
Surrogate: Toluene-d8		101 %	20-170		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		92.5 %	21-167		"	"	"	"	

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **08/06/21 09:59**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
C10-C28 (DRO)	ND	50	mg/kg	1	BEH0110	"	08/07/21	EPA 8015M	
C28-C36 (ORO)	ND	50	"	"	"	"	"	"	

Date Sampled: **08/06/21 09:59**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: o-Terphenyl		82.6 %	30-150		"	"	"	"	

PAH by EPA Method 8270D SIM

Summit Scientific

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



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

Project: Larson Farms 3,4,5,6,7-24 Tank Battery
Project Number: [none]
Project Manager: Mark Longhurst

Reported:
11/01/21 14:26

SEP02-SS05@8'
2108095-03 (Soil)

Summit Scientific

PAH by EPA Method 8270D SIM

Date Sampled: **08/06/21 09:59**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Chrysene	ND	0.00500	mg/kg	1	BEI0238	09/13/21	09/14/21	EPA 8270D SIM	
Fluorene	ND	0.00500	"	"	"	"	"	"	
1-Methylnaphthalene	ND	0.00500	"	"	"	"	"	"	
2-Methylnaphthalene	ND	0.00500	"	"	"	"	"	"	

Date Sampled: **08/06/21 09:59**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: 2-Methylnaphthalene-d10		47.9 %	40-150		"	"	"	"	
Surrogate: Fluoranthene-d10		63.1 %	40-150		"	"	"	"	

Summit Scientific

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

Project: Larson Farms 3,4,5,6,7-24 Tank Battery
Project Number: [none]
Project Manager: Mark Longhurst

Reported:
11/01/21 14:26

SEP02-SS06@7'
2108095-04 (Soil)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **08/06/21 10:00**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Benzene	ND	0.0020	mg/kg	1	BEH0109	08/06/21	08/06/21	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: **08/06/21 10:00**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: 1,2-Dichloroethane-d4		103 %	23-173		"	"	"	"	
Surrogate: Toluene-d8		99.8 %	20-170		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		94.4 %	21-167		"	"	"	"	

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **08/06/21 10:00**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
C10-C28 (DRO)	ND	50	mg/kg	1	BEH0110	"	08/07/21	EPA 8015M	
C28-C36 (ORO)	ND	50	"	"	"	"	"	"	

Date Sampled: **08/06/21 10:00**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: o-Terphenyl		84.6 %	30-150		"	"	"	"	

PAH by EPA Method 8270D SIM

Summit Scientific

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

Project: Larson Farms 3,4,5,6,7-24 Tank Battery
Project Number: [none]
Project Manager: Mark Longhurst

Reported:
11/01/21 14:26

SEP02-SS06@7'
2108095-04 (Soil)

Summit Scientific

PAH by EPA Method 8270D SIM

Date Sampled: **08/06/21 10:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Chrysene	ND	0.00500	mg/kg	1	BEI0238	09/13/21	09/14/21	EPA 8270D SIM	
Fluorene	ND	0.00500	"	"	"	"	"	"	
1-Methylnaphthalene	ND	0.00500	"	"	"	"	"	"	
2-Methylnaphthalene	ND	0.00500	"	"	"	"	"	"	

Date Sampled: **08/06/21 10:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 2-Methylnaphthalene-d10		67.3 %	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: Larson Farms 3,4,5,6,7-24 Tank Battery
Project Number: [none]
Project Manager: Mark Longhurst

Reported:
11/01/21 14:26

SEP02-SS07@8'
2108095-05 (Soil)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **08/06/21 10:01**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Benzene	ND	0.0020	mg/kg	1	BEH0109	08/06/21	08/06/21	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: **08/06/21 10:01**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: 1,2-Dichloroethane-d4		105 %	23-173		"	"	"	"	
Surrogate: Toluene-d8		100 %	20-170		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		95.0 %	21-167		"	"	"	"	

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **08/06/21 10:01**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
C10-C28 (DRO)	ND	50	mg/kg	1	BEH0110	"	08/07/21	EPA 8015M	
C28-C36 (ORO)	ND	50	"	"	"	"	"	"	

Date Sampled: **08/06/21 10:01**

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

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

Project: Larson Farms 3,4,5,6,7-24 Tank Battery
Project Number: [none]
Project Manager: Mark Longhurst

Reported:
11/01/21 14:26

SEP02-SS07@8'
2108095-05 (Soil)

Summit Scientific

PAH by EPA Method 8270D SIM

Date Sampled: **08/06/21 10:01**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Chrysene	ND	0.00500	mg/kg	1	BEI0238	09/13/21	09/14/21	EPA 8270D SIM	
Fluorene	ND	0.00500	"	"	"	"	"	"	
1-Methylnaphthalene	ND	0.00500	"	"	"	"	"	"	
2-Methylnaphthalene	ND	0.00500	"	"	"	"	"	"	

