State of New Mexico
Oil Conservation Division

Incident ID	
District RP	
Facility ID	
Application ID	

Site Assessment/Characterization

This information must be provided to the appropriate district office no later than 90 days after the release discovery date.

What is the shallowest depth to groundwater beneath the area affected by the release?	64.0 (ft bgs)
Did this release impact groundwater or surface water?	☐ Yes ☒ No
Are the lateral extents of the release within 300 feet of a continuously flowing watercourse or any other significant watercourse?	☐ Yes ☒ No
Are the lateral extents of the release within 200 feet of any lakebed, sinkhole, or playa lake (measured from the ordinary high-water mark)?	☐ Yes ☒ No
Are the lateral extents of the release within 300 feet of an occupied permanent residence, school, hospital, institution, or church?	☐ Yes ☒ No
Are the lateral extents of the release within 500 horizontal feet of a spring or a private domestic fresh water well used by less than five households for domestic or stock watering purposes?	☐ Yes ☒ No
Are the lateral extents of the release within 1000 feet of any other fresh water well or spring?	☐ Yes ☒ No
Are the lateral extents of the release within incorporated municipal boundaries or within a defined municipal fresh water well field?	☐ Yes ☒ No
Are the lateral extents of the release within 300 feet of a wetland?	☐ Yes ☒ No
Are the lateral extents of the release overlying a subsurface mine?	☐ Yes ☒ No
Are the lateral extents of the release overlying an unstable area such as karst geology?	☐ Yes ☒ No
Are the lateral extents of the release within a 100-year floodplain?	☐ Yes ☒ No
Did the release impact areas **not** on an exploration, development, production, or storage site?	☐ Yes ☒ No

Attach a comprehensive report (electronic submittals in .pdf format are preferred) demonstrating the lateral and vertical extents of soil contamination associated with the release have been determined. Refer to 19.15.29.11 NMAC for specifics.

Characterization Report Checklist: ***Each of the following items must be included in the report.***

- ☒ Scaled site map showing impacted area, surface features, subsurface features, delineation points, and monitoring wells.
- ☒ Field data
- ☒ Data table of soil contaminant concentration data
- ☒ Depth to water determination
- ☒ Determination of water sources and significant watercourses within ½-mile of the lateral extents of the release
- ☒ Boring or excavation logs
- ☒ Photographs including date and GIS information
- ☒ Topographic/Aerial maps
- ☒ Laboratory data including chain of custody

If the site characterization report does not include completed efforts at remediation of the release, the report must include a proposed remediation plan. That plan must include the estimated volume of material to be remediated, the proposed remediation technique, proposed sampling plan and methods, anticipated timelines for beginning and completing the remediation. The closure criteria for a release are contained in Table 1 of 19.15.29.12 NMAC, however, use of the table is modified by site- and release-specific parameters.

State of New Mexico
Oil Conservation Division

Incident ID	
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I hereby certify that the information given above is true and complete to the best of my knowledge and understand that pursuant to OCD rules and regulations all operators are required to report and/or file certain release notifications and perform corrective actions for releases which may endanger public health or the environment. The acceptance of a C-141 report by the OCD does not relieve the operator of liability should their operations have failed to adequately investigate and remediate contamination that pose a threat to groundwater, surface water, human health or the environment. In addition, OCD acceptance of a C-141 report does not relieve the operator of responsibility for compliance with any other federal, state, or local laws and/or regulations.

Printed Name: Brian Cunningham Title: Production Foreman

Signature: Brian Cunningham Date: 4/08/2019

email: bcunningham@legacylp.com Telephone: 432-234-9450

OCD Only

Received by: Dylan Rose-Coss Date: 04/24/2019

State of New Mexico
Oil Conservation Division

Incident ID	
District RP	
Facility ID	
Application ID	

Remediation Plan

Remediation Plan Checklist: *Each of the following items must be included in the plan.*

- [X] Detailed description of proposed remediation technique
- [X] Scaled sitemap with GPS coordinates showing delineation points
- [X] Estimated volume of material to be remediated
- [X] Closure criteria is to Table 1 specifications subject to 19.15.29.12(C)(4) NMAC
- [X] Proposed schedule for remediation (note if remediation plan timeline is more than 90 days OCD approval is required)

Deferral Requests Only: *Each of the following items must be confirmed as part of any request for deferral of remediation.*

- [X] Contamination must be in areas immediately under or around production equipment where remediation could cause a major facility deconstruction.
- [X] Extents of contamination must be fully delineated.
- [X] Contamination does not cause an imminent risk to human health, the environment, or groundwater.

I hereby certify that the information given above is true and complete to the best of my knowledge and understand that pursuant to OCD rules and regulations all operators are required to report and/or file certain release notifications and perform corrective actions for releases which may endanger public health or the environment. The acceptance of a C-141 report by the OCD does not relieve the operator of liability should their operations have failed to adequately investigate and remediate contamination that pose a threat to groundwater, surface water, human health or the environment. In addition, OCD acceptance of a C-141 report does not relieve the operator of responsibility for compliance with any other federal, state, or local laws and/or regulations.

Printed Name: Brian Cunningham Title: Production Foreman

Signature: Brian Cunningham Date: 4/08/2019

email: bcunningham@legacylp.com Telephone: 432-234-9450

OCD Only

Received by: Dylan Rose-Coss Date: 04/24/2019

☐ Approved ☐ Approved with Attached Conditions of Approval ☐ Denied ☒ Deferral Approved

Signature: Dylan Rose-Coss Date: 06/24/2019

1RP-5201
DEFERRAL REQUEST
Lea Unit #8D
Crude Oil Spill
Lea County, New Mexico

Latitude: N 32.59254°
Longitude: W -103.51155°

LAI Project No. 18-0138-03

April 24, 2019

Prepared for:
Legacy Reserves Operating, LP
303 West Wall Street, Suite 1300
Midland, Texas 79701

Prepared by:
Larson & Associates, Inc.
507 North Marienfeld Street, Suite 205
Midland, Texas 79701

Mark J. Larson, P.G.
Certified Professional Geologist #10490

Rachel E. Owen
Sr. Geoscientist

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1.0 INTRODUCTION

Larson & Associates, Inc. (LAI) has prepared this deferral request on behalf of Legacy Reserves Operating, LP (Legacy) for submittal to the New Mexico Oil Conservation (OCD) District I for a crude oil spill at the Lea Unit #8D Battery (Site) located in Unit B, Section 12, Township 20 South, Range 34 East in Lea County, New Mexico. The geodetic position is North 32.59254° and West 103.51155°. Figure 1 presents a topographic map. Figure 2 presents an aerial map.

1.1 Background

The spill occurred on September 20, 2018, due to a malfunction at the injection well causing a tank to overflow. The initial C-141 reported that approximately 80 barrels (bbls) of crude oil was released and 20 bbls of crude oil was recovered. The spill occurred on the well pad and flowed to the pasture southeast of the well pad. The spill area measures approximately 20,284 ft^2. LAI calculated the spill volume at approximately 173 bbls based on the depth of impacted soil between approximately 1 to 6 feet bgs and moisture content of 7% from laboratory analysis. The spill is considered a major release due to the volume of released fluids greater than 25 bbls. LAI, on behalf of Legacy, called the spill into the OCD District 1 the same day (Olivia Yu was called on September 20, 2018 at approximately 13:45 CST). The initial C-141 was submitted to OCD District 1 on September 21, 2018 and assigned remediation permit number 1RP-5201. Appendix A presents the initial C-141.

1.2 Physical Setting

The physical setting is as follows:

- The surface elevation is approximately 3,685 feet above mean sea level (msl);
- The topography slopes gently towards the southeast;
- There are no surface water features within 1,000 feet of the Site;
- The soils are designated as “Kermit soils and dune land, 0 to 12 percent slopes”, consisting of 0 to 60 inches of fine sand.
- The surface geology is the Ogallala Formation (lower Pliocene to middle Miocene)- Alluvial and eolian deposits, and petrocalcic soils of the southern High Plains;
- Groundwater occurs in the Ogallala formation at approximately 64.0 feet below ground surface (bgs) based on New Mexico State Engineer records;
- The nearest fresh water well is located in Unit P (SE/4, SE/4), Section 12, Township 20 South, Range 34 East, approximately 0.6 miles or about 3,200 feet southeast of the Site.

1.3 Remediation Levels

The following remediation levels are based on closure criteria presented in Table 1 of 19.15.29 NMAC:

- Benzene 10 mg/Kg
- BTEX 50 mg/Kg
- TPH 2,500 mg/Kg
- Chloride 10,000 mg/Kg

Further, 19.15.29.13 NMAC (Restoration, Reclamation and Re-Vegetation) requires the operator to restore the impacted surface area that existed prior to the release or their final land use.

2.0 DELINEATION

On November 28 and 29, 2018, LAI personnel used direct push technology (DPT) to collect soil samples at seven (7) locations inside of the spill area and five (5) locations outside of the spill in each cardinal direction (north, south, east and west) for horizontal delineation. The samples were collected at 1 foot intervals to approximately 4 feet bgs and 2 foot intervals to approximately 8 feet bgs depending on subsurface conditions. The soil samples were delivered under chain of custody and preservation to Permian Basin Environmental Laboratory (PBEL) in Midland, Texas, and analyzed for benzene, toluene, ethylbenzene, xylenes (BTEX), total petroleum hydrocarbons (TPH), including gasoline range organics (C6-C12), diesel range organics (>C12-C28) and oil range organics (>C28-C35) by EPA SW-846 Methods 8021B and 8015M, respectively. All samples will be analyzed for chloride by Method 300.

Benzene was reported above the OCD closure criteria of 10 milligrams per kilogram (mg/Kg) in samples DP-6, 0 to 1 foot (10.6 mg/Kg), DP-7, 0 to 1 foot (466.6 mg/Kg) and DP-9, 0 to 1 foot (36.1 mg/Kg).

BTEX was reported above the closure criteria (50 mg/Kg) in the following samples:

DP-2, 2 to 3 feet (93.7 mg/Kg)
DP-3, 1 to 2 feet (60 mg/Kg)
DP-6, 0 to 1 foot (237 mg/Kg)
DP-7, 0 to 1 foot (654 mg/Kg)
DP-8, 3 to 4 feet (229 mg/Kg)
DP-9, 0 to 1 foot (424.7 mg/Kg)
DP-12, 4 to 6 feet (163 mg/Kg)

TPH was reported above the OCD closure criteria (2,500 mg/Kg) in samples following samples:

DP-2, 3 to 4 feet (3,650 mg/Kg)
DP-3, 1 to 2 feet (8,310 mg/Kg)
DP-4, 0 to 1 foot (22,200 mg/Kg)
DP-6, 0 to 1 foot (36,400 mg/Kg)
DP-8, 4 to 6 feet (8,030 mg/Kg)
DP-9, 1 to 2 feet (3,230 mg/Kg)
DP-12, 4 to 6 feet (13,100 mg/Kg)

Chloride exceeded the Restoration, Reclamation and Re-Vegetation standard (600 mg/Kg) in the following samples: DP-6, 0 to 1 foot (701 mg/Kg) and DP-7, 0 to 1 foot (1,290 mg/Kg). Table 1 presents the delineation soil sample analytical data summary. Figure 2 presents the soil sample locations. Appendix B presents the laboratory report.

3.0 REMEDIATION

Between January 16, 2019 and March 20, 2019, Superior Oilfield Services (SOS), under supervision from LAI, used a backhoe to excavate soil from DP-2, DP-3, DP-4, DP-6, DP-7, DP-8, DP-9, and DP-12. Remediation began by removing the upper 6 inches of caliche from the spill area on the pad and pasture south of the pad. SOS excavated soil from the following areas and depths:

DP-2, 11 feet, 17 x 20 feet (340 square feet)
DP-3, 4 feet, 15 x 20 feet (300 square feet)
DP-4, 1.5 feet 11 x 13 feet (143 square feet)
DP-6, 2 feet, 20 x 40 feet (800 square feet)
DP-7, 2 feet, 8 x 28 feet (224 square feet)
DP-8, 10 feet, 16 x 16 feet (256 square feet)
DP-9, 3 feet, 15 x 20 feet (300 square feet)
DP-12, 7 feet, 16 x 16 feet (256 square feet)

Approximately 515 cubic yards of soil was disposed of at R360 Halfway Landfill and Lazy Ace Land-farm located between Hobbs and Carlsbad, New Mexico.

On January 22, 2019, March 14, 2019, and April 2, 2019, LAI personnel collected confirmation soil samples from the sidewalls (north, south, east and west) and at the bottom of each excavation. Figure 2 presents the excavations and confirmation sample locations. Table 2 presents the analytical data summary.

4.0 DEFERRAL REQUEST AND FURTHER REMEDIATION PLAN

Due to the proximity of excavations, encompassing DP-6 (north side) and DP-7 (north side and south side), to production equipment, Legacy is requesting a deferral to complete the remediation in these areas until abandonment or removal of the tanks, pumps, and electric lines for 1RP-5201. Legacy backfilled excavations on the well pad (DP-3, DP-4, DP-6, DP-7 and DP-9) with clean caliche and in the pasture (DP-2, DP-8, and DP-12) area with clean sand and seeded the areas with BLM Mix #3.

Tables

Table 1
1RP-5201
Delineation Soil Sample Analytical Data Summary
Legacy Reserves, Lea Unit 8D
Lea County, New Mexico
18-0138-03

Sample	Depth (Feet)	Collection Date	Status	Benzene (mg/Kg)	BTEX (mg/Kg)	C6 - C12 (mg/Kg)	C12 - C28 (mg/Kg)	C28 - C35 (mg/Kg)	C6 - C35 (mg/Kg)	Chloride (mg/Kg)
Remediation Level:				**10**	**50**				**2,500**	**10,000**
DP-1	0 - 1	11/29/2018	In-situ	<0.0202	<0.920	<25.3	<25.3	<25.3	<25.3	5.46
	1 - 2	11/29/2018	In-situ	<0.0204	<0.920	<25.5	<25.5	<25.5	<25.5	6.37
DP-2	0 - 1	11/29/2018	In-situ	0.504	**96.3**	4,110	14,200	2,390	**20,700**	3.03
	1 - 2	11/29/2018	In-situ	0.504	**92**	4,790	11,800	2,100	**18,700**	<1.04
	2 - 3	11/29/2018	In-situ	0.440	**93.7**	6,030	13,700	2,460	**22,200**	--
	3 - 4	11/29/2018	In-situ	<0.0206	3.71	645	2,590	416	**3,650**	--
	4 - 6	11/29/2018	In-situ	--	--	<26.6	132	29.7	162	--
DP-3	0 - 1	11/29/2018	In-situ	0.524	**102**	431	1,380	184	**1,990**	12.3
	1 - 2	11/29/2018	In-situ	<0.105	**60**	2,150	5,370	798	**8,310**	3.94
	2 - 3	11/29/2018	In-situ	<0.0200	<0.920	<29.4	48.9	<29.4	48.9	--
DP-4	0 - 1	11/29/2018	In-situ	0.835	44.7	4,030	15,900	2,310	**22,200**	333
	1 - 2	11/29/2018	In-situ	<0.0204	<0.920	<25.5	207	54.1	262	4.39
DP-5	0 - 1	11/29/2018	In-situ	<0.0217	<0.920	<27.2	33.6	<27.2	33.6	171
	1 - 2	11/29/2018	In-situ	<0.0200	<0.920	<25.0	<25.0	<25.0	<25.0	10.1
DP-6	0 - 1	11/29/2018	In-situ	**10.6**	**237**	7,460	25,100	3,840	**36,400**	**701**
	1 - 2	11/29/2018	In-situ	<0.0204	<0.920	<25.5	263	58.4	322	7.79
DP-7	0 - 1	11/29/2018	In-situ	**46.6**	**654**	13,900	38,300	5,970	58,200	**1,290**
	1 - 2	11/29/2018	In-situ	0.0248	<0.920	<30.1	88.3	<30.1	88.3	171
DP-8	0 - 1	11/29/2018	In-situ	0.561	**169**	8,000	19,500	2,930	**30,400**	5.5
	1-2	11/29/2018	In-situ	0.369	**139**	4,180	9,060	1,460	**14,700**	<1.03
	2 - 3	11/29/2018	In-situ	<0.258	**93.4**	3,760	8,370	1,380	**13,500**	--
	3-4	11/29/2018	In-situ	2.57	**229**	7,480	14,000	2,370	**23,800**	--
	4-6	11/29/2018	In-situ	<0.281	47.5	1,980	5,250	795	**8,030**	--
	6-8	11/29/2018	In-situ	--	--	<26.6	29.8	<26.6	29.8	--
DP-9	0 - 1'	11/28/2018	In-Situ	**36.1**	**424.7**	13,900	47,600	7,600	**69,100**	115

Table 1
1RP-5201
Delineation Soil Sample Analytical Data Summary
Legacy Reserves, Lea Unit 8D
Lea County, New Mexico
18-0138-03

Sample	Depth (Feet)	Collection Date	Status	Benzene (mg/Kg)	BTEX (mg/Kg)	C6 - C12 (mg/Kg)	C12 - C28 (mg/Kg)	C28 - C35 (mg/Kg)	C6 - C35 (mg/Kg)	Chloride (mg/Kg)
Remediation Level:				**10**	**50**				**2,500**	**10,000**
	1 - 2'	11/28/2018	In-Situ	0.22	9.9	435	2,390	400	**3,230**	95.9
	2 - 3'	11/28/2018	In-Situ	--	--	66.7	545	96.9	709	--
DP-10	0 - 1'	11/28/2018	In-Situ	<0.0202	<0.920	<25.5	<25.5	<25.5	<25.5	5.10
	1 - 2'	11/28/2018	In-Situ	<0.0202	<0.920	<25.5	<25.5	<25.5	<25.5	<1.02
DP-11	0 - 1'	11/28/2018	In-Situ	0.0746	1.6276	<28.1	301	99.6	400	5.33
	1 - 2'	11/28/2018	In-Situ	--	--	--	--	--	--	--
DP-12	0 - 1'	11/28/2018	In-Situ	0.529	**123**	5,300	27,100	4,300	**36,700**	7.99
	1 - 2'	11/28/2018	In-Situ	0.453	**161**	3,750	11,200	1,920	**16,800**	<1.01
	2 - 3'	11/28/2018	In-Situ	0.282	**139**	3,720	11,600	1,950	**17,200**	--
	3 - 4'	11/28/2018	In-Situ	8.27	**269**	5,630	13,700	2,190	**21,500**	--
	4 - 6'	11/28/2018	In-Situ	3.47	**163**	3,300	8,380	1,430	**13,100**	--
	6 - 8'	11/28/2018	In-Situ	<0.549	<2.3	<27.5	124	37.9	162	--

Notes: analysis performed by Xenco Laboratories, Midland, Texas by EPA SW-846 Methods 8021B (BTEX), 8015M (TPH) and 300 (chloride)
mg/Kg: denotes concentration in milligrams per kilogram
Depth is feet below ground surface (bgs)
Denotes concentration above remediation level

Table 2
1RP-5201
Confirmation Soil Sample Analytical Data Summary
Legacy Reserves, Lea Unit 8D
Lea County, New Mexico
18-0138-03

Sample	Depth (Feet)	Collection Date	Status	Benzene (mg/Kg)	BTEX (mg/Kg)	C6 - C12 (mg/Kg)	C12 - C28 (mg/Kg)	C28 - C35 (mg/Kg)	C6 - C35 (mg/Kg)	Chloride (mg/Kg)
Remediation Level:				**10**	**50**				**2,500**	**10,000**
DP-2.1 (north sidewall)	3	1/22/2019	In-Situ	<0.00100	<0.00600	<25.0	<25.0	<25.0	<25.0	<1.00
DP-2.2 (east sidewall)	3	1/22/2019	In-Situ	<0.00100	<0.00600	<25.0	<25.0	<25.0	<25.0	<1.00
DP-2.3 (south sidewall)	3	1/22/2019	In-Situ	<0.0202	<0.1212	<25.3	<25.3	<25.3	<25.3	5.16
DP-2.4 (west sidewall)	3	1/22/2019	In-Situ	<0.00101	<0.00606	<25.3	37.0	<25.3	37.0	<1.01
DP-2.5 (bottom)	6	1/22/2019	Excavated	<0.00101	0.2054	223	3,720	496	**4,440**	3.33
	11	3/14/2019	In-Situ	<0.00105	<0.00631	<26.3	<26.3	<26.3	<26.3	<1.05
DP-3.1 (north sidewall)	2	1/22/2019	In-Situ	<0.00105	<0.00631	<26.3	<26.3	<26.3	<26.3	2.97
DP-3.2 (east sidewall)	2	1/22/2019	In-Situ	<0.00102	<0.00612	<25.0	<25.0	<25.0	<25.0	221
DP-3.3 (south sidewall)	2	1/22/2019	In-Situ	<0.00101	<0.00606	<25.3	<25.3	<25.3	<25.3	5.49
DP-3.4 (west sidewall)	2	1/22/2019	In-Situ	<0.00101	<0.00606	<25.3	<25.3	<25.3	<25.3	48.5
DP-3.5 (bottom)	4	1/22/2019	In-Situ	<0.0202	<0.1212	<25.3	253	105	358	249
DP-4.1 (north sidewall)	0.75	1/22/2019	In-Situ	--	--	<25.0	<25.0	<25.0	<25.0	28.8
		4/2/2019	In-Situ	<0.00201	<0.00201	--	--	--	--	
DP-4.2 (east sidewall)	0.75	1/22/2019	In-Situ	--	--	<25.0	<25.0	<25.0	<25.0	6.15
		4/2/2019	In-Situ	<0.00198	<0.00198	--	--	--	--	--
DP-4.3 (south sidewall)	0.75	1/22/2019	In-Situ	--	--	<25.5	35.6	<25.5	35.6	2.73
		4/2/2019	In-Situ	<0.00199	<0.00199	--	--	--	--	--
DP-4.4 (west sidewall)	0.75	1/22/2019	In-Situ	--	--	<25.0	<25.0	<25.0	<25.0	<1.00
		4/2/2019	In-Situ	<0.00198	<0.00198	--	--	--	--	--
DP-4.5 (bottom)	1.5	1/22/2019	In-Situ	--	--	<25.8	<25.8	<25.8	<25.8	21.3
		4/2/2019	In-Situ	<0.00200	<0.00200	--	--	--	--	--
DP-6.1 (north sidewall)	1	1/22/2019	In-Situ	<0.0204	3.763	452	2,940	380	**3,770**	91.2
DP-6.2 (east sidewall)	1	1/22/2019	In-Situ	0.00158	0.05446	99.6	1,620	265	1,990	80.7
DP-6.3 (south sidewall)	1	1/22/2019	In-Situ	<0.00101	<0.00606	<25.3	<25.3	<25.3	<25.3	9.79
DP-6.4 (west sidewall)	1	1/22/2019	In-Situ	<0.00101	<0.00606	<25.3	29.8	<25.3	29.8	157
DP-6.5 (bottom)	2	1/22/2019	In-Situ	<0.00100	0.00965	30.5	817	119	966	253
DP-7.1 (north sidewall)	0.75	1/22/2019	In-Situ	0.0304	10.3604	873	4,650	671	**6,190**	414
DP-7.2 (east sidewall)	0.75	1/22/2019	In-Situ	0.00111	0.13721	<25.0	108	<25.0	108	188
DP-7.3 (south sidewall)	0.75	1/22/2019	In-Situ	0.0162	0.3276	1,010	10,300	1,340	**12,600**	158

Table 2
1RP-5201
Confirmation Soil Sample Analytical Data Summary
Legacy Reserves, Lea Unit 8D
Lea County, New Mexico
18-0138-03

Sample	Depth (Feet)	Collection Date	Status	Benzene (mg/Kg)	BTEX (mg/Kg)	C6 - C12 (mg/Kg)	C12 - C28 (mg/Kg)	C28 - C35 (mg/Kg)	C6 - C35 (mg/Kg)	Chloride (mg/Kg)
Remediation Level:				**10**	**50**				**2,500**	**10,000**
DP-7.4 (west sidewall)	0.75	1/22/2019	In-Situ	<0.00101	<0.00606	<25.0	<25.0	<25.0	<25.0	45.3
DP-7.5 (bottom)	1.5	1/22/2019	Excavated	<0.0200	2.98	178	2,060	275	**2,510**	75.4
	2	3/20/2019	In-Situ	<0.00109	<0.00653	<27.2	618	147	765	305.0
DP-8.1 (north sidewall)	3.5	1/22/2019	In-Situ	<0.00100	0.00965	<25.0	32.5	<25.0	32.5	5.83
DP-8.2 (east sidewall)	3.5	1/22/2019	Excavated	<0.00100	0.0997	96.5	2,410	307	**2,810**	7.08
	5	3/14/2019	In-Situ	<0.00101	<0.00606	<25.3	<25.3	<25.3	<25.3	21.6
DP-8.3 (south sidewall)	3.5	1/22/2019	In-Situ	<0.00100	<0.00600	<25.0	<25.0	<25.0	<25.0	<1.00
DP-8.4 (west sidewall)	3.5	1/22/2019	In-Situ	<0.00102	0.00612	<25.5	<25.5	<25.5	<25.5	4.14
DP-8.5 (bottom)	7	1/22/2019	Excavated	0.00378	0.66278	124	2,720	459	**3,310**	60.1
	10	3/14/2019	In-Situ	<0.00102	<0.00612	<25.5	<25.5	<25.5	<25.5	21.4
DP-9.1 (north sidewall)	1.5	1/22/2019	In-Situ	<0.00102	<0.00612	<25.5	<25.5	<25.5	<25.5	46.7
DP-9.2 (east sidewall)	1.5	1/22/2019	In-Situ	<0.00102	<0.00612	<25.5	<25.5	<25.5	<25.5	34.3
DP-9.7 (east sidewall)	1.5	3/20/2019	In-Situ	<0.00101	<0.00606	<25.3	43.2	<25.3	43.2	1.53
DP-9.3 (south sidewall)	1.5	1/22/2019	In-Situ	<0.00102	<0.00612	<25.3	45.7	<25.3	45.7	10.9
DP-9.4 (west sidewall)	1.5	1/22/2019	In-Situ	<0.00102	<0.00612	<25.5	<25.5	<25.5	<25.5	28.6
DP-9.6 (west sidewall)	1.5	3/20/2019	In-Situ	<0.00100	<0.00600	<25.0	55.1	<25.0	55.1	5.26
DP-9.5 (bottom)	3	1/22/2019	In-Situ	<0.00102	<0.00612	<25.5	<25.5	<25.5	<25.5	285
DP-12.1 (north sidewall	3.5	1/22/2019	In-Situ	<0.0200	<0.1200	<25.0	149	49.3	199	<1.00
DP-12.2 (east sidewall)	3.5	1/22/2019	In-Situ	<0.00101	<0.00606	<25.3	<25.3	<25.3	<25.3	<1.01
DP-12.3 (south sidewall	3.5	1/22/2019	In-Situ	<0.00100	<0.00600	<25.0	<25.0	<25.0	<25.0	<1.03
DP-12.4 (west sidewall)	3.5	1/22/2019	In-Situ	<0.00100	<0.00600	<25.0	<25.0	<25.0	<25.0	<1.57
DP-12.5 (bottom)	7	1/22/2019	In-Situ	<0.00102	0.24038	37.1	380	52.6	470	1.84

Notes: analysis performed by Xenco Laboratories, Midland, Texas by EPA SW-846 Methods 8021B (BTEX), 8015M (TPH) and 300 (chloride)
mg/Kg: denotes concentration in milligrams per kilogram
feet below ground surface (bgs)
Denotes concentration above remediation level and excavated
Denotes concentration above remediation level and defer remeidation until abandonement

