

**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 <sup>(4)</sup> (mg/kg)	Chrysene (mg/kg)	Fluorene (mg/kg)	1-M (mg/kg)	2-M (mg/kg)
<b>Residential SSL<sup>(1,2)</sup></b>			<b>1.2</b>	<b>490</b>	<b>5.8</b>	<b>58</b>	<b>30</b>	<b>27</b>	<b>2</b>	<b>500</b>	<b>110</b>	<b>240</b>	<b>18</b>	<b>24</b>
<b>Protection of Groundwater SSL<sup>(1,2,3)</sup></b>			<b>0.0026</b>	<b>0.69</b>	<b>0.78</b>	<b>9.9</b>	<b>0.0081</b>	<b>0.0087</b>	<b>0.0038</b>	<b>500</b>	<b>9</b>	<b>0.54</b>	<b>0.006</b>	<b>0.019</b>
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	<b>0.012</b>	0.052	0.073	0.12	<b>0.61</b>	<b>0.074</b>	<b>0.050</b>	<b>560</b>	0.0305	0.0678	<b>0.417</b>	<b>0.615</b>
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:**

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

COGCC = Colorado Oil and Gas Conservation Commission

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

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

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

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

mg/kg = Milligrams per kilogram

TMB = Trimethylbenzene

**SEP02-SS01 @ 7'** = 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)
<b>Soil Suitability for Reclamation Standard <sup>(1)</sup></b>			<b>6-8.3</b>	<b>&lt;4</b>	<b>&lt;6</b>	<b>2</b>
SEP02-SS01 @ 7'	8/5/2021	7 ft. bgs	<b>8.45</b>	3.02	<b>19.8</b>	0.809
SEP02-SS12 @ 2.5'	8/6/2021	2.5 ft. bgs	<b>8.45</b>	3.02	<b>19.8</b>	0.809
BKG01 @ 5'	8/6/2021	5 ft. bgs	<b>8.96</b>	1.62	5.20	NA
BKG01 @ 7'	8/6/2021	7 ft. bgs	<b>8.81</b>	NA	<b>26.2</b>	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)
<b>Residential SSL<sup>(1,2)</sup></b>			<b>360</b>	<b>1,800</b>	<b>1.1</b>	<b>0.11</b>	<b>1.1</b>	<b>11</b>	<b>110</b>	<b>0.11</b>	<b>240</b>	<b>240</b>	<b>1.1</b>	<b>180</b>	<b>18</b>	<b>24</b>
<b>Protection of Groundwater SSL<sup>(1,2,3)</sup></b>			<b>0.55</b>	<b>5.8</b>	<b>0.011</b>	<b>0.24</b>	<b>0.3</b>	<b>2.9</b>	<b>9</b>	<b>0.096</b>	<b>8.9</b>	<b>0.54</b>	<b>0.98</b>	<b>1.3</b>	<b>0.006</b>	<b>0.019</b>
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	<b>0.417</b>	<b>0.615</b>

**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

Benzo(a) = Benzoanthracene

Benzo(a) = Benzopyrene

Benzo(b) = Benzofluoranthene

Benzo(k) = Benzofluoranthene

A,H = Dibenzoanthracene

1,2,3-CD = Indenopyrene

M = Methylanthalene

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)
<b>Residential SSL <sup>(1,2)</sup></b>			<b>0.68</b>	<b>15,000</b>	<b>71</b>	<b>0.3</b>	<b>3,100</b>	<b>400</b>	<b>1,500</b>	<b>390</b>	<b>390</b>	<b>23,000</b>
<b>Protection of Groundwater SSL <sup>(1,2,3)</sup></b>			<b>0.29</b>	<b>82</b>	<b>0.38</b>	<b>0.00067</b>	<b>46</b>	<b>14</b>	<b>26</b>	<b>0.26</b>	<b>0.8</b>	<b>370</b>
SEP02-SS01 @ 7'	8/5/2021	7 ft. bgs	<b>5.32</b>	<b>106</b>	<0.266	<0.30 <sup>(4)</sup>	10.2	8.66	7.87	<b>0.881</b>	0.0365	35.2
BKG01 @ 5'	8/6/2021	5 ft. bgs	<b>4.65</b>	<b>177</b>	<0.254	<0.30 <sup>(4)</sup>	10.7	9.83	9.58	<b>1.02</b>	0.0528	40.6
BKG01 @ 7'	8/6/2021	7 ft. bgs	<b>4.42</b>	<b>192</b>	<0.265	<0.30 <sup>(4)</sup>	9.52	9.39	8.85	<b>1.01</b>	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 <sup>(1)</sup>		PDOP Value	VOC Concentration <sup>(2)</sup> (ppm)
			Latitude	Longitude		
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 <sup>(2)</sup> (ft.)	Groundwater Elevation (ft. AMSL)
COGCC Table 915-1 Groundwater Standard (µg/L) <sup>(1)</sup>		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