Date Sampled: **08/06/21 10:01**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 2-Methylnaphthalene-d10		59.7 %	40-150		"	"	"	"	
Surrogate: Fluoranthene-d10		74.7 %	40-150		"	"	"	"	

Summit Scientific

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

Project: Larson Farms 3,4,5,6,7-24 Tank Battery
Project Number: [none]
Project Manager: Mark Longhurst

Reported:
11/01/21 14:26

SEP02-SS08@7'
2108095-06 (Soil)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **08/06/21 10:58**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Benzene	ND	0.0020	mg/kg	1	BEH0109	08/06/21	08/07/21	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: **08/06/21 10:58**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: 1,2-Dichloroethane-d4		108 %	23-173		"	"	"	"	
Surrogate: Toluene-d8		100 %	20-170		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		95.9 %	21-167		"	"	"	"	

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **08/06/21 10:58**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
C10-C28 (DRO)	ND	50	mg/kg	1	BEH0110	"	08/07/21	EPA 8015M	
C28-C36 (ORO)	ND	50	"	"	"	"	"	"	

Date Sampled: **08/06/21 10:58**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: o-Terphenyl		82.9 %	30-150		"	"	"	"	

PAH by EPA Method 8270D SIM

Summit Scientific

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

Project: Larson Farms 3,4,5,6,7-24 Tank Battery
Project Number: [none]
Project Manager: Mark Longhurst

Reported:
11/01/21 14:26

SEP02-SS08@7'
2108095-06 (Soil)

Summit Scientific

PAH by EPA Method 8270D SIM

Date Sampled: **08/06/21 10:58**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Chrysene	ND	0.00500	mg/kg	1	BEI0238	09/13/21	09/14/21	EPA 8270D SIM	
Fluorene	ND	0.00500	"	"	"	"	"	"	
1-Methylnaphthalene	ND	0.00500	"	"	"	"	"	"	
2-Methylnaphthalene	ND	0.00500	"	"	"	"	"	"	

Date Sampled: **08/06/21 10:58**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 2-Methylnaphthalene-d10		65.7 %	40-150		"	"	"	"	
Surrogate: Fluoranthene-d10		82.8 %	40-150		"	"	"	"	

Summit Scientific

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

Project: Larson Farms 3,4,5,6,7-24 Tank Battery
Project Number: [none]
Project Manager: Mark Longhurst

Reported:
11/01/21 14:26

SEP02-SS09@8'
2108095-07 (Soil)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **08/06/21 10:59**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Benzene	ND	0.0020	mg/kg	1	BEH0109	08/06/21	08/07/21	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: **08/06/21 10:59**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: 1,2-Dichloroethane-d4		105 %	23-173		"	"	"	"	
Surrogate: Toluene-d8		100 %	20-170		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		93.2 %	21-167		"	"	"	"	

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **08/06/21 10:59**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
C10-C28 (DRO)	ND	50	mg/kg	1	BEH0110	"	08/07/21	EPA 8015M	
C28-C36 (ORO)	ND	50	"	"	"	"	"	"	

Date Sampled: **08/06/21 10:59**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: o-Terphenyl		83.2 %	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: Larson Farms 3,4,5,6,7-24 Tank Battery
Project Number: [none]
Project Manager: Mark Longhurst

Reported:
11/01/21 14:26

SEP02-SS09@8'
2108095-07 (Soil)

Summit Scientific

PAH by EPA Method 8270D SIM

Date Sampled: **08/06/21 10:59**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Chrysene	ND	0.00500	mg/kg	1	BEI0238	09/13/21	09/14/21	EPA 8270D SIM	
Fluorene	ND	0.00500	"	"	"	"	"	"	
1-Methylnaphthalene	ND	0.00500	"	"	"	"	"	"	
2-Methylnaphthalene	ND	0.00500	"	"	"	"	"	"	

Date Sampled: **08/06/21 10:59**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 2-Methylnaphthalene-d10	55.3 %	40-150			"	"	"	"	
Surrogate: Fluoranthene-d10	75.5 %	40-150			"	"	"	"	

Summit Scientific

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



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

Project: Larson Farms 3,4,5,6,7-24 Tank Battery
Project Number: [none]
Project Manager: Mark Longhurst

Reported:
11/01/21 14:26

SEP02-SS10@7'
2108095-08 (Soil)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **08/06/21 10:02**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Benzene	ND	0.0020	mg/kg	1	BEH0109	08/06/21	08/07/21	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: **08/06/21 10:02**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: 1,2-Dichloroethane-d4		107 %	23-173		"	"	"	"	
Surrogate: Toluene-d8		101 %	20-170		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		94.3 %	21-167		"	"	"	"	