Figures

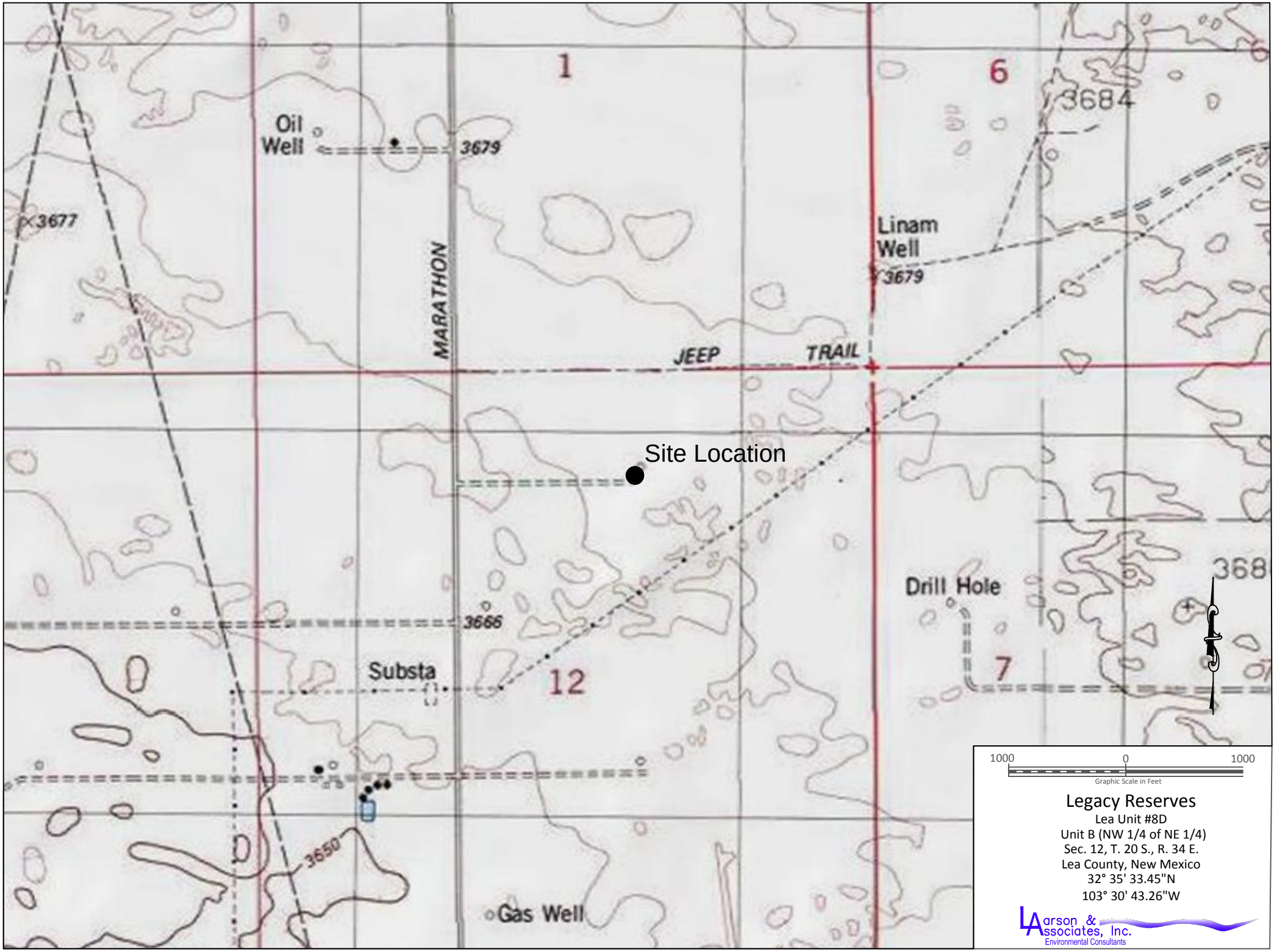

Figure 1 - Topographic Map

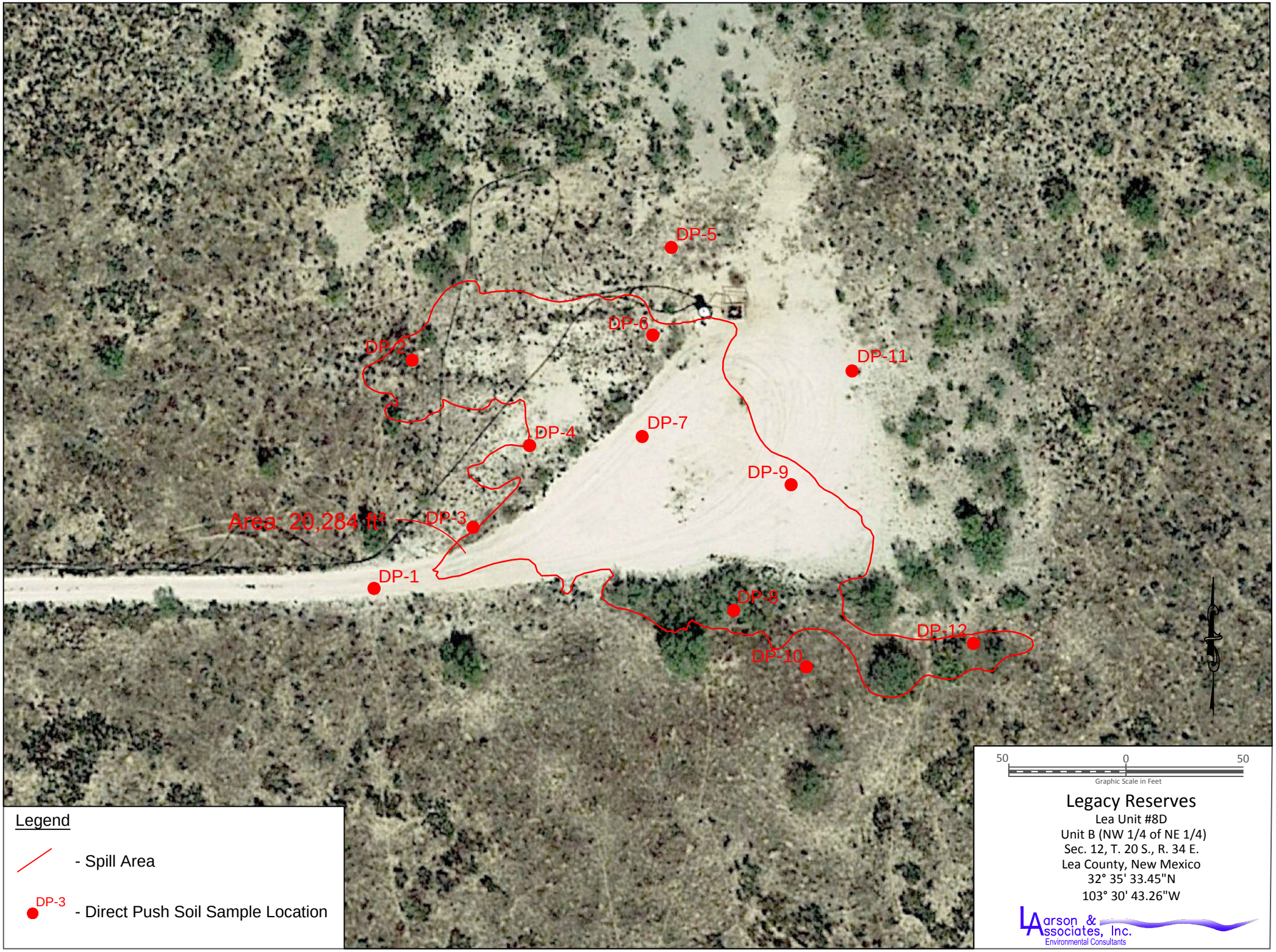

Figure 2 - Aerial Map Showing Direct Push Soil Sample Locations

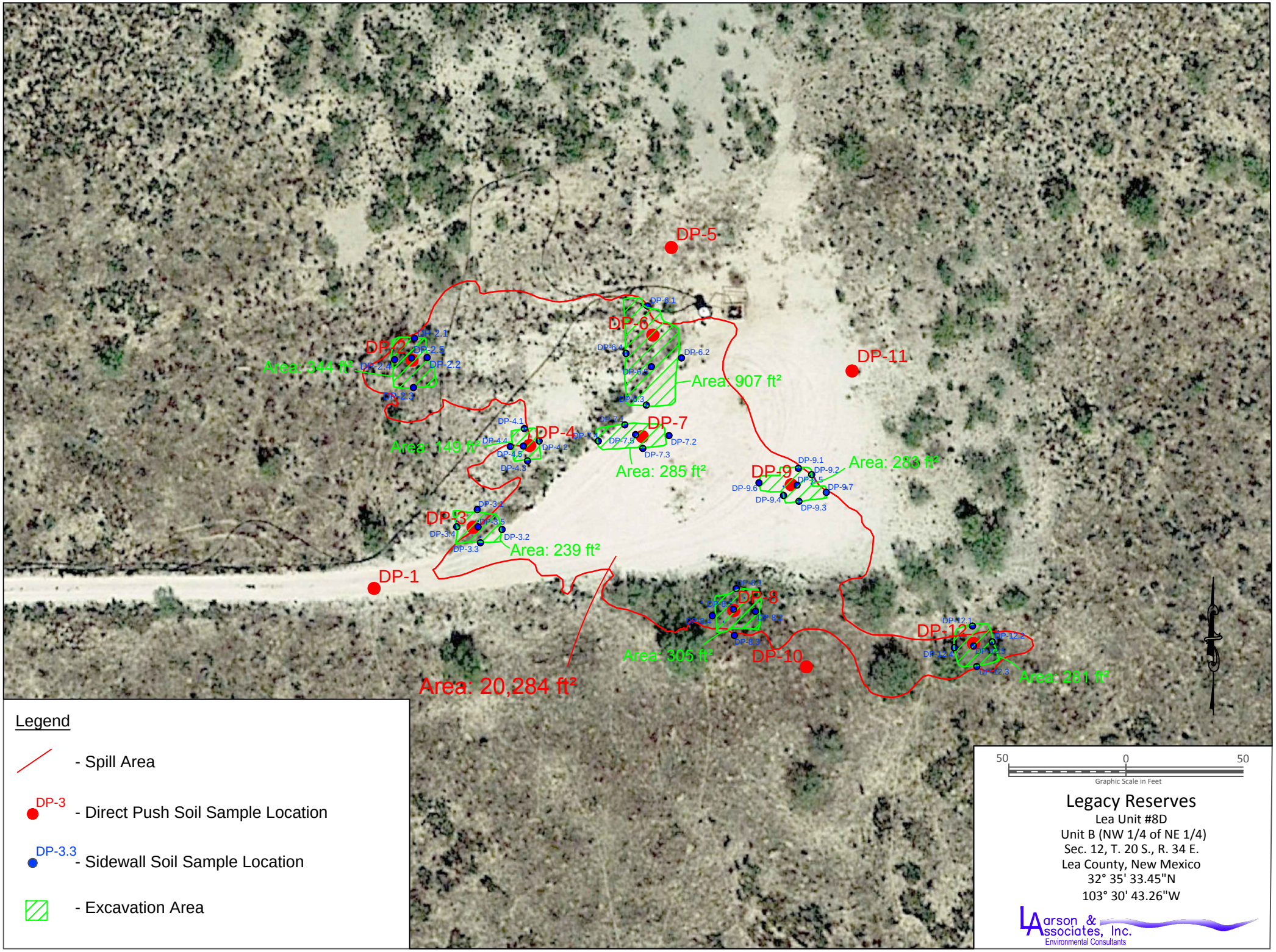

Figure 3 - Aerial Map Showing Direct Push Soil Sample Locations and Excavated Areas

Appendix A

Initial C-141

District I
1625 N. French Dr., Hobbs, NM 88240
District II
811 S. First St., Artesia, NM 88210
District III
1000 Rio Brazos Road, Aztec, NM 87410
District IV
1220 S. St. Francis Dr., Santa Fe, NM 87505

HOBBS OCD
SEP 21 2018
RECEIVED

State of New Mexico
Energy Minerals and Natural Resources Department

Oil Conservation Division
1220 South St. Francis Dr.
Santa Fe, NM 87505

Form C-141
Revised August 24, 2018
Submit to appropriate OCD District office

Incident ID	NOY1826757876
District RP	1RP-5201
Facility ID	
Application ID	pOY1826756384

Release Notification

Responsible Party

Responsible Party Legacy Reserves Operating, LP	OGRID 240974
Contact Name Brian Cunningham	Contact Telephone 432-234-9450
Contact email bcunningham@legacylp.com	Incident # *(assigned by OCD)*
Contact mailing address 303 W. Wall St. Midland, TX 79701	

Location of Release Source

Latitude 32.59254 N Longitude 103.51155 W

(NAD 83 in decimal degrees to 5 decimal places)

Site Name Lea Unit #8D	Site Type Tank Battery
Date Release Discovered 9/20/2018	API# *(if applicable)* 3002502431

Unit Letter	Section	Township	Range	County
B	12	20S	34E	Lea

Federal minerals

Surface Owner: ☐ State ☒ Federal ☐ Tribal ☒ Private (*Name:* Kenneth Smith)

Nature and Volume of Release

Material(s) Released (Select all that apply and attach calculations or specific justification for the volumes provided below)

☒ Crude Oil	Volume Released (bbls) 80 bbls	Volume Recovered (bbls) N/A
☐ Produced Water	Volume Released (bbls)	Volume Recovered (bbls)
	Is the concentration of total dissolved solids (TDS) in the produced water >10,000 mg/l?	☐ Yes ☐ No
☐ Condensate	Volume Released (bbls)	Volume Recovered (bbls)
☐ Natural Gas	Volume Released (Mcf)	Volume Recovered (Mcf)
☐ Other (describe)	Volume/Weight Released (provide units)	Volume/Weight Recovered (provide units)

Cause of Release

The tank battery overflowed due to a malfunction on the injection well.

State of New Mexico
Oil Conservation Division

Incident ID	NOY1826757876
District RP	1RP-5201
Facility ID	
Application ID	pOY1826756384

Was this a major release as defined by 19.15.29.7(A) NMAC? [X] Yes [ ] No	If YES, for what reason(s) does the responsible party consider this a major release? The release was greater than 25 bbls of liquid.
If YES, was immediate notice given to the OCD? By whom? To whom? When and by what means (phone, email, etc)? Larson and Associates personnel called Olivia Yu from OCD on 9/20/2018 and left a voice mail.	

Initial Response

The responsible party must undertake the following actions immediately unless they could create a safety hazard that would result in injury

- [X] The source of the release has been stopped.
- [X] The impacted area has been secured to protect human health and the environment.
- [X] Released materials have been contained via the use of berms or dikes, absorbent pads, or other containment devices.
- [X] All free liquids and recoverable materials have been removed and managed appropriately.

If all the actions described above have not been undertaken, explain why:

Per 19.15.29.8 B. (4) NMAC the responsible party may commence remediation immediately after discovery of a release. If remediation has begun, please attach a narrative of actions to date. If remedial efforts have been successfully completed or if the release occurred within a lined containment area (see 19.15.29.11(A)(5)(a) NMAC), please attach all information needed for closure evaluation.

I hereby certify that the information given above is true and complete to the best of my knowledge and understand that pursuant to OCD rules and regulations all operators are required to report and or file certain release notifications and perform corrective actions for releases which may endanger public health or the environment. The acceptance of a C-141 report by the OCD does not relieve the operator of liability should their operations have failed to adequately investigate and remediate contamination that pose a threat to groundwater, surface water, human health or the environment. In addition, OCD acceptance of a C-141 report does not relieve the operator of responsibility for compliance with any other federal, state, or local laws and/or regulations.

Printed Name: Brian Cunningham Title: Production Foreman

Signature: Brian Cunningham Date: 9/20/2018

email: bcunningham@legacylp.com Telephone: 432-234-9450

OCD Only

Received by: **RECEIVED** By Olivia Yu at 4:06 pm, Sep 24, 2018 Date:

Appendix B

OCD Correspondence

From: Brian Cunningham
To: Mark Larson
Subject: Fwd: Major release at Lea Unit #8D (30-025-02431)
Date: Tuesday, September 25, 2018 9:14:05 AM
Attachments: 1RP5201_initialnotif_3002502431.pdf
ATT00001.htm

FYI

Sent from my iPhone

Begin forwarded message:

From: "Yu, Olivia, EMNRD" <Olivia.Yu@state.nm.us>
Date: September 24, 2018 at 4:14:50 PM MDT
To: "bcunningham@legacylp.com" <bcunningham@legacylp.com>, "Tucker, Shelly" <stucker@blm.gov>
Cc: "Hernandez, Christina, EMNRD" <Christina.Hernandez@state.nm.us>
Subject: Major release at Lea Unit #8D (30-025-02431)

Mr. Cunningham:

Please note that NMOCD databases indicate Federal surface and minerals ownerships. BLM can verify.

Please be advised that

1. The initial portion of the C-141 form does not include the calculations to determine the release volume. Visual estimation is not sufficient nor adequate. Please submit measurements in volume estimation; including dimensions, soil parameters (porosity, texture, bulk density, etc), and dated, geo-referenced photo documentation verifying that the release has been contained.
2. Per 19.15.29.10 NMAC, a major release necessitates immediate notification to NMOCD Environmental Bureau chief, in addition to the District office.
3. Per 19.15.29.13 NMAC, regulations of corresponding agencies supersede NMOCD's.

The 1RP for this incident is

5201	9/24/2018	A	Legacy	Lea Unit #8D	30-025-02431	20S-34E-12B	9/20/2018

Please remember to include this 1RP identifier to all communications. Revised NMAC 19.15.29 was effective on August 14, 2018. Delineate and remediate per regulation. Mind the timelines for submittal of requisite information.

Please be advised that NMOCD recommends a completed site characterization/delineation report be reviewed or approved by NMOCD BEFORE any significant remediation work towards closure.

Thanks,

Olivia Yu
Environmental Specialist
NMOCD, District I
Olivia.yu@state.nm.us
575-393-6161 x113

Appendix C

Laboratory Reports

PERMIAN BASIN
ENVIRONMENTAL LAB, LP
1400 Rankin Hwy
Midland, TX 79701

PBELAB

Analytical Report

Prepared for:

Mark Larson

Larson & Associates, Inc.

P.O. Box 50685

Midland, TX 79710

Project: Lea Unit #8D (Legacy)

Project Number: 18-0138-03

Location:

Lab Order Number: 8L01001

NELAP ACCREDITED TNI LABORATORY

NELAP/TCEQ # T104704516-17-8

Report Date: 12/14/18

Larson & Associates, Inc.
P.O. Box 50685
Midland TX, 79710

Project: Lea Unit #8D (Legacy)
Project Number: 18-0138-03
Project Manager: Mark Larson

Fax: (432) 687-0456

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
DP-11 (0'-1')	8L01001-01	Soil	11/28/18 14:18	12-01-2018 13:30
DP-11 (1'-2')	8L01001-02	Soil	11/28/18 14:21	12-01-2018 13:30
DP-9 (0'-1')	8L01001-09	Soil	11/28/18 14:50	12-01-2018 13:30
DP-9 (1'-2')	8L01001-10	Soil	11/28/18 14:54	12-01-2018 13:30
DP-9 (2'-3')	8L01001-11	Soil	11/28/18 15:01	12-01-2018 13:30
DP-10 (0'-1')	8L01001-17	Soil	11/28/18 15:16	12-01-2018 13:30
DP-10 (1'-2')	8L01001-18	Soil	11/28/18 15:17	12-01-2018 13:30
DP-12 (0'-1')	8L01001-22	Soil	11/28/18 15:26	12-01-2018 13:30
DP-12 (1'-2')	8L01001-23	Soil	11/28/18 15:28	12-01-2018 13:30
DP-12 (2'-3')	8L01001-24	Soil	11/28/18 15:30	12-01-2018 13:30
DP-12 (3'-4')	8L01001-25	Soil	11/28/18 15:32	12-01-2018 13:30
DP-12 (4'-6')	8L01001-26	Soil	11/28/18 15:34	12-01-2018 13:30
DP-12 (6'-8')	8L01001-27	Soil	11/28/18 15:37	12-01-2018 13:30
DP-7 (0'-1')	8L01001-30	Soil	11/29/18 11:13	12-01-2018 13:30
DP-7 (1'-2')	8L01001-31	Soil	11/29/18 11:15	12-01-2018 13:30
DP-4 (0'-1')	8L01001-38	Soil	11/29/18 11:27	12-01-2018 13:30
DP-4 (1'-2')	8L01001-39	Soil	11/29/18 11:28	12-01-2018 13:30
DP-2 (0'-1')	8L01001-46	Soil	11/29/18 12:20	12-01-2018 13:30
DP-2 (1'-2')	8L01001-47	Soil	11/29/18 12:22	12-01-2018 13:30
DP-2 (2'-3')	8L01001-48	Soil	11/29/18 12:24	12-01-2018 13:30
DP-2 (3'-4')	8L01001-49	Soil	11/29/18 12:27	12-01-2018 13:30
DP-2 (4'-6')	8L01001-50	Soil	11/29/18 12:29	12-01-2018 13:30
DP-1 (0'-1')	8L01001-54	Soil	11/29/18 12:55	12-01-2018 13:30
DP-1 (1'-2')	8L01001-55	Soil	11/29/18 12:57	12-01-2018 13:30
DP-3 (0'-1')	8L01001-62	Soil	11/29/18 13:10	12-01-2018 13:30
DP-3 (1'-2')	8L01001-63	Soil	11/29/18 13:11	12-01-2018 13:30
DP-3 (2'-3')	8L01001-64	Soil	11/29/18 13:12	12-01-2018 13:30
DP-8 (0'-1')	8L01001-70	Soil	11/29/18 14:18	12-01-2018 13:30
DP-8 (1'-2')	8L01001-71	Soil	11/29/18 14:20	12-01-2018 13:30
DP-8 (2'-3')	8L01001-72	Soil	11/29/18 14:21	12-01-2018 13:30
DP-8 (3'-4')	8L01001-73	Soil	11/29/18 14:23	12-01-2018 13:30
DP-8 (4'-6')	8L01001-74	Soil	11/29/18 14:25	12-01-2018 13:30
DP-8 (6'-8')	8L01001-75	Soil	11/29/18 14:26	12-01-2018 13:30
DP-6 (0'-1')	8L01001-78	Soil	11/29/18 14:50	12-01-2018 13:30

Larson & Associates, Inc.
P.O. Box 50685
Midland TX, 79710

Project: Lea Unit #8D (Legacy)
Project Number: 18-0138-03
Project Manager: Mark Larson

Fax: (432) 687-0456

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
DP-6 (1'-2')	8L01001-79	Soil	11/29/18 14:52	12-01-2018 13:30
DP-5 (0'-1')	8L01001-86	Soil	11/29/18 15:07	12-01-2018 13:30
DP-5 (1'-2')	8L01001-87	Soil	11/29/18 15:08	12-01-2018 13:30

Larson & Associates, Inc.
P.O. Box 50685
Midland TX, 79710

Project: Lea Unit #8D (Legacy)
Project Number: 18-0138-03
Project Manager: Mark Larson

Fax: (432) 687-0456

DP-11 (0'-1')

8L01001-01 (Soil)

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Permian Basin Environmental Lab, L.P.									
Organics by GC									
Benzene	**0.0746**	0.0225	mg/kg dry	20	P8L0403	12/04/18	12/04/18	EPA 8021B	
Toluene	**0.579**	0.225	mg/kg dry	20	P8L0403	12/04/18	12/04/18	EPA 8021B	
Ethylbenzene	**0.316**	0.112	mg/kg dry	20	P8L0403	12/04/18	12/04/18	EPA 8021B	
Xylene (p/m)	**0.658**	0.449	mg/kg dry	20	P8L0403	12/04/18	12/04/18	EPA 8021B	
Xylene (o)	ND	0.225	mg/kg dry	20	P8L0403	12/04/18	12/04/18	EPA 8021B	
Surrogate: 4-Bromofluorobenzene		*91.6 %*	*75-125*		*P8L0403*	*12/04/18*	*12/04/18*	*EPA 8021B*	
Surrogate: 1,4-Difluorobenzene		*75.5 %*	*75-125*		*P8L0403*	*12/04/18*	*12/04/18*	*EPA 8021B*	
General Chemistry Parameters by EPA / Standard Methods									
Chloride	**5.33**	1.12	mg/kg dry	1	P8L0707	12/07/18	12/07/18	EPA 300.0	
% Moisture	**11.0**	0.1	%	1	P8L0410	12/04/18	12/04/18	ASTM D2216	
Total Petroleum Hydrocarbons C6-C35 by EPA Method 8015M									
C6-C12	ND	28.1	mg/kg dry	1	P8L0406	12/03/18	12/03/18	TPH 8015M	
>C12-C28	**301**	28.1	mg/kg dry	1	P8L0406	12/03/18	12/03/18	TPH 8015M	
>C28-C35	**99.6**	28.1	mg/kg dry	1	P8L0406	12/03/18	12/03/18	TPH 8015M	
Surrogate: 1-Chlorooctane		*105 %*	*70-130*		*P8L0406*	*12/03/18*	*12/03/18*	*TPH 8015M*	
Surrogate: o-Terphenyl		*114 %*	*70-130*		*P8L0406*	*12/03/18*	*12/03/18*	*TPH 8015M*	
Total Petroleum Hydrocarbon C6-C35	**400**	28.1	mg/kg dry	1	[CALC]	12/03/18	12/03/18	calc	
BTEX by 8021B									
Xylenes (total)	ND	0.600	mg/kg	20	[CALC]	12/04/18	12/04/18	EPA 8021B	
Total BTEX	**1.45**	0.920	mg/kg	20	[CALC]	12/04/18	12/04/18	EPA 8021B	

Larson & Associates, Inc.
P.O. Box 50685
Midland TX, 79710

Project: Lea Unit #8D (Legacy)
Project Number: 18-0138-03
Project Manager: Mark Larson

Fax: (432) 687-0456

DP-11 (1'-2')

8L01001-02 (Soil)

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Permian Basin Environmental Lab, L.P.									
Organics by GC									
Benzene	ND	0.0204	mg/kg dry	20	P8L0403	12/04/18	12/04/18	EPA 8021B	
Toluene	ND	0.204	mg/kg dry	20	P8L0403	12/04/18	12/04/18	EPA 8021B	
Ethylbenzene	ND	0.102	mg/kg dry	20	P8L0403	12/04/18	12/04/18	EPA 8021B	
Xylene (p/m)	ND	0.408	mg/kg dry	20	P8L0403	12/04/18	12/04/18	EPA 8021B	
Xylene (o)	ND	0.204	mg/kg dry	20	P8L0403	12/04/18	12/04/18	EPA 8021B	
Surrogate: 1,4-Difluorobenzene		*85.0 %*	*75-125*		*P8L0403*	*12/04/18*	*12/04/18*	*EPA 8021B*	
Surrogate: 4-Bromofluorobenzene		*93.2 %*	*75-125*		*P8L0403*	*12/04/18*	*12/04/18*	*EPA 8021B*	
General Chemistry Parameters by EPA / Standard Methods									
Chloride	ND	1.02	mg/kg dry	1	P8L0707	12/07/18	12/07/18	EPA 300.0	
% Moisture	**2.0**	0.1	%	1	P8L0410	12/04/18	12/04/18	ASTM D2216	
Total Petroleum Hydrocarbons C6-C35 by EPA Method 8015M									
C6-C12	ND	25.5	mg/kg dry	1	P8L0407	12/03/18	12/04/18	TPH 8015M	
>C12-C28	ND	25.5	mg/kg dry	1	P8L0407	12/03/18	12/04/18	TPH 8015M	
>C28-C35	ND	25.5	mg/kg dry	1	P8L0407	12/03/18	12/04/18	TPH 8015M	
Surrogate: 1-Chlorooctane		*110 %*	*70-130*		*P8L0407*	*12/03/18*	*12/04/18*	*TPH 8015M*	
Surrogate: o-Terphenyl		*119 %*	*70-130*		*P8L0407*	*12/03/18*	*12/04/18*	*TPH 8015M*	
Total Petroleum Hydrocarbon C6-C35	ND	25.5	mg/kg dry	1	[CALC]	12/03/18	12/04/18	calc	
BTEX by 8021B									
Xylenes (total)	ND	0.600	mg/kg	20	[CALC]	12/04/18	12/04/18	EPA 8021B	
Total BTEX	ND	0.920	mg/kg	20	[CALC]	12/04/18	12/04/18	EPA 8021B	

Larson & Associates, Inc.
P.O. Box 50685
Midland TX, 79710

Project: Lea Unit #8D (Legacy)
Project Number: 18-0138-03
Project Manager: Mark Larson

Fax: (432) 687-0456

DP-9 (0'-1')

8L01001-09 (Soil)

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Permian Basin Environmental Lab, L.P.									
Organics by GC									
Benzene	**36.1**	0.291	mg/kg dry	250	P8L0403	12/04/18	12/04/18	EPA 8021B	
Toluene	**101**	2.91	mg/kg dry	250	P8L0403	12/04/18	12/04/18	EPA 8021B	
Ethylbenzene	**96.5**	1.45	mg/kg dry	250	P8L0403	12/04/18	12/04/18	EPA 8021B	
Xylene (p/m)	**106**	5.81	mg/kg dry	250	P8L0403	12/04/18	12/04/18	EPA 8021B	
Xylene (o)	**85.1**	2.91	mg/kg dry	250	P8L0403	12/04/18	12/04/18	EPA 8021B	
Surrogate: 1,4-Difluorobenzene		*92.8 %*	*75-125*		*P8L0403*	*12/04/18*	*12/04/18*	*EPA 8021B*	
Surrogate: 4-Bromofluorobenzene		*73.0 %*	*75-125*		*P8L0403*	*12/04/18*	*12/04/18*	*EPA 8021B*	*S-GC*
General Chemistry Parameters by EPA / Standard Methods									
Chloride	**115**	1.16	mg/kg dry	1	P8L0707	12/07/18	12/07/18	EPA 300.0	
% Moisture	**14.0**	0.1	%	1	P8L0410	12/04/18	12/04/18	ASTM D2216	
Total Petroleum Hydrocarbons C6-C35 by EPA Method 8015M									
C6-C12	**13900**	291	mg/kg dry	10	P8L0407	12/03/18	12/04/18	TPH 8015M	
>C12-C28	**47600**	291	mg/kg dry	10	P8L0407	12/03/18	12/04/18	TPH 8015M	
>C28-C35	**7600**	291	mg/kg dry	10	P8L0407	12/03/18	12/04/18	TPH 8015M	
Surrogate: 1-Chlorooctane		*87.6 %*	*70-130*		*P8L0407*	*12/03/18*	*12/04/18*	*TPH 8015M*	
Surrogate: o-Terphenyl		*80.0 %*	*70-130*		*P8L0407*	*12/03/18*	*12/04/18*	*TPH 8015M*	
Total Petroleum Hydrocarbon C6-C35	**69100**	291	mg/kg dry	10	[CALC]	12/03/18	12/04/18	calc	
BTEX by 8021B									
Xylenes (total)	**164**	7.50	mg/kg	250	[CALC]	12/04/18	12/04/18	EPA 8021B	
Total BTEX	**365**	11.5	mg/kg	250	[CALC]	12/04/18	12/04/18	EPA 8021B	

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Project: Lea Unit #8D (Legacy)
Project Number: 18-0138-03
Project Manager: Mark Larson

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DP-9 (1'-2')

8L01001-10 (Soil)

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Permian Basin Environmental Lab, L.P.									
Organics by GC									
Benzene	**0.220**	0.0206	mg/kg dry	20	P8L0403	12/04/18	12/04/18	EPA 8021B	
Toluene	**2.52**	0.206	mg/kg dry	20	P8L0403	12/04/18	12/04/18	EPA 8021B	
Ethylbenzene	**1.71**	0.103	mg/kg dry	20	P8L0403	12/04/18	12/04/18	EPA 8021B	
Xylene (p/m)	**3.77**	0.412	mg/kg dry	20	P8L0403	12/04/18	12/04/18	EPA 8021B	
Xylene (o)	**1.98**	0.206	mg/kg dry	20	P8L0403	12/04/18	12/04/18	EPA 8021B	
Surrogate: 4-Bromofluorobenzene		*65.7 %*	*75-125*		*P8L0403*	*12/04/18*	*12/04/18*	*EPA 8021B*	*S-GC*
Surrogate: 1,4-Difluorobenzene		*85.1 %*	*75-125*		*P8L0403*	*12/04/18*	*12/04/18*	*EPA 8021B*	
General Chemistry Parameters by EPA / Standard Methods									
Chloride	**95.9**	1.03	mg/kg dry	1	P8L0707	12/07/18	12/07/18	EPA 300.0	
% Moisture	**3.0**	0.1	%	1	P8L0410	12/04/18	12/04/18	ASTM D2216	
Total Petroleum Hydrocarbons C6-C35 by EPA Method 8015M									
C6-C12	**435**	129	mg/kg dry	5	P8L0407	12/03/18	12/04/18	TPH 8015M	
>C12-C28	**2390**	129	mg/kg dry	5	P8L0407	12/03/18	12/04/18	TPH 8015M	
>C28-C35	**400**	129	mg/kg dry	5	P8L0407	12/03/18	12/04/18	TPH 8015M	
Surrogate: 1-Chlorooctane		*115 %*	*70-130*		*P8L0407*	*12/03/18*	*12/04/18*	*TPH 8015M*	
Surrogate: o-Terphenyl		*109 %*	*70-130*		*P8L0407*	*12/03/18*	*12/04/18*	*TPH 8015M*	
Total Petroleum Hydrocarbon C6-C35	**3230**	129	mg/kg dry	5	[CALC]	12/03/18	12/04/18	calc	
BTEX by 8021B									
Xylenes (total)	**5.58**	0.600	mg/kg	20	[CALC]	12/04/18	12/04/18	EPA 8021B	
Total BTEX	**9.90**	0.920	mg/kg	20	[CALC]	12/04/18	12/04/18	EPA 8021B	

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Midland TX, 79710	Project Manager: Mark Larson	

DP-9 (2'-3')

8L01001-11 (Soil)

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Permian Basin Environmental Lab, L.P.									
General Chemistry Parameters by EPA / Standard Methods									
% Moisture	**3.0**	0.1	%	1	P8L0410	12/04/18	12/04/18	ASTM D2216	
Total Petroleum Hydrocarbons C6-C35 by EPA Method 8015M									
C6-C12	**66.7**	25.8	mg/kg dry	1	P8L0407	12/03/18	12/04/18	TPH 8015M	
>C12-C28	**545**	25.8	mg/kg dry	1	P8L0407	12/03/18	12/04/18	TPH 8015M	
>C28-C35	**96.9**	25.8	mg/kg dry	1	P8L0407	12/03/18	12/04/18	TPH 8015M	
Surrogate: 1-Chlorooctane		*105 %*	*70-130*		*P8L0407*	*12/03/18*	*12/04/18*	*TPH 8015M*	
Surrogate: o-Terphenyl		*111 %*	*70-130*		*P8L0407*	*12/03/18*	*12/04/18*	*TPH 8015M*	
Total Petroleum Hydrocarbon C6-C35	**709**	25.8	mg/kg dry	1	[CALC]	12/03/18	12/04/18	calc	

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Project: Lea Unit #8D (Legacy)
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Project Manager: Mark Larson

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DP-10 (0'-1')

8L01001-17 (Soil)

Permian Basin Environmental Lab, L.P.

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Organics by GC									
Benzene	ND	0.0202	mg/kg dry	20	P8L0403	12/04/18	12/04/18	EPA 8021B	
Toluene	ND	0.202	mg/kg dry	20	P8L0403	12/04/18	12/04/18	EPA 8021B	
Ethylbenzene	ND	0.101	mg/kg dry	20	P8L0403	12/04/18	12/04/18	EPA 8021B	
Xylene (p/m)	ND	0.404	mg/kg dry	20	P8L0403	12/04/18	12/04/18	EPA 8021B	
Xylene (o)	ND	0.202	mg/kg dry	20	P8L0403	12/04/18	12/04/18	EPA 8021B	
Surrogate: 4-Bromofluorobenzene		*99.0 %*	*75-125*		*P8L0403*	*12/04/18*	*12/04/18*	*EPA 8021B*	
Surrogate: 1,4-Difluorobenzene		*98.5 %*	*75-125*		*P8L0403*	*12/04/18*	*12/04/18*	*EPA 8021B*	
General Chemistry Parameters by EPA / Standard Methods									
Chloride	**5.10**	1.01	mg/kg dry	1	P8L0707	12/07/18	12/08/18	EPA 300.0	
% Moisture	**1.0**	0.1	%	1	P8L0410	12/04/18	12/04/18	ASTM D2216	
Total Petroleum Hydrocarbons C6-C35 by EPA Method 8015M									
C6-C12	ND	25.3	mg/kg dry	1	P8L0407	12/03/18	12/04/18	TPH 8015M	
>C12-C28	ND	25.3	mg/kg dry	1	P8L0407	12/03/18	12/04/18	TPH 8015M	
>C28-C35	ND	25.3	mg/kg dry	1	P8L0407	12/03/18	12/04/18	TPH 8015M	
Surrogate: 1-Chlorooctane		*98.0 %*	*70-130*		*P8L0407*	*12/03/18*	*12/04/18*	*TPH 8015M*	
Surrogate: o-Terphenyl		*110 %*	*70-130*		*P8L0407*	*12/03/18*	*12/04/18*	*TPH 8015M*	
Total Petroleum Hydrocarbon C6-C35	ND	25.3	mg/kg dry	1	[CALC]	12/03/18	12/04/18	calc	
BTEX by 8021B									
Xylenes (total)	ND	0.600	mg/kg	20	[CALC]	12/04/18	12/04/18	EPA 8021B	
Total BTEX	ND	0.920	mg/kg	20	[CALC]	12/04/18	12/04/18	EPA 8021B	

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Midland TX, 79710	Project Manager: Mark Larson	

DP-10 (1'-2')

8L01001-18 (Soil)

Permian Basin Environmental Lab, L.P.

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Organics by GC									
Benzene	ND	0.0204	mg/kg dry	20	P8L0403	12/04/18	12/04/18	EPA 8021B	
Toluene	ND	0.204	mg/kg dry	20	P8L0403	12/04/18	12/04/18	EPA 8021B	
Ethylbenzene	ND	0.102	mg/kg dry	20	P8L0403	12/04/18	12/04/18	EPA 8021B	
Xylene (p/m)	ND	0.408	mg/kg dry	20	P8L0403	12/04/18	12/04/18	EPA 8021B	
Xylene (o)	ND	0.204	mg/kg dry	20	P8L0403	12/04/18	12/04/18	EPA 8021B	
Surrogate: 4-Bromofluorobenzene		*100 %*	*75-125*		*P8L0403*	*12/04/18*	*12/04/18*	*EPA 8021B*	
Surrogate: 1,4-Difluorobenzene		*92.1 %*	*75-125*		*P8L0403*	*12/04/18*	*12/04/18*	*EPA 8021B*	
General Chemistry Parameters by EPA / Standard Methods									
Chloride	ND	1.02	mg/kg dry	1	P8L0707	12/07/18	12/08/18	EPA 300.0	
% Moisture	**2.0**	0.1	%	1	P8L0410	12/04/18	12/04/18	ASTM D2216	
Total Petroleum Hydrocarbons C6-C35 by EPA Method 8015M									
C6-C12	ND	25.5	mg/kg dry	1	P8L0407	12/03/18	12/04/18	TPH 8015M	
>C12-C28	ND	25.5	mg/kg dry	1	P8L0407	12/03/18	12/04/18	TPH 8015M	
>C28-C35	ND	25.5	mg/kg dry	1	P8L0407	12/03/18	12/04/18	TPH 8015M	
Surrogate: 1-Chlorooctane		*98.5 %*	*70-130*		*P8L0407*	*12/03/18*	*12/04/18*	*TPH 8015M*	
Surrogate: o-Terphenyl		*105 %*	*70-130*		*P8L0407*	*12/03/18*	*12/04/18*	*TPH 8015M*	
Total Petroleum Hydrocarbon C6-C35	ND	25.5	mg/kg dry	1	[CALC]	12/03/18	12/04/18	calc	
BTEX by 8021B									
Total BTEX	ND	0.920	mg/kg	20	[CALC]	12/04/18	12/04/18	EPA 8021B	
Xylenes (total)	ND	0.600	mg/kg	20	[CALC]	12/04/18	12/04/18	EPA 8021B	

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Project: Lea Unit #8D (Legacy)
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Project Manager: Mark Larson

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DP-12 (0'-1')

8L01001-22 (Soil)

Permian Basin Environmental Lab, L.P.