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4653 Table Mountain Drive, Golden, Colorado 80403

303.277.9310

August 11, 2021

Mark Longhurst

PDC Energy

1775 Sherman St. STE. 3000

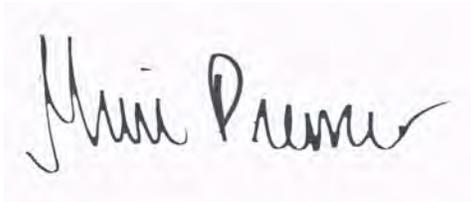
Denver, CO 80203

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 that reads "Muri Premer". The signature is written in a cursive style with a large initial "M" and a long, sweeping underline.

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

S<sub>2</sub>

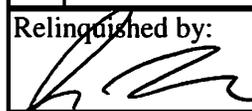
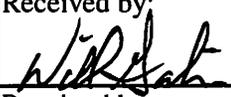
2108052

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: N/A

ID	Sample Description	Date Sampled	Time Sampled	# of containers	Preservative				Matrix				Analysis Requested						Special Instructions	
					HCl	HNO3	None	Other	Water	Soil	Air-Canister #	Other	BTEXN - 8260B	TPH - (C6 - C36)	1,2,4 & 1,3,5-TMB	Boron - HWS	pH, EC, SAR			
1	SEPO1-DL@S'	8/4/21	1148	2			X			X			X	X	X					pH, EC, SAR by saturated paste
2	SEPO2-DL@S'		1205	2			X			X			X	X	X					
3	SEPO4-DL@S'		1206	2			X			X			X	X	X					
4	SEPO5-DL@S'		1207	2			X			X			X	X	X					
5	SEPO1-FL@4'		1255	2			X			X			X	X	X					
6	SEPO2-FL@S'		1304	2			X			X			X	X	X					
7	SEPO3-FL@S'		1312	2			X			X			X	X	X					
8	SEPO4-FL@S'		1333	2			X			X			X	X	X					
9	SEPO5-FL@4'		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)	Notes:  on ice
Relinquished by: Tasman's Lock Box	Date/Time: 8/4/21 1800	Received by: 	Date/Time: 8/4/21 1800	Same Day _____ 72 hours _____ 24 hours _____ Standard <input checked="" type="checkbox"/> 48 hours _____	
Relinquished by:	Date/Time:	Received by:	Date/Time:	Sample Integrity: Temperature Upon Receipt: 20 Samples Intact: <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	

### 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 #: \_\_\_\_\_  
 H.D.  P.U.  FedEx  UPS  USPS  Other

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 <sup>(1)</sup> ? NOTE: If samples are delivered the same day of sampling, this requirement is met provided that there is evidence that cooling has begun.	✓			
Were all samples received intact <sup>(1)</sup> ?	✓			
Was adequate sample volume provided <sup>(1)</sup> ?	✓			
If custody seals are present, are they intact <sup>(1)</sup> ?			✓	
Are samples with holding times due within 48 hours sample due within 48 hours present?			✓	
Is a chain-of-custody (COC) form present and filled out completely <sup>(1)</sup> ?	✓			
Does the COC agree with the number and type of sample bottles received <sup>(1)</sup> ?	✓			
Do the sample IDs on the bottle labels match the COC <sup>(1)</sup> ?	✓			
Is the COC properly relinquished by the client w/ date and time recorded <sup>(1)</sup> ?	✓			
For volatiles in water – is there headspace present? If yes, <b>contact client and note in narrative.</b>			✓	
Are samples preserved that require preservation (excluding cooling) <sup>(1)</sup> ? Note the type of preservative in the Comments column – HCl, H2SO4, NaOH, HNO3, ect			✓	
If samples are acid preserved for metals, is the pH ≤ 2 <sup>(1)</sup> ? Record the pH in Comments.			✓	
If dissolved metals are requested, were samples field filtered?			✓	

Additional Comments (if any):