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **08/06/21 10:02**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
C10-C28 (DRO)	ND	50	mg/kg	1	BEH0110	"	08/07/21	EPA 8015M	
C28-C36 (ORO)	ND	50	"	"	"	"	"	"	

Date Sampled: **08/06/21 10:02**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: o-Terphenyl		83.0 %	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: Larson Farms 3,4,5,6,7-24 Tank Battery
Project Number: [none]
Project Manager: Mark Longhurst

Reported:
11/01/21 14:26

SEP02-SS10@7'
2108095-08 (Soil)

Summit Scientific

PAH by EPA Method 8270D SIM

Date Sampled: **08/06/21 10:02**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Chrysene	ND	0.00500	mg/kg	1	BEI0238	09/13/21	09/14/21	EPA 8270D SIM	
Fluorene	ND	0.00500	"	"	"	"	"	"	
1-Methylnaphthalene	ND	0.00500	"	"	"	"	"	"	
2-Methylnaphthalene	ND	0.00500	"	"	"	"	"	"	

Date Sampled: **08/06/21 10:02**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 2-Methylnaphthalene-d10		55.1 %	40-150		"	"	"	"	
Surrogate: Fluoranthene-d10		63.5 %	40-150		"	"	"	"	

Summit Scientific

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

Project: Larson Farms 3,4,5,6,7-24 Tank Battery
Project Number: [none]
Project Manager: Mark Longhurst

Reported:
11/01/21 14:26

SEP02-SS11@8'
2108095-09 (Soil)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **08/06/21 10:03**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Benzene	ND	0.0020	mg/kg	1	BEH0109	08/06/21	08/07/21	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: **08/06/21 10:03**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: 1,2-Dichloroethane-d4		109 %	23-173		"	"	"	"	
Surrogate: Toluene-d8		103 %	20-170		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		92.0 %	21-167		"	"	"	"	

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **08/06/21 10:03**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
C10-C28 (DRO)	ND	50	mg/kg	1	BEH0110	"	08/07/21	EPA 8015M	
C28-C36 (ORO)	ND	50	"	"	"	"	"	"	

Date Sampled: **08/06/21 10:03**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: o-Terphenyl		83.0 %	30-150		"	"	"	"	

PAH by EPA Method 8270D SIM

Summit Scientific

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

Project: Larson Farms 3,4,5,6,7-24 Tank Battery
Project Number: [none]
Project Manager: Mark Longhurst

Reported:
11/01/21 14:26

SEP02-SS11@8'
2108095-09 (Soil)

Summit Scientific

PAH by EPA Method 8270D SIM

Date Sampled: **08/06/21 10:03**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Chrysene	ND	0.00500	mg/kg	1	BEI0238	09/13/21	09/14/21	EPA 8270D SIM	
Fluorene	ND	0.00500	"	"	"	"	"	"	
1-Methylnaphthalene	ND	0.00500	"	"	"	"	"	"	
2-Methylnaphthalene	ND	0.00500	"	"	"	"	"	"	

Date Sampled: **08/06/21 10:03**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: 2-Methylnaphthalene-d10		56.6 %	40-150		"	"	"	"	
Surrogate: Fluoranthene-d10		76.8 %	40-150		"	"	"	"	

Summit Scientific

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

Project: Larson Farms 3,4,5,6,7-24 Tank Battery
Project Number: [none]
Project Manager: Mark Longhurst

Reported:
11/01/21 14:26

SEP02-SS12@2.5'
2108095-10 (Soil)

Summit Scientific

PAH by EPA Method 8270D SIM

Date Sampled: **08/06/21 11:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Chrysene	ND	0.00500	mg/kg	1	BEI0238	09/13/21	09/14/21	EPA 8270D SIM	
Fluorene	ND	0.00500	"	"	"	"	"	"	
1-Methylnaphthalene	ND	0.00500	"	"	"	"	"	"	
2-Methylnaphthalene	ND	0.00500	"	"	"	"	"	"	

Date Sampled: **08/06/21 11:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 2-Methylnaphthalene-d10		59.3 %	40-150		"	"	"	"	
Surrogate: Fluoranthene-d10		80.8 %	40-150		"	"	"	"	

Total Metals by EPA 6020B Hot Water Soluble Extraction

Date Sampled: **08/06/21 11:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Boron	0.363	0.0100	mg/L	1	BEH0126	08/09/21	08/10/21	EPA 6020B	

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

Date Sampled: **08/06/21 11:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Calcium	24.8	0.0725	mg/L dry	1	BEH0122	08/09/21	08/12/21	EPA 6020B	
Magnesium	6.99	0.0725	"	"	"	"	"	"	
Sodium	176	0.0725	"	"	"	"	"	"	