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Organics by GC									
Benzene	**0.529**	0.235	mg/kg dry	200	P8L0403	12/04/18	12/04/18	EPA 8021B	
Toluene	**25.6**	2.35	mg/kg dry	200	P8L0403	12/04/18	12/04/18	EPA 8021B	
Ethylbenzene	**33.0**	1.18	mg/kg dry	200	P8L0403	12/04/18	12/04/18	EPA 8021B	
Xylene (p/m)	**52.6**	4.71	mg/kg dry	200	P8L0403	12/04/18	12/04/18	EPA 8021B	
Xylene (o)	**33.6**	2.35	mg/kg dry	200	P8L0403	12/04/18	12/04/18	EPA 8021B	
Surrogate: 4-Bromofluorobenzene		*69.4 %*	*75-125*		*P8L0403*	*12/04/18*	*12/04/18*	*EPA 8021B*	*S-GC*
Surrogate: 1,4-Difluorobenzene		*88.8 %*	*75-125*		*P8L0403*	*12/04/18*	*12/04/18*	*EPA 8021B*	
General Chemistry Parameters by EPA / Standard Methods									
Chloride	**7.99**	1.18	mg/kg dry	1	P8L0707	12/07/18	12/08/18	EPA 300.0	
% Moisture	**15.0**	0.1	%	1	P8L0410	12/04/18	12/04/18	ASTM D2216	
Total Petroleum Hydrocarbons C6-C35 by EPA Method 8015M									
C6-C12	**5330**	294	mg/kg dry	10	P8L0407	12/03/18	12/04/18	TPH 8015M	
>C12-C28	**27100**	294	mg/kg dry	10	P8L0407	12/03/18	12/04/18	TPH 8015M	
>C28-C35	**4300**	294	mg/kg dry	10	P8L0407	12/03/18	12/04/18	TPH 8015M	
Surrogate: 1-Chlorooctane		*96.1 %*	*70-130*		*P8L0407*	*12/03/18*	*12/04/18*	*TPH 8015M*	
Surrogate: o-Terphenyl		*81.4 %*	*70-130*		*P8L0407*	*12/03/18*	*12/04/18*	*TPH 8015M*	
Total Petroleum Hydrocarbon C6-C35	**36700**	294	mg/kg dry	10	[CALC]	12/03/18	12/04/18	calc	
BTEX by 8021B									
Xylenes (total)	**73.2**	6.00	mg/kg	200	[CALC]	12/04/18	12/04/18	EPA 8021B	
Total BTEX	**123**	9.20	mg/kg	200	[CALC]	12/04/18	12/04/18	EPA 8021B	

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Midland TX, 79710	Project Manager: Mark Larson	

DP-12 (1'-2')

8L01001-23 (Soil)

Permian Basin Environmental Lab, L.P.

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Organics by GC									
Benzene	**0.453**	0.202	mg/kg dry	200	P8L0403	12/04/18	12/04/18	EPA 8021B	
Toluene	**32.6**	2.02	mg/kg dry	200	P8L0403	12/04/18	12/04/18	EPA 8021B	
Ethylbenzene	**35.6**	1.01	mg/kg dry	200	P8L0403	12/04/18	12/04/18	EPA 8021B	
Xylene (p/m)	**57.9**	4.04	mg/kg dry	200	P8L0403	12/04/18	12/04/18	EPA 8021B	
Xylene (o)	**35.7**	2.02	mg/kg dry	200	P8L0403	12/04/18	12/04/18	EPA 8021B	
Surrogate: 4-Bromofluorobenzene		*70.7 %*	*75-125*		*P8L0403*	*12/04/18*	*12/04/18*	*EPA 8021B*	*S-GC*
Surrogate: 1,4-Difluorobenzene		*93.4 %*	*75-125*		*P8L0403*	*12/04/18*	*12/04/18*	*EPA 8021B*	
General Chemistry Parameters by EPA / Standard Methods									
Chloride	ND	1.01	mg/kg dry	1	P8L0707	12/07/18	12/08/18	EPA 300.0	
% Moisture	**1.0**	0.1	%	1	P8L0410	12/04/18	12/04/18	ASTM D2216	
Total Petroleum Hydrocarbons C6-C35 by EPA Method 8015M									
C6-C12	**3750**	253	mg/kg dry	10	P8L0407	12/03/18	12/04/18	TPH 8015M	
>C12-C28	**11200**	253	mg/kg dry	10	P8L0407	12/03/18	12/04/18	TPH 8015M	
>C28-C35	**1920**	253	mg/kg dry	10	P8L0407	12/03/18	12/04/18	TPH 8015M	
Surrogate: 1-Chlorooctane		*94.7 %*	*70-130*		*P8L0407*	*12/03/18*	*12/04/18*	*TPH 8015M*	
Surrogate: o-Terphenyl		*92.0 %*	*70-130*		*P8L0407*	*12/03/18*	*12/04/18*	*TPH 8015M*	
Total Petroleum Hydrocarbon C6-C35	**16800**	253	mg/kg dry	10	[CALC]	12/03/18	12/04/18	calc	
BTEX by 8021B									
Total BTEX	**161**	9.20	mg/kg	200	[CALC]	12/04/18	12/04/18	EPA 8021B	
Xylenes (total)	**92.6**	6.00	mg/kg	200	[CALC]	12/04/18	12/04/18	EPA 8021B	

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Project: Lea Unit #8D (Legacy)
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DP-12 (2'-3')

8L01001-24 (Soil)

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Permian Basin Environmental Lab, L.P.									
Organics by GC									
Benzene	**0.282**	0.222	mg/kg dry	200	P8L0403	12/04/18	12/04/18	EPA 8021B	
Toluene	**31.1**	2.22	mg/kg dry	200	P8L0403	12/04/18	12/04/18	EPA 8021B	
Ethylbenzene	**34.3**	1.11	mg/kg dry	200	P8L0403	12/04/18	12/04/18	EPA 8021B	
Xylene (p/m)	**55.0**	4.44	mg/kg dry	200	P8L0403	12/04/18	12/04/18	EPA 8021B	
Xylene (o)	**34.0**	2.22	mg/kg dry	200	P8L0403	12/04/18	12/04/18	EPA 8021B	
Surrogate: 4-Bromofluorobenzene		*66.6 %*	*75-125*		*P8L0403*	*12/04/18*	*12/04/18*	*EPA 8021B*	*S-GC*
Surrogate: 1,4-Difluorobenzene		*84.2 %*	*75-125*		*P8L0403*	*12/04/18*	*12/04/18*	*EPA 8021B*	
General Chemistry Parameters by EPA / Standard Methods									
% Moisture	**10.0**	0.1	%	1	P8L0410	12/04/18	12/04/18	ASTM D2216	
Total Petroleum Hydrocarbons C6-C35 by EPA Method 8015M									
C6-C12	**3720**	278	mg/kg dry	10	P8L0407	12/03/18	12/04/18	TPH 8015M	
>C12-C28	**11600**	278	mg/kg dry	10	P8L0407	12/03/18	12/04/18	TPH 8015M	
>C28-C35	**1950**	278	mg/kg dry	10	P8L0407	12/03/18	12/04/18	TPH 8015M	
Surrogate: 1-Chlorooctane		*110 %*	*70-130*		*P8L0407*	*12/03/18*	*12/04/18*	*TPH 8015M*	
Surrogate: o-Terphenyl		*94.0 %*	*70-130*		*P8L0407*	*12/03/18*	*12/04/18*	*TPH 8015M*	
Total Petroleum Hydrocarbon C6-C35	**17200**	278	mg/kg dry	10	[CALC]	12/03/18	12/04/18	calc	
BTEX by 8021B									
Total BTEX	**139**	9.20	mg/kg	200	[CALC]	12/04/18	12/04/18	EPA 8021B	
Xylenes (total)	**80.1**	6.00	mg/kg	200	[CALC]	12/04/18	12/04/18	EPA 8021B	

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Project: Lea Unit #8D (Legacy)
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Project Manager: Mark Larson

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DP-12 (3'-4')

8L01001-25 (Soil)

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Permian Basin Environmental Lab, L.P.									
Organics by GC									
Benzene	**8.27**	0.266	mg/kg dry	250	P8L0403	12/04/18	12/04/18	EPA 8021B	
Toluene	**73.3**	2.66	mg/kg dry	250	P8L0403	12/04/18	12/04/18	EPA 8021B	
Ethylbenzene	**62.6**	1.33	mg/kg dry	250	P8L0403	12/04/18	12/04/18	EPA 8021B	
Xylene (p/m)	**87.7**	5.32	mg/kg dry	250	P8L0403	12/04/18	12/04/18	EPA 8021B	
Xylene (o)	**54.9**	2.66	mg/kg dry	250	P8L0403	12/04/18	12/04/18	EPA 8021B	
Surrogate: 4-Bromofluorobenzene		*63.4 %*	*75-125*		*P8L0403*	*12/04/18*	*12/04/18*	*EPA 8021B*	*S-GC*
Surrogate: 1,4-Difluorobenzene		*80.8 %*	*75-125*		*P8L0403*	*12/04/18*	*12/04/18*	*EPA 8021B*	
General Chemistry Parameters by EPA / Standard Methods									
% Moisture	**6.0**	0.1	%	1	P8L0410	12/04/18	12/04/18	ASTM D2216	
Total Petroleum Hydrocarbons C6-C35 by EPA Method 8015M									
C6-C12	**5630**	266	mg/kg dry	10	P8L0407	12/03/18	12/04/18	TPH 8015M	
>C12-C28	**13700**	266	mg/kg dry	10	P8L0407	12/03/18	12/04/18	TPH 8015M	
>C28-C35	**2190**	266	mg/kg dry	10	P8L0407	12/03/18	12/04/18	TPH 8015M	
Surrogate: 1-Chlorooctane		*107 %*	*70-130*		*P8L0407*	*12/03/18*	*12/04/18*	*TPH 8015M*	
Surrogate: o-Terphenyl		*85.6 %*	*70-130*		*P8L0407*	*12/03/18*	*12/04/18*	*TPH 8015M*	
Total Petroleum Hydrocarbon C6-C35	**21500**	266	mg/kg dry	10	[CALC]	12/03/18	12/04/18	calc	
BTEX by 8021B									
Total BTEX	**269**	11.5	mg/kg	250	[CALC]	12/04/18	12/04/18	EPA 8021B	
Xylenes (total)	**134**	7.50	mg/kg	250	[CALC]	12/04/18	12/04/18	EPA 8021B	

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Project: Lea Unit #8D (Legacy)
Project Number: 18-0138-03
Project Manager: Mark Larson

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DP-12 (4'-6')

8L01001-26 (Soil)

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Permian Basin Environmental Lab, L.P.									
Organics by GC									
Benzene	**3.47**	0.222	mg/kg dry	200	P8L0403	12/04/18	12/04/18	EPA 8021B	
Toluene	**46.1**	2.22	mg/kg dry	200	P8L0403	12/04/18	12/04/18	EPA 8021B	
Ethylbenzene	**38.0**	1.11	mg/kg dry	200	P8L0403	12/04/18	12/04/18	EPA 8021B	
Xylene (p/m)	**59.4**	4.44	mg/kg dry	200	P8L0403	12/04/18	12/04/18	EPA 8021B	
Xylene (o)	**34.3**	2.22	mg/kg dry	200	P8L0403	12/04/18	12/04/18	EPA 8021B	
Surrogate: 1,4-Difluorobenzene		*97.3 %*	*75-125*		*P8L0403*	*12/04/18*	*12/04/18*	*EPA 8021B*	
Surrogate: 4-Bromofluorobenzene		*71.4 %*	*75-125*		*P8L0403*	*12/04/18*	*12/04/18*	*EPA 8021B*	*S-GC*
General Chemistry Parameters by EPA / Standard Methods									
% Moisture	**10.0**	0.1	%	1	P8L0410	12/04/18	12/04/18	ASTM D2216	
Total Petroleum Hydrocarbons C6-C35 by EPA Method 8015M									
C6-C12	**3300**	139	mg/kg dry	5	P8L0407	12/03/18	12/04/18	TPH 8015M	
>C12-C28	**8380**	139	mg/kg dry	5	P8L0407	12/03/18	12/04/18	TPH 8015M	
>C28-C35	**1430**	139	mg/kg dry	5	P8L0407	12/03/18	12/04/18	TPH 8015M	
Surrogate: 1-Chlorooctane		*123 %*	*70-130*		*P8L0407*	*12/03/18*	*12/04/18*	*TPH 8015M*	
Surrogate: o-Terphenyl		*90.3 %*	*70-130*		*P8L0407*	*12/03/18*	*12/04/18*	*TPH 8015M*	
Total Petroleum Hydrocarbon C6-C35	**13100**	139	mg/kg dry	5	[CALC]	12/03/18	12/04/18	calc	
BTEX by 8021B									
Total BTEX	**163**	9.20	mg/kg	200	[CALC]	12/04/18	12/04/18	EPA 8021B	
Xylenes (total)	**84.3**	6.00	mg/kg	200	[CALC]	12/04/18	12/04/18	EPA 8021B	

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Project: Lea Unit #8D (Legacy)
Project Number: 18-0138-03
Project Manager: Mark Larson

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DP-12 (6'-8')

8L01001-27 (Soil)

Permian Basin Environmental Lab, L.P.

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Organics by GC									
Benzene	ND	0.0549	mg/kg dry	50	P8L0403	12/04/18	12/04/18	EPA 8021B	
Toluene	ND	0.549	mg/kg dry	50	P8L0403	12/04/18	12/04/18	EPA 8021B	
Ethylbenzene	ND	0.275	mg/kg dry	50	P8L0403	12/04/18	12/04/18	EPA 8021B	
Xylene (p/m)	ND	1.10	mg/kg dry	50	P8L0403	12/04/18	12/04/18	EPA 8021B	
Xylene (o)	ND	0.549	mg/kg dry	50	P8L0403	12/04/18	12/04/18	EPA 8021B	
Surrogate: 1,4-Difluorobenzene		*93.6 %*	*75-125*		*P8L0403*	*12/04/18*	*12/04/18*	*EPA 8021B*	
Surrogate: 4-Bromofluorobenzene		*97.9 %*	*75-125*		*P8L0403*	*12/04/18*	*12/04/18*	*EPA 8021B*	
General Chemistry Parameters by EPA / Standard Methods									
% Moisture	**9.0**	0.1	%	1	P8L0410	12/04/18	12/04/18	ASTM D2216	
Total Petroleum Hydrocarbons C6-C35 by EPA Method 8015M									
C6-C12	ND	27.5	mg/kg dry	1	P8L0407	12/03/18	12/04/18	TPH 8015M	
>C12-C28	**124**	27.5	mg/kg dry	1	P8L0407	12/03/18	12/04/18	TPH 8015M	
>C28-C35	**37.9**	27.5	mg/kg dry	1	P8L0407	12/03/18	12/04/18	TPH 8015M	
Surrogate: 1-Chlorooctane		*116 %*	*70-130*		*P8L0407*	*12/03/18*	*12/04/18*	*TPH 8015M*	
Surrogate: o-Terphenyl		*128 %*	*70-130*		*P8L0407*	*12/03/18*	*12/04/18*	*TPH 8015M*	
Total Petroleum Hydrocarbon C6-C35	**162**	27.5	mg/kg dry	1	[CALC]	12/03/18	12/04/18	calc	
BTEX by 8021B									
Total BTEX	ND	2.30	mg/kg	50	[CALC]	12/04/18	12/04/18	EPA 8021B	
Xylenes (total)	ND	1.50	mg/kg	50	[CALC]	12/04/18	12/04/18	EPA 8021B	

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Project: Lea Unit #8D (Legacy)
Project Number: 18-0138-03
Project Manager: Mark Larson

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DP-7 (0'-1')

8L01001-30 (Soil)

Permian Basin Environmental Lab, L.P.

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Organics by GC									
Benzene	**46.6**	0.526	mg/kg dry	500	P8L0403	12/04/18	12/04/18	EPA 8021B	
Toluene	**188**	5.26	mg/kg dry	500	P8L0403	12/04/18	12/04/18	EPA 8021B	
Ethylbenzene	**140**	2.63	mg/kg dry	500	P8L0403	12/04/18	12/04/18	EPA 8021B	
Xylene (p/m)	**195**	10.5	mg/kg dry	500	P8L0403	12/04/18	12/04/18	EPA 8021B	
Xylene (o)	**119**	5.26	mg/kg dry	500	P8L0403	12/04/18	12/04/18	EPA 8021B	
Surrogate: 4-Bromofluorobenzene		*72.9 %*	*75-125*		*P8L0403*	*12/04/18*	*12/04/18*	*EPA 8021B*	*S-GC*
Surrogate: 1,4-Difluorobenzene		*92.1 %*	*75-125*		*P8L0403*	*12/04/18*	*12/04/18*	*EPA 8021B*	
General Chemistry Parameters by EPA / Standard Methods									
Chloride	**1290**	5.26	mg/kg dry	5	P8L0709	12/07/18	12/08/18	EPA 300.0	
% Moisture	**5.0**	0.1	%	1	P8L0410	12/04/18	12/04/18	ASTM D2216	
Total Petroleum Hydrocarbons C6-C35 by EPA Method 8015M									
C6-C12	**13900**	263	mg/kg dry	10	P8L0407	12/03/18	12/04/18	TPH 8015M	
>C12-C28	**38300**	263	mg/kg dry	10	P8L0407	12/03/18	12/04/18	TPH 8015M	
>C28-C35	**5970**	263	mg/kg dry	10	P8L0407	12/03/18	12/04/18	TPH 8015M	
Surrogate: 1-Chlorooctane		*110 %*	*70-130*		*P8L0407*	*12/03/18*	*12/04/18*	*TPH 8015M*	
Surrogate: o-Terphenyl		*75.0 %*	*70-130*		*P8L0407*	*12/03/18*	*12/04/18*	*TPH 8015M*	
Total Petroleum Hydrocarbon C6-C35	**58200**	263	mg/kg dry	10	[CALC]	12/03/18	12/04/18	calc	
BTEX by 8021B									
Total BTEX	**654**	23.0	mg/kg	500	[CALC]	12/04/18	12/04/18	EPA 8021B	
Xylenes (total)	**299**	15.0	mg/kg	500	[CALC]	12/04/18	12/04/18	EPA 8021B	

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Project: Lea Unit #8D (Legacy)
Project Number: 18-0138-03
Project Manager: Mark Larson

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DP-7 (1'-2')

8L01001-31 (Soil)

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Permian Basin Environmental Lab, L.P.									
Organics by GC									
Benzene	**0.0248**	0.0241	mg/kg dry	20	P8L0403	12/04/18	12/04/18	EPA 8021B	
Toluene	ND	0.241	mg/kg dry	20	P8L0403	12/04/18	12/04/18	EPA 8021B	
Ethylbenzene	ND	0.120	mg/kg dry	20	P8L0403	12/04/18	12/04/18	EPA 8021B	
Xylene (p/m)	ND	0.482	mg/kg dry	20	P8L0403	12/04/18	12/04/18	EPA 8021B	
Xylene (o)	ND	0.241	mg/kg dry	20	P8L0403	12/04/18	12/04/18	EPA 8021B	
Surrogate: 1,4-Difluorobenzene		*87.2 %*	*75-125*		*P8L0403*	*12/04/18*	*12/04/18*	*EPA 8021B*	
Surrogate: 4-Bromofluorobenzene		*90.3 %*	*75-125*		*P8L0403*	*12/04/18*	*12/04/18*	*EPA 8021B*	
General Chemistry Parameters by EPA / Standard Methods									
Chloride	**171**	1.20	mg/kg dry	1	P8L0709	12/07/18	12/08/18	EPA 300.0	
% Moisture	**17.0**	0.1	%	1	P8L0410	12/04/18	12/04/18	ASTM D2216	
Total Petroleum Hydrocarbons C6-C35 by EPA Method 8015M									
C6-C12	ND	30.1	mg/kg dry	1	P8L0405	12/03/18	12/04/18	TPH 8015M	
>C12-C28	**88.3**	30.1	mg/kg dry	1	P8L0405	12/03/18	12/04/18	TPH 8015M	
>C28-C35	ND	30.1	mg/kg dry	1	P8L0405	12/03/18	12/04/18	TPH 8015M	
Surrogate: 1-Chlorooctane		*100 %*	*70-130*		*P8L0405*	*12/03/18*	*12/04/18*	*TPH 8015M*	
Surrogate: o-Terphenyl		*117 %*	*70-130*		*P8L0405*	*12/03/18*	*12/04/18*	*TPH 8015M*	
Total Petroleum Hydrocarbon C6-C35	**88.3**	30.1	mg/kg dry	1	[CALC]	12/03/18	12/04/18	calc	
BTEX by 8021B									
Xylenes (total)	ND	0.600	mg/kg	20	[CALC]	12/04/18	12/04/18	EPA 8021B	
Total BTEX	ND	0.920	mg/kg	20	[CALC]	12/04/18	12/04/18	EPA 8021B	

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Project: Lea Unit #8D (Legacy)
Project Number: 18-0138-03
Project Manager: Mark Larson

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DP-4 (0'-1')

8L01001-38 (Soil)

Permian Basin Environmental Lab, L.P.

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Organics by GC									
Benzene	**0.835**	0.284	mg/kg dry	250	P8L0403	12/04/18	12/04/18	EPA 8021B	
Toluene	**5.28**	2.84	mg/kg dry	250	P8L0403	12/04/18	12/04/18	EPA 8021B	
Ethylbenzene	**4.00**	1.42	mg/kg dry	250	P8L0403	12/04/18	12/04/18	EPA 8021B	
Xylene (p/m)	**22.5**	5.68	mg/kg dry	250	P8L0403	12/04/18	12/04/18	EPA 8021B	
Xylene (o)	**18.2**	2.84	mg/kg dry	250	P8L0403	12/04/18	12/04/18	EPA 8021B	
Surrogate: 1,4-Difluorobenzene		*82.0 %*	*75-125*		*P8L0403*	*12/04/18*	*12/04/18*	*EPA 8021B*	
Surrogate: 4-Bromofluorobenzene		*66.4 %*	*75-125*		*P8L0403*	*12/04/18*	*12/04/18*	*EPA 8021B*	*S-GC*
General Chemistry Parameters by EPA / Standard Methods									
Chloride	**333**	1.14	mg/kg dry	1	P8L0709	12/07/18	12/08/18	EPA 300.0	
% Moisture	**12.0**	0.1	%	1	P8L0410	12/04/18	12/04/18	ASTM D2216	
Total Petroleum Hydrocarbons C6-C35 by EPA Method 8015M									
C6-C12	**4030**	142	mg/kg dry	5	P8L0405	12/03/18	12/04/18	TPH 8015M	
>C12-C28	**15900**	142	mg/kg dry	5	P8L0405	12/03/18	12/04/18	TPH 8015M	
>C28-C35	**2310**	142	mg/kg dry	5	P8L0405	12/03/18	12/04/18	TPH 8015M	
Surrogate: 1-Chlorooctane		*99.6 %*	*70-130*		*P8L0405*	*12/03/18*	*12/04/18*	*TPH 8015M*	
Surrogate: o-Terphenyl		*89.1 %*	*70-130*		*P8L0405*	*12/03/18*	*12/04/18*	*TPH 8015M*	
Total Petroleum Hydrocarbon C6-C35	**22200**	142	mg/kg dry	5	[CALC]	12/03/18	12/04/18	calc	
BTEX by 8021B									
Xylenes (total)	**35.8**	7.50	mg/kg	250	[CALC]	12/04/18	12/04/18	EPA 8021B	
Total BTEX	**44.7**	11.5	mg/kg	250	[CALC]	12/04/18	12/04/18	EPA 8021B	

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Project: Lea Unit #8D (Legacy)
Project Number: 18-0138-03
Project Manager: Mark Larson

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DP-4 (1'-2')

8L01001-39 (Soil)

Permian Basin Environmental Lab, L.P.

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Organics by GC									
Benzene	ND	0.0204	mg/kg dry	20	P8L0403	12/04/18	12/04/18	EPA 8021B	
Toluene	ND	0.204	mg/kg dry	20	P8L0403	12/04/18	12/04/18	EPA 8021B	
Ethylbenzene	ND	0.102	mg/kg dry	20	P8L0403	12/04/18	12/04/18	EPA 8021B	
Xylene (p/m)	ND	0.408	mg/kg dry	20	P8L0403	12/04/18	12/04/18	EPA 8021B	
Xylene (o)	ND	0.204	mg/kg dry	20	P8L0403	12/04/18	12/04/18	EPA 8021B	
Surrogate: 1,4-Difluorobenzene		*90.4 %*	*75-125*		*P8L0403*	*12/04/18*	*12/04/18*	*EPA 8021B*	
Surrogate: 4-Bromofluorobenzene		*102 %*	*75-125*		*P8L0403*	*12/04/18*	*12/04/18*	*EPA 8021B*	
General Chemistry Parameters by EPA / Standard Methods									
Chloride	**4.39**	1.02	mg/kg dry	1	P8L0709	12/07/18	12/08/18	EPA 300.0	
% Moisture	**2.0**	0.1	%	1	P8L0410	12/04/18	12/04/18	ASTM D2216	
Total Petroleum Hydrocarbons C6-C35 by EPA Method 8015M									
C6-C12	ND	25.5	mg/kg dry	1	P8L0405	12/03/18	12/04/18	TPH 8015M	
>C12-C28	**207**	25.5	mg/kg dry	1	P8L0405	12/03/18	12/04/18	TPH 8015M	
>C28-C35	**54.1**	25.5	mg/kg dry	1	P8L0405	12/03/18	12/04/18	TPH 8015M	
Surrogate: 1-Chlorooctane		*103 %*	*70-130*		*P8L0405*	*12/03/18*	*12/04/18*	*TPH 8015M*	
Surrogate: o-Terphenyl		*120 %*	*70-130*		*P8L0405*	*12/03/18*	*12/04/18*	*TPH 8015M*	
Total Petroleum Hydrocarbon C6-C35	**262**	25.5	mg/kg dry	1	[CALC]	12/03/18	12/04/18	calc	
BTEX by 8021B									
Xylenes (total)	ND	0.600	mg/kg	20	[CALC]	12/04/18	12/04/18	EPA 8021B	
Total BTEX	ND	0.920	mg/kg	20	[CALC]	12/04/18	12/04/18	EPA 8021B	

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Project: Lea Unit #8D (Legacy)
Project Number: 18-0138-03
Project Manager: Mark Larson

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DP-2 (0'-1')

8L01001-46 (Soil)

Permian Basin Environmental Lab, L.P.

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Organics by GC									
Benzene	**0.504**	0.213	mg/kg dry	200	P8L0403	12/04/18	12/04/18	EPA 8021B	
Toluene	**19.6**	2.13	mg/kg dry	200	P8L0403	12/04/18	12/04/18	EPA 8021B	
Ethylbenzene	**22.2**	1.06	mg/kg dry	200	P8L0403	12/04/18	12/04/18	EPA 8021B	
Xylene (p/m)	**41.1**	4.26	mg/kg dry	200	P8L0403	12/04/18	12/04/18	EPA 8021B	
Xylene (o)	**19.1**	2.13	mg/kg dry	200	P8L0403	12/04/18	12/04/18	EPA 8021B	
Surrogate: 4-Bromofluorobenzene		*68.1 %*	*75-125*		*P8L0403*	*12/04/18*	*12/04/18*	*EPA 8021B*	*S-GC*
Surrogate: 1,4-Difluorobenzene		*83.6 %*	*75-125*		*P8L0403*	*12/04/18*	*12/04/18*	*EPA 8021B*	
General Chemistry Parameters by EPA / Standard Methods									
Chloride	**3.03**	1.06	mg/kg dry	1	P8L0709	12/07/18	12/08/18	EPA 300.0	
% Moisture	**6.0**	0.1	%	1	P8L0410	12/04/18	12/04/18	ASTM D2216	
Total Petroleum Hydrocarbons C6-C35 by EPA Method 8015M									
C6-C12	**4110**	266	mg/kg dry	10	P8L0405	12/03/18	12/04/18	TPH 8015M	
>C12-C28	**14200**	266	mg/kg dry	10	P8L0405	12/03/18	12/04/18	TPH 8015M	
>C28-C35	**2390**	266	mg/kg dry	10	P8L0405	12/03/18	12/04/18	TPH 8015M	
Surrogate: 1-Chlorooctane		*109 %*	*70-130*		*P8L0405*	*12/03/18*	*12/04/18*	*TPH 8015M*	
Surrogate: o-Terphenyl		*112 %*	*70-130*		*P8L0405*	*12/03/18*	*12/04/18*	*TPH 8015M*	
Total Petroleum Hydrocarbon C6-C35	**20700**	266	mg/kg dry	10	[CALC]	12/03/18	12/04/18	calc	
BTEX by 8021B									
Xylenes (total)	**56.5**	6.00	mg/kg	200	[CALC]	12/04/18	12/04/18	EPA 8021B	
Total BTEX	**96.3**	9.20	mg/kg	200	[CALC]	12/04/18	12/04/18	EPA 8021B	

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Project: Lea Unit #8D (Legacy)
Project Number: 18-0138-03
Project Manager: Mark Larson

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DP-2 (1'-2')

8L01001-47 (Soil)

Permian Basin Environmental Lab, L.P.