<sup>(1)</sup> 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**

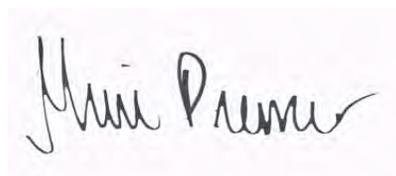
Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
C10-C28 (DRO)	ND	50	mg/kg	1	BEH0089	08/05/21	08/06/21	EPA 8015M	
C28-C36 (ORO)	ND	50	"	"	"	"	"	"	

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

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:**  
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 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 12:06**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
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 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 12:06**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
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 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 12:07**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
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 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 12:07**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
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 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 12:55**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
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 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 12:55**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
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 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 13:04**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
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 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 13:04**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
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 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 13:12**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
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 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 13:12**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
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 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 13:33**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
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 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 13:33**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
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 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 13:34**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
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 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 13:34**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
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		Notes
	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	

#### 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	"							
<i>Surrogate: 1,2-Dichloroethane-d4</i>	0.0420		"	0.0400		105	23-173			
<i>Surrogate: Toluene-d8</i>	0.0387		"	0.0400		96.8	20-170			
<i>Surrogate: 4-Bromofluorobenzene</i>	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			
<i>Surrogate: 1,2-Dichloroethane-d4</i>	0.0416		"	0.0400		104	23-173			
<i>Surrogate: Toluene-d8</i>	0.0398		"	0.0400		99.5	20-170			
<i>Surrogate: 4-Bromofluorobenzene</i>	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			
<i>Surrogate: 1,2-Dichloroethane-d4</i>	0.0432		"	0.0400		108	23-173			
<i>Surrogate: Toluene-d8</i>	0.0395		"	0.0400		98.8	20-170			
<i>Surrogate: 4-Bromofluorobenzene</i>	0.0368		"	0.0400		92.0	21-167			

Summit Scientific

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



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

Project: 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	Result	Reporting		Spike Level	Source Result	%REC		RPD		Notes
		Limit	Units			Limit	RPD	Limit	RPD	

**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			

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

**Extractable Petroleum Hydrocarbons by 8015 - Quality Control**  
**Summit Scientific**

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

**Batch 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			
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**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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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

### 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

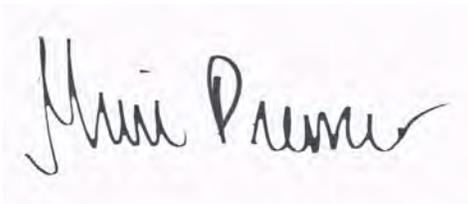
Denver, CO 80203

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 that reads "Muri Premer". The signature is written in a cursive style with a large initial "M" and a long, sweeping underline.

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

*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

2108059

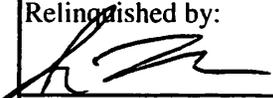
S<sub>2</sub>

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	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	VOC-915		PAH-915
1	SEPOZ-SS01 @ 7'	8/5/21	1401	3			X			X				X	X	X	X	X	X	pH, EC, SAR by saturated paste
2	SEPOZ-SS02 @ 8'	↓	1403	3			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	<b>Turn Around Time</b> (Check) Same Day <input checked="" type="checkbox"/> 72 hours ___ 24 hours ___ Standard ___ 48 hours ___ <b>Sample Integrity:</b> Temperature Upon Receipt: 10.2 Samples Intact: <input checked="" type="checkbox"/> Yes No	<b>Notes:</b>
Relinquished by: Tasman's Lock Box Date/Time: 8/5/21 1750	Received by: Will Lylin Date/Time: 8/5/21 1750		
Relinquished by: Date/Time:	Received by: Date/Time:		

**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  Air  Soil/Solid  Water  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 <sup>(1)</sup> ? NOTE: If samples are delivered the same day of sampling, this requirement is met provided that there is evidence that cooling has begun.	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<i>on ice</i>
Were all samples received intact <sup>(1)</sup> ?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Was adequate sample volume provided <sup>(1)</sup> ?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
If custody seals are present, are they intact <sup>(1)</sup> ?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
Are samples with holding times due within 48 hours sample due within 48 hours present?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<i>same day</i>
Is a chain-of-custody (COC) form present and filled out completely <sup>(1)</sup> ?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Does the COC agree with the number and type of sample bottles received <sup>(1)</sup> ?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Do the sample IDs on the bottle labels match the COC <sup>(1)</sup> ?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Is the COC properly relinquished by the client w/ date and time recorded <sup>(1)</sup> ?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
For volatiles in water – is there headspace present? If yes, contact client and note in narrative.	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
Are samples preserved that require preservation (excluding cooling) <sup>(1)</sup> ? Note the type of preservative in the Comments column – HCl, H2SO4, NaOH, HNO3, ect	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
If samples are acid preserved for metals, is the pH ≤ 2 <sup>(1)</sup> ? Record the pH in Comments.	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
If dissolved metals are requested, were samples field filtered?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	