Calculated Analysis

Date Sampled: **08/06/21 11:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	8.04	0.00100	units	1	BEH0230	08/13/21	08/13/21	Calculation	

Summit Scientific

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

Project: Larson Farms 3,4,5,6,7-24 Tank Battery
Project Number: [none]
Project Manager: Mark Longhurst

Reported:
11/01/21 14:26

SEP02-SS12@2.5'
2108095-10 (Soil)

Summit Scientific

Calculated Analysis

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **08/06/21 11:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
% Solids	69.0		%	1	BEH0123	08/09/21	08/09/21	Calculation	

Specific Conductance by EPA Method 120.1, Saturated Paste Extraction

Date Sampled: **08/06/21 11:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Specific Conductance (EC)	0.851	0.0100	mmhos/cm	1	BEH0143	08/10/21	08/10/21	EPA 120.1	

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

Date Sampled: **08/06/21 11:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
pH	8.53		pH Units	1	BEH0142	08/10/21	08/10/21	EPA 9045D	

Summit Scientific

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

Project: Larson Farms 3,4,5,6,7-24 Tank Battery
Project Number: [none]
Project Manager: Mark Longhurst

Reported:
11/01/21 14:26

GW01
2108095-11 (Water)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **08/06/21 11:10**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Benzene	ND	1.0	ug/l	1	BEH0111	08/06/21	08/06/21	EPA 8260B	
Toluene	ND	1.0	"	"	"	"	"	"	
Ethylbenzene	ND	1.0	"	"	"	"	"	"	
Xylenes (total)	ND	2.0	"	"	"	"	"	"	
Naphthalene	ND	1.0	"	"	"	"	"	"	
1,2,4-Trimethylbenzene	ND	1.0	"	"	"	"	"	"	
1,3,5-Trimethylbenzene	ND	1.0	"	"	"	"	"	"	

Date Sampled: **08/06/21 11:10**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: 1,2-Dichloroethane-d4		85.8 %	23-173		"	"	"	"	
Surrogate: Toluene-d8		98.1 %	20-170		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		91.1 %	21-167		"	"	"	"	

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **08/06/21 11:10**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
C10-C28 (DRO)	ND	5.0	mg/L	1	BEH0127	08/09/21	08/10/21	EPA 8015M	
C28-C36 (ORO)	5.6	5.0	"	"	"	"	"	"	

Date Sampled: **08/06/21 11:10**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: o-Terphenyl		93.5 %	58.9-148		"	"	"	"	

Summit Scientific

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

Project: Larson Farms 3,4,5,6,7-24 Tank Battery

Project Number: [none]
Project Manager: Mark Longhurst

Reported:
11/01/21 14:26

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 BEH0109 - EPA 5030 Soil MS

Blank (BEH0109-BLK1)

Prepared & Analyzed: 08/06/21

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	0.0414		"	0.0400		104	23-173			
Surrogate: Toluene-d8	0.0397		"	0.0400		99.2	20-170			
Surrogate: 4-Bromofluorobenzene	0.0369		"	0.0400		92.2	21-167			

LCS (BEH0109-BS1)

Prepared & Analyzed: 08/06/21

Benzene	0.0704	0.0020	mg/kg	0.100		70.4	70-130			
Toluene	0.0718	0.0050	"	0.100		71.8	70-130			
Ethylbenzene	0.0904	0.0050	"	0.100		90.4	70-130			
m,p-Xylene	0.177	0.010	"	0.200		88.7	70-130			
o-Xylene	0.0893	0.0050	"	0.100		89.3	70-130			
1,2,4-Trimethylbenzene	0.0914	0.0050	"	0.100		91.4	70-130			
1,3,5-Trimethylbenzene	0.0914	0.0050	"	0.100		91.4	70-130			
Naphthalene	0.115	0.0038	"	0.100		115	70-130			
Surrogate: 1,2-Dichloroethane-d4	0.0404		"	0.0400		101	23-173			
Surrogate: Toluene-d8	0.0400		"	0.0400		100	20-170			
Surrogate: 4-Bromofluorobenzene	0.0369		"	0.0400		92.3	21-167			

Matrix Spike (BEH0109-MS1)