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Organics by GC									
Benzene	**0.504**	0.208	mg/kg dry	200	P8L0403	12/04/18	12/04/18	EPA 8021B	
Toluene	**7.34**	2.08	mg/kg dry	200	P8L0403	12/04/18	12/04/18	EPA 8021B	
Ethylbenzene	**10.5**	1.04	mg/kg dry	200	P8L0403	12/04/18	12/04/18	EPA 8021B	
Xylene (p/m)	**46.3**	4.17	mg/kg dry	200	P8L0403	12/04/18	12/04/18	EPA 8021B	
Xylene (o)	**31.1**	2.08	mg/kg dry	200	P8L0403	12/04/18	12/04/18	EPA 8021B	
Surrogate: 1,4-Difluorobenzene		*81.0 %*	*75-125*		*P8L0403*	*12/04/18*	*12/04/18*	*EPA 8021B*	
Surrogate: 4-Bromofluorobenzene		*64.8 %*	*75-125*		*P8L0403*	*12/04/18*	*12/04/18*	*EPA 8021B*	*S-GC*
General Chemistry Parameters by EPA / Standard Methods									
Chloride	ND	1.04	mg/kg dry	1	P8L0709	12/07/18	12/08/18	EPA 300.0	
% Moisture	**4.0**	0.1	%	1	P8L0410	12/04/18	12/04/18	ASTM D2216	
Total Petroleum Hydrocarbons C6-C35 by EPA Method 8015M									
C6-C12	**4790**	260	mg/kg dry	10	P8L0405	12/03/18	12/04/18	TPH 8015M	
>C12-C28	**11800**	260	mg/kg dry	10	P8L0405	12/03/18	12/04/18	TPH 8015M	
>C28-C35	**2100**	260	mg/kg dry	10	P8L0405	12/03/18	12/04/18	TPH 8015M	
Surrogate: 1-Chlorooctane		*120 %*	*70-130*		*P8L0405*	*12/03/18*	*12/04/18*	*TPH 8015M*	
Surrogate: o-Terphenyl		*113 %*	*70-130*		*P8L0405*	*12/03/18*	*12/04/18*	*TPH 8015M*	
Total Petroleum Hydrocarbon C6-C35	**18700**	260	mg/kg dry	10	[CALC]	12/03/18	12/04/18	calc	
BTEX by 8021B									
Xylenes (total)	**74.4**	6.00	mg/kg	200	[CALC]	12/04/18	12/04/18	EPA 8021B	
Total BTEX	**92.0**	9.20	mg/kg	200	[CALC]	12/04/18	12/04/18	EPA 8021B	

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Project: Lea Unit #8D (Legacy)
Project Number: 18-0138-03
Project Manager: Mark Larson

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DP-2 (2'-3')

8L01001-48 (Soil)

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Permian Basin Environmental Lab, L.P.									
Organics by GC									
Benzene	**0.440**	0.247	mg/kg dry	200	P8L0411	12/04/18	12/05/18	EPA 8021B	
Toluene	**10.4**	2.47	mg/kg dry	200	P8L0411	12/04/18	12/05/18	EPA 8021B	
Ethylbenzene	**9.94**	1.23	mg/kg dry	200	P8L0411	12/04/18	12/05/18	EPA 8021B	
Xylene (p/m)	**63.2**	4.94	mg/kg dry	200	P8L0411	12/04/18	12/05/18	EPA 8021B	
Xylene (o)	**31.7**	2.47	mg/kg dry	200	P8L0411	12/04/18	12/05/18	EPA 8021B	
Surrogate: 1,4-Difluorobenzene		*88.5 %*	*75-125*		*P8L0411*	*12/04/18*	*12/05/18*	*EPA 8021B*	
Surrogate: 4-Bromofluorobenzene		*81.8 %*	*75-125*		*P8L0411*	*12/04/18*	*12/05/18*	*EPA 8021B*	
General Chemistry Parameters by EPA / Standard Methods									
% Moisture	**19.0**	0.1	%	1	P8L0410	12/04/18	12/04/18	ASTM D2216	
Total Petroleum Hydrocarbons C6-C35 by EPA Method 8015M									
C6-C12	**6030**	309	mg/kg dry	10	P8L0405	12/03/18	12/04/18	TPH 8015M	
>C12-C28	**13700**	309	mg/kg dry	10	P8L0405	12/03/18	12/04/18	TPH 8015M	
>C28-C35	**2460**	309	mg/kg dry	10	P8L0405	12/03/18	12/04/18	TPH 8015M	
Surrogate: 1-Chlorooctane		*106 %*	*70-130*		*P8L0405*	*12/03/18*	*12/04/18*	*TPH 8015M*	
Surrogate: o-Terphenyl		*97.6 %*	*70-130*		*P8L0405*	*12/03/18*	*12/04/18*	*TPH 8015M*	
Total Petroleum Hydrocarbon C6-C35	**22200**	309	mg/kg dry	10	[CALC]	12/03/18	12/04/18	calc	
BTEX by 8021B									
Xylenes (total)	**76.9**	6.00	mg/kg	200	[CALC]	12/04/18	12/05/18	EPA 8021B	
Total BTEX	**93.7**	9.20	mg/kg	200	[CALC]	12/04/18	12/05/18	EPA 8021B	

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Project: Lea Unit #8D (Legacy)
Project Number: 18-0138-03
Project Manager: Mark Larson

Fax: (432) 687-0456

DP-2 (3'-4')

8L01001-49 (Soil)

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Permian Basin Environmental Lab, L.P.									
Organics by GC									
Benzene	ND	0.0206	mg/kg dry	20	P8L0411	12/04/18	12/05/18	EPA 8021B	
Toluene	**0.210**	0.206	mg/kg dry	20	P8L0411	12/04/18	12/05/18	EPA 8021B	
Ethylbenzene	**0.156**	0.103	mg/kg dry	20	P8L0411	12/04/18	12/05/18	EPA 8021B	
Xylene (p/m)	**2.25**	0.412	mg/kg dry	20	P8L0411	12/04/18	12/05/18	EPA 8021B	
Xylene (o)	**1.21**	0.206	mg/kg dry	20	P8L0411	12/04/18	12/05/18	EPA 8021B	
Surrogate: 1,4-Difluorobenzene		*86.2 %*	*75-125*		*P8L0411*	*12/04/18*	*12/05/18*	*EPA 8021B*	
Surrogate: 4-Bromofluorobenzene		*70.3 %*	*75-125*		*P8L0411*	*12/04/18*	*12/05/18*	*EPA 8021B*	*S-GC*
General Chemistry Parameters by EPA / Standard Methods									
% Moisture	**3.0**	0.1	%	1	P8L0410	12/04/18	12/04/18	ASTM D2216	
Total Petroleum Hydrocarbons C6-C35 by EPA Method 8015M									
C6-C12	**645**	25.8	mg/kg dry	1	P8L0405	12/03/18	12/04/18	TPH 8015M	
>C12-C28	**2590**	25.8	mg/kg dry	1	P8L0405	12/03/18	12/04/18	TPH 8015M	
>C28-C35	**416**	25.8	mg/kg dry	1	P8L0405	12/03/18	12/04/18	TPH 8015M	
Surrogate: 1-Chlorooctane		*120 %*	*70-130*		*P8L0405*	*12/03/18*	*12/04/18*	*TPH 8015M*	
Surrogate: o-Terphenyl		*121 %*	*70-130*		*P8L0405*	*12/03/18*	*12/04/18*	*TPH 8015M*	
Total Petroleum Hydrocarbon C6-C35	**3650**	25.8	mg/kg dry	1	[CALC]	12/03/18	12/04/18	calc	
BTEX by 8021B									
Xylenes (total)	**3.36**	0.600	mg/kg	20	[CALC]	12/04/18	12/05/18	EPA 8021B	
Total BTEX	**3.71**	0.920	mg/kg	20	[CALC]	12/04/18	12/05/18	EPA 8021B	

Larson & Associates, Inc.	Project: Lea Unit #8D (Legacy)	Fax: (432) 687-0456
P.O. Box 50685	Project Number: 18-0138-03	
Midland TX, 79710	Project Manager: Mark Larson	

DP-2 (4'-6')

8L01001-50 (Soil)

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Permian Basin Environmental Lab, L.P.									
General Chemistry Parameters by EPA / Standard Methods									
% Moisture	**6.0**	0.1	%	1	P8L0410	12/04/18	12/04/18	ASTM D2216	
Total Petroleum Hydrocarbons C6-C35 by EPA Method 8015M									
C6-C12	ND	26.6	mg/kg dry	1	P8L0405	12/03/18	12/04/18	TPH 8015M	
>C12-C28	**132**	26.6	mg/kg dry	1	P8L0405	12/03/18	12/04/18	TPH 8015M	
>C28-C35	**29.7**	26.6	mg/kg dry	1	P8L0405	12/03/18	12/04/18	TPH 8015M	
Surrogate: 1-Chlorooctane		*110 %*	*70-130*		*P8L0405*	*12/03/18*	*12/04/18*	*TPH 8015M*	
Surrogate: o-Terphenyl		*131 %*	*70-130*		*P8L0405*	*12/03/18*	*12/04/18*	*TPH 8015M*	*S-GC*
Total Petroleum Hydrocarbon C6-C35	**162**	26.6	mg/kg dry	1	[CALC]	12/03/18	12/04/18	calc	

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Midland TX, 79710	Project Manager: Mark Larson	

DP-1 (0'-1')

8L01001-54 (Soil)

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Permian Basin Environmental Lab, L.P.									
Organics by GC									
Benzene	ND	0.0202	mg/kg dry	20	P8L0411	12/04/18	12/05/18	EPA 8021B	
Toluene	ND	0.202	mg/kg dry	20	P8L0411	12/04/18	12/05/18	EPA 8021B	
Ethylbenzene	ND	0.101	mg/kg dry	20	P8L0411	12/04/18	12/05/18	EPA 8021B	
Xylene (p/m)	ND	0.404	mg/kg dry	20	P8L0411	12/04/18	12/05/18	EPA 8021B	
Xylene (o)	ND	0.202	mg/kg dry	20	P8L0411	12/04/18	12/05/18	EPA 8021B	
Surrogate: 4-Bromofluorobenzene		*92.7 %*	*75-125*		*P8L0411*	*12/04/18*	*12/05/18*	*EPA 8021B*	
Surrogate: 1,4-Difluorobenzene		*83.3 %*	*75-125*		*P8L0411*	*12/04/18*	*12/05/18*	*EPA 8021B*	
General Chemistry Parameters by EPA / Standard Methods									
Chloride	**5.46**	1.01	mg/kg dry	1	P8L0709	12/07/18	12/08/18	EPA 300.0	
% Moisture	**1.0**	0.1	%	1	P8L0410	12/04/18	12/04/18	ASTM D2216	
Total Petroleum Hydrocarbons C6-C35 by EPA Method 8015M									
C6-C12	ND	25.3	mg/kg dry	1	P8L0507	12/04/18	12/04/18	TPH 8015M	
>C12-C28	ND	25.3	mg/kg dry	1	P8L0507	12/04/18	12/04/18	TPH 8015M	
>C28-C35	ND	25.3	mg/kg dry	1	P8L0507	12/04/18	12/04/18	TPH 8015M	
Surrogate: 1-Chlorooctane		*106 %*	*70-130*		*P8L0507*	*12/04/18*	*12/04/18*	*TPH 8015M*	
Surrogate: o-Terphenyl		*124 %*	*70-130*		*P8L0507*	*12/04/18*	*12/04/18*	*TPH 8015M*	
Total Petroleum Hydrocarbon C6-C35	ND	25.3	mg/kg dry	1	[CALC]	12/04/18	12/04/18	calc	
BTEX by 8021B									
Total BTEX	ND	0.920	mg/kg	20	[CALC]	12/04/18	12/05/18	EPA 8021B	
Xylenes (total)	ND	0.600	mg/kg	20	[CALC]	12/04/18	12/05/18	EPA 8021B	

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Project: Lea Unit #8D (Legacy)
Project Number: 18-0138-03
Project Manager: Mark Larson

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DP-1 (1'-2')

8L01001-55 (Soil)

Permian Basin Environmental Lab, L.P.

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Organics by GC									
Benzene	ND	0.0204	mg/kg dry	20	P8L0411	12/04/18	12/05/18	EPA 8021B	
Toluene	ND	0.204	mg/kg dry	20	P8L0411	12/04/18	12/05/18	EPA 8021B	
Ethylbenzene	ND	0.102	mg/kg dry	20	P8L0411	12/04/18	12/05/18	EPA 8021B	
Xylene (p/m)	ND	0.408	mg/kg dry	20	P8L0411	12/04/18	12/05/18	EPA 8021B	
Xylene (o)	ND	0.204	mg/kg dry	20	P8L0411	12/04/18	12/05/18	EPA 8021B	
Surrogate: 1,4-Difluorobenzene		*92.0 %*	*75-125*		*P8L0411*	*12/04/18*	*12/05/18*	*EPA 8021B*	
Surrogate: 4-Bromofluorobenzene		*102 %*	*75-125*		*P8L0411*	*12/04/18*	*12/05/18*	*EPA 8021B*	
General Chemistry Parameters by EPA / Standard Methods									
Chloride	**6.37**	1.02	mg/kg dry	1	P8L0709	12/07/18	12/08/18	EPA 300.0	
% Moisture	**2.0**	0.1	%	1	P8L0410	12/04/18	12/04/18	ASTM D2216	
Total Petroleum Hydrocarbons C6-C35 by EPA Method 8015M									
C6-C12	ND	25.5	mg/kg dry	1	P8L0507	12/04/18	12/04/18	TPH 8015M	
>C12-C28	ND	25.5	mg/kg dry	1	P8L0507	12/04/18	12/04/18	TPH 8015M	
>C28-C35	ND	25.5	mg/kg dry	1	P8L0507	12/04/18	12/04/18	TPH 8015M	
Surrogate: 1-Chlorooctane		*109 %*	*70-130*		*P8L0507*	*12/04/18*	*12/04/18*	*TPH 8015M*	
Surrogate: o-Terphenyl		*128 %*	*70-130*		*P8L0507*	*12/04/18*	*12/04/18*	*TPH 8015M*	
Total Petroleum Hydrocarbon C6-C35	ND	25.5	mg/kg dry	1	[CALC]	12/04/18	12/04/18	calc	
BTEX by 8021B									
Total BTEX	ND	0.920	mg/kg	20	[CALC]	12/04/18	12/05/18	EPA 8021B	
Xylenes (total)	ND	0.600	mg/kg	20	[CALC]	12/04/18	12/05/18	EPA 8021B	

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Project: Lea Unit #8D (Legacy)
Project Number: 18-0138-03
Project Manager: Mark Larson

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DP-3 (0'-1')

8L01001-62 (Soil)

Permian Basin Environmental Lab, L.P.

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Organics by GC									
Benzene	**0.524**	0.253	mg/kg dry	200	P8L0411	12/04/18	12/05/18	EPA 8021B	
Toluene	**29.6**	2.53	mg/kg dry	200	P8L0411	12/04/18	12/05/18	EPA 8021B	
Ethylbenzene	**29.3**	1.27	mg/kg dry	200	P8L0411	12/04/18	12/05/18	EPA 8021B	
Xylene (p/m)	**49.3**	5.06	mg/kg dry	200	P8L0411	12/04/18	12/05/18	EPA 8021B	
Xylene (o)	**20.5**	2.53	mg/kg dry	200	P8L0411	12/04/18	12/05/18	EPA 8021B	
Surrogate: 1,4-Difluorobenzene		*109 %*	*75-125*		*P8L0411*	*12/04/18*	*12/05/18*	*EPA 8021B*	
Surrogate: 4-Bromofluorobenzene		*101 %*	*75-125*		*P8L0411*	*12/04/18*	*12/05/18*	*EPA 8021B*	
General Chemistry Parameters by EPA / Standard Methods									
Chloride	**12.3**	1.27	mg/kg dry	1	P8L0709	12/07/18	12/08/18	EPA 300.0	
% Moisture	**21.0**	0.1	%	1	P8L0410	12/04/18	12/04/18	ASTM D2216	
Total Petroleum Hydrocarbons C6-C35 by EPA Method 8015M									
C6-C12	**431**	158	mg/kg dry	5	P8L0507	12/04/18	12/04/18	TPH 8015M	
>C12-C28	**1380**	158	mg/kg dry	5	P8L0507	12/04/18	12/04/18	TPH 8015M	
>C28-C35	**184**	158	mg/kg dry	5	P8L0507	12/04/18	12/04/18	TPH 8015M	
Surrogate: 1-Chlorooctane		*107 %*	*70-130*		*P8L0507*	*12/04/18*	*12/04/18*	*TPH 8015M*	
Surrogate: o-Terphenyl		*111 %*	*70-130*		*P8L0507*	*12/04/18*	*12/04/18*	*TPH 8015M*	
Total Petroleum Hydrocarbon C6-C35	**1990**	158	mg/kg dry	5	[CALC]	12/04/18	12/04/18	calc	
BTEX by 8021B									
Xylenes (total)	**55.1**	6.00	mg/kg	200	[CALC]	12/04/18	12/05/18	EPA 8021B	
Total BTEX	**102**	9.20	mg/kg	200	[CALC]	12/04/18	12/05/18	EPA 8021B	

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Project: Lea Unit #8D (Legacy)
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Project Manager: Mark Larson

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DP-3 (1'-2')

8L01001-63 (Soil)

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Permian Basin Environmental Lab, L.P.									
Organics by GC									
Benzene	ND	0.105	mg/kg dry	100	P8L0411	12/04/18	12/05/18	EPA 8021B	
Toluene	**11.1**	1.05	mg/kg dry	100	P8L0411	12/04/18	12/05/18	EPA 8021B	
Ethylbenzene	**15.1**	0.526	mg/kg dry	100	P8L0411	12/04/18	12/05/18	EPA 8021B	
Xylene (p/m)	**25.5**	2.11	mg/kg dry	100	P8L0411	12/04/18	12/05/18	EPA 8021B	
Xylene (o)	**11.4**	1.05	mg/kg dry	100	P8L0411	12/04/18	12/05/18	EPA 8021B	
Surrogate: 1,4-Difluorobenzene		*83.1 %*	*75-125*		*P8L0411*	*12/04/18*	*12/05/18*	*EPA 8021B*	
Surrogate: 4-Bromofluorobenzene		*70.6 %*	*75-125*		*P8L0411*	*12/04/18*	*12/05/18*	*EPA 8021B*	*S-GC*
General Chemistry Parameters by EPA / Standard Methods									
Chloride	**3.94**	1.05	mg/kg dry	1	P8L0709	12/07/18	12/08/18	EPA 300.0	
% Moisture	**5.0**	0.1	%	1	P8L0410	12/04/18	12/04/18	ASTM D2216	
Total Petroleum Hydrocarbons C6-C35 by EPA Method 8015M									
C6-C12	**2150**	132	mg/kg dry	5	P8L0507	12/04/18	12/04/18	TPH 8015M	
>C12-C28	**5370**	132	mg/kg dry	5	P8L0507	12/04/18	12/04/18	TPH 8015M	
>C28-C35	**798**	132	mg/kg dry	5	P8L0507	12/04/18	12/04/18	TPH 8015M	
Surrogate: 1-Chlorooctane		*116 %*	*70-130*		*P8L0507*	*12/04/18*	*12/04/18*	*TPH 8015M*	
Surrogate: o-Terphenyl		*109 %*	*70-130*		*P8L0507*	*12/04/18*	*12/04/18*	*TPH 8015M*	
Total Petroleum Hydrocarbon C6-C35	**8310**	132	mg/kg dry	5	[CALC]	12/04/18	12/04/18	calc	
BTEX by 8021B									
Total BTEX	**60.0**	4.60	mg/kg	100	[CALC]	12/04/18	12/05/18	EPA 8021B	
Xylenes (total)	**35.0**	3.00	mg/kg	100	[CALC]	12/04/18	12/05/18	EPA 8021B	

Larson & Associates, Inc.	Project: Lea Unit #8D (Legacy)	Fax: (432) 687-0456
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Midland TX, 79710	Project Manager: Mark Larson	

DP-3 (2'-3')

8L01001-64 (Soil)

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Permian Basin Environmental Lab, L.P.									
General Chemistry Parameters by EPA / Standard Methods									
% Moisture	**15.0**	0.1	%	1	P8L0410	12/04/18	12/04/18	ASTM D2216	
Total Petroleum Hydrocarbons C6-C35 by EPA Method 8015M									
C6-C12	ND	29.4	mg/kg dry	1	P8L0507	12/04/18	12/04/18	TPH 8015M	
>C12-C28	**48.9**	29.4	mg/kg dry	1	P8L0507	12/04/18	12/04/18	TPH 8015M	
>C28-C35	ND	29.4	mg/kg dry	1	P8L0507	12/04/18	12/04/18	TPH 8015M	
Surrogate: 1-Chlorooctane		*120 %*	*70-130*		*P8L0507*	*12/04/18*	*12/04/18*	*TPH 8015M*	
Surrogate: o-Terphenyl		*142 %*	*70-130*		*P8L0507*	*12/04/18*	*12/04/18*	*TPH 8015M*	*S-GC*
Total Petroleum Hydrocarbon C6-C35	**48.9**	29.4	mg/kg dry	1	[CALC]	12/04/18	12/04/18	calc	

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DP-8 (0'-1')

8L01001-70 (Soil)

Permian Basin Environmental Lab, L.P.

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Organics by GC									
Benzene	**0.561**	0.266	mg/kg dry	250	P8L0411	12/04/18	12/05/18	EPA 8021B	
Toluene	**40.8**	2.66	mg/kg dry	250	P8L0411	12/04/18	12/05/18	EPA 8021B	
Ethylbenzene	**36.9**	1.33	mg/kg dry	250	P8L0411	12/04/18	12/05/18	EPA 8021B	
Xylene (p/m)	**69.7**	5.32	mg/kg dry	250	P8L0411	12/04/18	12/05/18	EPA 8021B	
Xylene (o)	**32.0**	2.66	mg/kg dry	250	P8L0411	12/04/18	12/05/18	EPA 8021B	
Surrogate: 1,4-Difluorobenzene		*92.7 %*	*75-125*		*P8L0411*	*12/04/18*	*12/05/18*	*EPA 8021B*	
Surrogate: 4-Bromofluorobenzene		*82.2 %*	*75-125*		*P8L0411*	*12/04/18*	*12/05/18*	*EPA 8021B*	
General Chemistry Parameters by EPA / Standard Methods									
Chloride	**5.50**	1.06	mg/kg dry	1	P8L0709	12/07/18	12/08/18	EPA 300.0	
% Moisture	**6.0**	0.1	%	1	P8L0410	12/04/18	12/04/18	ASTM D2216	
Total Petroleum Hydrocarbons C6-C35 by EPA Method 8015M									
C6-C12	**8000**	266	mg/kg dry	10	P8L0507	12/04/18	12/04/18	TPH 8015M	
>C12-C28	**19500**	266	mg/kg dry	10	P8L0507	12/04/18	12/04/18	TPH 8015M	
>C28-C35	**2930**	266	mg/kg dry	10	P8L0507	12/04/18	12/04/18	TPH 8015M	
Surrogate: 1-Chlorooctane		*118 %*	*70-130*		*P8L0507*	*12/04/18*	*12/04/18*	*TPH 8015M*	
Surrogate: o-Terphenyl		*101 %*	*70-130*		*P8L0507*	*12/04/18*	*12/04/18*	*TPH 8015M*	
Total Petroleum Hydrocarbon C6-C35	**30400**	266	mg/kg dry	10	[CALC]	12/04/18	12/04/18	calc	
BTEX by 8021B									
Total BTEX	**169**	11.5	mg/kg	250	[CALC]	12/04/18	12/05/18	EPA 8021B	
Xylenes (total)	**95.6**	7.50	mg/kg	250	[CALC]	12/04/18	12/05/18	EPA 8021B	

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Project: Lea Unit #8D (Legacy)
Project Number: 18-0138-03
Project Manager: Mark Larson

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DP-8 (1'-2')

8L01001-71 (Soil)

Permian Basin Environmental Lab, L.P.

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Organics by GC									
Benzene	**0.369**	0.258	mg/kg dry	250	P8L0411	12/04/18	12/05/18	EPA 8021B	
Toluene	**31.1**	2.58	mg/kg dry	250	P8L0411	12/04/18	12/05/18	EPA 8021B	
Ethylbenzene	**33.0**	1.29	mg/kg dry	250	P8L0411	12/04/18	12/05/18	EPA 8021B	
Xylene (p/m)	**55.5**	5.15	mg/kg dry	250	P8L0411	12/04/18	12/05/18	EPA 8021B	
Xylene (o)	**23.1**	2.58	mg/kg dry	250	P8L0411	12/04/18	12/05/18	EPA 8021B	
Surrogate: 4-Bromofluorobenzene		*72.0 %*	*75-125*		*P8L0411*	*12/04/18*	*12/05/18*	*EPA 8021B*	*S-GC*
Surrogate: 1,4-Difluorobenzene		*91.4 %*	*75-125*		*P8L0411*	*12/04/18*	*12/05/18*	*EPA 8021B*	
General Chemistry Parameters by EPA / Standard Methods									
Chloride	ND	1.03	mg/kg dry	1	P8L0709	12/07/18	12/08/18	EPA 300.0	
% Moisture	**3.0**	0.1	%	1	P8L0410	12/04/18	12/04/18	ASTM D2216	
Total Petroleum Hydrocarbons C6-C35 by EPA Method 8015M									
C6-C12	**4180**	129	mg/kg dry	5	P8L0507	12/04/18	12/04/18	TPH 8015M	
>C12-C28	**9060**	129	mg/kg dry	5	P8L0507	12/04/18	12/04/18	TPH 8015M	
>C28-C35	**1460**	129	mg/kg dry	5	P8L0507	12/04/18	12/04/18	TPH 8015M	
Surrogate: 1-Chlorooctane		*115 %*	*70-130*		*P8L0507*	*12/04/18*	*12/04/18*	*TPH 8015M*	
Surrogate: o-Terphenyl		*98.0 %*	*70-130*		*P8L0507*	*12/04/18*	*12/04/18*	*TPH 8015M*	
Total Petroleum Hydrocarbon C6-C35	**14700**	129	mg/kg dry	5	[CALC]	12/04/18	12/04/18	calc	
BTEX by 8021B									
Total BTEX	**139**	11.5	mg/kg	250	[CALC]	12/04/18	12/05/18	EPA 8021B	
Xylenes (total)	**76.2**	7.50	mg/kg	250	[CALC]	12/04/18	12/05/18	EPA 8021B	

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Midland TX, 79710	Project Manager: Mark Larson	

DP-8 (2'-3')

8L01001-72 (Soil)

Permian Basin Environmental Lab, L.P.

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Organics by GC									
Benzene	ND	0.258	mg/kg dry	250	P8L0411	12/04/18	12/05/18	EPA 8021B	
Toluene	**14.4**	2.58	mg/kg dry	250	P8L0411	12/04/18	12/05/18	EPA 8021B	
Ethylbenzene	**22.2**	1.29	mg/kg dry	250	P8L0411	12/04/18	12/05/18	EPA 8021B	
Xylene (p/m)	**42.6**	5.15	mg/kg dry	250	P8L0411	12/04/18	12/05/18	EPA 8021B	
Xylene (o)	**17.2**	2.58	mg/kg dry	250	P8L0411	12/04/18	12/05/18	EPA 8021B	
Surrogate: 1,4-Difluorobenzene		*76.9 %*	*75-125*		*P8L0411*	*12/04/18*	*12/05/18*	*EPA 8021B*	
Surrogate: 4-Bromofluorobenzene		*68.7 %*	*75-125*		*P8L0411*	*12/04/18*	*12/05/18*	*EPA 8021B*	*S-GC*
General Chemistry Parameters by EPA / Standard Methods									
% Moisture	**3.0**	0.1	%	1	P8L0410	12/04/18	12/04/18	ASTM D2216	
Total Petroleum Hydrocarbons C6-C35 by EPA Method 8015M									
C6-C12	**3760**	129	mg/kg dry	5	P8L0507	12/04/18	12/04/18	TPH 8015M	
>C12-C28	**8370**	129	mg/kg dry	5	P8L0507	12/04/18	12/04/18	TPH 8015M	
>C28-C35	**1380**	129	mg/kg dry	5	P8L0507	12/04/18	12/04/18	TPH 8015M	
Surrogate: 1-Chlorooctane		*93.5 %*	*70-130*		*P8L0507*	*12/04/18*	*12/04/18*	*TPH 8015M*	
Surrogate: o-Terphenyl		*94.9 %*	*70-130*		*P8L0507*	*12/04/18*	*12/04/18*	*TPH 8015M*	
Total Petroleum Hydrocarbon C6-C35	**13500**	129	mg/kg dry	5	[CALC]	12/04/18	12/04/18	calc	
BTEX by 8021B									
Total BTEX	**93.4**	11.5	mg/kg	250	[CALC]	12/04/18	12/05/18	EPA 8021B	
Xylenes (total)	**57.9**	7.50	mg/kg	250	[CALC]	12/04/18	12/05/18	EPA 8021B	

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Midland TX, 79710

Project: Lea Unit #8D (Legacy)
Project Number: 18-0138-03
Project Manager: Mark Larson

Fax: (432) 687-0456

DP-8 (3'-4')

8L01001-73 (Soil)

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Permian Basin Environmental Lab, L.P.									
Organics by GC									
Benzene	**2.57**	0.269	mg/kg dry	250	P8L0411	12/04/18	12/05/18	EPA 8021B	
Toluene	**53.1**	2.69	mg/kg dry	250	P8L0411	12/04/18	12/05/18	EPA 8021B	
Ethylbenzene	**44.1**	1.34	mg/kg dry	250	P8L0411	12/04/18	12/05/18	EPA 8021B	
Xylene (p/m)	**90.4**	5.38	mg/kg dry	250	P8L0411	12/04/18	12/05/18	EPA 8021B	
Xylene (o)	**56.0**	2.69	mg/kg dry	250	P8L0411	12/04/18	12/05/18	EPA 8021B	
Surrogate: 1,4-Difluorobenzene		*106 %*	*75-125*		*P8L0411*	*12/04/18*	*12/05/18*	*EPA 8021B*	
Surrogate: 4-Bromofluorobenzene		*83.0 %*	*75-125*		*P8L0411*	*12/04/18*	*12/05/18*	*EPA 8021B*	
General Chemistry Parameters by EPA / Standard Methods									
% Moisture	**7.0**	0.1	%	1	P8L0410	12/04/18	12/04/18	ASTM D2216	
Total Petroleum Hydrocarbons C6-C35 by EPA Method 8015M									
C6-C12	**7480**	269	mg/kg dry	10	P8L0507	12/04/18	12/04/18	TPH 8015M	
>C12-C28	**14000**	269	mg/kg dry	10	P8L0507	12/04/18	12/04/18	TPH 8015M	
>C28-C35	**2370**	269	mg/kg dry	10	P8L0507	12/04/18	12/04/18	TPH 8015M	
Surrogate: 1-Chlorooctane		*111 %*	*70-130*		*P8L0507*	*12/04/18*	*12/04/18*	*TPH 8015M*	
Surrogate: o-Terphenyl		*94.4 %*	*70-130*		*P8L0507*	*12/04/18*	*12/04/18*	*TPH 8015M*	
Total Petroleum Hydrocarbon C6-C35	**23800**	269	mg/kg dry	10	[CALC]	12/04/18	12/04/18	calc	
BTEX by 8021B									
Total BTEX	**229**	11.5	mg/kg	250	[CALC]	12/04/18	12/05/18	EPA 8021B	
Xylenes (total)	**136**	7.50	mg/kg	250	[CALC]	12/04/18	12/05/18	EPA 8021B	

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Midland TX, 79710	Project Manager: Mark Larson	

DP-8 (4'-6')

8L01001-74 (Soil)

Permian Basin Environmental Lab, L.P.

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Organics by GC									
Benzene	ND	0.281	mg/kg dry	250	P8L0411	12/04/18	12/05/18	EPA 8021B	
Toluene	**8.33**	2.81	mg/kg dry	250	P8L0411	12/04/18	12/05/18	EPA 8021B	
Ethylbenzene	**7.94**	1.40	mg/kg dry	250	P8L0411	12/04/18	12/05/18	EPA 8021B	
Xylene (p/m)	**27.0**	5.62	mg/kg dry	250	P8L0411	12/04/18	12/05/18	EPA 8021B	
Xylene (o)	**10.1**	2.81	mg/kg dry	250	P8L0411	12/04/18	12/05/18	EPA 8021B	
Surrogate: 4-Bromofluorobenzene		*69.8 %*	*75-125*		*P8L0411*	*12/04/18*	*12/05/18*	*EPA 8021B*	*S-GC*
Surrogate: 1,4-Difluorobenzene		*81.0 %*	*75-125*		*P8L0411*	*12/04/18*	*12/05/18*	*EPA 8021B*	
General Chemistry Parameters by EPA / Standard Methods									
% Moisture	**11.0**	0.1	%	1	P8L0410	12/04/18	12/04/18	ASTM D2216	
Total Petroleum Hydrocarbons C6-C35 by EPA Method 8015M									
C6-C12	**1980**	140	mg/kg dry	5	P8L0507	12/04/18	12/04/18	TPH 8015M	
>C12-C28	**5250**	140	mg/kg dry	5	P8L0507	12/04/18	12/04/18	TPH 8015M	
>C28-C35	**795**	140	mg/kg dry	5	P8L0507	12/04/18	12/04/18	TPH 8015M	
Surrogate: 1-Chlorooctane		*101 %*	*70-130*		*P8L0507*	*12/04/18*	*12/04/18*	*TPH 8015M*	
Surrogate: o-Terphenyl		*103 %*	*70-130*		*P8L0507*	*12/04/18*	*12/04/18*	*TPH 8015M*	
Total Petroleum Hydrocarbon C6-C35	**8030**	140	mg/kg dry	5	[CALC]	12/04/18	12/04/18	calc	
BTEX by 8021B									
Xylenes (total)	**33.0**	7.50	mg/kg	250	[CALC]	12/04/18	12/05/18	EPA 8021B	
Total BTEX	**47.5**	11.5	mg/kg	250	[CALC]	12/04/18	12/05/18	EPA 8021B	

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Midland TX, 79710	Project Manager: Mark Larson	

DP-8 (6'-8')

8L01001-75 (Soil)

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Permian Basin Environmental Lab, L.P.									
General Chemistry Parameters by EPA / Standard Methods									
% Moisture	**6.0**	0.1	%	1	P8L0410	12/04/18	12/04/18	ASTM D2216	
Total Petroleum Hydrocarbons C6-C35 by EPA Method 8015M									
C6-C12	ND	26.6	mg/kg dry	1	P8L0504	12/04/18	12/04/18	TPH 8015M	
>C12-C28	**29.8**	26.6	mg/kg dry	1	P8L0504	12/04/18	12/04/18	TPH 8015M	
>C28-C35	ND	26.6	mg/kg dry	1	P8L0504	12/04/18	12/04/18	TPH 8015M	
Surrogate: 1-Chlorooctane		*108 %*	*70-130*		*P8L0504*	*12/04/18*	*12/04/18*	*TPH 8015M*	
Surrogate: o-Terphenyl		*119 %*	*70-130*		*P8L0504*	*12/04/18*	*12/04/18*	*TPH 8015M*	
Total Petroleum Hydrocarbon C6-C35	**29.8**	26.6	mg/kg dry	1	[CALC]	12/04/18	12/04/18	calc	

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Project: Lea Unit #8D (Legacy)
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Project Manager: Mark Larson

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DP-6 (0'-1')

8L01001-78 (Soil)

Permian Basin Environmental Lab, L.P.

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Organics by GC									
Benzene	**10.6**	0.225	mg/kg dry	200	P8L0411	12/04/18	12/05/18	EPA 8021B	
Toluene	**70.7**	2.25	mg/kg dry	200	P8L0411	12/04/18	12/05/18	EPA 8021B	
Ethylbenzene	**57.0**	1.12	mg/kg dry	200	P8L0411	12/04/18	12/05/18	EPA 8021B	
Xylene (p/m)	**78.8**	4.49	mg/kg dry	200	P8L0411	12/04/18	12/05/18	EPA 8021B	
Xylene (o)	**49.4**	2.25	mg/kg dry	200	P8L0411	12/04/18	12/05/18	EPA 8021B	
Surrogate: 1,4-Difluorobenzene		*87.9 %*	*75-125*		*P8L0411*	*12/04/18*	*12/05/18*	*EPA 8021B*	
Surrogate: 4-Bromofluorobenzene		*67.0 %*	*75-125*		*P8L0411*	*12/04/18*	*12/05/18*	*EPA 8021B*	*S-GC*
General Chemistry Parameters by EPA / Standard Methods									
Chloride	**701**	1.12	mg/kg dry	1	P8L0709	12/07/18	12/08/18	EPA 300.0	
% Moisture	**11.0**	0.1	%	1	P8L0410	12/04/18	12/04/18	ASTM D2216	
Total Petroleum Hydrocarbons C6-C35 by EPA Method 8015M									
C6-C12	**7460**	281	mg/kg dry	10	P8L0504	12/04/18	12/04/18	TPH 8015M	
>C12-C28	**25100**	281	mg/kg dry	10	P8L0504	12/04/18	12/04/18	TPH 8015M	
>C28-C35	**3840**	281	mg/kg dry	10	P8L0504	12/04/18	12/04/18	TPH 8015M	
Surrogate: 1-Chlorooctane		*108 %*	*70-130*		*P8L0504*	*12/04/18*	*12/04/18*	*TPH 8015M*	
Surrogate: o-Terphenyl		*79.0 %*	*70-130*		*P8L0504*	*12/04/18*	*12/04/18*	*TPH 8015M*	
Total Petroleum Hydrocarbon C6-C35	**36400**	281	mg/kg dry	10	[CALC]	12/04/18	12/04/18	calc	
BTEX by 8021B									
Total BTEX	**237**	9.20	mg/kg	200	[CALC]	12/04/18	12/05/18	EPA 8021B	
Xylenes (total)	**114**	6.00	mg/kg	200	[CALC]	12/04/18	12/05/18	EPA 8021B	

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Project: Lea Unit #8D (Legacy)
Project Number: 18-0138-03
Project Manager: Mark Larson

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DP-6 (1'-2')

8L01001-79 (Soil)

Permian Basin Environmental Lab, L.P.