Additional Comments (if any):

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

WG  
Custodian Printed Name or Initials

Will Galin  
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	"	"	"	"	"	"	

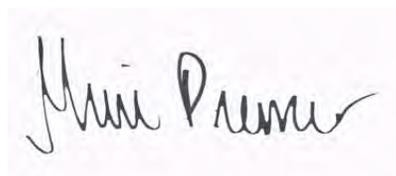
Date Sampled: **08/05/21 14:01**

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	"	"	"	"	"	"	
<b>Chrysene</b>	<b>0.0305</b>	0.00500	"	"	"	"	"	"	
Dibenz (a,h) anthracene	ND	0.00500	"	"	"	"	"	"	
Fluoranthene	ND	0.00500	"	"	"	"	"	"	
<b>Fluorene</b>	<b>0.0678</b>	0.00500	"	"	"	"	"	"	
Indeno (1,2,3-cd) pyrene	ND	0.00500	"	"	"	"	"	"	
Pyrene	ND	0.00500	"	"	"	"	"	"	
<b>1-Methylnaphthalene</b>	<b>0.417</b>	0.00500	"	"	"	"	"	"	
<b>2-Methylnaphthalene</b>	<b>0.615</b>	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
<b>Boron</b>	<b>0.809</b>	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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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**

**Total Metals by EPA 6020B**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
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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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

**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	

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

**Summit Scientific**

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

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

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

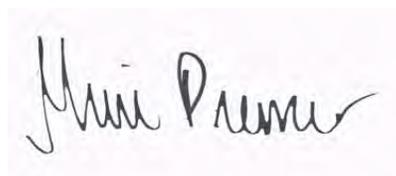
Date Sampled: **08/05/21 14:03**

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

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		Notes
	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	

#### 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	"							
<i>Surrogate: 1,2-Dichloroethane-d4</i>	0.0187		"	0.0400		46.8	23-173			
<i>Surrogate: Toluene-d8</i>	0.0542		"	0.0400		136	20-170			
<i>Surrogate: 4-Bromofluorobenzene</i>	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			
<i>Surrogate: 1,2-Dichloroethane-d4</i>	0.0152		"	0.0400		37.9	23-173			
<i>Surrogate: Toluene-d8</i>	0.0470		"	0.0400		117	20-170			
<i>Surrogate: 4-Bromofluorobenzene</i>	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			
<i>Surrogate: 1,2-Dichloroethane-d4</i>	0.0177		"	0.0400		44.2	23-173			
<i>Surrogate: Toluene-d8</i>	0.0423		"	0.0400		106	20-170			
<i>Surrogate: 4-Bromofluorobenzene</i>	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		Notes
	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	

**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		Notes
		Limit	Units		Result	%REC	Limits	RPD	Limit		

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

**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	"							
<i>Surrogate: 2-Methylnaphthalene-d10</i>	<i>0.0203</i>		<i>"</i>	<i>0.0333</i>		<i>60.8</i>		<i>40-150</i>		
<i>Surrogate: Fluoranthene-d10</i>	<i>0.0262</i>		<i>"</i>	<i>0.0333</i>		<i>78.5</i>		<i>40-150</i>		

**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		
<i>Surrogate: 2-Methylnaphthalene-d10</i>	<i>0.0239</i>		<i>"</i>	<i>0.0333</i>		<i>71.8</i>		<i>40-150</i>		
<i>Surrogate: Fluoranthene-d10</i>	<i>0.0279</i>		<i>"</i>	<i>0.0333</i>		<i>83.7</i>		<i>40-150</i>		

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		Notes
	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	

**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**

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

**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	"							
<i>Surrogate: 2-Methylnaphthalene-d10</i>	<i>0.0209</i>		"	<i>0.0333</i>		<i>62.6</i>	<i>40-150</i>			
<i>Surrogate: Fluoranthene-d10</i>	<i>0.0143</i>		"	<i>0.0333</i>		<i>43.0</i>	<i>40-150</i>			