Source: 2108092-01

Prepared & Analyzed: 08/06/21

Benzene	0.0707	0.0020	mg/kg	0.100	ND	70.7	70-130			
Toluene	0.0739	0.0050	"	0.100	ND	73.9	70-130			
Ethylbenzene	0.0902	0.0050	"	0.100	ND	90.2	70-130			
m,p-Xylene	0.176	0.010	"	0.200	ND	87.9	70-130			
o-Xylene	0.0891	0.0050	"	0.100	ND	89.1	70-130			
1,2,4-Trimethylbenzene	0.0904	0.0050	"	0.100	ND	90.4	70-130			
1,3,5-Trimethylbenzene	0.0902	0.0050	"	0.100	ND	90.2	70-130			
Naphthalene	0.119	0.0038	"	0.100	ND	119	70-130			
Surrogate: 1,2-Dichloroethane-d4	0.0419		"	0.0400		105	23-173			
Surrogate: Toluene-d8	0.0407		"	0.0400		102	20-170			
Surrogate: 4-Bromofluorobenzene	0.0375		"	0.0400		93.7	21-167			

Summit Scientific

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

Project: Larson Farms 3,4,5,6,7-24 Tank Battery
Project Number: [none]
Project Manager: Mark Longhurst

Reported:
11/01/21 14:26

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 BEH0109 - EPA 5030 Soil MS

Matrix Spike Dup (BEH0109-MSD1)		Source: 2108092-01			Prepared & Analyzed: 08/06/21					
Benzene	0.0739	0.0020	mg/kg	0.100	ND	73.9	70-130	4.36	30	
Toluene	0.0700	0.0050	"	0.100	ND	70.0	70-130	5.38	30	
Ethylbenzene	0.0868	0.0050	"	0.100	ND	86.8	70-130	3.83	30	
m,p-Xylene	0.170	0.010	"	0.200	ND	84.9	70-130	3.47	30	
o-Xylene	0.0845	0.0050	"	0.100	ND	84.5	70-130	5.32	30	
1,2,4-Trimethylbenzene	0.0871	0.0050	"	0.100	ND	87.1	70-130	3.72	30	
1,3,5-Trimethylbenzene	0.0866	0.0050	"	0.100	ND	86.6	70-130	4.04	30	
Naphthalene	0.120	0.0038	"	0.100	ND	120	70-130	1.20	30	
Surrogate: 1,2-Dichloroethane-d4		0.0418	"	0.0400		104	23-173			
Surrogate: Toluene-d8		0.0402	"	0.0400		100	20-170			
Surrogate: 4-Bromofluorobenzene		0.0375	"	0.0400		93.7	21-167			

Batch BEH0111 - EPA 5030 Water MS

Blank (BEH0111-BLK1)		Prepared & Analyzed: 08/06/21								
Benzene	ND	1.0	ug/l							
Toluene	ND	1.0	"							
Ethylbenzene	ND	1.0	"							
m,p-Xylene	ND	2.0	"							
o-Xylene	ND	1.0	"							
Xylenes (total)	ND	2.0	"							
Naphthalene	ND	1.0	"							
1,2,4-Trimethylbenzene	ND	1.0	"							
1,3,5-Trimethylbenzene	ND	1.0	"							
Gasoline Range Hydrocarbons	ND	500	"							
Surrogate: 1,2-Dichloroethane-d4		10.4	"	13.3		77.7	23-173			
Surrogate: Toluene-d8		13.1	"	13.3		98.4	20-170			
Surrogate: 4-Bromofluorobenzene		12.0	"	13.3		89.6	21-167			

Summit Scientific

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

Project: Larson Farms 3,4,5,6,7-24 Tank Battery
Project Number: [none]
Project Manager: Mark Longhurst

Reported:
11/01/21 14:26

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

Batch BEH0111 - EPA 5030 Water MS

LCS (BEH0111-BS1)

Prepared & Analyzed: 08/06/21

Benzene	37.4	1.0	ug/l	41.7			89.9		51-132		
Toluene	42.4	1.0	"	41.7			102		51-138		
Ethylbenzene	47.0	1.0	"	41.7			113		58-146		
m,p-Xylene	96.4	2.0	"	83.3			116		57-144		
o-Xylene	48.0	1.0	"	41.7			115		53-146		
Naphthalene	44.6	1.0	"	41.7			107		70-130		
1,2,4-Trimethylbenzene	41.3	1.0	"	41.7			99.1		70-130		
1,3,5-Trimethylbenzene	50.8	1.0	"	41.7			122		70-130		
Surrogate: 1,2-Dichloroethane-d4	10.5		"	13.3			79.1		23-173		
Surrogate: Toluene-d8	13.1		"	13.3			98.2		20-170		
Surrogate: 4-Bromofluorobenzene	11.9		"	13.3			89.3		21-167		

Matrix Spike (BEH0111-MS1)