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Organics by GC									
Benzene	ND	0.0204	mg/kg dry	20	P8L0411	12/04/18	12/05/18	EPA 8021B	
Toluene	ND	0.204	mg/kg dry	20	P8L0411	12/04/18	12/05/18	EPA 8021B	
Ethylbenzene	ND	0.102	mg/kg dry	20	P8L0411	12/04/18	12/05/18	EPA 8021B	
Xylene (p/m)	ND	0.408	mg/kg dry	20	P8L0411	12/04/18	12/05/18	EPA 8021B	
Xylene (o)	ND	0.204	mg/kg dry	20	P8L0411	12/04/18	12/05/18	EPA 8021B	
Surrogate: 4-Bromofluorobenzene		*105 %*	*75-125*		*P8L0411*	*12/04/18*	*12/05/18*	*EPA 8021B*	
Surrogate: 1,4-Difluorobenzene		*97.5 %*	*75-125*		*P8L0411*	*12/04/18*	*12/05/18*	*EPA 8021B*	
General Chemistry Parameters by EPA / Standard Methods									
Chloride	**7.79**	1.02	mg/kg dry	1	P8L0709	12/07/18	12/08/18	EPA 300.0	
% Moisture	**2.0**	0.1	%	1	P8L0410	12/04/18	12/04/18	ASTM D2216	
Total Petroleum Hydrocarbons C6-C35 by EPA Method 8015M									
C6-C12	ND	25.5	mg/kg dry	1	P8L0504	12/04/18	12/04/18	TPH 8015M	
>C12-C28	**263**	25.5	mg/kg dry	1	P8L0504	12/04/18	12/04/18	TPH 8015M	
>C28-C35	**58.4**	25.5	mg/kg dry	1	P8L0504	12/04/18	12/04/18	TPH 8015M	
Surrogate: 1-Chlorooctane		*115 %*	*70-130*		*P8L0504*	*12/04/18*	*12/04/18*	*TPH 8015M*	
Surrogate: o-Terphenyl		*124 %*	*70-130*		*P8L0504*	*12/04/18*	*12/04/18*	*TPH 8015M*	
Total Petroleum Hydrocarbon C6-C35	**322**	25.5	mg/kg dry	1	[CALC]	12/04/18	12/04/18	calc	
BTEX by 8021B									
Xylenes (total)	ND	0.600	mg/kg	20	[CALC]	12/04/18	12/05/18	EPA 8021B	
Total BTEX	ND	0.920	mg/kg	20	[CALC]	12/04/18	12/05/18	EPA 8021B	

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Midland TX, 79710	Project Manager: Mark Larson	

DP-5 (0'-1')

8L01001-86 (Soil)

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Permian Basin Environmental Lab, L.P.									
Organics by GC									
Benzene	ND	0.0217	mg/kg dry	20	P8L0411	12/04/18	12/05/18	EPA 8021B	
Toluene	ND	0.217	mg/kg dry	20	P8L0411	12/04/18	12/05/18	EPA 8021B	
Ethylbenzene	ND	0.109	mg/kg dry	20	P8L0411	12/04/18	12/05/18	EPA 8021B	
Xylene (p/m)	ND	0.435	mg/kg dry	20	P8L0411	12/04/18	12/05/18	EPA 8021B	
Xylene (o)	ND	0.217	mg/kg dry	20	P8L0411	12/04/18	12/05/18	EPA 8021B	
Surrogate: 4-Bromofluorobenzene		*93.0 %*	*75-125*		*P8L0411*	*12/04/18*	*12/05/18*	*EPA 8021B*	
Surrogate: 1,4-Difluorobenzene		*91.8 %*	*75-125*		*P8L0411*	*12/04/18*	*12/05/18*	*EPA 8021B*	
General Chemistry Parameters by EPA / Standard Methods									
Chloride	**171**	1.09	mg/kg dry	1	P8L0709	12/07/18	12/08/18	EPA 300.0	
% Moisture	**8.0**	0.1	%	1	P8L0410	12/04/18	12/04/18	ASTM D2216	
Total Petroleum Hydrocarbons C6-C35 by EPA Method 8015M									
C6-C12	ND	27.2	mg/kg dry	1	P8L0504	12/04/18	12/04/18	TPH 8015M	
>C12-C28	**33.6**	27.2	mg/kg dry	1	P8L0504	12/04/18	12/04/18	TPH 8015M	
>C28-C35	ND	27.2	mg/kg dry	1	P8L0504	12/04/18	12/04/18	TPH 8015M	
Surrogate: 1-Chlorooctane		*123 %*	*70-130*		*P8L0504*	*12/04/18*	*12/04/18*	*TPH 8015M*	
Surrogate: o-Terphenyl		*135 %*	*70-130*		*P8L0504*	*12/04/18*	*12/04/18*	*TPH 8015M*	*S-GC*
Total Petroleum Hydrocarbon C6-C35	**33.6**	27.2	mg/kg dry	1	[CALC]	12/04/18	12/04/18	calc	
BTEX by 8021B									
Total BTEX	ND	0.920	mg/kg	20	[CALC]	12/04/18	12/05/18	EPA 8021B	
Xylenes (total)	ND	0.600	mg/kg	20	[CALC]	12/04/18	12/05/18	EPA 8021B	

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Midland TX, 79710	Project Manager: Mark Larson	

DP-5 (1'-2')

8L01001-87 (Soil)

Permian Basin Environmental Lab, L.P.

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Organics by GC									
Benzene	ND	0.0200	mg/kg dry	20	P8L0411	12/04/18	12/05/18	EPA 8021B	
Toluene	ND	0.200	mg/kg dry	20	P8L0411	12/04/18	12/05/18	EPA 8021B	
Ethylbenzene	ND	0.100	mg/kg dry	20	P8L0411	12/04/18	12/05/18	EPA 8021B	
Xylene (p/m)	ND	0.400	mg/kg dry	20	P8L0411	12/04/18	12/05/18	EPA 8021B	
Xylene (o)	ND	0.200	mg/kg dry	20	P8L0411	12/04/18	12/05/18	EPA 8021B	
Surrogate: 4-Bromofluorobenzene		*93.4 %*	*75-125*		*P8L0411*	*12/04/18*	*12/05/18*	*EPA 8021B*	
Surrogate: 1,4-Difluorobenzene		*89.7 %*	*75-125*		*P8L0411*	*12/04/18*	*12/05/18*	*EPA 8021B*	
General Chemistry Parameters by EPA / Standard Methods									
Chloride	**10.1**	1.00	mg/kg dry	1	P8L0709	12/07/18	12/08/18	EPA 300.0	
% Moisture	ND	0.1	%	1	P8L0410	12/04/18	12/04/18	ASTM D2216	
Total Petroleum Hydrocarbons C6-C35 by EPA Method 8015M									
C6-C12	ND	25.0	mg/kg dry	1	P8L0509	12/04/18	12/05/18	TPH 8015M	
>C12-C28	ND	25.0	mg/kg dry	1	P8L0509	12/04/18	12/05/18	TPH 8015M	
>C28-C35	ND	25.0	mg/kg dry	1	P8L0509	12/04/18	12/05/18	TPH 8015M	
Surrogate: 1-Chlorooctane		*103 %*	*70-130*		*P8L0509*	*12/04/18*	*12/05/18*	*TPH 8015M*	
Surrogate: o-Terphenyl		*120 %*	*70-130*		*P8L0509*	*12/04/18*	*12/05/18*	*TPH 8015M*	
Total Petroleum Hydrocarbon C6-C35	ND	25.0	mg/kg dry	1	[CALC]	12/04/18	12/05/18	calc	
BTEX by 8021B									
Total BTEX	ND	0.920	mg/kg	20	[CALC]	12/04/18	12/05/18	EPA 8021B	
Xylenes (total)	ND	0.600	mg/kg	20	[CALC]	12/04/18	12/05/18	EPA 8021B	

Organics by GC - Quality Control

Permian Basin Environmental Lab, L.P.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch P8L0403 - General Preparation (GC)										
Blank (P8L0403-BLK1)				Prepared & Analyzed: 12/04/18						
Benzene	ND	0.00100	mg/kg wet							
Toluene	ND	0.0100	"							
Ethylbenzene	ND	0.00500	"							
Xylene (p/m)	ND	0.0200	"							
Xylene (o)	ND	0.0100	"							
Surrogate: 1,4-Difluorobenzene	*0.0509*		*"*	*0.0600*		*84.9*	*75-125*			
Surrogate: 4-Bromofluorobenzene	*0.0568*		*"*	*0.0600*		*94.6*	*75-125*			
LCS (P8L0403-BS1)				Prepared & Analyzed: 12/04/18						
Benzene	0.118	0.00100	mg/kg wet	0.100		118	70-130			
Toluene	0.116	0.0100	"	0.100		116	70-130			
Ethylbenzene	0.109	0.00500	"	0.100		109	70-130			
Xylene (p/m)	0.230	0.0200	"	0.200		115	70-130			
Xylene (o)	0.119	0.0100	"	0.100		119	70-130			
Surrogate: 4-Bromofluorobenzene	*0.0619*		*"*	*0.0600*		*103*	*75-125*			
Surrogate: 1,4-Difluorobenzene	*0.0622*		*"*	*0.0600*		*104*	*75-125*			
LCS Dup (P8L0403-BSD1)				Prepared & Analyzed: 12/04/18						
Benzene	0.117	0.00100	mg/kg wet	0.100		117	70-130	1.16	20	
Toluene	0.113	0.0100	"	0.100		113	70-130	2.68	20	
Ethylbenzene	0.114	0.00500	"	0.100		114	70-130	4.82	20	
Xylene (p/m)	0.231	0.0200	"	0.200		116	70-130	0.407	20	
Xylene (o)	0.119	0.0100	"	0.100		119	70-130	0.378	20	
Surrogate: 1,4-Difluorobenzene	*0.0590*		*"*	*0.0600*		*98.3*	*75-125*			
Surrogate: 4-Bromofluorobenzene	*0.0602*		*"*	*0.0600*		*100*	*75-125*			
Matrix Spike (P8L0403-MS1)	**Source: 8K30008-17**			Prepared & Analyzed: 12/04/18						
Benzene	0.0926	0.00106	mg/kg dry	0.106	ND	87.0	80-120			
Toluene	0.0895	0.0106	"	0.106	ND	84.2	80-120			
Ethylbenzene	0.116	0.00532	"	0.106	ND	109	80-120			
Xylene (p/m)	0.181	0.0213	"	0.213	ND	84.9	80-120			
Xylene (o)	0.0888	0.0106	"	0.106	ND	83.5	80-120			
Surrogate: 1,4-Difluorobenzene	*0.0675*		*"*	*0.0638*		*106*	*75-125*			
Surrogate: 4-Bromofluorobenzene	*0.0686*		*"*	*0.0638*		*108*	*75-125*			

Organics by GC - Quality Control

Permian Basin Environmental Lab, L.P.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch P8L0403 - General Preparation (GC)										
Matrix Spike Dup (P8L0403-MSD1)	**Source: 8K30008-17**			Prepared & Analyzed: 12/04/18						
Benzene	0.107	0.00106	mg/kg dry	0.106	ND	100	80-120	14.2	20	
Toluene	0.103	0.0106	"	0.106	ND	97.0	80-120	14.2	20	
Ethylbenzene	0.115	0.00532	"	0.106	ND	108	80-120	0.286	20	
Xylene (p/m)	0.198	0.0213	"	0.213	ND	93.2	80-120	9.34	20	
Xylene (o)	0.112	0.0106	"	0.106	ND	106	80-120	23.5	20	R3
Surrogate: 1,4-Difluorobenzene	*0.0657*		*"*	*0.0638*		*103*	*75-125*			
Surrogate: 4-Bromofluorobenzene	*0.0655*		*"*	*0.0638*		*103*	*75-125*			
Batch P8L0411 - General Preparation (GC)										
Blank (P8L0411-BLK1)				Prepared: 12/04/18 Analyzed: 12/05/18						
Benzene	ND	0.00100	mg/kg wet							
Toluene	ND	0.0100	"							
Ethylbenzene	ND	0.00500	"							
Xylene (p/m)	ND	0.0200	"							
Xylene (o)	ND	0.0100	"							
Surrogate: 4-Bromofluorobenzene	*0.0558*		*"*	*0.0600*		*93.0*	*75-125*			
Surrogate: 1,4-Difluorobenzene	*0.0532*		*"*	*0.0600*		*88.7*	*75-125*			
LCS (P8L0411-BS1)				Prepared: 12/04/18 Analyzed: 12/05/18						
Benzene	0.107	0.00100	mg/kg wet	0.100		107	70-130			
Toluene	0.102	0.0100	"	0.100		102	70-130			
Ethylbenzene	0.111	0.00500	"	0.100		111	70-130			
Xylene (p/m)	0.194	0.0200	"	0.200		96.9	70-130			
Xylene (o)	0.111	0.0100	"	0.100		111	70-130			
Surrogate: 1,4-Difluorobenzene	*0.0594*		*"*	*0.0600*		*99.0*	*75-125*			
Surrogate: 4-Bromofluorobenzene	*0.0589*		*"*	*0.0600*		*98.1*	*75-125*			

Organics by GC - Quality Control

Permian Basin Environmental Lab, L.P.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch P8L0411 - General Preparation (GC)										
LCS Dup (P8L0411-BSD1)				Prepared: 12/04/18 Analyzed: 12/05/18						
Benzene	0.102	0.00100	mg/kg wet	0.100		102	70-130	4.58	20	
Toluene	0.0960	0.0100	"	0.100		96.0	70-130	5.76	20	
Ethylbenzene	0.114	0.00500	"	0.100		114	70-130	2.82	20	
Xylene (p/m)	0.186	0.0200	"	0.200		92.8	70-130	4.34	20	
Xylene (o)	0.118	0.0100	"	0.100		118	70-130	5.68	20	
Surrogate: 4-Bromofluorobenzene	*0.0618*		*"*	*0.0600*		*103*	*75-125*			
Surrogate: 1,4-Difluorobenzene	*0.0606*		*"*	*0.0600*		*101*	*75-125*			
Matrix Spike (P8L0411-MS1)		**Source: 8L04002-01**		Prepared: 12/04/18 Analyzed: 12/05/18						
Benzene	0.0156	0.00101	mg/kg dry	0.101	0.00397	11.5	80-120			QM-07
Toluene	0.0406	0.0101	"	0.101	0.0349	5.66	80-120			QM-07
Ethylbenzene	0.0118	0.00505	"	0.101	0.00315	8.59	80-120			QM-07
Xylene (p/m)	0.0269	0.0202	"	0.202	0.00891	8.93	80-120			QM-07
Xylene (o)	0.0130	0.0101	"	0.101	0.00409	8.81	80-120			QM-07
Surrogate: 1,4-Difluorobenzene	*0.0627*		*"*	*0.0606*		*103*	*75-125*			
Surrogate: 4-Bromofluorobenzene	*0.0544*		*"*	*0.0606*		*89.8*	*75-125*			
Matrix Spike Dup (P8L0411-MSD1)		**Source: 8L04002-01**		Prepared: 12/04/18 Analyzed: 12/05/18						
Benzene	0.0247	0.00101	mg/kg dry	0.101	0.00397	20.5	80-120	56.5	20	QM-07
Toluene	0.0439	0.0101	"	0.101	0.0349	8.93	80-120	44.8	20	QM-07
Ethylbenzene	0.0212	0.00505	"	0.101	0.00315	17.9	80-120	70.2	20	QM-07
Xylene (p/m)	0.0462	0.0202	"	0.202	0.00891	18.5	80-120	69.6	20	QM-07
Xylene (o)	0.0178	0.0101	"	0.101	0.00409	13.6	80-120	42.6	20	QM-07
Surrogate: 1,4-Difluorobenzene	*0.0596*		*"*	*0.0606*		*98.3*	*75-125*			
Surrogate: 4-Bromofluorobenzene	*0.0648*		*"*	*0.0606*		*107*	*75-125*			

General Chemistry Parameters by EPA / Standard Methods - Quality Control

Permian Basin Environmental Lab, L.P.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch P8L0410 - * DEFAULT PREP *** **										
Blank (P8L0410-BLK1)				Prepared & Analyzed: 12/04/18						
% Moisture	ND	0.1	%							
Duplicate (P8L0410-DUP1)		**Source: 8L01001-20**		Prepared & Analyzed: 12/04/18						
% Moisture	3.0	0.1	%		3.0			0.00	20	
Duplicate (P8L0410-DUP2)		**Source: 8L01001-47**		Prepared & Analyzed: 12/04/18						
% Moisture	4.0	0.1	%		4.0			0.00	20	
Duplicate (P8L0410-DUP3)		**Source: 8L01001-74**		Prepared & Analyzed: 12/04/18						
% Moisture	13.0	0.1	%		11.0			16.7	20	
Duplicate (P8L0410-DUP4)		**Source: 8L01005-04**		Prepared & Analyzed: 12/04/18						
% Moisture	8.0	0.1	%		8.0			0.00	20	
Duplicate (P8L0410-DUP5)		**Source: 8L01009-02**		Prepared & Analyzed: 12/04/18						
% Moisture	6.0	0.1	%		9.0			40.0	20	
Duplicate (P8L0410-DUP6)		**Source: 8L01009-14**		Prepared & Analyzed: 12/04/18						
% Moisture	15.0	0.1	%		15.0			0.00	20	
Batch P8L0707 - * DEFAULT PREP *** **										
Blank (P8L0707-BLK1)				Prepared: 12/07/18 Analyzed: 12/08/18						
Chloride	ND	1.00	mg/kg wet							
LCS (P8L0707-BS1)				Prepared & Analyzed: 12/07/18						
Chloride	393	1.00	mg/kg wet	400		98.2	80-120			

General Chemistry Parameters by EPA / Standard Methods - Quality Control

Permian Basin Environmental Lab, L.P.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch P8L0707 - * DEFAULT PREP *** **										
LCS Dup (P8L0707-BSD1)				Prepared & Analyzed: 12/07/18						
Chloride	397	1.00	mg/kg wet	400		99.2	80-120	0.980	20	
Duplicate (P8L0707-DUP1)		**Source: 8K29013-06**		Prepared & Analyzed: 12/07/18						
Chloride	16.8	1.03	mg/kg dry		15.3			9.49	20	
Duplicate (P8L0707-DUP2)		**Source: 8K30006-08**		Prepared & Analyzed: 12/07/18						
Chloride	2210	12.0	mg/kg dry		2220			0.381	20	
Matrix Spike (P8L0707-MS1)		**Source: 8K29013-06**		Prepared & Analyzed: 12/07/18						
Chloride	512	1.03	mg/kg dry	515	15.3	96.4	80-120			
Batch P8L0709 - * DEFAULT PREP *** **										
Blank (P8L0709-BLK1)				Prepared: 12/07/18 Analyzed: 12/08/18						
Chloride	ND	1.00	mg/kg wet							
LCS (P8L0709-BS1)				Prepared: 12/07/18 Analyzed: 12/08/18						
Chloride	392	1.00	mg/kg wet	400		98.1	80-120			
LCS Dup (P8L0709-BSD1)				Prepared: 12/07/18 Analyzed: 12/08/18						
Chloride	400	1.00	mg/kg wet	400		100	80-120	1.92	20	
Duplicate (P8L0709-DUP1)		**Source: 8L01001-30**		Prepared: 12/07/18 Analyzed: 12/08/18						
Chloride	1260	5.26	mg/kg dry		1290			2.57	20	
Duplicate (P8L0709-DUP2)		**Source: 8L01001-70**		Prepared: 12/07/18 Analyzed: 12/08/18						
Chloride	4.91	1.06	mg/kg dry		5.50			11.2	20	

General Chemistry Parameters by EPA / Standard Methods - Quality Control

Permian Basin Environmental Lab, L.P.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch P8L0709 - * DEFAULT PREP *** **										
Matrix Spike (P8L0709-MS1)	**Source: 8L01001-30**			Prepared: 12/07/18 Analyzed: 12/08/18						
Chloride	2280	5.26	mg/kg dry	1050	1290	93.7	80-120			

Total Petroleum Hydrocarbons C6-C35 by EPA Method 8015M - Quality Control

Permian Basin Environmental Lab, L.P.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch P8L0405 - TX 1005										
Blank (P8L0405-BLK1)				Prepared: 12/03/18 Analyzed: 12/04/18						
C6-C12	ND	25.0	mg/kg wet							
>C12-C28	ND	25.0	"							
>C28-C35	ND	25.0	"							
Surrogate: 1-Chlorooctane	*124*		*"*	*100*		*124*	*70-130*			
Surrogate: o-Terphenyl	*67.9*		*"*	*50.0*		*136*	*70-130*			*S-GC*
LCS (P8L0405-BS1)				Prepared: 12/03/18 Analyzed: 12/04/18						
C6-C12	1110	25.0	mg/kg wet	1000		111	75-125			
>C12-C28	1200	25.0	"	1000		120	75-125			
Surrogate: 1-Chlorooctane	*127*		*"*	*100*		*127*	*70-130*			
Surrogate: o-Terphenyl	*57.2*		*"*	*50.0*		*114*	*70-130*			
LCS Dup (P8L0405-BSD1)				Prepared: 12/03/18 Analyzed: 12/04/18						
C6-C12	1060	25.0	mg/kg wet	1000		106	75-125	4.56	20	
>C12-C28	1130	25.0	"	1000		113	75-125	5.87	20	
Surrogate: 1-Chlorooctane	*121*		*"*	*100*		*121*	*70-130*			
Surrogate: o-Terphenyl	*61.2*		*"*	*50.0*		*122*	*70-130*			
Duplicate (P8L0405-DUP1)	**Source: 8L01001-50**			Prepared: 12/03/18 Analyzed: 12/04/18						
C6-C12	16.9	26.6	mg/kg dry		17.6			4.06	20	
>C12-C28	30.5	26.6	"		132			125	20	
Surrogate: 1-Chlorooctane	*105*		*"*	*106*		*98.6*	*70-130*			
Surrogate: o-Terphenyl	*62.9*		*"*	*53.2*		*118*	*70-130*			
Batch P8L0406 - TX 1005										
Blank (P8L0406-BLK1)				Prepared & Analyzed: 12/03/18						
C6-C12	ND	25.0	mg/kg wet							
>C12-C28	ND	25.0	"							
>C28-C35	ND	25.0	"							
Surrogate: 1-Chlorooctane	*110*		*"*	*100*		*110*	*70-130*			
Surrogate: o-Terphenyl	*58.5*		*"*	*50.0*		*117*	*70-130*			

Total Petroleum Hydrocarbons C6-C35 by EPA Method 8015M - Quality Control

Permian Basin Environmental Lab, L.P.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch P8L0406 - TX 1005										
LCS (P8L0406-BS1)				Prepared & Analyzed: 12/03/18						
C6-C12	859	25.0	mg/kg wet	1000		85.9	75-125			
>C12-C28	1110	25.0	"	1000		111	75-125			
Surrogate: 1-Chlorooctane	*124*		*"*	*100*		*124*	*70-130*			
Surrogate: o-Terphenyl	*50.4*		*"*	*50.0*		*101*	*70-130*			
LCS Dup (P8L0406-BSD1)				Prepared & Analyzed: 12/03/18						
C6-C12	840	25.0	mg/kg wet	1000		84.0	75-125	2.26	20	
>C12-C28	1090	25.0	"	1000		109	75-125	1.66	20	
Surrogate: 1-Chlorooctane	*127*		*"*	*100*		*127*	*70-130*			
Surrogate: o-Terphenyl	*56.5*		*"*	*50.0*		*113*	*70-130*			
Duplicate (P8L0406-DUP1)	**Source: 8L01001-01**			Prepared & Analyzed: 12/03/18						
C6-C12	14.9	28.1	mg/kg dry		25.8			53.4	20	
>C12-C28	86.6	28.1	"		301			111	20	
Surrogate: 1-Chlorooctane	*125*		*"*	*112*		*111*	*70-130*			
Surrogate: o-Terphenyl	*67.2*		*"*	*56.2*		*120*	*70-130*			
Batch P8L0407 - TX 1005										
Blank (P8L0407-BLK1)				Prepared: 12/03/18 Analyzed: 12/04/18						
C6-C12	ND	25.0	mg/kg wet							
>C12-C28	ND	25.0	"							
>C28-C35	ND	25.0	"							
Surrogate: 1-Chlorooctane	*117*		*"*	*100*		*117*	*70-130*			
Surrogate: o-Terphenyl	*62.8*		*"*	*50.0*		*126*	*70-130*			
LCS (P8L0407-BS1)				Prepared: 12/03/18 Analyzed: 12/04/18						
C6-C12	860	25.0	mg/kg wet	1000		86.0	75-125			
>C12-C28	1130	25.0	"	1000		113	75-125			
Surrogate: 1-Chlorooctane	*120*		*"*	*100*		*120*	*70-130*			
Surrogate: o-Terphenyl	*63.7*		*"*	*50.0*		*127*	*70-130*			

Total Petroleum Hydrocarbons C6-C35 by EPA Method 8015M - Quality Control

Permian Basin Environmental Lab, L.P.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch P8L0407 - TX 1005										
LCS Dup (P8L0407-BSD1)				Prepared: 12/03/18 Analyzed: 12/04/18						
C6-C12	863	25.0	mg/kg wet	1000		86.3	75-125	0.315	20	
>C12-C28	1140	25.0	"	1000		114	75-125	0.495	20	
Surrogate: 1-Chlorooctane	*129*		*"*	*100*		*129*	*70-130*			
Surrogate: o-Terphenyl	*58.3*		*"*	*50.0*		*117*	*70-130*			
Duplicate (P8L0407-DUP1)	**Source: 8L01001-30**			Prepared: 12/03/18 Analyzed: 12/04/18						
C6-C12	13900	263	mg/kg dry		13900			0.138	20	
>C12-C28	39700	263	"		38300			3.62	20	
Surrogate: 1-Chlorooctane	*130*		*"*	*105*		*124*	*70-130*			
Surrogate: o-Terphenyl	*43.2*		*"*	*52.6*		*82.0*	*70-130*			
Batch P8L0504 - TX 1005										
Blank (P8L0504-BLK1)				Prepared & Analyzed: 12/04/18						
C6-C12	ND	25.0	mg/kg wet							
>C12-C28	ND	25.0	"							
>C28-C35	ND	25.0	"							
Surrogate: 1-Chlorooctane	*115*		*"*	*100*		*115*	*70-130*			
Surrogate: o-Terphenyl	*59.3*		*"*	*50.0*		*119*	*70-130*			
LCS (P8L0504-BS1)				Prepared & Analyzed: 12/04/18						
C6-C12	877	25.0	mg/kg wet	1000		87.7	75-125			
>C12-C28	1120	25.0	"	1000		112	75-125			
Surrogate: 1-Chlorooctane	*129*		*"*	*100*		*129*	*70-130*			
Surrogate: o-Terphenyl	*51.1*		*"*	*50.0*		*102*	*70-130*			
LCS Dup (P8L0504-BSD1)				Prepared & Analyzed: 12/04/18						
C6-C12	816	25.0	mg/kg wet	1000		81.6	75-125	7.18	20	
>C12-C28	1100	25.0	"	1000		110	75-125	1.60	20	
Surrogate: 1-Chlorooctane	*128*		*"*	*100*		*128*	*70-130*			
Surrogate: o-Terphenyl	*51.0*		*"*	*50.0*		*102*	*70-130*			

Total Petroleum Hydrocarbons C6-C35 by EPA Method 8015M - Quality Control

Permian Basin Environmental Lab, L.P.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch P8L0504 - TX 1005										
Duplicate (P8L0504-DUP1)	**Source: 8L01001-86**			Prepared & Analyzed: 12/04/18						
C6-C12	17.2	27.2	mg/kg dry		21.6			22.3	20	
>C12-C28	29.6	27.2	"		33.6			12.8	20	
Surrogate: 1-Chlorooctane	*135*		*"*	*109*		*124*	*70-130*			
Surrogate: o-Terphenyl	*74.3*		*"*	*54.3*		*137*	*70-130*			
Batch P8L0507 - TX 1005										
Blank (P8L0507-BLK1)				Prepared & Analyzed: 12/04/18						
C6-C12	ND	25.0	mg/kg wet							
>C12-C28	ND	25.0	"							
>C28-C35	ND	25.0	"							
Surrogate: 1-Chlorooctane	*117*		*"*	*100*		*117*	*70-130*			
Surrogate: o-Terphenyl	*63.0*		*"*	*50.0*		*126*	*70-130*			
LCS (P8L0507-BS1)				Prepared & Analyzed: 12/04/18						
C6-C12	926	25.0	mg/kg wet	1000		92.6	75-125			
>C12-C28	1090	25.0	"	1000		109	75-125			
Surrogate: 1-Chlorooctane	*105*		*"*	*100*		*105*	*70-130*			
Surrogate: o-Terphenyl	*51.8*		*"*	*50.0*		*104*	*70-130*			
LCS Dup (P8L0507-BSD1)				Prepared & Analyzed: 12/04/18						
C6-C12	976	25.0	mg/kg wet	1000		97.6	75-125	5.34	20	
>C12-C28	1150	25.0	"	1000		115	75-125	5.85	20	
Surrogate: 1-Chlorooctane	*126*		*"*	*100*		*126*	*70-130*			
Surrogate: o-Terphenyl	*58.4*		*"*	*50.0*		*117*	*70-130*			
Duplicate (P8L0507-DUP1)	**Source: 8L01001-74**			Prepared & Analyzed: 12/04/18						
C6-C12	1970	140	mg/kg dry		1980			0.700	20	
>C12-C28	5080	140	"		5250			3.23	20	
Surrogate: 1-Chlorooctane	*112*		*"*	*112*		*100*	*70-130*			
Surrogate: o-Terphenyl	*57.7*		*"*	*56.2*		*103*	*70-130*			

Total Petroleum Hydrocarbons C6-C35 by EPA Method 8015M - Quality Control

Permian Basin Environmental Lab, L.P.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch P8L0509 - TX 1005										
Blank (P8L0509-BLK1)				Prepared: 12/04/18 Analyzed: 12/05/18						
C6-C12	ND	25.0	mg/kg wet							
>C12-C28	ND	25.0	"							
>C28-C35	ND	25.0	"							
Surrogate: 1-Chlorooctane	*104*		*"*	*100*		*104*	*70-130*			
Surrogate: o-Terphenyl	*57.7*		*"*	*50.0*		*115*	*70-130*			
LCS (P8L0509-BS1)				Prepared & Analyzed: 12/04/18						
C6-C12	1030	25.0	mg/kg wet	1000		103	75-125			
>C12-C28	1100	25.0	"	1000		110	75-125			
Surrogate: 1-Chlorooctane	*117*		*"*	*100*		*117*	*70-130*			
Surrogate: o-Terphenyl	*53.9*		*"*	*50.0*		*108*	*70-130*			
LCS Dup (P8L0509-BSD1)				Prepared: 12/04/18 Analyzed: 12/05/18						
C6-C12	985	25.0	mg/kg wet	1000		98.5	75-125	4.64	20	
>C12-C28	1090	25.0	"	1000		109	75-125	0.756	20	
Surrogate: 1-Chlorooctane	*115*		*"*	*100*		*115*	*70-130*			
Surrogate: o-Terphenyl	*52.6*		*"*	*50.0*		*105*	*70-130*			
Duplicate (P8L0509-DUP1)		**Source: 8L01009-07**		Prepared: 12/04/18 Analyzed: 12/05/18						
C6-C12	16.8	27.8	mg/kg dry		21.9			26.0	20	
>C12-C28	179	27.8	"		241			29.7	20	
Surrogate: 1-Chlorooctane	*123*		*"*	*111*		*110*	*70-130*			
Surrogate: o-Terphenyl	*68.6*		*"*	*55.6*		*123*	*70-130*			

Notes and Definitions

S-GC	Surrogate recovery outside of control limits. The data was accepted based on valid recovery of the remaining surrogate.
R3	The RPD exceeded the acceptance limit due to sample matrix effects.
QM-07	The spike recovery was outside acceptance limits for the MS and/or MSD. The batch was accepted based on acceptable LCS recovery.
BULK	Samples received in Bulk soil containers
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
LCS	Laboratory Control Spike
MS	Matrix Spike
Dup	Duplicate

Report Approved By: Brent Barron Date: 12/14/2018

Brent Barron, Laboratory Director/Technical Director

Nº 0464

CHAIN-OF-CUSTOD

Larson & Associates, Inc.
Environmental Consultants
507 N. Marienfeld, Ste. 200
Midland, TX 79701
432-687-0901

DATE: 11/30/18 PAGE 1 OF 7

PO#: LAB WORK ORDER#:

PROJECT LOCATION OR NAME: Lea Unit #8D (Legac

LAI PROJECT #: 18-0138-03 COLLECTOR: KO/DS

Data Reported to:

TRRP report? ☐ Yes ☒ No

TIME ZONE: Time zone/State: MST

S=SOIL W=WATER A=AIR P=PAINT SL=SLUDGE OT=OTHER

SL01001

PRESERVATION: HCl, HNO_3, H_2SO_4 ☐ NaOH ☐, ICE, UNPRESERVED

ANALYSES: BTEX ☒ MTBE ☐; TRPH 418.1 ☐; TPH 1005 ☐ TPH 1006 ☐; GASOLINE MOD 8015 ☒; DIESEL - MOD 8015 ☒; OIL - MOD 8015 ☒; VOC 8260 ☐; SVOC 8270 ☐ PAH 8270 ☐ HOLDPAH ☐; 8081 PESTICIDES ☐ 8151 HERBICIDES ☐; 8082 PCBS ☐; TBLP - METALS (RCRA) ☐ TCLP VOC ☐; TCLP - PEST ☐ HERB ☐ Semi-VOC ☐; TOTAL METALS (RCRA) ☐ OTHER LIST ☐; LEAD - TOTAL ☐ D.W. 200.8 ☐ TCLP ☐; RCI ☐ TOX ☐ FLASHPOINT ☐; TDS ☐ TSS ☐ % MOISTURE ☐ CYANIDE ☐; pH ☐ HEXAVALENT CHROMIUM ☐; EXPLOSIVES ☐ PECHLORATE ☐; CHLORIDE ☐ ANIONS ☐ ALKALINITY ☐; M300 ☒

Field Sample I.D.	Lab #	Date	Time	Matrix	# of Containers	HCl	HNO_3	H_2SO_4 ☐ NaOH ☐	ICE	UNPRESERVED	BTEX ☒ MTBE ☐	TRPH 418.1 ☐	TPH 1005 ☐ TPH 1006 ☐	GASOLINE MOD 8015 ☒	DIESEL - MOD 8015 ☒	OIL - MOD 8015 ☒	M300 ☒	FIELD NOTES
DP-11 (0'-1')		11/28/18	14:18	S	1				X		X	X	X	X			X	Analyze
(1'-2')			14:21															Chloride
(2'-3')			14:25															until delineation
(3'-4')			14:27															limit is
(4'-6')			14:31															reached
(6'-8')			14:36															(600 mg/kg)
(8'-10')			14:39															
(10'-11')		"	14:44	"														Analyze
DP-9 (0'-1')		11/28/18	14:50	S					X		X	X	X	X			X	TPH
(1'-2')			14:54															until delineation
(2'-3')			15:01															limit is
(3'-4')			15:04															reached
(4'-6')			15:06															(2,500 mg/kg)
(6'-8')			15:08															
(8'-10')		"	15:11	"	"													
TOTAL																		

RELINQUISHED BY:(Signature) DATE/TIME 11/30/18 1:30 RECEIVED BY: (Signature)

RELINQUISHED BY:(Signature) DATE/TIME RECEIVED BY: (Signature)

RELINQUISHED BY:(Signature) DATE/TIME 11-30-18 1:30 RECEIVED BY: (Signature) Carolyn Berry

LABORATORY: PBEL

TURN AROUND TIME
NORMAL ☒
1 DAY ☐
2 DAY ☐
OTHER ☐

LABORATORY USE ONLY:
RECEIVING TEMP: 12-2.2 THERM#: 11
CUSTODY SEALS - ☐ BROKEN ☐ INTACT ☐ NOT USED
☐ CARRIER BILL #
☐ HAND DELIVERED

Nº 0465

CHAIN-OF-CUSTOD

Page 55 of 60

Larson & Associates, Inc.
Environmental Consultants

507 N. Marienfeld, Ste. 200
Midland, TX 79701
432-687-0901

DATE: 11/30/2018 PAGE 2 OF 7

PO#: _____ LAB WORK ORDER#: _____

PROJECT LOCATION OR NAME: Lea Unit # 8D (Legacy

LAI PROJECT #: 18-0138-03 COLLECTOR: KO/DS

Data Reported to:

TRRP report? ☐ Yes ☒ No

TIME ZONE: Time zone/State: MST

S=SOIL W=WATER A=AIR P=PAINT SL=SLUDGE OT=OTHER

PRESERVATION: HCl | HNO_3 | H_2SO_4 ☐ NaOH ☐ | ICE | UNPRESSERVED

ANALYSES: BTEX ☒ MTBE ☐ | TRPH 418.1 ☐ | TPH 1005 ☐ TPH 1006 ☐ | GASOLINE MOD 8015 ☒ | DIESEL - MOD 8015 ☒ ORO ☑ | OIL - MOD 8015 ☒ | VOC 8260 ☐ | SVOC 8270 ☐ PAH 8270 ☐ HOLDPAH ☐ | 8081 PESTICIDES ☐ 8151 HERBICIDES ☐ | 8082 PCBS ☐ | TBLP - METALS (RCRA) ☐ TCLP VOC ☐ | TCLP - PEST ☐ HERB ☐ SemI-VOC ☐ | TOTAL METALS (RCRA) ☐ OTHER LIST ☐ | LEAD - TOTAL ☐ D.W. 200.8 ☐ TCLP ☐ | RCI ☐ TOX ☐ FLASHPOINT ☐ | TDS ☐ TSS ☐ % MOISTURE ☐ CYANIDE ☐ | pH ☐ HEXAVALENT CHROMIUM ☐ | EXPLOSIVES ☐ PECHLORATE ☐ | CHLORIDE ☑ ANIONS ☐ ALKALINITY ☐ | M300 ☒

Field Sample I.D.	Lab #	Date	Time	Matrix	# of Containers	HCl	HNO_3	H_2SO_4 NaOH	ICE	UNPRESSERVED	FIELD NOTES
DP-9 (10'-11')		11/28/2018	15:13	S	1				X		Analyze
DP-10 (0'-1')		11/28/2018	15:16	S					X		Chloride
(1'-2')		"	15:17	"					"		until
(2'-3')		"	15:20	"					"		delineation
(3'-4')		"	15:22	"					"		limit is
(4'-6')		"	15:24	"					"		reached
DP-12 (0'-1')		11/28/18	15:26	S					X		(600 mg/kg)
(1'-2')		"	15:28	"					"		
(2'-3')		"	15:30	"					"		Analyze
(3'-4')		"	15:32	"					"		TPH
(4'-6')		"	15:34	"					"		until
(6-8')		"	15:37	"					"		delineation
(8-10')		"	15:40	"					"		limit is
(10'-12')		"	15:43	"					"		reached
DP-7 (0'-1')		11/29/18	11:13	S					X		(2,500 mg/kg)
TOTAL											

RELINQUISHED BY:(Signature) Rachel Owen DATE/TIME 11/30/18 1:30 RECEIVED BY: (Signature)

RELINQUISHED BY:(Signature) DATE/TIME RECEIVED BY: (Signature)

RELINQUISHED BY:(Signature) DATE/TIME 11/30/18 1:30 RECEIVED BY: (Signature) Celina Barron

LABORATORY: PBEL

TURN AROUND TIME
NORMAL ☒
1 DAY ☐
2 DAY ☐
OTHER ☐

LABORATORY USE ONLY:
RECEIVING TEMP: 1.2-2.2 THERM#: L1
CUSTODY SEALS - ☐ BROKEN ☐ INTACT ☐ NOT USED
☐ CARRIER BILL # _____
☐ HAND DELIVERED

Nº 0466

CHAIN-OF-CUSTODY

Larson & Associates, Inc.
Environmental Consultants
507 N. Marienfeld, Ste. 200
Midland, TX 79701
432-687-0901

DATE: 11/30/2018 PAGE 3 OF 7

PO#: LAB WORK ORDER#:

PROJECT LOCATION OR NAME: Legacy Lea Unit 8D

LAI PROJECT #: 18-0138-03 COLLECTOR: KO/DS

Data Reported to:

TRRP report? ☐ Yes ☒ No

TIME ZONE: Time zone/State: MST

S=SOIL W=WATER A=AIR P=PAINT SL=SLUDGE OT=OTHER

Field Sample I.D.	Lab #	Date	Time	Matrix	# of Containers	PRESERVATION: HCl	HNO_3	H_2SO_4 ☐ NaOH ☐	ICE	UNPRESERVED	ANALYSES: BTEX ☐ MTBE ☐	TRPH 418.1 ☐	TPH 1005 ☐ TPH 1006 ☐	GASOLINE MOD 8015 ☑	DIESEL - MOD 8015 ☑	OIL - MOD 8015 ☐	ORO ☑	VOC 8260 ☐	SVOC 8270 ☐	PAH 8270 ☐	HOLDPAH ☐	8081 PESTICIDES ☐	8151 HERBICIDES ☐	8082 PCBS ☐	TCLP - METALS (RCRA) ☐	TCLP VOC ☐	TCLP - PEST ☐	HERB ☐	Semi-VOC ☐	TOTAL METALS (RCRA) ☐	OTHER LIST ☐	LEAD - TOTAL ☐	D.W. 200.8 ☐	TCLP ☐	RCI ☐	TOX ☐	FLASHPOINT ☐	TDS ☐	TSS ☐	% MOISTURE ☐	CYANIDE ☐	pH ☐	HEXAVALENT CHROMIUM ☐	EXPLOSIVES ☐	PECHLORATE ☐	CHLORIDE ☑	ANIONS ☐	ALKALINITY ☐	M 300	FIELD NOTES
DP-7 (1'-2')		11/29/18	11:15	S	1				X		X		X	X	X																											X				Analyze
(2'-3')		11/29/18	11:17																																										Chloride
(3'-4')			11:18																																									Until
(4'-6')			11:20																																										delineation
(6'-8')			11:22																																										limit is
(8'-10')			11:24																																										reached
~~(10'-12')~~																																													(600 mg/kg)
(10-11')		11/29/18	11:26	S	1				X																																				
DP-4 (0'-1')		11/29/18	11:27	S					X		X																																		Analyze
(1'-2')			11:28																																										~~Chloride~~ TPH
(2'-3')			11:29																																										Until
(3'-4')			11:31																																										delineation
(4'-6')			11:32																																										limit is
(6'-8')			11:35																																										reached
(8'-10')			11:36																																										(2500 mg/kg)
TOTAL																																													

RELINQUISHED BY:(Signature) Rachel Owen DATE/TIME 11-30-18/1:30 RECEIVED BY: (Signature)

RELINQUISHED BY:(Signature) DATE/TIME RECEIVED BY: (Signature)

RELINQUISHED BY:(Signature) DATE/TIME 11-30-18/1:30 RECEIVED BY: (Signature) Carolyn Bush

LABORATORY: PBEL

TURN AROUND TIME
NORMAL ☒
1 DAY ☐
2 DAY ☐
OTHER ☐

LABORATORY USE ONLY:
RECEIVING TEMP: 1.2-2.2 THERM#: L1
CUSTODY SEALS - ☐ BROKEN ☐ INTACT ☐ NOT USED
☐ CARRIER BILL #
☐ HAND DELIVERED

CHAIN-OF-CUSTODY

Larson & Associates, Inc.
Environmental Consultants
507 N. Marienfeld, Ste. 200
Midland, TX 79701
432-687-0901

DATE: 11/30/18 PAGE 4 OF 7

PO#: LAB WORK ORDER#:

PROJECT LOCATION OR NAME: Legacy ~~Unit~~ Lea Unit 8D

LAI PROJECT #: 18-0138-03 COLLECTOR: KOLDS

Data Reported to:

TRRP report? ☐ Yes ☒ No

TIME ZONE: Time zone/State: MST

S=SOIL W=WATER A=AIR P=PAINT SL=SLUDGE OT=OTHER

PRESERVATION: HCl, HNO_3, H_2SO_4 ☐ NaOH ☐, ICE, UNPRESERVED

ANALYSES: BTEX ☐ MTBE ☐ | TRPH 418.1 ☐ | TPH 1005 ☐ TPH 1006 ☐ | GASOLINE MOD 8015 ☐ | DIESEL - MOD 8015 ☒ DRO ☒ | OIL - MOD 8015 ☒ | VOC 8260 ☐ | SVOC 8270 ☐ | PAH 8270 ☐ HOLDPAH ☐ | 8081 PESTICIDES ☐ 8151 HERBICIDES ☐ | 8082 PCBS ☐ | TBLP - METALS (RCRA) ☐ TCLP VOC ☐ | TCLP - PEST ☐ HERB ☐ Semi-VOC ☐ | TOTAL METALS (RCRA) ☐ OTHER LIST ☐ | LEAD - TOTAL ☐ D.W. 200.8 ☐ TCLP ☐ | RCI ☐ TOX ☐ FLASHPOINT ☐ | TDS ☐ TSS ☐ % MOISTURE ☐ CYANIDE ☐ | pH ☐ HEXAVALENT CHROMIUM ☐ | EXPLOSIVES ☐ PECHLORATE ☐ | CHLORIDE ☒ ANIONS ☐ ALKALINITY ☐ | M 300

Field Sample I.D.	Lab #	Date	Time	Matrix	# of Containers	HCl	HNO_3	H_2SO_4 ☐ NaOH ☐	ICE	UNPRESERVED	FIELD NOTES
DP-4 (10'-12')		11/29/18	11:38	S	1				X		Analyze Chloride until delineation limit is reached (600 mg/kg)
DP-2 (0'-1')		11/29/18	12:20	S					X	X	
(1'-2')			12:22								
(2'-3')			12:24								
(3'-4')			12:27								
(4'-6')			12:29								
(6'-8')			12:32								
(8'-10')			12:35								
(10'-12')			12:38								Analyze TPH until delineation limit is reached (2,500 mg/kg)
DP-1 (0'-1')		11/29/18	12:55	S					X	X	
(1'-2')		11/29/18	12:57								
(2'-3')			13:00								
(3'-4')			13:01								
(4'-6')			13:03								
(6'-8')			13:06								
TOTAL											

RELINQUISHED BY:(Signature) DATE/TIME 11/30/18 1:30 RECEIVED BY: (Signature)

RELINQUISHED BY:(Signature) DATE/TIME RECEIVED BY: (Signature)

RELINQUISHED BY:(Signature) DATE/TIME 11/30/18 1:30 RECEIVED BY: (Signature)

LABORATORY: PBEL

TURN AROUND TIME
NORMAL ☒
1 DAY ☐
2 DAY ☐
OTHER ☐

LABORATORY USE ONLY:
RECEIVING TEMP: 12-2-2 THERM#: L1
CUSTODY SEALS - ☐ BROKEN ☐ INTACT ☐ NOT USED
☐ CARRIER BILL #
☐ HAND DELIVERED

CHAIN-OF-CUSTODY

Larson & Associates, Inc.
Environmental Consultants
507 N. Marienfeld, Ste. 200
Midland, TX 79701
432-687-0901

DATE: 11/30/2018 PAGE 5 OF 7

PO#: LAB WORK ORDER#:

PROJECT LOCATION OR NAME: Legacy Lea Unit 8D

LAI PROJECT #: 18-0138-[redacted]03 COLLECTOR: KO/DS

Data Reported to:

TRRP report? ☐ Yes ☒ No

TIME ZONE: Time zone/State: MST

S=SOIL W=WATER A=AIR P=PAINT SL=SLUDGE OT=OTHER

PRESERVATION: HCl | HNO_3 | H_2SO_4 ☐ NaOH ☐ | ICE | UNPRESSERVED

ANALYSES: BTEX ☐ MTBE ☐ | TRPH 418.1 ☐ | TPH 1005 ☐ TPH 1006 ☐ | GASOLINE MOD 8015 ☑ | DIESEL - MOD 8015 ☑ DRO ☑ | OIL - MOD 8015 ☑ | VOC 8260 ☐ | SVOC 8270 ☐ PAH 8270 ☐ HOLDPAH ☐ | 8081 PESTICIDES ☐ 8151 HERBICIDES ☐ | 8082 PCBS ☐ | TCLP - METALS (RCRA) ☐ TCLP VOC ☐ | TCLP - PEST ☐ HERB ☐ Semi-VOC ☐ | TOTAL METALS (RCRA) ☐ OTHER LIST ☐ | LEAD - TOTAL ☐ D.W. 200.8 ☐ TCLP ☐ | RCI ☐ TOX ☐ FLASHPOINT ☐ | TDS ☐ TSS ☐ % MOISTURE ☐ CYANIDE ☐ | pH ☐ HEXAVALENT CHROMIUM ☐ | EXPLOSIVES ☐ PECHLORATE ☐ | CHLORIDE ☑ ANIONS ☐ ALKALINITY ☐

Field Sample I.D.	Lab #	Date	Time	Matrix	# of Containers	HCl	HNO_3	H_2SO_4 ☐ NaOH ☐	ICE	UNPRESSERVED	ANALYSES	FIELD NOTES
DP-1 (8'-10')		11/29/18	13:08	S	1				X		TPH 1005 ☐ TPH 1006 ☐ GASOLINE MOD 8015 ☑ DIESEL - MOD 8015 ☑ DRO ☑ OIL - MOD 8015 ☑ TCLP - METALS (RCRA) ☐ TCLP VOC ☐ TCLP - PEST ☐ HERB ☐ Semi-VOC ☐ TOTAL METALS (RCRA) ☐ OTHER LIST ☐ LEAD - TOTAL ☐ D.W. 200.8 ☐ TCLP ☐ RCI ☐ TOX ☐ FLASHPOINT ☐ TDS ☐ TSS ☐ % MOISTURE ☐ CYANIDE ☐ pH ☐ HEXAVALENT CHROMIUM ☐ EXPLOSIVES ☐ PECHLORATE ☐ CHLORIDE ☑ ANIONS ☐ ALKALINITY ☐	Analyze
(10'-11')		〃	13:09	〃	〃				〃		〃	Chloride
DP-3 (0'-1')		11/29/18	13:10	S					X		BTEX ☐ MTBE ☐ X	until
(1'-2')			13:11									delineation
(2'-3')			13:12									limit is
(3'-4')			13:14									reached
(4'-6')			13:15									(600 mg/kg)
(6'-8')			13:16									
(8'-10')			13:17									Analyze
(10'-11')		〃	13:18	〃	〃				〃		〃	TPH
DP-8 (0'-1')		11/29/18	14:18	S					X		BTEX ☐ MTBE ☐ X	until
(1'-2')			14:20									delineation
(2'-3')			14:21									limit is
(3'-4')			14:23									reached
(4'-6')		〃	14:25	〃	〃				〃		〃	(2,500 mg/kg)
TOTAL												

RELINQUISHED BY:(Signature) [signature] DATE/TIME 11/30/18 1:30 RECEIVED BY: (Signature)

RELINQUISHED BY:(Signature) DATE/TIME RECEIVED BY: (Signature)

RELINQUISHED BY:(Signature) DATE/TIME 11-30-18 1:30 RECEIVED BY: (Signature) Caitlin Bemer

LABORATORY: PBEL

TURN AROUND TIME
NORMAL ☒
1 DAY ☐
2 DAY ☐
OTHER ☐

LABORATORY USE ONLY:
RECEIVING TEMP: 1.2-0.2 THERM#: L1
CUSTODY SEALS - ☐ BROKEN ☐ INTACT ☐ NOT USED
☐ CARRIER BILL # _____
☐ HAND DELIVERED

№ 0469

CHAIN-OF-CUSTODY

Larson & Associates, Inc.
Environmental Consultants
507 N. Marienfeld, Ste. 200
Midland, TX 79701
432-687-0901

DATE: 11/30/2018 PAGE 6 OF 7

PO#: LAB WORK ORDER#:

PROJECT LOCATION OR NAME: Legacy Lea Unit 8D

LAI PROJECT #: 18-0138-03 COLLECTOR: KO/DS

Data Reported to:

TRRP report? ☐ Yes ☒ No

TIME ZONE: Time zone/State: MST

S=SOIL W=WATER A=AIR P=PAINT SL=SLUDGE OT=OTHER

PRESERVATION: HCl, HNO_3, H_2SO_4 ☐ NaOH ☐, ICE, UNPRESERVED

ANALYSES: BTEX ☐ MTBE ☐ | TRPH 418.1 ☐ | TPH 1005 ☐ TPH 1006 ☐ | GASOLINE MOD 8015 ☑ | DIESEL - MOD 8015 ☑ OR6 ☑ | OIL - MOD 8015 ☑ | VOC 8260 ☐ | SVOC 8270 ☐ PAH 8270 ☐ HOLDPAH ☐ | 8081 PESTICIDES ☐ 8151 HERBICIDES ☐ | 8082 PCBS ☐ | TBLP - METALS (RCRA) ☐ TCLP VOC ☐ | TCLP - PEST ☐ HERB ☐ Semi-VOC ☐ | TOTAL METALS (RCRA) ☐ OTHER LIST ☐ | LEAD - TOTAL ☐ D.W. 200.8 ☐ TCLP ☐ | RCI ☐ TOX ☐ FLASHPOINT ☐ | TDS ☐ TSS ☐ % MOISTURE ☐ CYANIDE ☐ | pH ☐ HEXAVALENT CHROMIUM ☐ | EXPLOSIVES ☐ PECHLORATE ☐ | CHLORIDE ☒ ANIONS ☐ ALKALINITY ☐ | M 300.0

Field Sample I.D.	Lab #	Date	Time	Matrix	# of Containers	HCl	HNO_3	H_2SO_4 ☐ NaOH ☐	ICE	UNPRESERVED	BTEX ☐ MTBE ☐	TRPH 418.1 ☐	TPH 1005 ☐ TPH 1006 ☐	GASOLINE MOD 8015 ☑	DIESEL - MOD 8015 ☑ OR6 ☑	OIL - MOD 8015 ☑	VOC 8260 ☐	SVOC 8270 ☐ PAH 8270 ☐ HOLDPAH ☐	8081 PESTICIDES ☐ 8151 HERBICIDES ☐	8082 PCBS ☐	TBLP - METALS (RCRA) ☐ TCLP VOC ☐	TCLP - PEST ☐ HERB ☐ Semi-VOC ☐	TOTAL METALS (RCRA) ☐ OTHER LIST ☐	LEAD - TOTAL ☐ D.W. 200.8 ☐ TCLP ☐	RCI ☐ TOX ☐ FLASHPOINT ☐	TDS ☐ TSS ☐ % MOISTURE ☐ CYANIDE ☐	pH ☐ HEXAVALENT CHROMIUM ☐	EXPLOSIVES ☐ PECHLORATE ☐	CHLORIDE ☒ ANIONS ☐ ALKALINITY ☐	M 300.0	FIELD NOTES
DP-8 (6'-8')		11/29/18	14:26	S	1				X			X	X	X															X		Analyze Chloride until delineation limits reached (600 mg/kg)
(8'-10')			14:32																												
(10'-12')			14:34																												
DP-6 (0'-1')			14:50								X																				
(1'-2')			14:52																												
(2'-3')			14:54																												
(3-4')			14:56																												
(4'-6')			14:58																												
(6-8')			15:00																												Analyze TPH until delineation limits reached (2,500 mg/kg)
(8'-10')			15:02																												
(10'-11')			15:04																												
DP-5 (0'-1')			15:07								X																				
(1'-2')			15:08																												
(2'-3')			15:09																												
(3'-4')			15:10																												
TOTAL																															

RELINQUISHED BY:(Signature) Rachel Owen DATE/TIME 11.30.18/1:30 RECEIVED BY: (Signature)

RELINQUISHED BY:(Signature) DATE/TIME RECEIVED BY: (Signature)

RELINQUISHED BY:(Signature) DATE/TIME 11-30-18/1:30 RECEIVED BY: (Signature) Cassie Sellman

LABORATORY: PBEL

TURN AROUND TIME
NORMAL ☒
1 DAY ☐
2 DAY ☐
OTHER ☐

LABORATORY USE ONLY:
RECEIVING TEMP: 1.2-2.2 THERM#: 21
CUSTODY SEALS - ☐ BROKEN ☐ INTACT ☐ NOT USED
☐ CARRIER BILL # ☐ HAND DELIVERED

№ 0470

CHAIN-OF-CUSTODY

Larson & Associates, Inc.
Environmental Consultants

507 N. Marienfeld, Ste. 200
Midland, TX 79701
432-687-0901

Data Reported to:

DATE: 11/30/2018 PAGE 7 OF 7

PO#:

LAB WORK ORDER#:

PROJECT LOCATION OR NAME: Legacy Lea Unit 8D

LAI PROJECT #: 18-0138-03 COLLECTOR: KO/DS

TRRP report? ☐ Yes ☒ No

TIME ZONE: Time zone/State: MST

S=SOIL P=PAINT
W=WATER SL=SLUDGE
A=AIR OT=OTHER

Field Sample I.D.	Lab #	Date	Time	Matrix	# of Containers	HCl	HNO_3	H_2SO_4 ☐ NaOH ☐	ICE	UNPRESSERVED	BTEX ☒ MTBE ☐	TRPH 418.1 ☐ TPH 1005 ☐ TPH 1006 ☐	GASOLINE MOD 8015 ☒ GRO	DIESEL - MOD 8015 ☒	OIL - MOD 8015 ☒ ORO	VOC 8260 ☐	SVOC 8270 ☐ PAH 8270 ☐ HOLDPAH ☐	8081 PESTICIDES ☐ 8151 HERBICIDES ☐	8082 PCBS ☐	TBLP - METALS (RCRA) ☐ TCLP VOC ☐	TCLP - PEST ☐ HERB ☐ Semi-VOC ☐	TOTAL METALS (RCRA) ☐ OTHER LIST ☐	LEAD - TOTAL ☐ D.W. 200.8 ☐ TCLP ☐	RCI ☐ TOX ☐ FLASHPOINT ☐	TDS ☐ TSS ☐ % MOISTURE ☐ CYANIDE ☐	pH ☐ HEXAVALENT CHROMIUM ☐	EXPLOSIVES ☐ PECHLORATE ☐	CHLORIDE ☒ ANIONS ☐ ALKALINITY ☐ M300		
DP-5 (4'-6')		11/29/18	15:12	S	1				X				X	X	X													X		
(6'-8')		⊥	15:14	⊥	1				⊥				⊥	⊥	⊥													X		

TOTAL

FIELD NOTES:
Analyze
Chloride
until
Delineation
limit is
reached
(600 mg/kg)

Analyze
TPH
until
Delineation
limit is
reached
(2,500 mg/kg)

RELINQUISHED BY:(Signature)	DATE/TIME	RECEIVED BY: (Signature)
[signature]	11/30/18 1:30	
RELINQUISHED BY:(Signature)	DATE/TIME	RECEIVED BY: (Signature)
RELINQUISHED BY:(Signature)	DATE/TIME	RECEIVED BY: (Signature)
	11/30/18 1:30	Carson Barron

LABDRATORY: PBEL

TURN AROUND TIME
NORMAL ☒
1 DAY ☐
2 DAY ☐
OTHER ☐

LABORATORY USE ONLY:
RECEIVING TEMP: 1.2-2.2 THERM#: 1
CUSTODY SEALS - ☐ BROKEN ☐ INTACT ☐ NOT USED
☐ CARRIER BILL #
☐ HAND DELIVERED

PERMIAN BASIN
ENVIRONMENTAL LAB, LP
1400 Rankin Hwy
Midland, TX 79701

PBELAB

Revised Analytical Report

Prepared for:

Mark Larson

Larson & Associates, Inc.

P.O. Box 50685

Midland, TX 79710

Project: Lea Unit #8D (Legacy)

Project Number: 18-0138-03

Location:

Lab Order Number: 9A23003

NELAP ACCREDITED TNI LABORATORY

NELAP/TCEQ # T104704516-18-9

Report Date: 03/01/19

Larson & Associates, Inc.
P.O. Box 50685
Midland TX, 79710

Project: Lea Unit #8D (Legacy)
Project Number: 18-0138-03
Project Manager: Mark Larson

Fax: (432) 687-0456

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
DP-12.1 (3.5')	9A23003-01	Soil	01/22/19 13:36	01-23-2019 08:42
DP-12.2 (3.5')	9A23003-02	Soil	01/22/19 13:38	01-23-2019 08:42
DP-12.3 (3.5')	9A23003-03	Soil	01/22/19 13:39	01-23-2019 08:42
DP-12.4 (3.5')	9A23003-04	Soil	01/22/19 13:40	01-23-2019 08:42
DP-12.5 (7')	9A23003-05	Soil	01/22/19 13:41	01-23-2019 08:42
DP-8.1 (3.5')	9A23003-06	Soil	01/22/19 13:50	01-23-2019 08:42
DP-8.2 (3.5')	9A23003-07	Soil	01/22/19 13:51	01-23-2019 08:42
DP-8.3 (3.5')	9A23003-08	Soil	01/22/19 13:52	01-23-2019 08:42
DP-8.4 (3.5')	9A23003-09	Soil	01/22/19 13:54	01-23-2019 08:42
DP-8.5 (7')	9A23003-10	Soil	01/22/19 13:56	01-23-2019 08:42
DP-4.1 (0.75')	9A23003-11	Soil	01/22/19 14:08	01-23-2019 08:42
DP-4.2 (0.75')	9A23003-12	Soil	01/22/19 14:09	01-23-2019 08:42
DP-4.3 (0.75)	9A23003-13	Soil	01/22/19 14:10	01-23-2019 08:42
DP-4.4 (0.75')	9A23003-14	Soil	01/22/19 14:11	01-23-2019 08:42
DP-4.5 (1.5')	9A23003-15	Soil	01/22/19 14:12	01-23-2019 08:42
DP-2.1 (3')	9A23003-16	Soil	01/22/19 14:19	01-23-2019 08:42
DP-2.2 (3')	9A23003-17	Soil	01/22/19 14:20	01-23-2019 08:42
DP-2.3 (3')	9A23003-18	Soil	01/22/19 14:21	01-23-2019 08:42
DP-2.4 (3')	9A23003-19	Soil	01/22/19 14:22	01-23-2019 08:42
DP-2.5 (6')	9A23003-20	Soil	01/22/19 14:25	01-23-2019 08:42
DP-9.1 (1.5')	9A23003-21	Soil	01/22/19 14:59	01-23-2019 08:42
DP-9.2 (1.5')	9A23003-22	Soil	01/22/19 15:01	01-23-2019 08:42
DP-9.3 (1.5')	9A23003-23	Soil	01/22/19 15:02	01-23-2019 08:42
DP-9.4 (1.5')	9A23003-24	Soil	01/22/19 15:03	01-23-2019 08:42
DP-9.5 (3')	9A23003-25	Soil	01/22/19 15:09	01-23-2019 08:42
DP-3.1 (2')	9A23003-26	Soil	01/22/19 15:39	01-23-2019 08:42
DP-3.2 (2')	9A23003-27	Soil	01/22/19 15:40	01-23-2019 08:42
DP-3.3 (2')	9A23003-28	Soil	01/22/19 15:41	01-23-2019 08:42
DP-3.4 (2')	9A23003-29	Soil	01/22/19 15:43	01-23-2019 08:42
DP-3.5 (4')	9A23003-30	Soil	01/22/19 15:45	01-23-2019 08:42
DP-7.1 (0.75')	9A23003-31	Soil	01/22/19 15:22	01-23-2019 08:42
DP-7.2 (0.75')	9A23003-32	Soil	01/22/19 15:24	01-23-2019 08:42
DP-7.3 (0.75')	9A23003-33	Soil	01/22/19 15:26	01-23-2019 08:42
DP-7.4 (0.75')	9A23003-34	Soil	01/22/19 15:27	01-23-2019 08:42

Larson & Associates, Inc.
P.O. Box 50685
Midland TX, 79710

Project: Lea Unit #8D (Legacy)
Project Number: 18-0138-03
Project Manager: Mark Larson

Fax: (432) 687-0456

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
DP-7.5 (1.5')	9A23003-35	Soil	01/22/19 15:30	01-23-2019 08:42
DP-6.1 (1')	9A23003-36	Soil	01/22/19 15:33	01-23-2019 08:42
DP-6.2 (1')	9A23003-37	Soil	01/22/19 15:34	01-23-2019 08:42
DP-6.3 (1')	9A23003-38	Soil	01/22/19 15:35	01-23-2019 08:42
DP-6.4 (1')	9A23003-39	Soil	01/22/19 15:36	01-23-2019 08:42
DP-6.5 (2')	9A23003-40	Soil	01/22/19 15:37	01-23-2019 08:42

DP-12.1 (3.5')

9A23003-01 (Soil)

Permian Basin Environmental Lab, L.P.