**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			
<i>Surrogate: 2-Methylnaphthalene-d10</i>	<i>0.0216</i>		"	<i>0.0333</i>		<i>64.8</i>	<i>40-150</i>			
<i>Surrogate: Fluoranthene-d10</i>	<i>0.0152</i>		"	<i>0.0333</i>		<i>45.7</i>	<i>40-150</i>			

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		Notes
	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	

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

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 Hot Water Soluble Extraction - Quality Control**  
**Summit Scientific**

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

**Batch BEH0104 - EPA 3050B**

<b>Blank (BEH0104-BLK1)</b>				Prepared: 08/06/21 Analyzed: 08/07/21						
Boron	ND	0.0100	mg/L							
<b>LCS (BEH0104-BS1)</b>				Prepared: 08/06/21 Analyzed: 08/07/21						
Boron	4.99	0.0100	mg/L	5.00		99.8	80-120			
<b>Duplicate (BEH0104-DUP1)</b>				Source: 2108057-01 Prepared: 08/06/21 Analyzed: 08/07/21						
Boron	0.517	0.0100	mg/L		0.517			0.0167	20	
<b>Matrix Spike (BEH0104-MS1)</b>				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			
<b>Matrix Spike Dup (BEH0104-MSD1)</b>				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

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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 - Quality Control**  
**Summit Scientific**

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

**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

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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 - Quality Control**  
**Summit Scientific**

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

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

**Batch BEH0106 - 3060A Mod**

<b>Blank (BEH0106-BLK1)</b>		Prepared: 08/06/21 Analyzed: 08/10/21								
Chromium, Hexavalent	ND	0.30	mg/kg wet							
<b>LCS (BEH0106-BS1)</b>		Prepared: 08/06/21 Analyzed: 08/10/21								
Chromium, Hexavalent	25.8	0.30	mg/kg wet	25.0		103	80-120			
<b>Duplicate (BEH0106-DUP1)</b>		<b>Source: 2108059-01</b>		Prepared: 08/06/21 Analyzed: 08/10/21						
Chromium, Hexavalent	ND	0.30	mg/kg dry		ND				20	
<b>Matrix Spike (BEH0106-MS1)</b>		<b>Source: 2108059-01</b>		Prepared: 08/06/21 Analyzed: 08/10/21						
Chromium, Hexavalent	33.6	0.30	mg/kg dry	33.3	ND	101	75-125			
<b>Matrix Spike Dup (BEH0106-MSD1)</b>		<b>Source: 2108059-01</b>		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	Result	Reporting		Spike Level	Source Result	%REC		RPD		Notes
		Limit	Units			%REC	Limits	RPD	Limit	

**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 Result	%REC		RPD		Notes
		Limit	Units			Limit	Limits	RPD	Limit	

**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 Result	%REC		RPD		Notes
		Limit	Units			Limit	RPD	Limit	RPD	

**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

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, Saturated Paste Extraction - Quality Control**

**Summit Scientific**

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

**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

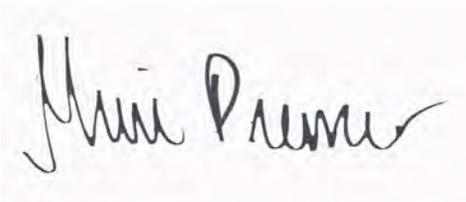
Denver, CO 80203

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 that reads "Muri Premer". The signature is written in a cursive style with a large, stylized initial "M".

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

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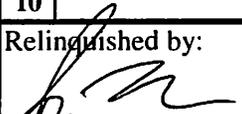
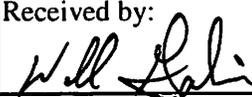


# Summit Scientific

S<sub>2</sub>

4653 Table Mountain Drive ♦ Golden, Colorado 80403  
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, 7-24 Tank Battery
Sampler Name: J. Marcus	Project Number: 119