Source: 2108095-11

Prepared & Analyzed: 08/06/21

Benzene	37.6	1.0	ug/l	41.7	ND	90.3			34-141		
Toluene	41.2	1.0	"	41.7	ND	98.8			27-151		
Ethylbenzene	45.8	1.0	"	41.7	ND	110			29-160		
m,p-Xylene	93.5	2.0	"	83.3	ND	112			20-166		
o-Xylene	46.4	1.0	"	41.7	ND	111			33-159		
Naphthalene	37.9	1.0	"	41.7	ND	90.9			70-130		
1,2,4-Trimethylbenzene	40.1	1.0	"	41.7	ND	96.3			70-130		
1,3,5-Trimethylbenzene	49.0	1.0	"	41.7	ND	117			70-130		
Surrogate: 1,2-Dichloroethane-d4	11.3		"	13.3		84.7			23-173		
Surrogate: Toluene-d8	13.0		"	13.3		97.3			20-170		
Surrogate: 4-Bromofluorobenzene	11.7		"	13.3		88.0			21-167		

Matrix Spike Dup (BEH0111-MSD1)

Source: 2108095-11

Prepared & Analyzed: 08/06/21

Benzene	39.0	1.0	ug/l	41.7	ND	93.6			34-141	3.63	30
Toluene	41.1	1.0	"	41.7	ND	98.7			27-151	0.122	30
Ethylbenzene	45.5	1.0	"	41.7	ND	109			29-160	0.679	30
m,p-Xylene	94.5	2.0	"	83.3	ND	113			20-166	1.07	30
o-Xylene	46.7	1.0	"	41.7	ND	112			33-159	0.601	30
Naphthalene	36.0	1.0	"	41.7	ND	86.5			70-130	4.98	30
1,2,4-Trimethylbenzene	40.9	1.0	"	41.7	ND	98.2			70-130	2.00	30
1,3,5-Trimethylbenzene	49.6	1.0	"	41.7	ND	119			70-130	1.22	30
Surrogate: 1,2-Dichloroethane-d4	11.5		"	13.3		86.3			23-173		
Surrogate: Toluene-d8	13.0		"	13.3		97.6			20-170		
Surrogate: 4-Bromofluorobenzene	11.6		"	13.3		87.2			21-167		

Summit Scientific

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

Project: Larson Farms 3,4,5,6,7-24 Tank Battery
Project Number: [none]
Project Manager: Mark Longhurst

Reported:
11/01/21 14:26

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 BEH0110 - EPA 3550A

Blank (BEH0110-BLK1)

Prepared & Analyzed: 08/06/21

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

LCS (BEH0110-BS1)

Prepared & Analyzed: 08/06/21

C10-C28 (DRO)	584	50	mg/kg	500	117	70-130
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Matrix Spike (BEH0110-MS1)

Source: 2108092-01

Prepared & Analyzed: 08/06/21

C10-C28 (DRO)	591	50	mg/kg	500	16.5	115	70-130
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Matrix Spike Dup (BEH0110-MSD1)

Source: 2108092-01

Prepared & Analyzed: 08/06/21

C10-C28 (DRO)	586	50	mg/kg	500	16.5	114	70-130	0.916	20
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Batch BEH0127 - EPA 3520B

Blank (BEH0127-BLK1)

Prepared: 08/09/21 Analyzed: 08/10/21

C10-C28 (DRO)	ND	5.0	mg/L
C28-C36 (ORO)	ND	5.0	"

LCS (BEH0127-BS1)

Prepared: 08/09/21 Analyzed: 08/10/21

C10-C28 (DRO)	56.9	5.0	mg/L	50.0	114	54.3-147
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Matrix Spike (BEH0127-MS1)

Source: 2108084-01

Prepared: 08/09/21 Analyzed: 08/10/21

C10-C28 (DRO)	56.2	5.0	mg/L	50.0	3.17	106	81.6-126
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Matrix Spike Dup (BEH0127-MSD1)

Source: 2108084-01

Prepared: 08/09/21 Analyzed: 08/10/21

C10-C28 (DRO)	54.5	5.0	mg/L	50.0	3.17	103	81.6-126	2.93	13.6
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Summit Scientific

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

Project: Larson Farms 3,4,5,6,7-24 Tank Battery
Project Number: [none]
Project Manager: Mark Longhurst

Reported:
11/01/21 14:26

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 BEI0238 - EPA 5030 Soil MS

Blank (BEI0238-BLK1)

Prepared: 09/13/21 Analyzed: 09/14/21

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	0.0315		"	0.0333		94.6		40-150			
Surrogate: Fluoranthene-d10	0.0280		"	0.0333		83.9		40-150			

LCS (BEI0238-BS1)