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Organics by GC									
Benzene	ND	0.0200	mg/kg dry	20	P9A2307	01/23/19	01/29/19	EPA 8021B	
Toluene	ND	0.0200	mg/kg dry	20	P9A2307	01/23/19	01/29/19	EPA 8021B	
Ethylbenzene	ND	0.0200	mg/kg dry	20	P9A2307	01/23/19	01/29/19	EPA 8021B	
Xylene (p/m)	ND	0.0400	mg/kg dry	20	P9A2307	01/23/19	01/29/19	EPA 8021B	
Xylene (o)	ND	0.0200	mg/kg dry	20	P9A2307	01/23/19	01/29/19	EPA 8021B	
Surrogate: 4-Bromofluorobenzene		*86.3 %*	*75-125*		*P9A2307*	*01/23/19*	*01/29/19*	*EPA 8021B*	
Surrogate: 1,4-Difluorobenzene		*91.5 %*	*75-125*		*P9A2307*	*01/23/19*	*01/29/19*	*EPA 8021B*	
General Chemistry Parameters by EPA / Standard Methods									
Chloride	ND	1.00	mg/kg dry	1	P9B2608	02/26/19	02/27/19	EPA 300.0	O-04
% Moisture	ND	0.1	%	1	P9A2412	01/24/19	01/24/19	ASTM D2216	
Total Petroleum Hydrocarbons C6-C35 by EPA Method 8015M									
C6-C12	ND	25.0	mg/kg dry	1	P9A2405	01/23/19	01/24/19	TPH 8015M	
>C12-C28	**149**	25.0	mg/kg dry	1	P9A2405	01/23/19	01/24/19	TPH 8015M	
>C28-C35	**49.3**	25.0	mg/kg dry	1	P9A2405	01/23/19	01/24/19	TPH 8015M	
Surrogate: 1-Chlorooctane		*94.2 %*	*70-130*		*P9A2405*	*01/23/19*	*01/24/19*	*TPH 8015M*	
Surrogate: o-Terphenyl		*104 %*	*70-130*		*P9A2405*	*01/23/19*	*01/24/19*	*TPH 8015M*	
Total Petroleum Hydrocarbon C6-C35	**199**	25.0	mg/kg dry	1	[CALC]	01/23/19	01/24/19	calc	

Larson & Associates, Inc.	Project: Lea Unit #8D (Legacy)	Fax: (432) 687-0456
P.O. Box 50685	Project Number: 18-0138-03	
Midland TX, 79710	Project Manager: Mark Larson	

DP-12.2 (3.5')

9A23003-02 (Soil)

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Permian Basin Environmental Lab, L.P.									
Organics by GC									
Benzene	ND	0.00101	mg/kg dry	1	P9A2307	01/23/19	01/23/19	EPA 8021B	
Toluene	ND	0.00101	mg/kg dry	1	P9A2307	01/23/19	01/23/19	EPA 8021B	
Ethylbenzene	ND	0.00101	mg/kg dry	1	P9A2307	01/23/19	01/23/19	EPA 8021B	
Xylene (p/m)	ND	0.00202	mg/kg dry	1	P9A2307	01/23/19	01/23/19	EPA 8021B	
Xylene (o)	ND	0.00101	mg/kg dry	1	P9A2307	01/23/19	01/23/19	EPA 8021B	
Surrogate: 1,4-Difluorobenzene		*88.0 %*	*75-125*		*P9A2307*	*01/23/19*	*01/23/19*	*EPA 8021B*	
Surrogate: 4-Bromofluorobenzene		*89.8 %*	*75-125*		*P9A2307*	*01/23/19*	*01/23/19*	*EPA 8021B*	
General Chemistry Parameters by EPA / Standard Methods									
Chloride	ND	1.01	mg/kg dry	1	P9B2608	02/26/19	02/27/19	EPA 300.0	O-04
% Moisture	**1.0**	0.1	%	1	P9A2412	01/24/19	01/24/19	ASTM D2216	
Total Petroleum Hydrocarbons C6-C35 by EPA Method 8015M									
C6-C12	ND	25.3	mg/kg dry	1	P9A2407	01/24/19	01/24/19	TPH 8015M	
>C12-C28	ND	25.3	mg/kg dry	1	P9A2407	01/24/19	01/24/19	TPH 8015M	
>C28-C35	ND	25.3	mg/kg dry	1	P9A2407	01/24/19	01/24/19	TPH 8015M	
Surrogate: 1-Chlorooctane		*107 %*	*70-130*		*P9A2407*	*01/24/19*	*01/24/19*	*TPH 8015M*	
Surrogate: o-Terphenyl		*120 %*	*70-130*		*P9A2407*	*01/24/19*	*01/24/19*	*TPH 8015M*	
Total Petroleum Hydrocarbon C6-C35	ND	25.3	mg/kg dry	1	[CALC]	01/24/19	01/24/19	calc	

Larson & Associates, Inc.
P.O. Box 50685
Midland TX, 79710

Project: Lea Unit #8D (Legacy)
Project Number: 18-0138-03
Project Manager: Mark Larson

Fax: (432) 687-0456

DP-12.3 (3.5')

9A23003-03 (Soil)

Permian Basin Environmental Lab, L.P.

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Organics by GC									
Benzene	ND	0.00100	mg/kg dry	1	P9A2307	01/23/19	01/23/19	EPA 8021B	
Toluene	ND	0.00100	mg/kg dry	1	P9A2307	01/23/19	01/23/19	EPA 8021B	
Ethylbenzene	ND	0.00100	mg/kg dry	1	P9A2307	01/23/19	01/23/19	EPA 8021B	
Xylene (p/m)	ND	0.00200	mg/kg dry	1	P9A2307	01/23/19	01/23/19	EPA 8021B	
Xylene (o)	ND	0.00100	mg/kg dry	1	P9A2307	01/23/19	01/23/19	EPA 8021B	
Surrogate: 1,4-Difluorobenzene		*104 %*	*75-125*		*P9A2307*	*01/23/19*	*01/23/19*	*EPA 8021B*	
Surrogate: 4-Bromofluorobenzene		*90.4 %*	*75-125*		*P9A2307*	*01/23/19*	*01/23/19*	*EPA 8021B*	
General Chemistry Parameters by EPA / Standard Methods									
Chloride	**1.03**	1.00	mg/kg dry	1	P9B2608	02/26/19	02/27/19	EPA 300.0	O-04
% Moisture	ND	0.1	%	1	P9A2412	01/24/19	01/24/19	ASTM D2216	
Total Petroleum Hydrocarbons C6-C35 by EPA Method 8015M									
C6-C12	ND	25.0	mg/kg dry	1	P9A2407	01/24/19	01/24/19	TPH 8015M	
>C12-C28	ND	25.0	mg/kg dry	1	P9A2407	01/24/19	01/24/19	TPH 8015M	
>C28-C35	ND	25.0	mg/kg dry	1	P9A2407	01/24/19	01/24/19	TPH 8015M	
Surrogate: 1-Chlorooctane		*112 %*	*70-130*		*P9A2407*	*01/24/19*	*01/24/19*	*TPH 8015M*	
Surrogate: o-Terphenyl		*127 %*	*70-130*		*P9A2407*	*01/24/19*	*01/24/19*	*TPH 8015M*	
Total Petroleum Hydrocarbon C6-C35	ND	25.0	mg/kg dry	1	[CALC]	01/24/19	01/24/19	calc	

Larson & Associates, Inc.
P.O. Box 50685
Midland TX, 79710

Project: Lea Unit #8D (Legacy)
Project Number: 18-0138-03
Project Manager: Mark Larson

Fax: (432) 687-0456

DP-12.4 (3.5')

9A23003-04 (Soil)

Permian Basin Environmental Lab, L.P.

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Organics by GC									
Benzene	ND	0.00100	mg/kg dry	1	P9A2307	01/23/19	01/23/19	EPA 8021B	
Toluene	ND	0.00100	mg/kg dry	1	P9A2307	01/23/19	01/23/19	EPA 8021B	
Ethylbenzene	ND	0.00100	mg/kg dry	1	P9A2307	01/23/19	01/23/19	EPA 8021B	
Xylene (p/m)	ND	0.00200	mg/kg dry	1	P9A2307	01/23/19	01/23/19	EPA 8021B	
Xylene (o)	ND	0.00100	mg/kg dry	1	P9A2307	01/23/19	01/23/19	EPA 8021B	
Surrogate: 1,4-Difluorobenzene		*99.8 %*	*75-125*		*P9A2307*	*01/23/19*	*01/23/19*	*EPA 8021B*	
Surrogate: 4-Bromofluorobenzene		*89.3 %*	*75-125*		*P9A2307*	*01/23/19*	*01/23/19*	*EPA 8021B*	
General Chemistry Parameters by EPA / Standard Methods									
Chloride	**1.57**	1.00	mg/kg dry	1	P9B2608	02/26/19	02/27/19	EPA 300.0	O-04
% Moisture	ND	0.1	%	1	P9A2412	01/24/19	01/24/19	ASTM D2216	
Total Petroleum Hydrocarbons C6-C35 by EPA Method 8015M									
C6-C12	ND	25.0	mg/kg dry	1	P9A2407	01/24/19	01/25/19	TPH 8015M	
>C12-C28	ND	25.0	mg/kg dry	1	P9A2407	01/24/19	01/25/19	TPH 8015M	
>C28-C35	ND	25.0	mg/kg dry	1	P9A2407	01/24/19	01/25/19	TPH 8015M	
Surrogate: 1-Chlorooctane		*110 %*	*70-130*		*P9A2407*	*01/24/19*	*01/25/19*	*TPH 8015M*	
Surrogate: o-Terphenyl		*123 %*	*70-130*		*P9A2407*	*01/24/19*	*01/25/19*	*TPH 8015M*	
Total Petroleum Hydrocarbon C6-C35	ND	25.0	mg/kg dry	1	[CALC]	01/24/19	01/25/19	calc	

Larson & Associates, Inc.	Project: Lea Unit #8D (Legacy)	Fax: (432) 687-0456
P.O. Box 50685	Project Number: 18-0138-03	
Midland TX, 79710	Project Manager: Mark Larson	

DP-12.5 (7')

9A23003-05 (Soil)

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Permian Basin Environmental Lab, L.P.									
Organics by GC									
Benzene	ND	0.00102	mg/kg dry	1	P9A2307	01/23/19	01/23/19	EPA 8021B	
Toluene	**0.00978**	0.00102	mg/kg dry	1	P9A2307	01/23/19	01/23/19	EPA 8021B	
Ethylbenzene	**0.0526**	0.00102	mg/kg dry	1	P9A2307	01/23/19	01/23/19	EPA 8021B	
Xylene (p/m)	**0.0971**	0.00204	mg/kg dry	1	P9A2307	01/23/19	01/23/19	EPA 8021B	
Xylene (o)	**0.0809**	0.00102	mg/kg dry	1	P9A2307	01/23/19	01/23/19	EPA 8021B	
Surrogate: 1,4-Difluorobenzene		*79.7 %*	*75-125*		*P9A2307*	*01/23/19*	*01/23/19*	*EPA 8021B*	
Surrogate: 4-Bromofluorobenzene		*73.8 %*	*75-125*		*P9A2307*	*01/23/19*	*01/23/19*	*EPA 8021B*	*S-09*
General Chemistry Parameters by EPA / Standard Methods									
Chloride	**1.84**	1.02	mg/kg dry	1	P9B2608	02/26/19	02/27/19	EPA 300.0	O-04
% Moisture	**2.0**	0.1	%	1	P9A2412	01/24/19	01/24/19	ASTM D2216	
Total Petroleum Hydrocarbons C6-C35 by EPA Method 8015M									
C6-C12	**37.1**	25.5	mg/kg dry	1	P9A2407	01/24/19	01/25/19	TPH 8015M	
>C12-C28	**380**	25.5	mg/kg dry	1	P9A2407	01/24/19	01/25/19	TPH 8015M	
>C28-C35	**52.6**	25.5	mg/kg dry	1	P9A2407	01/24/19	01/25/19	TPH 8015M	
Surrogate: 1-Chlorooctane		*109 %*	*70-130*		*P9A2407*	*01/24/19*	*01/25/19*	*TPH 8015M*	
Surrogate: o-Terphenyl		*123 %*	*70-130*		*P9A2407*	*01/24/19*	*01/25/19*	*TPH 8015M*	
Total Petroleum Hydrocarbon C6-C35	**470**	25.5	mg/kg dry	1	[CALC]	01/24/19	01/25/19	calc	

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Midland TX, 79710

Project: Lea Unit #8D (Legacy)
Project Number: 18-0138-03
Project Manager: Mark Larson

Fax: (432) 687-0456

DP-8.1 (3.5')

9A23003-06 (Soil)

Permian Basin Environmental Lab, L.P.

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Organics by GC									
Benzene	ND	0.00100	mg/kg dry	1	P9A2307	01/23/19	01/23/19	EPA 8021B	
Toluene	**0.00206**	0.00100	mg/kg dry	1	P9A2307	01/23/19	01/23/19	EPA 8021B	
Ethylbenzene	**0.00127**	0.00100	mg/kg dry	1	P9A2307	01/23/19	01/23/19	EPA 8021B	
Xylene (p/m)	**0.00442**	0.00200	mg/kg dry	1	P9A2307	01/23/19	01/23/19	EPA 8021B	
Xylene (o)	**0.00196**	0.00100	mg/kg dry	1	P9A2307	01/23/19	01/23/19	EPA 8021B	
Surrogate: 1,4-Difluorobenzene		*95.1 %*	*75-125*		*P9A2307*	*01/23/19*	*01/23/19*	*EPA 8021B*	
Surrogate: 4-Bromofluorobenzene		*82.6 %*	*75-125*		*P9A2307*	*01/23/19*	*01/23/19*	*EPA 8021B*	
General Chemistry Parameters by EPA / Standard Methods									
Chloride	**5.83**	1.00	mg/kg dry	1	P9B2608	02/26/19	02/27/19	EPA 300.0	O-04
% Moisture	ND	0.1	%	1	P9A2412	01/24/19	01/24/19	ASTM D2216	
Total Petroleum Hydrocarbons C6-C35 by EPA Method 8015M									
C6-C12	ND	25.0	mg/kg dry	1	P9A2407	01/24/19	01/25/19	TPH 8015M	
>C12-C28	**32.5**	25.0	mg/kg dry	1	P9A2407	01/24/19	01/25/19	TPH 8015M	
>C28-C35	ND	25.0	mg/kg dry	1	P9A2407	01/24/19	01/25/19	TPH 8015M	
Surrogate: 1-Chlorooctane		*127 %*	*70-130*		*P9A2407*	*01/24/19*	*01/25/19*	*TPH 8015M*	
Surrogate: o-Terphenyl		*141 %*	*70-130*		*P9A2407*	*01/24/19*	*01/25/19*	*TPH 8015M*	*S-09*
Total Petroleum Hydrocarbon C6-C35	**32.5**	25.0	mg/kg dry	1	[CALC]	01/24/19	01/25/19	calc	

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Midland TX, 79710	Project Manager: Mark Larson	

DP-8.2 (3.5')

9A23003-07 (Soil)

Permian Basin Environmental Lab, L.P.

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Organics by GC									
Benzene	ND	0.00100	mg/kg dry	1	P9A2307	01/23/19	01/23/19	EPA 8021B	
Toluene	**0.0255**	0.00100	mg/kg dry	1	P9A2307	01/23/19	01/23/19	EPA 8021B	
Ethylbenzene	**0.0166**	0.00100	mg/kg dry	1	P9A2307	01/23/19	01/23/19	EPA 8021B	
Xylene (p/m)	**0.0398**	0.00200	mg/kg dry	1	P9A2307	01/23/19	01/23/19	EPA 8021B	
Xylene (o)	**0.0178**	0.00100	mg/kg dry	1	P9A2307	01/23/19	01/23/19	EPA 8021B	
Surrogate: 4-Bromofluorobenzene		*89.8 %*	*75-125*		*P9A2307*	*01/23/19*	*01/23/19*	*EPA 8021B*	
Surrogate: 1,4-Difluorobenzene		*89.8 %*	*75-125*		*P9A2307*	*01/23/19*	*01/23/19*	*EPA 8021B*	
General Chemistry Parameters by EPA / Standard Methods									
Chloride	**7.08**	1.00	mg/kg dry	1	P9B2608	02/26/19	02/27/19	EPA 300.0	O-04
% Moisture	ND	0.1	%	1	P9A2412	01/24/19	01/24/19	ASTM D2216	
Total Petroleum Hydrocarbons C6-C35 by EPA Method 8015M									
C6-C12	**96.5**	25.0	mg/kg dry	1	P9A2407	01/24/19	01/25/19	TPH 8015M	
>C12-C28	**2410**	25.0	mg/kg dry	1	P9A2407	01/24/19	01/25/19	TPH 8015M	
>C28-C35	**307**	25.0	mg/kg dry	1	P9A2407	01/24/19	01/25/19	TPH 8015M	
Surrogate: 1-Chlorooctane		*126 %*	*70-130*		*P9A2407*	*01/24/19*	*01/25/19*	*TPH 8015M*	
Surrogate: o-Terphenyl		*133 %*	*70-130*		*P9A2407*	*01/24/19*	*01/25/19*	*TPH 8015M*	*S-09*
Total Petroleum Hydrocarbon C6-C35	**2810**	25.0	mg/kg dry	1	[CALC]	01/24/19	01/25/19	calc	

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Midland TX, 79710	Project Manager: Mark Larson	

DP-8.3 (3.5')

9A23003-08 (Soil)

Permian Basin Environmental Lab, L.P.

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Organics by GC									
Benzene	ND	0.00100	mg/kg dry	1	P9A2307	01/23/19	01/23/19	EPA 8021B	
Toluene	ND	0.00100	mg/kg dry	1	P9A2307	01/23/19	01/23/19	EPA 8021B	
Ethylbenzene	ND	0.00100	mg/kg dry	1	P9A2307	01/23/19	01/23/19	EPA 8021B	
Xylene (p/m)	ND	0.00200	mg/kg dry	1	P9A2307	01/23/19	01/23/19	EPA 8021B	
Xylene (o)	ND	0.00100	mg/kg dry	1	P9A2307	01/23/19	01/23/19	EPA 8021B	
Surrogate: 1,4-Difluorobenzene		*99.5 %*	*75-125*		*P9A2307*	*01/23/19*	*01/23/19*	*EPA 8021B*	
Surrogate: 4-Bromofluorobenzene		*87.5 %*	*75-125*		*P9A2307*	*01/23/19*	*01/23/19*	*EPA 8021B*	
General Chemistry Parameters by EPA / Standard Methods									
Chloride	ND	1.00	mg/kg dry	1	P9B2608	02/26/19	02/27/19	EPA 300.0	O-04
% Moisture	ND	0.1	%	1	P9A2412	01/24/19	01/24/19	ASTM D2216	
Total Petroleum Hydrocarbons C6-C35 by EPA Method 8015M									
C6-C12	ND	25.0	mg/kg dry	1	P9A2407	01/24/19	01/25/19	TPH 8015M	
>C12-C28	ND	25.0	mg/kg dry	1	P9A2407	01/24/19	01/25/19	TPH 8015M	
>C28-C35	ND	25.0	mg/kg dry	1	P9A2407	01/24/19	01/25/19	TPH 8015M	
Surrogate: 1-Chlorooctane		*102 %*	*70-130*		*P9A2407*	*01/24/19*	*01/25/19*	*TPH 8015M*	
Surrogate: o-Terphenyl		*115 %*	*70-130*		*P9A2407*	*01/24/19*	*01/25/19*	*TPH 8015M*	
Total Petroleum Hydrocarbon C6-C35	ND	25.0	mg/kg dry	1	[CALC]	01/24/19	01/25/19	calc	

Larson & Associates, Inc.
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Midland TX, 79710

Project: Lea Unit #8D (Legacy)
Project Number: 18-0138-03
Project Manager: Mark Larson

Fax: (432) 687-0456

DP-8.4 (3.5')

9A23003-09 (Soil)

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Permian Basin Environmental Lab, L.P.									
Organics by GC									
Benzene	ND	0.00102	mg/kg dry	1	P9A2307	01/23/19	01/23/19	EPA 8021B	
Toluene	ND	0.00102	mg/kg dry	1	P9A2307	01/23/19	01/23/19	EPA 8021B	
Ethylbenzene	ND	0.00102	mg/kg dry	1	P9A2307	01/23/19	01/23/19	EPA 8021B	
Xylene (p/m)	ND	0.00204	mg/kg dry	1	P9A2307	01/23/19	01/23/19	EPA 8021B	
Xylene (o)	ND	0.00102	mg/kg dry	1	P9A2307	01/23/19	01/23/19	EPA 8021B	
Surrogate: 1,4-Difluorobenzene		*101 %*	*75-125*		*P9A2307*	*01/23/19*	*01/23/19*	*EPA 8021B*	
Surrogate: 4-Bromofluorobenzene		*86.6 %*	*75-125*		*P9A2307*	*01/23/19*	*01/23/19*	*EPA 8021B*	
General Chemistry Parameters by EPA / Standard Methods									
Chloride	**4.14**	1.02	mg/kg dry	1	P9B2608	02/26/19	02/27/19	EPA 300.0	O-04
% Moisture	**2.0**	0.1	%	1	P9A2412	01/24/19	01/24/19	ASTM D2216	
Total Petroleum Hydrocarbons C6-C35 by EPA Method 8015M									
C6-C12	ND	25.5	mg/kg dry	1	P9A2407	01/24/19	01/25/19	TPH 8015M	
>C12-C28	ND	25.5	mg/kg dry	1	P9A2407	01/24/19	01/25/19	TPH 8015M	
>C28-C35	ND	25.5	mg/kg dry	1	P9A2407	01/24/19	01/25/19	TPH 8015M	
Surrogate: 1-Chlorooctane		*113 %*	*70-130*		*P9A2407*	*01/24/19*	*01/25/19*	*TPH 8015M*	
Surrogate: o-Terphenyl		*124 %*	*70-130*		*P9A2407*	*01/24/19*	*01/25/19*	*TPH 8015M*	
Total Petroleum Hydrocarbon C6-C35	ND	25.5	mg/kg dry	1	[CALC]	01/24/19	01/25/19	calc	

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Midland TX, 79710	Project Manager: Mark Larson	

DP-8.5 (7')

9A23003-10 (Soil)

Permian Basin Environmental Lab, L.P.

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Organics by GC									
Benzene	**0.00378**	0.00101	mg/kg dry	1	P9A2307	01/23/19	01/23/19	EPA 8021B	
Toluene	**0.171**	0.00101	mg/kg dry	1	P9A2307	01/23/19	01/23/19	EPA 8021B	
Ethylbenzene	**0.108**	0.00101	mg/kg dry	1	P9A2307	01/23/19	01/23/19	EPA 8021B	
Xylene (p/m)	**0.232**	0.00202	mg/kg dry	1	P9A2307	01/23/19	01/23/19	EPA 8021B	
Xylene (o)	**0.148**	0.00101	mg/kg dry	1	P9A2307	01/23/19	01/23/19	EPA 8021B	
Surrogate: 4-Bromofluorobenzene		*64.4 %*	*75-125*		*P9A2307*	*01/23/19*	*01/23/19*	*EPA 8021B*	*S-09*
Surrogate: 1,4-Difluorobenzene		*99.3 %*	*75-125*		*P9A2307*	*01/23/19*	*01/23/19*	*EPA 8021B*	
General Chemistry Parameters by EPA / Standard Methods									
Chloride	**60.1**	1.01	mg/kg dry	1	P9B2608	02/26/19	02/27/19	EPA 300.0	O-04
% Moisture	**1.0**	0.1	%	1	P9A2412	01/24/19	01/24/19	ASTM D2216	
Total Petroleum Hydrocarbons C6-C35 by EPA Method 8015M									
C6-C12	**124**	25.3	mg/kg dry	1	P9A2408	01/24/19	01/24/19	TPH 8015M	
>C12-C28	**2720**	25.3	mg/kg dry	1	P9A2408	01/24/19	01/24/19	TPH 8015M	
>C28-C35	**459**	25.3	mg/kg dry	1	P9A2408	01/24/19	01/24/19	TPH 8015M	
Surrogate: 1-Chlorooctane		*107 %*	*70-130*		*P9A2408*	*01/24/19*	*01/24/19*	*TPH 8015M*	
Surrogate: o-Terphenyl		*110 %*	*70-130*		*P9A2408*	*01/24/19*	*01/24/19*	*TPH 8015M*	
Total Petroleum Hydrocarbon C6-C35	**3310**	25.3	mg/kg dry	1	[CALC]	01/24/19	01/24/19	calc	

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P.O. Box 50685	Project Number: 18-0138-03	
Midland TX, 79710	Project Manager: Mark Larson	

DP-4.1 (0.75')

9A23003-11 (Soil)

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Permian Basin Environmental Lab, L.P.									
General Chemistry Parameters by EPA / Standard Methods									
Chloride	**28.8**	1.00	mg/kg dry	1	P9B2608	02/26/19	02/27/19	EPA 300.0	O-04
% Moisture	ND	0.1	%	1	P9A2412	01/24/19	01/24/19	ASTM D2216	
Total Petroleum Hydrocarbons C6-C35 by EPA Method 8015M									
C6-C12	ND	25.0	mg/kg dry	1	P9A2408	01/24/19	01/25/19	TPH 8015M	
>C12-C28	ND	25.0	mg/kg dry	1	P9A2408	01/24/19	01/25/19	TPH 8015M	
>C28-C35	ND	25.0	mg/kg dry	1	P9A2408	01/24/19	01/25/19	TPH 8015M	
Surrogate: 1-Chlorooctane		*94.2 %*	*70-130*		*P9A2408*	*01/24/19*	*01/25/19*	*TPH 8015M*	
Surrogate: o-Terphenyl		*102 %*	*70-130*		*P9A2408*	*01/24/19*	*01/25/19*	*TPH 8015M*	
Total Petroleum Hydrocarbon C6-C35	ND	25.0	mg/kg dry	1	[CALC]	01/24/19	01/25/19	calc	

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P.O. Box 50685	Project Number: 18-0138-03	
Midland TX, 79710	Project Manager: Mark Larson	

DP-4.2 (0.75')

9A23003-12 (Soil)

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Permian Basin Environmental Lab, L.P.									
General Chemistry Parameters by EPA / Standard Methods									
Chloride	**6.15**	1.00	mg/kg dry	1	P9B2608	02/26/19	02/27/19	EPA 300.0	O-04
% Moisture	ND	0.1	%	1	P9A2412	01/24/19	01/24/19	ASTM D2216	
Total Petroleum Hydrocarbons C6-C35 by EPA Method 8015M									
C6-C12	ND	25.0	mg/kg dry	1	P9A2408	01/24/19	01/25/19	TPH 8015M	
>C12-C28	ND	25.0	mg/kg dry	1	P9A2408	01/24/19	01/25/19	TPH 8015M	
>C28-C35	ND	25.0	mg/kg dry	1	P9A2408	01/24/19	01/25/19	TPH 8015M	
Surrogate: 1-Chlorooctane		*125 %*	*70-130*		*P9A2408*	*01/24/19*	*01/25/19*	*TPH 8015M*	
Surrogate: o-Terphenyl		*140 %*	*70-130*		*P9A2408*	*01/24/19*	*01/25/19*	*TPH 8015M*	*S-09*
Total Petroleum Hydrocarbon C6-C35	ND	25.0	mg/kg dry	1	[CALC]	01/24/19	01/25/19	calc	

DP-4.3 (0.75)

9A23003-13 (Soil)

Permian Basin Environmental Lab, L.P.

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
General Chemistry Parameters by EPA / Standard Methods									
Chloride	**2.73**	1.02	mg/kg dry	1	P9B2608	02/26/19	02/27/19	EPA 300.0	O-04
% Moisture	**2.0**	0.1	%	1	P9A2412	01/24/19	01/24/19	ASTM D2216	
Total Petroleum Hydrocarbons C6-C35 by EPA Method 8015M									
C6-C12	ND	25.5	mg/kg dry	1	P9A2408	01/24/19	01/25/19	TPH 8015M	
>C12-C28	**35.6**	25.5	mg/kg dry	1	P9A2408	01/24/19	01/25/19	TPH 8015M	
>C28-C35	ND	25.5	mg/kg dry	1	P9A2408	01/24/19	01/25/19	TPH 8015M	
Surrogate: 1-Chlorooctane		*118 %*	*70-130*		*P9A2408*	*01/24/19*	*01/25/19*	*TPH 8015M*	
Surrogate: o-Terphenyl		*131 %*	*70-130*		*P9A2408*	*01/24/19*	*01/25/19*	*TPH 8015M*	*S-09*
Total Petroleum Hydrocarbon C6-C35	**35.6**	25.5	mg/kg dry	1	[CALC]	01/24/19	01/25/19	calc	

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Midland TX, 79710	Project Manager: Mark Larson	

DP-4.4 (0.75')

9A23003-14 (Soil)

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Permian Basin Environmental Lab, L.P.									
General Chemistry Parameters by EPA / Standard Methods									
Chloride	ND	1.00	mg/kg dry	1	P9B2608	02/26/19	02/27/19	EPA 300.0	O-04
% Moisture	ND	0.1	%	1	P9A2412	01/24/19	01/24/19	ASTM D2216	
Total Petroleum Hydrocarbons C6-C35 by EPA Method 8015M									
C6-C12	ND	25.0	mg/kg dry	1	P9A2408	01/24/19	01/25/19	TPH 8015M	
>C12-C28	ND	25.0	mg/kg dry	1	P9A2408	01/24/19	01/25/19	TPH 8015M	
>C28-C35	ND	25.0	mg/kg dry	1	P9A2408	01/24/19	01/25/19	TPH 8015M	
Surrogate: 1-Chlorooctane		*95.8 %*	*70-130*		*P9A2408*	*01/24/19*	*01/25/19*	*TPH 8015M*	
Surrogate: o-Terphenyl		*101 %*	*70-130*		*P9A2408*	*01/24/19*	*01/25/19*	*TPH 8015M*	
Total Petroleum Hydrocarbon C6-C35	ND	25.0	mg/kg dry	1	[CALC]	01/24/19	01/25/19	calc	

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P.O. Box 50685	Project Number: 18-0138-03	
Midland TX, 79710	Project Manager: Mark Larson	

DP-4.5 (1.5')

9A23003-15 (Soil)

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Permian Basin Environmental Lab, L.P.									
General Chemistry Parameters by EPA / Standard Methods									
Chloride	**21.3**	1.03	mg/kg dry	1	P9B2608	02/26/19	02/27/19	EPA 300.0	O-04
% Moisture	**3.0**	0.1	%	1	P9A2412	01/24/19	01/24/19	ASTM D2216	
Total Petroleum Hydrocarbons C6-C35 by EPA Method 8015M									
C6-C12	ND	25.8	mg/kg dry	1	P9A2408	01/24/19	01/25/19	TPH 8015M	
>C12-C28	ND	25.8	mg/kg dry	1	P9A2408	01/24/19	01/25/19	TPH 8015M	
>C28-C35	ND	25.8	mg/kg dry	1	P9A2408	01/24/19	01/25/19	TPH 8015M	
Surrogate: 1-Chlorooctane		*85.3 %*	*70-130*		*P9A2408*	*01/24/19*	*01/25/19*	*TPH 8015M*	
Surrogate: o-Terphenyl		*92.5 %*	*70-130*		*P9A2408*	*01/24/19*	*01/25/19*	*TPH 8015M*	
Total Petroleum Hydrocarbon C6-C35	ND	25.8	mg/kg dry	1	[CALC]	01/24/19	01/25/19	calc	

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Midland TX, 79710	Project Manager: Mark Larson	

DP-2.1 (3')

9A23003-16 (Soil)

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Permian Basin Environmental Lab, L.P.									
Organics by GC									
Benzene	ND	0.00100	mg/kg dry	1	P9A2307	01/23/19	01/23/19	EPA 8021B	
Toluene	ND	0.00100	mg/kg dry	1	P9A2307	01/23/19	01/23/19	EPA 8021B	
Ethylbenzene	ND	0.00100	mg/kg dry	1	P9A2307	01/23/19	01/23/19	EPA 8021B	
Xylene (p/m)	ND	0.00200	mg/kg dry	1	P9A2307	01/23/19	01/23/19	EPA 8021B	
Xylene (o)	ND	0.00100	mg/kg dry	1	P9A2307	01/23/19	01/23/19	EPA 8021B	
Surrogate: 4-Bromofluorobenzene		*79.3 %*	*75-125*		*P9A2307*	*01/23/19*	*01/23/19*	*EPA 8021B*	
Surrogate: 1,4-Difluorobenzene		*98.6 %*	*75-125*		*P9A2307*	*01/23/19*	*01/23/19*	*EPA 8021B*	
General Chemistry Parameters by EPA / Standard Methods									
Chloride	ND	1.00	mg/kg dry	1	P9B2608	02/26/19	02/27/19	EPA 300.0	O-04
% Moisture	ND	0.1	%	1	P9A2412	01/24/19	01/24/19	ASTM D2216	
Total Petroleum Hydrocarbons C6-C35 by EPA Method 8015M									
C6-C12	ND	25.0	mg/kg dry	1	P9A2408	01/24/19	01/25/19	TPH 8015M	
>C12-C28	ND	25.0	mg/kg dry	1	P9A2408	01/24/19	01/25/19	TPH 8015M	
>C28-C35	ND	25.0	mg/kg dry	1	P9A2408	01/24/19	01/25/19	TPH 8015M	
Surrogate: 1-Chlorooctane		*93.8 %*	*70-130*		*P9A2408*	*01/24/19*	*01/25/19*	*TPH 8015M*	
Surrogate: o-Terphenyl		*103 %*	*70-130*		*P9A2408*	*01/24/19*	*01/25/19*	*TPH 8015M*	
Total Petroleum Hydrocarbon C6-C35	ND	25.0	mg/kg dry	1	[CALC]	01/24/19	01/25/19	calc	

Larson & Associates, Inc.
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Midland TX, 79710

Project: Lea Unit #8D (Legacy)
Project Number: 18-0138-03
Project Manager: Mark Larson

Fax: (432) 687-0456

DP-2.2 (3')

9A23003-17 (Soil)

Permian Basin Environmental Lab, L.P.