ID	Sample Description	Date Sampled	Time Sampled	# of containers	Preservative				Matrix			Analysis Requested					Special Instructions		
					HCl	HNO3	None	Other	Water	Soil	Air-Canister #	Other	BTEXN - 8260B	TPH - (C6 - C36)	1,2,4 & 1,3,5-TMB	Boron - HWS		pH, EC, SAR	
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: 8/6/21 1430		Received by: Tasman's Lock Box		Date/Time: 8/6/21 1430		Turn Around Time (Check)					Notes:						
Relinquished by: Tasman's Lock Box		Date/Time: 8/6/21 1800		Received by: 		Date/Time: 8/6/21 1800		Same Day <input checked="" type="checkbox"/> 72 hours <input type="checkbox"/>											
								24 hours <input type="checkbox"/> Standard <input type="checkbox"/>											
								48 hours <input type="checkbox"/>					Sample Integrity:						
Relinquished by:		Date/Time:		Received by:		Date/Time:		Temperature Upon Receipt: 6					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 <sup>(1)</sup> ? NOTE: If samples are delivered the same day of sampling, this requirement is met provided that there is evidence that cooling has begun.	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<i>on ice</i>
Were all samples received intact <sup>(1)</sup> ?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Was adequate sample volume provided <sup>(1)</sup> ?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
If custody seals are present, are they intact <sup>(1)</sup> ?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
Are samples with holding times due within 48 hours sample due within 48 hours present?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<i>same day</i>
Is a chain-of-custody (COC) form present and filled out completely <sup>(1)</sup> ?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Does the COC agree with the number and type of sample bottles received <sup>(1)</sup> ?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Do the sample IDs on the bottle labels match the COC <sup>(1)</sup> ?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Is the COC properly relinquished by the client w/ date and time recorded <sup>(1)</sup> ?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
For volatiles in water – is there headspace present? <b>If yes, contact client and note in narrative.</b>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
Are samples preserved that require preservation (excluding cooling) <sup>(1)</sup> ? Note the type of preservative in the Comments column – HCl, H2SO4, NaOH, HNO3, ect	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
If samples are acid preserved for metals, is the pH ≤ 2 <sup>(1)</sup> ? Record the pH in Comments.	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
If dissolved metals are requested, were samples field filtered?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	

Additional Comments (if any):

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

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		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 09:57**

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		93.2 %		21-167		"	"	"	"	

**Extractable Petroleum Hydrocarbons by 8015**

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

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		"	"	"	"	"	"	

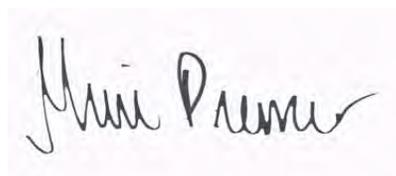
Date Sampled: **08/06/21 09:57**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
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 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 09:57**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
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 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 09:58**

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		92.2 %	21-167		"	"	"	"	

**Extractable Petroleum Hydrocarbons by 8015**

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

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	"	"	"	"	"	"	

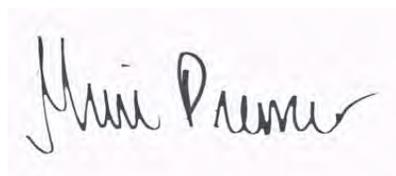
Date Sampled: **08/06/21 09:58**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
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 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 09:59**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
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 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	"	"	"	"	"	"	

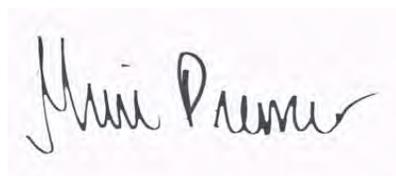
Date Sampled: **08/06/21 09:59**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: o-Terphenyl		82.6 %	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-SS05@8'**  
**2108095-03 (Soil)**

**Summit Scientific**

**PAH by EPA Method 8270D SIM**

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

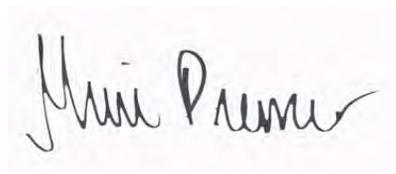
Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Chrysene	ND	0.00500	mg/kg	1	BEI0238	09/13/21	09/14/21	EPA 8270D SIM	
Fluorene	ND	0.00500	"	"	"	"	"	"	
1-Methylnaphthalene	ND	0.00500	"	"	"	"	"	"	
2-Methylnaphthalene	ND	0.00500	"	"	"	"	"	"	

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

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
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 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 10:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
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 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	"	"	"	"	"	"	

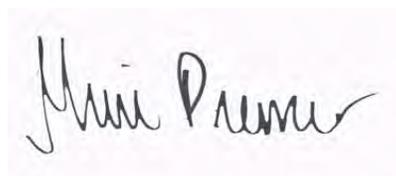
Date Sampled: **08/06/21 10:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
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**