Prepared: 09/13/21 Analyzed: 09/14/21

Acenaphthene	0.0264	0.00500	mg/kg	0.0333		79.1		31-137			
Anthracene	0.0276	0.00500	"	0.0333		82.8		30-120			
Benzo (a) anthracene	0.0274	0.00500	"	0.0333		82.3		30-120			
Benzo (a) pyrene	0.0269	0.00500	"	0.0333		80.7		30-120			
Benzo (b) fluoranthene	0.0266	0.00500	"	0.0333		79.9		30-120			
Benzo (k) fluoranthene	0.0281	0.00500	"	0.0333		84.2		30-120			
Chrysene	0.0264	0.00500	"	0.0333		79.1		30-120			
Dibenz (a,h) anthracene	0.0237	0.00500	"	0.0333		71.1		30-120			
Fluoranthene	0.0272	0.00500	"	0.0333		81.6		30-120			
Fluorene	0.0281	0.00500	"	0.0333		84.2		30-120			
Indeno (1,2,3-cd) pyrene	0.0261	0.00500	"	0.0333		78.3		30-120			
Naphthalene	0.0256	0.00500	"	0.0333		76.9		30-120			
Pyrene	0.0240	0.00500	"	0.0333		71.9		35-142			
1-Methylnaphthalene	0.0230	0.00500	"	0.0333		69.1		35-142			
2-Methylnaphthalene	0.0271	0.00500	"	0.0333		81.3		35-142			
Surrogate: 2-Methylnaphthalene-d10	0.0202		"	0.0333		60.7		40-150			
Surrogate: Fluoranthene-d10	0.0257		"	0.0333		77.1		40-150			

Summit Scientific

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

Project: Larson Farms 3,4,5,6,7-24 Tank Battery
Project Number: [none]
Project Manager: Mark Longhurst

Reported:
11/01/21 14:26

PAH by EPA Method 8270D SIM - Quality Control

Summit Scientific

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

Batch BEI0238 - EPA 5030 Soil MS

Matrix Spike (BEI0238-MS1)		Source: 2108095-01		Prepared: 09/13/21		Analyzed: 09/14/21	
Acenaphthene	0.0229	0.00500	mg/kg	0.0333	ND	68.6	31-137
Anthracene	0.0240	0.00500	"	0.0333	ND	72.0	30-120
Benzo (a) anthracene	0.0245	0.00500	"	0.0333	ND	73.4	30-120
Benzo (a) pyrene	0.0230	0.00500	"	0.0333	ND	69.0	30-120
Benzo (b) fluoranthene	0.0235	0.00500	"	0.0333	ND	70.5	30-120
Benzo (k) fluoranthene	0.0240	0.00500	"	0.0333	ND	72.1	30-120
Chrysene	0.0236	0.00500	"	0.0333	ND	70.8	30-120
Dibenz (a,h) anthracene	0.0203	0.00500	"	0.0333	ND	60.9	30-120
Fluoranthene	0.0238	0.00500	"	0.0333	ND	71.5	30-120
Fluorene	0.0250	0.00500	"	0.0333	ND	74.9	30-120
Indeno (1,2,3-cd) pyrene	0.0223	0.00500	"	0.0333	ND	67.0	30-120
Naphthalene	0.0215	0.00500	"	0.0333	ND	64.4	30-120
Pyrene	0.0204	0.00500	"	0.0333	ND	61.1	35-142
1-Methylnaphthalene	0.0203	0.00500	"	0.0333	ND	61.0	15-130
2-Methylnaphthalene	0.0248	0.00500	"	0.0333	ND	74.4	15-130
Surrogate: 2-Methylnaphthalene-d10	0.0190		"	0.0333		57.1	40-150
Surrogate: Fluoranthene-d10	0.0222		"	0.0333		66.5	40-150

Matrix Spike Dup (BEI0238-MSD1)	Source: 2108095-01			Prepared: 09/13/21	Analyzed: 09/14/21				
Acenaphthene	0.0190	0.00500	mg/kg	0.0333	ND	57.0	31-137	18.5	30
Anthracene	0.0185	0.00500	"	0.0333	ND	55.6	30-120	25.7	30
Benzo (a) anthracene	0.0189	0.00500	"	0.0333	ND	56.7	30-120	25.7	30
Benzo (a) pyrene	0.0186	0.00500	"	0.0333	ND	55.8	30-120	21.1	30
Benzo (b) fluoranthene	0.0235	0.00500	"	0.0333	ND	70.4	30-120	0.250	30
Benzo (k) fluoranthene	0.0207	0.00500	"	0.0333	ND	62.1	30-120	14.9	30
Chrysene	0.0183	0.00500	"	0.0333	ND	54.8	30-120	25.5	30
Dibenz (a,h) anthracene	0.0156	0.00500	"	0.0333	ND	46.7	30-120	26.4	30
Fluoranthene	0.0204	0.00500	"	0.0333	ND	61.3	30-120	15.3	30
Fluorene	0.0207	0.00500	"	0.0333	ND	62.1	30-120	18.7	30
Indeno (1,2,3-cd) pyrene	0.0178	0.00500	"	0.0333	ND	53.3	30-120	22.8	30
Naphthalene	0.0175	0.00500	"	0.0333	ND	52.5	30-120	20.3	30
Pyrene	0.0169	0.00500	"	0.0333	ND	50.6	35-142	18.9	30
1-Methylnaphthalene	0.0160	0.00500	"	0.0333	ND	48.2	15-130	23.6	50
2-Methylnaphthalene	0.0215	0.00500	"	0.0333	ND	64.6	15-130	14.2	50
Surrogate: 2-Methylnaphthalene-d10	0.0168		"	0.0333		50.5	40-150		
Surrogate: Fluoranthene-d10	0.0187		"	0.0333		56.1	40-150		