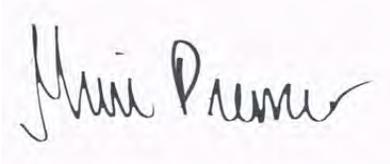
Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Chrysene	ND	0.00500	mg/kg	1	BEI0238	09/13/21	09/14/21	EPA 8270D SIM	
Fluorene	ND	0.00500	"	"	"	"	"	"	
1-Methylnaphthalene	ND	0.00500	"	"	"	"	"	"	
2-Methylnaphthalene	ND	0.00500	"	"	"	"	"	"	

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 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 10:01**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
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 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	"	"	"	"	"	"	

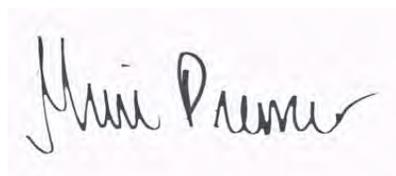
Date Sampled: **08/06/21 10:01**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
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 Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
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 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		95.9 %	21-167		"	"	"	"	

**Extractable Petroleum Hydrocarbons by 8015**

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

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	"	"	"	"	"	"	

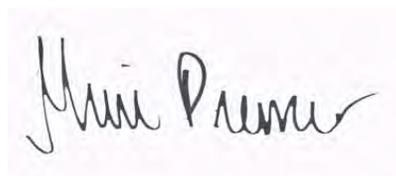
Date Sampled: **08/06/21 10:58**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
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**

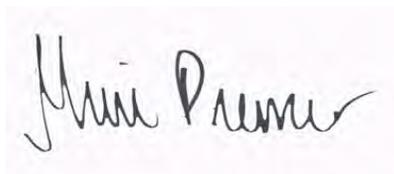
Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Chrysene	ND	0.00500	mg/kg	1	BEI0238	09/13/21	09/14/21	EPA 8270D SIM	
Fluorene	ND	0.00500	"	"	"	"	"	"	
1-Methylnaphthalene	ND	0.00500	"	"	"	"	"	"	
2-Methylnaphthalene	ND	0.00500	"	"	"	"	"	"	

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 Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
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 Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
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 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	"	"	"	"	"	"	

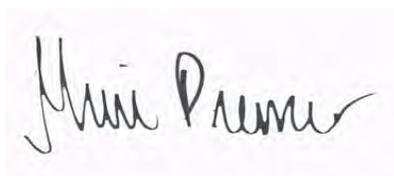
Date Sampled: **08/06/21 10:59**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: o-Terphenyl		83.2 %	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 14:26

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

**Summit Scientific**

**PAH by EPA Method 8270D SIM**

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

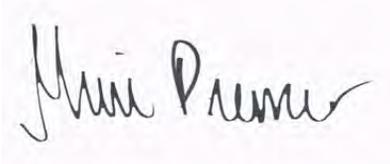
Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Chrysene	ND	0.00500	mg/kg	1	BEI0238	09/13/21	09/14/21	EPA 8270D SIM	
Fluorene	ND	0.00500	"	"	"	"	"	"	
1-Methylnaphthalene	ND	0.00500	"	"	"	"	"	"	
2-Methylnaphthalene	ND	0.00500	"	"	"	"	"	"	

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

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

**Summit Scientific**

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

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

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
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 Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
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 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	"	"	"	"	"	"	

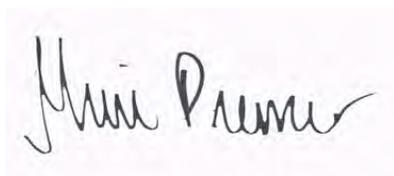
Date Sampled: **08/06/21 10:02**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
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-SS10@7'**  
**2108095-08 (Soil)**

**Summit Scientific**

**PAH by EPA Method 8270D SIM**

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

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
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		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
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 Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
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 Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
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 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	"	"	"	"	"	"	

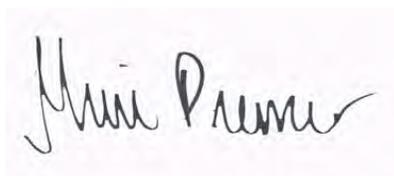
Date Sampled: **08/06/21 10:03**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
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 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 10:03**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
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
<b>Boron</b>	<b>0.363</b>	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
<b>Calcium</b>	<b>24.8</b>	0.0725	mg/L dry	1	BEH0122	08/09/21	08/12/21	EPA 6020B	
<b>Magnesium</b>	<b>6.99</b>	0.0725	"	"	"	"	"	"	
<b>Sodium</b>	<b>176</b>	0.0725	"	"	"	"	"	"	