Summit Scientific

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

Project: Larson Farms 3,4,5,6,7-24 Tank Battery

Project Number: [none]
Project Manager: Mark Longhurst

Reported:
11/01/21 14:26

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 BEH0126 - EPA 3050B

Blank (BEH0126-BLK1)

Prepared: 08/09/21 Analyzed: 08/10/21

Boron ND 0.0100 mg/L

LCS (BEH0126-BS1)

Prepared: 08/09/21 Analyzed: 08/10/21

Boron 5.04 0.0100 mg/L 5.00 101 80-120

Duplicate (BEH0126-DUP1)

Source: 2108056-01

Prepared: 08/09/21 Analyzed: 08/10/21

Boron 0.0530 0.0100 mg/L 0.0717 30.1 20 QR-03

Matrix Spike (BEH0126-MS1)

Source: 2108056-01

Prepared: 08/09/21 Analyzed: 08/10/21

Boron 5.00 0.0100 mg/L 5.00 0.0717 98.5 75-125

Matrix Spike Dup (BEH0126-MSD1)

Source: 2108056-01

Prepared: 08/09/21 Analyzed: 08/10/21

Boron 5.09 0.0100 mg/L 5.00 0.0717 100 75-125 1.86 25

Summit Scientific

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

Project: Larson Farms 3,4,5,6,7-24 Tank Battery
Project Number: [none]
Project Manager: Mark Longhurst

Reported:
11/01/21 14:26

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 BEH0122 - General Preparation

Blank (BEH0122-BLK1)

Prepared: 08/09/21 Analyzed: 08/12/21

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

LCS (BEH0122-BS1)

Prepared: 08/09/21 Analyzed: 08/12/21

Calcium	5.30	0.0500	mg/L wet	5.00	106	70-130
Magnesium	4.95	0.0500	"	5.00	98.9	70-130
Sodium	4.95	0.0500	"	5.00	98.9	70-130

Summit Scientific

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

Project: Larson Farms 3,4,5,6,7-24 Tank Battery

Project Number: [none]

Project Manager: Mark Longhurst

Reported:
11/01/21 14:26

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 BEH0123 - General Preparation

Duplicate (BEH0123-DUP1)

Source: 2106181-16

Prepared & Analyzed: 08/09/21

% Solids	85.5	%	85.7	0.216	20
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Summit Scientific

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

Project: Larson Farms 3,4,5,6,7-24 Tank Battery

Project Number: [none]

Project Manager: Mark Longhurst

Reported:
11/01/21 14:26

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 BEH0143 - General Preparation

Blank (BEH0143-BLK1)

Prepared & Analyzed: 08/10/21

Specific Conductance (EC) ND 0.0100 mmhos/cm

LCS (BEH0143-BS1)

Prepared & Analyzed: 08/10/21

Specific Conductance (EC) 0.152 0.0100 mmhos/cm 0.150 102 90-110

Duplicate (BEH0143-DUP1)

Source: 2107436-13

Prepared & Analyzed: 08/10/21

Specific Conductance (EC) 0.423 0.0100 mmhos/cm 0.422 0.379 20

Summit Scientific

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

Project: Larson Farms 3,4,5,6,7-24 Tank Battery

Project Number: [none]
Project Manager: Mark Longhurst

Reported:
11/01/21 14:26

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 BEH0142 - General Preparation

LCS (BEH0142-BS1)

Prepared & Analyzed: 08/10/21

pH	9.26	pH Units	9.21	101	95-105
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Duplicate (BEH0142-DUP1)

Source: 2107436-13

Prepared & Analyzed: 08/10/21

pH	8.46	pH Units	8.45	0.118	20
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Summit Scientific

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

Project: Larson Farms 3,4,5,6,7-24 Tank Battery
Project Number: [none]
Project Manager: Mark Longhurst

Reported:
11/01/21 14:26

Notes and Definitions

QR-03 The RPD value for the sample duplicate or MS/MSD was outside of QC acceptance limits due to matrix interference. QC batch accepted based on LCS and/or LCSD recovery and/or RPD values.

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