**Calculated Analysis**

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

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
<b>Sodium Adsorption Ratio</b>	<b>8.04</b>	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	<b>69.0</b>		%	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)	<b>0.851</b>	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	<b>8.53</b>		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 Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
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 Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
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 Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
C10-C28 (DRO)	ND	5.0	mg/L	1	BEH0127	08/09/21	08/10/21	EPA 8015M	
<b>C28-C36 (ORO)</b>	<b>5.6</b>	5.0	"	"	"	"	"	"	

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

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
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		Notes
	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit		

#### 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	"								
<i>Surrogate: 1,2-Dichloroethane-d4</i>	<i>0.0414</i>		<i>"</i>	<i>0.0400</i>		<i>104</i>	<i>23-173</i>				
<i>Surrogate: Toluene-d8</i>	<i>0.0397</i>		<i>"</i>	<i>0.0400</i>		<i>99.2</i>	<i>20-170</i>				
<i>Surrogate: 4-Bromofluorobenzene</i>	<i>0.0369</i>		<i>"</i>	<i>0.0400</i>		<i>92.2</i>	<i>21-167</i>				

##### 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				
<i>Surrogate: 1,2-Dichloroethane-d4</i>	<i>0.0404</i>		<i>"</i>	<i>0.0400</i>		<i>101</i>	<i>23-173</i>				
<i>Surrogate: Toluene-d8</i>	<i>0.0400</i>		<i>"</i>	<i>0.0400</i>		<i>100</i>	<i>20-170</i>				
<i>Surrogate: 4-Bromofluorobenzene</i>	<i>0.0369</i>		<i>"</i>	<i>0.0400</i>		<i>92.3</i>	<i>21-167</i>				

##### 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				
<i>Surrogate: 1,2-Dichloroethane-d4</i>	<i>0.0419</i>		<i>"</i>	<i>0.0400</i>		<i>105</i>	<i>23-173</i>				
<i>Surrogate: Toluene-d8</i>	<i>0.0407</i>		<i>"</i>	<i>0.0400</i>		<i>102</i>	<i>20-170</i>				
<i>Surrogate: 4-Bromofluorobenzene</i>	<i>0.0375</i>		<i>"</i>	<i>0.0400</i>		<i>93.7</i>	<i>21-167</i>				

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	Notes
	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	

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

**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)**

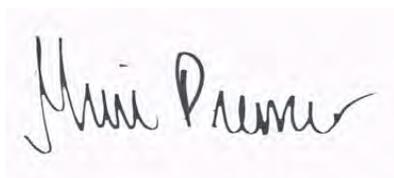
Source: 2108084-01

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		Notes
	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	

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		Notes
	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	

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

**Batch BEH0126 - EPA 3050B**

<b>Blank (BEH0126-BLK1)</b>				Prepared: 08/09/21 Analyzed: 08/10/21						
Boron	ND	0.0100	mg/L							
<b>LCS (BEH0126-BS1)</b>				Prepared: 08/09/21 Analyzed: 08/10/21						
Boron	5.04	0.0100	mg/L	5.00	101	80-120				
<b>Duplicate (BEH0126-DUP1)</b>				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
<b>Matrix Spike (BEH0126-MS1)</b>				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			
<b>Matrix Spike Dup (BEH0126-MSD1)</b>				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	Result	Reporting		Spike Level	Source Result	%REC		RPD		Notes
		Limit	Units			%REC	Limits	RPD	Limit	

**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 Result	%REC		RPD		Notes
		Limit	Units			%REC	Limits	RPD	Limit	

**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 Result	%REC		RPD		Notes
		Limit	Units			Limits	RPD	Limit		

**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	Source	%REC		RPD		Notes
		Limit	Units	Level	Result	%REC	Limits	RPD	Limit	

**Batch BEH0142 - General Preparation**

**LCS (BEH0142-BS1)**

Prepared & Analyzed: 08/10/21

pH 9.26 pH Units 9.21 101 95-105

**Duplicate (BEH0142-DUP1)**

Source: 2107436-13

Prepared & Analyzed: 08/10/21

pH 8.46 pH Units 8.45 0.118 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 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