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Organics by GC									
Benzene	ND	0.00100	mg/kg dry	1	P9A2307	01/23/19	01/23/19	EPA 8021B	
Toluene	ND	0.00100	mg/kg dry	1	P9A2307	01/23/19	01/23/19	EPA 8021B	
Ethylbenzene	ND	0.00100	mg/kg dry	1	P9A2307	01/23/19	01/23/19	EPA 8021B	
Xylene (p/m)	ND	0.00200	mg/kg dry	1	P9A2307	01/23/19	01/23/19	EPA 8021B	
Xylene (o)	ND	0.00100	mg/kg dry	1	P9A2307	01/23/19	01/23/19	EPA 8021B	
Surrogate: 4-Bromofluorobenzene		*79.7 %*	*75-125*		*P9A2307*	*01/23/19*	*01/23/19*	*EPA 8021B*	
Surrogate: 1,4-Difluorobenzene		*98.6 %*	*75-125*		*P9A2307*	*01/23/19*	*01/23/19*	*EPA 8021B*	
General Chemistry Parameters by EPA / Standard Methods									
Chloride	ND	1.00	mg/kg dry	1	P9B2608	02/26/19	02/27/19	EPA 300.0	O-04
% Moisture	ND	0.1	%	1	P9A2412	01/24/19	01/24/19	ASTM D2216	
Total Petroleum Hydrocarbons C6-C35 by EPA Method 8015M									
C6-C12	ND	25.0	mg/kg dry	1	P9A2408	01/24/19	01/25/19	TPH 8015M	
>C12-C28	ND	25.0	mg/kg dry	1	P9A2408	01/24/19	01/25/19	TPH 8015M	
>C28-C35	ND	25.0	mg/kg dry	1	P9A2408	01/24/19	01/25/19	TPH 8015M	
Surrogate: 1-Chlorooctane		*91.9 %*	*70-130*		*P9A2408*	*01/24/19*	*01/25/19*	*TPH 8015M*	
Surrogate: o-Terphenyl		*97.4 %*	*70-130*		*P9A2408*	*01/24/19*	*01/25/19*	*TPH 8015M*	
Total Petroleum Hydrocarbon C6-C35	ND	25.0	mg/kg dry	1	[CALC]	01/24/19	01/25/19	calc	

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Midland TX, 79710	Project Manager: Mark Larson	

DP-2.3 (3')

9A23003-18 (Soil)

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Permian Basin Environmental Lab, L.P.									
Organics by GC									
Benzene	ND	0.0202	mg/kg dry	20	P9A2308	01/23/19	01/24/19	EPA 8021B	
Toluene	ND	0.0202	mg/kg dry	20	P9A2308	01/23/19	01/24/19	EPA 8021B	
Ethylbenzene	ND	0.0202	mg/kg dry	20	P9A2308	01/23/19	01/24/19	EPA 8021B	
Xylene (p/m)	ND	0.0404	mg/kg dry	20	P9A2308	01/23/19	01/24/19	EPA 8021B	
Xylene (o)	ND	0.0202	mg/kg dry	20	P9A2308	01/23/19	01/24/19	EPA 8021B	
Surrogate: 1,4-Difluorobenzene		*111 %*	*75-125*		*P9A2308*	*01/23/19*	*01/24/19*	*EPA 8021B*	
Surrogate: 4-Bromofluorobenzene		*72.6 %*	*75-125*		*P9A2308*	*01/23/19*	*01/24/19*	*EPA 8021B*	*S-09*
General Chemistry Parameters by EPA / Standard Methods									
Chloride	**5.16**	1.01	mg/kg dry	1	P9B2608	02/26/19	02/27/19	EPA 300.0	O-04
% Moisture	**1.0**	0.1	%	1	P9A2412	01/24/19	01/24/19	ASTM D2216	
Total Petroleum Hydrocarbons C6-C35 by EPA Method 8015M									
C6-C12	ND	25.3	mg/kg dry	1	P9A2408	01/24/19	01/25/19	TPH 8015M	
>C12-C28	ND	25.3	mg/kg dry	1	P9A2408	01/24/19	01/25/19	TPH 8015M	
>C28-C35	ND	25.3	mg/kg dry	1	P9A2408	01/24/19	01/25/19	TPH 8015M	
Surrogate: 1-Chlorooctane		*99.3 %*	*70-130*		*P9A2408*	*01/24/19*	*01/25/19*	*TPH 8015M*	
Surrogate: o-Terphenyl		*105 %*	*70-130*		*P9A2408*	*01/24/19*	*01/25/19*	*TPH 8015M*	
Total Petroleum Hydrocarbon C6-C35	ND	25.3	mg/kg dry	1	[CALC]	01/24/19	01/25/19	calc	

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Project Manager: Mark Larson

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DP-2.4 (3')

9A23003-19 (Soil)

Permian Basin Environmental Lab, L.P.

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Organics by GC									
Benzene	ND	0.00101	mg/kg dry	1	P9A2307	01/23/19	01/23/19	EPA 8021B	
Toluene	ND	0.00101	mg/kg dry	1	P9A2307	01/23/19	01/23/19	EPA 8021B	
Ethylbenzene	ND	0.00101	mg/kg dry	1	P9A2307	01/23/19	01/23/19	EPA 8021B	
Xylene (p/m)	ND	0.00202	mg/kg dry	1	P9A2307	01/23/19	01/23/19	EPA 8021B	
Xylene (o)	ND	0.00101	mg/kg dry	1	P9A2307	01/23/19	01/23/19	EPA 8021B	
Surrogate: 4-Bromofluorobenzene		*84.2 %*	*75-125*		*P9A2307*	*01/23/19*	*01/23/19*	*EPA 8021B*	
Surrogate: 1,4-Difluorobenzene		*94.4 %*	*75-125*		*P9A2307*	*01/23/19*	*01/23/19*	*EPA 8021B*	
General Chemistry Parameters by EPA / Standard Methods									
Chloride	ND	1.01	mg/kg dry	1	P9B2608	02/26/19	02/27/19	EPA 300.0	O-04
% Moisture	**1.0**	0.1	%	1	P9A2412	01/24/19	01/24/19	ASTM D2216	
Total Petroleum Hydrocarbons C6-C35 by EPA Method 8015M									
C6-C12	ND	25.3	mg/kg dry	1	P9A2408	01/24/19	01/25/19	TPH 8015M	
>C12-C28	**37.0**	25.3	mg/kg dry	1	P9A2408	01/24/19	01/25/19	TPH 8015M	
>C28-C35	ND	25.3	mg/kg dry	1	P9A2408	01/24/19	01/25/19	TPH 8015M	
Surrogate: 1-Chlorooctane		*99.8 %*	*70-130*		*P9A2408*	*01/24/19*	*01/25/19*	*TPH 8015M*	
Surrogate: o-Terphenyl		*105 %*	*70-130*		*P9A2408*	*01/24/19*	*01/25/19*	*TPH 8015M*	
Total Petroleum Hydrocarbon C6-C35	**37.0**	25.3	mg/kg dry	1	[CALC]	01/24/19	01/25/19	calc	

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DP-2.5 (6')

9A23003-20 (Soil)

Permian Basin Environmental Lab, L.P.

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Organics by GC									
Benzene	ND	0.00101	mg/kg dry	1	P9A2307	01/23/19	01/23/19	EPA 8021B	
Toluene	**0.0270**	0.00101	mg/kg dry	1	P9A2307	01/23/19	01/23/19	EPA 8021B	
Ethylbenzene	**0.0450**	0.00101	mg/kg dry	1	P9A2307	01/23/19	01/23/19	EPA 8021B	
Xylene (p/m)	**0.0930**	0.00202	mg/kg dry	1	P9A2307	01/23/19	01/23/19	EPA 8021B	
Xylene (o)	**0.0404**	0.00101	mg/kg dry	1	P9A2307	01/23/19	01/23/19	EPA 8021B	
Surrogate: 4-Bromofluorobenzene		*68.9 %*	*75-125*		*P9A2307*	*01/23/19*	*01/23/19*	*EPA 8021B*	*S-09*
Surrogate: 1,4-Difluorobenzene		*82.6 %*	*75-125*		*P9A2307*	*01/23/19*	*01/23/19*	*EPA 8021B*	
General Chemistry Parameters by EPA / Standard Methods									
Chloride	**3.33**	1.01	mg/kg dry	1	P9B2610	02/26/19	02/28/19	EPA 300.0	O-04
% Moisture	**1.0**	0.1	%	1	P9A2412	01/24/19	01/24/19	ASTM D2216	
Total Petroleum Hydrocarbons C6-C35 by EPA Method 8015M									
C6-C12	**223**	126	mg/kg dry	5	P9A2408	01/24/19	01/25/19	TPH 8015M	
>C12-C28	**3720**	126	mg/kg dry	5	P9A2408	01/24/19	01/25/19	TPH 8015M	
>C28-C35	**496**	126	mg/kg dry	5	P9A2408	01/24/19	01/25/19	TPH 8015M	
Surrogate: 1-Chlorooctane		*103 %*	*70-130*		*P9A2408*	*01/24/19*	*01/25/19*	*TPH 8015M*	
Surrogate: o-Terphenyl		*95.8 %*	*70-130*		*P9A2408*	*01/24/19*	*01/25/19*	*TPH 8015M*	
Total Petroleum Hydrocarbon C6-C35	**4440**	126	mg/kg dry	5	[CALC]	01/24/19	01/25/19	calc	

DP-9.1 (1.5')

9A23003-21 (Soil)

Permian Basin Environmental Lab, L.P.

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Organics by GC									
Benzene	ND	0.00102	mg/kg dry	1	P9A2307	01/23/19	01/24/19	EPA 8021B	
Toluene	ND	0.00102	mg/kg dry	1	P9A2307	01/23/19	01/24/19	EPA 8021B	
Ethylbenzene	ND	0.00102	mg/kg dry	1	P9A2307	01/23/19	01/24/19	EPA 8021B	
Xylene (p/m)	ND	0.00204	mg/kg dry	1	P9A2307	01/23/19	01/24/19	EPA 8021B	
Xylene (o)	ND	0.00102	mg/kg dry	1	P9A2307	01/23/19	01/24/19	EPA 8021B	
Surrogate: 1,4-Difluorobenzene		*104 %*	*75-125*		*P9A2307*	*01/23/19*	*01/24/19*	*EPA 8021B*	
Surrogate: 4-Bromofluorobenzene		*89.2 %*	*75-125*		*P9A2307*	*01/23/19*	*01/24/19*	*EPA 8021B*	
General Chemistry Parameters by EPA / Standard Methods									
Chloride	**46.7**	1.02	mg/kg dry	1	P9B2610	02/26/19	02/28/19	EPA 300.0	O-04
% Moisture	**2.0**	0.1	%	1	P9A2412	01/24/19	01/24/19	ASTM D2216	
Total Petroleum Hydrocarbons C6-C35 by EPA Method 8015M									
C6-C12	ND	25.5	mg/kg dry	1	P9A2408	01/24/19	01/25/19	TPH 8015M	
>C12-C28	ND	25.5	mg/kg dry	1	P9A2408	01/24/19	01/25/19	TPH 8015M	
>C28-C35	ND	25.5	mg/kg dry	1	P9A2408	01/24/19	01/25/19	TPH 8015M	
Surrogate: 1-Chlorooctane		*98.7 %*	*70-130*		*P9A2408*	*01/24/19*	*01/25/19*	*TPH 8015M*	
Surrogate: o-Terphenyl		*103 %*	*70-130*		*P9A2408*	*01/24/19*	*01/25/19*	*TPH 8015M*	
Total Petroleum Hydrocarbon C6-C35	ND	25.5	mg/kg dry	1	[CALC]	01/24/19	01/25/19	calc	

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Midland TX, 79710	Project Manager: Mark Larson	

DP-9.2 (1.5')

9A23003-22 (Soil)

Permian Basin Environmental Lab, L.P.

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Organics by GC									
Benzene	ND	0.00102	mg/kg dry	1	P9A2307	01/23/19	01/24/19	EPA 8021B	
Toluene	ND	0.00102	mg/kg dry	1	P9A2307	01/23/19	01/24/19	EPA 8021B	
Ethylbenzene	ND	0.00102	mg/kg dry	1	P9A2307	01/23/19	01/24/19	EPA 8021B	
Xylene (p/m)	ND	0.00204	mg/kg dry	1	P9A2307	01/23/19	01/24/19	EPA 8021B	
Xylene (o)	ND	0.00102	mg/kg dry	1	P9A2307	01/23/19	01/24/19	EPA 8021B	
Surrogate: 1,4-Difluorobenzene		*99.8 %*	*75-125*		*P9A2307*	*01/23/19*	*01/24/19*	*EPA 8021B*	
Surrogate: 4-Bromofluorobenzene		*87.4 %*	*75-125*		*P9A2307*	*01/23/19*	*01/24/19*	*EPA 8021B*	
General Chemistry Parameters by EPA / Standard Methods									
Chloride	**34.3**	1.02	mg/kg dry	1	P9B2610	02/26/19	02/28/19	EPA 300.0	O-04
% Moisture	**2.0**	0.1	%	1	P9A2412	01/24/19	01/24/19	ASTM D2216	
Total Petroleum Hydrocarbons C6-C35 by EPA Method 8015M									
C6-C12	ND	25.5	mg/kg dry	1	P9A2408	01/24/19	01/25/19	TPH 8015M	
>C12-C28	ND	25.5	mg/kg dry	1	P9A2408	01/24/19	01/25/19	TPH 8015M	
>C28-C35	ND	25.5	mg/kg dry	1	P9A2408	01/24/19	01/25/19	TPH 8015M	
Surrogate: 1-Chlorooctane		*101 %*	*70-130*		*P9A2408*	*01/24/19*	*01/25/19*	*TPH 8015M*	
Surrogate: o-Terphenyl		*106 %*	*70-130*		*P9A2408*	*01/24/19*	*01/25/19*	*TPH 8015M*	
Total Petroleum Hydrocarbon C6-C35	ND	25.5	mg/kg dry	1	[CALC]	01/24/19	01/25/19	calc	

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DP-9.3 (1.5')

9A23003-23 (Soil)

Permian Basin Environmental Lab, L.P.

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Organics by GC									
Benzene	ND	0.00101	mg/kg dry	1	P9A2307	01/23/19	01/24/19	EPA 8021B	
Toluene	ND	0.00101	mg/kg dry	1	P9A2307	01/23/19	01/24/19	EPA 8021B	
Ethylbenzene	ND	0.00101	mg/kg dry	1	P9A2307	01/23/19	01/24/19	EPA 8021B	
Xylene (p/m)	ND	0.00202	mg/kg dry	1	P9A2307	01/23/19	01/24/19	EPA 8021B	
Xylene (o)	ND	0.00101	mg/kg dry	1	P9A2307	01/23/19	01/24/19	EPA 8021B	
Surrogate: 4-Bromofluorobenzene		*83.0 %*	*75-125*		*P9A2307*	*01/23/19*	*01/24/19*	*EPA 8021B*	
Surrogate: 1,4-Difluorobenzene		*87.9 %*	*75-125*		*P9A2307*	*01/23/19*	*01/24/19*	*EPA 8021B*	
General Chemistry Parameters by EPA / Standard Methods									
Chloride	**10.9**	1.01	mg/kg dry	1	P9B2610	02/26/19	02/28/19	EPA 300.0	O-04
% Moisture	**1.0**	0.1	%	1	P9A2412	01/24/19	01/24/19	ASTM D2216	
Total Petroleum Hydrocarbons C6-C35 by EPA Method 8015M									
C6-C12	ND	25.3	mg/kg dry	1	P9A2408	01/24/19	01/25/19	TPH 8015M	
>C12-C28	**45.7**	25.3	mg/kg dry	1	P9A2408	01/24/19	01/25/19	TPH 8015M	
>C28-C35	ND	25.3	mg/kg dry	1	P9A2408	01/24/19	01/25/19	TPH 8015M	
Surrogate: 1-Chlorooctane		*85.3 %*	*70-130*		*P9A2408*	*01/24/19*	*01/25/19*	*TPH 8015M*	
Surrogate: o-Terphenyl		*88.8 %*	*70-130*		*P9A2408*	*01/24/19*	*01/25/19*	*TPH 8015M*	
Total Petroleum Hydrocarbon C6-C35	**45.7**	25.3	mg/kg dry	1	[CALC]	01/24/19	01/25/19	calc	

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Midland TX, 79710	Project Manager: Mark Larson	

DP-9.4 (1.5')

9A23003-24 (Soil)

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Permian Basin Environmental Lab, L.P.									
Organics by GC									
Benzene	ND	0.00102	mg/kg dry	1	P9A2307	01/23/19	01/24/19	EPA 8021B	
Toluene	ND	0.00102	mg/kg dry	1	P9A2307	01/23/19	01/24/19	EPA 8021B	
Ethylbenzene	ND	0.00102	mg/kg dry	1	P9A2307	01/23/19	01/24/19	EPA 8021B	
Xylene (p/m)	ND	0.00204	mg/kg dry	1	P9A2307	01/23/19	01/24/19	EPA 8021B	
Xylene (o)	ND	0.00102	mg/kg dry	1	P9A2307	01/23/19	01/24/19	EPA 8021B	
Surrogate: 1,4-Difluorobenzene		*101 %*	*75-125*		*P9A2307*	*01/23/19*	*01/24/19*	*EPA 8021B*	
Surrogate: 4-Bromofluorobenzene		*76.8 %*	*75-125*		*P9A2307*	*01/23/19*	*01/24/19*	*EPA 8021B*	
General Chemistry Parameters by EPA / Standard Methods									
Chloride	**28.6**	1.02	mg/kg dry	1	P9B2610	02/26/19	02/28/19	EPA 300.0	O-04
% Moisture	**2.0**	0.1	%	1	P9A2412	01/24/19	01/24/19	ASTM D2216	
Total Petroleum Hydrocarbons C6-C35 by EPA Method 8015M									
C6-C12	ND	25.5	mg/kg dry	1	P9A2408	01/24/19	01/25/19	TPH 8015M	
>C12-C28	ND	25.5	mg/kg dry	1	P9A2408	01/24/19	01/25/19	TPH 8015M	
>C28-C35	ND	25.5	mg/kg dry	1	P9A2408	01/24/19	01/25/19	TPH 8015M	
Surrogate: 1-Chlorooctane		*102 %*	*70-130*		*P9A2408*	*01/24/19*	*01/25/19*	*TPH 8015M*	
Surrogate: o-Terphenyl		*108 %*	*70-130*		*P9A2408*	*01/24/19*	*01/25/19*	*TPH 8015M*	
Total Petroleum Hydrocarbon C6-C35	ND	25.5	mg/kg dry	1	[CALC]	01/24/19	01/25/19	calc	

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DP-9.5 (3')

9A23003-25 (Soil)

Permian Basin Environmental Lab, L.P.

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Organics by GC									
Benzene	ND	0.00102	mg/kg dry	1	P9A2307	01/23/19	01/24/19	EPA 8021B	
Toluene	ND	0.00102	mg/kg dry	1	P9A2307	01/23/19	01/24/19	EPA 8021B	
Ethylbenzene	ND	0.00102	mg/kg dry	1	P9A2307	01/23/19	01/24/19	EPA 8021B	
Xylene (p/m)	ND	0.00204	mg/kg dry	1	P9A2307	01/23/19	01/24/19	EPA 8021B	
Xylene (o)	ND	0.00102	mg/kg dry	1	P9A2307	01/23/19	01/24/19	EPA 8021B	
Surrogate: 4-Bromofluorobenzene		*88.9 %*	*75-125*		*P9A2307*	*01/23/19*	*01/24/19*	*EPA 8021B*	
Surrogate: 1,4-Difluorobenzene		*96.1 %*	*75-125*		*P9A2307*	*01/23/19*	*01/24/19*	*EPA 8021B*	
General Chemistry Parameters by EPA / Standard Methods									
Chloride	**285**	1.02	mg/kg dry	1	P9B2610	02/26/19	02/28/19	EPA 300.0	O-04
% Moisture	**2.0**	0.1	%	1	P9A2412	01/24/19	01/24/19	ASTM D2216	
Total Petroleum Hydrocarbons C6-C35 by EPA Method 8015M									
C6-C12	ND	25.5	mg/kg dry	1	P9A2408	01/24/19	01/25/19	TPH 8015M	
>C12-C28	ND	25.5	mg/kg dry	1	P9A2408	01/24/19	01/25/19	TPH 8015M	
>C28-C35	ND	25.5	mg/kg dry	1	P9A2408	01/24/19	01/25/19	TPH 8015M	
Surrogate: 1-Chlorooctane		*101 %*	*70-130*		*P9A2408*	*01/24/19*	*01/25/19*	*TPH 8015M*	
Surrogate: o-Terphenyl		*108 %*	*70-130*		*P9A2408*	*01/24/19*	*01/25/19*	*TPH 8015M*	
Total Petroleum Hydrocarbon C6-C35	ND	25.5	mg/kg dry	1	[CALC]	01/24/19	01/25/19	calc	

Larson & Associates, Inc.	Project: Lea Unit #8D (Legacy)	Fax: (432) 687-0456
P.O. Box 50685	Project Number: 18-0138-03	
Midland TX, 79710	Project Manager: Mark Larson	

DP-3.1 (2')

9A23003-26 (Soil)

Permian Basin Environmental Lab, L.P.

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Organics by GC									
Benzene	ND	0.00105	mg/kg dry	1	P9A2307	01/23/19	01/24/19	EPA 8021B	
Toluene	ND	0.00105	mg/kg dry	1	P9A2307	01/23/19	01/24/19	EPA 8021B	
Ethylbenzene	ND	0.00105	mg/kg dry	1	P9A2307	01/23/19	01/24/19	EPA 8021B	
Xylene (p/m)	ND	0.00211	mg/kg dry	1	P9A2307	01/23/19	01/24/19	EPA 8021B	
Xylene (o)	ND	0.00105	mg/kg dry	1	P9A2307	01/23/19	01/24/19	EPA 8021B	
Surrogate: 4-Bromofluorobenzene		*73.8 %*	*75-125*		*P9A2307*	*01/23/19*	*01/24/19*	*EPA 8021B*	*S-09*
Surrogate: 1,4-Difluorobenzene		*97.6 %*	*75-125*		*P9A2307*	*01/23/19*	*01/24/19*	*EPA 8021B*	
General Chemistry Parameters by EPA / Standard Methods									
Chloride	**2.97**	1.05	mg/kg dry	1	P9B2610	02/26/19	02/28/19	EPA 300.0	O-04
% Moisture	**5.0**	0.1	%	1	P9A2412	01/24/19	01/24/19	ASTM D2216	
Total Petroleum Hydrocarbons C6-C35 by EPA Method 8015M									
C6-C12	ND	26.3	mg/kg dry	1	P9A2408	01/24/19	01/25/19	TPH 8015M	
>C12-C28	ND	26.3	mg/kg dry	1	P9A2408	01/24/19	01/25/19	TPH 8015M	
>C28-C35	ND	26.3	mg/kg dry	1	P9A2408	01/24/19	01/25/19	TPH 8015M	
Surrogate: 1-Chlorooctane		*103 %*	*70-130*		*P9A2408*	*01/24/19*	*01/25/19*	*TPH 8015M*	
Surrogate: o-Terphenyl		*111 %*	*70-130*		*P9A2408*	*01/24/19*	*01/25/19*	*TPH 8015M*	
Total Petroleum Hydrocarbon C6-C35	ND	26.3	mg/kg dry	1	[CALC]	01/24/19	01/25/19	calc	

DP-3.2 (2')

9A23003-27 (Soil)

Permian Basin Environmental Lab, L.P.

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Organics by GC									
Benzene	ND	0.00102	mg/kg dry	1	P9A2308	01/23/19	01/24/19	EPA 8021B	
Toluene	ND	0.00102	mg/kg dry	1	P9A2308	01/23/19	01/24/19	EPA 8021B	
Ethylbenzene	ND	0.00102	mg/kg dry	1	P9A2308	01/23/19	01/24/19	EPA 8021B	
Xylene (p/m)	ND	0.00204	mg/kg dry	1	P9A2308	01/23/19	01/24/19	EPA 8021B	
Xylene (o)	ND	0.00102	mg/kg dry	1	P9A2308	01/23/19	01/24/19	EPA 8021B	
Surrogate: 4-Bromofluorobenzene		*82.1 %*	*75-125*		*P9A2308*	*01/23/19*	*01/24/19*	*EPA 8021B*	
Surrogate: 1,4-Difluorobenzene		*117 %*	*75-125*		*P9A2308*	*01/23/19*	*01/24/19*	*EPA 8021B*	
General Chemistry Parameters by EPA / Standard Methods									
Chloride	**221**	1.02	mg/kg dry	1	P9B2610	02/26/19	02/28/19	EPA 300.0	O-04
% Moisture	**2.0**	0.1	%	1	P9A2412	01/24/19	01/24/19	ASTM D2216	
Total Petroleum Hydrocarbons C6-C35 by EPA Method 8015M									
C6-C12	ND	25.5	mg/kg dry	1	P9A2408	01/24/19	01/25/19	TPH 8015M	
>C12-C28	ND	25.5	mg/kg dry	1	P9A2408	01/24/19	01/25/19	TPH 8015M	
>C28-C35	ND	25.5	mg/kg dry	1	P9A2408	01/24/19	01/25/19	TPH 8015M	
Surrogate: 1-Chlorooctane		*104 %*	*70-130*		*P9A2408*	*01/24/19*	*01/25/19*	*TPH 8015M*	
Surrogate: o-Terphenyl		*115 %*	*70-130*		*P9A2408*	*01/24/19*	*01/25/19*	*TPH 8015M*	
Total Petroleum Hydrocarbon C6-C35	ND	25.5	mg/kg dry	1	[CALC]	01/24/19	01/25/19	calc	

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Midland TX, 79710	Project Manager: Mark Larson	

DP-3.3 (2')

9A23003-28 (Soil)

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Permian Basin Environmental Lab, L.P.									
Organics by GC									
Benzene	ND	0.00101	mg/kg dry	1	P9A2308	01/23/19	01/24/19	EPA 8021B	
Toluene	ND	0.00101	mg/kg dry	1	P9A2308	01/23/19	01/24/19	EPA 8021B	
Ethylbenzene	ND	0.00101	mg/kg dry	1	P9A2308	01/23/19	01/24/19	EPA 8021B	
Xylene (p/m)	ND	0.00202	mg/kg dry	1	P9A2308	01/23/19	01/24/19	EPA 8021B	
Xylene (o)	ND	0.00101	mg/kg dry	1	P9A2308	01/23/19	01/24/19	EPA 8021B	
Surrogate: 4-Bromofluorobenzene		*78.2 %*	*75-125*		*P9A2308*	*01/23/19*	*01/24/19*	*EPA 8021B*	
Surrogate: 1,4-Difluorobenzene		*112 %*	*75-125*		*P9A2308*	*01/23/19*	*01/24/19*	*EPA 8021B*	
General Chemistry Parameters by EPA / Standard Methods									
Chloride	**5.49**	1.01	mg/kg dry	1	P9B2610	02/26/19	02/28/19	EPA 300.0	O-04
% Moisture	**1.0**	0.1	%	1	P9A2412	01/24/19	01/24/19	ASTM D2216	
Total Petroleum Hydrocarbons C6-C35 by EPA Method 8015M									
C6-C12	ND	25.3	mg/kg dry	1	P9A2408	01/24/19	01/25/19	TPH 8015M	
>C12-C28	ND	25.3	mg/kg dry	1	P9A2408	01/24/19	01/25/19	TPH 8015M	
>C28-C35	ND	25.3	mg/kg dry	1	P9A2408	01/24/19	01/25/19	TPH 8015M	
Surrogate: 1-Chlorooctane		*105 %*	*70-130*		*P9A2408*	*01/24/19*	*01/25/19*	*TPH 8015M*	
Surrogate: o-Terphenyl		*115 %*	*70-130*		*P9A2408*	*01/24/19*	*01/25/19*	*TPH 8015M*	
Total Petroleum Hydrocarbon C6-C35	ND	25.3	mg/kg dry	1	[CALC]	01/24/19	01/25/19	calc	

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Midland TX, 79710	Project Manager: Mark Larson	

DP-3.4 (2')

9A23003-29 (Soil)

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Permian Basin Environmental Lab, L.P.									
Organics by GC									
Benzene	ND	0.00101	mg/kg dry	1	P9A2308	01/23/19	01/24/19	EPA 8021B	
Toluene	ND	0.00101	mg/kg dry	1	P9A2308	01/23/19	01/24/19	EPA 8021B	
Ethylbenzene	ND	0.00101	mg/kg dry	1	P9A2308	01/23/19	01/24/19	EPA 8021B	
Xylene (p/m)	ND	0.00202	mg/kg dry	1	P9A2308	01/23/19	01/24/19	EPA 8021B	
Xylene (o)	ND	0.00101	mg/kg dry	1	P9A2308	01/23/19	01/24/19	EPA 8021B	
Surrogate: 1,4-Difluorobenzene		*110 %*	*75-125*		*P9A2308*	*01/23/19*	*01/24/19*	*EPA 8021B*	
Surrogate: 4-Bromofluorobenzene		*76.0 %*	*75-125*		*P9A2308*	*01/23/19*	*01/24/19*	*EPA 8021B*	
General Chemistry Parameters by EPA / Standard Methods									
Chloride	**48.5**	1.01	mg/kg dry	1	P9B2610	02/26/19	02/28/19	EPA 300.0	O-04
% Moisture	**1.0**	0.1	%	1	P9A2412	01/24/19	01/24/19	ASTM D2216	
Total Petroleum Hydrocarbons C6-C35 by EPA Method 8015M									
C6-C12	ND	25.3	mg/kg dry	1	P9A2408	01/24/19	01/25/19	TPH 8015M	
>C12-C28	ND	25.3	mg/kg dry	1	P9A2408	01/24/19	01/25/19	TPH 8015M	
>C28-C35	ND	25.3	mg/kg dry	1	P9A2408	01/24/19	01/25/19	TPH 8015M	
Surrogate: 1-Chlorooctane		*82.1 %*	*70-130*		*P9A2408*	*01/24/19*	*01/25/19*	*TPH 8015M*	
Surrogate: o-Terphenyl		*87.9 %*	*70-130*		*P9A2408*	*01/24/19*	*01/25/19*	*TPH 8015M*	
Total Petroleum Hydrocarbon C6-C35	ND	25.3	mg/kg dry	1	[CALC]	01/24/19	01/25/19	calc	

Larson & Associates, Inc.
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Midland TX, 79710

Project: Lea Unit #8D (Legacy)
Project Number: 18-0138-03
Project Manager: Mark Larson

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DP-3.5 (4')

9A23003-30 (Soil)

Permian Basin Environmental Lab, L.P.

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Organics by GC									
Benzene	ND	0.0202	mg/kg dry	20	P9A2308	01/23/19	01/24/19	EPA 8021B	
Toluene	ND	0.0202	mg/kg dry	20	P9A2308	01/23/19	01/24/19	EPA 8021B	
Ethylbenzene	ND	0.0202	mg/kg dry	20	P9A2308	01/23/19	01/24/19	EPA 8021B	
Xylene (p/m)	ND	0.0404	mg/kg dry	20	P9A2308	01/23/19	01/24/19	EPA 8021B	
Xylene (o)	ND	0.0202	mg/kg dry	20	P9A2308	01/23/19	01/24/19	EPA 8021B	
Surrogate: 4-Bromofluorobenzene		*73.3 %*	*75-125*		*P9A2308*	*01/23/19*	*01/24/19*	*EPA 8021B*	*S-09*
Surrogate: 1,4-Difluorobenzene		*109 %*	*75-125*		*P9A2308*	*01/23/19*	*01/24/19*	*EPA 8021B*	
General Chemistry Parameters by EPA / Standard Methods									
Chloride	**249**	1.01	mg/kg dry	1	P9B2610	02/26/19	02/28/19	EPA 300.0	O-04
% Moisture	**1.0**	0.1	%	1	P9A2412	01/24/19	01/24/19	ASTM D2216	
Total Petroleum Hydrocarbons C6-C35 by EPA Method 8015M									
C6-C12	ND	25.3	mg/kg dry	1	P9A2410	01/24/19	01/28/19	TPH 8015M	
>C12-C28	**253**	25.3	mg/kg dry	1	P9A2410	01/24/19	01/28/19	TPH 8015M	
>C28-C35	**105**	25.3	mg/kg dry	1	P9A2410	01/24/19	01/28/19	TPH 8015M	
Surrogate: 1-Chlorooctane		*104 %*	*70-130*		*P9A2410*	*01/24/19*	*01/28/19*	*TPH 8015M*	
Surrogate: o-Terphenyl		*109 %*	*70-130*		*P9A2410*	*01/24/19*	*01/28/19*	*TPH 8015M*	
Total Petroleum Hydrocarbon C6-C35	**358**	25.3	mg/kg dry	1	[CALC]	01/24/19	01/28/19	calc	

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P.O. Box 50685	Project Number: 18-0138-03	
Midland TX, 79710	Project Manager: Mark Larson	

DP-7.1 (0.75')

9A23003-31 (Soil)

Permian Basin Environmental Lab, L.P.

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Organics by GC									
Benzene	**0.0304**	0.0204	mg/kg dry	20	P9A2308	01/23/19	01/24/19	EPA 8021B	
Toluene	**1.63**	0.0204	mg/kg dry	20	P9A2308	01/23/19	01/24/19	EPA 8021B	
Ethylbenzene	**2.39**	0.0204	mg/kg dry	20	P9A2308	01/23/19	01/24/19	EPA 8021B	
Xylene (p/m)	**3.93**	0.0408	mg/kg dry	20	P9A2308	01/23/19	01/24/19	EPA 8021B	
Xylene (o)	**2.38**	0.0204	mg/kg dry	20	P9A2308	01/23/19	01/24/19	EPA 8021B	
Surrogate: 1,4-Difluorobenzene		*86.4 %*	*75-125*		*P9A2308*	*01/23/19*	*01/24/19*	*EPA 8021B*	
Surrogate: 4-Bromofluorobenzene		*75.2 %*	*75-125*		*P9A2308*	*01/23/19*	*01/24/19*	*EPA 8021B*	
General Chemistry Parameters by EPA / Standard Methods									
Chloride	**414**	1.02	mg/kg dry	1	P9B2610	02/26/19	02/28/19	EPA 300.0	O-04
% Moisture	**2.0**	0.1	%	1	P9A2412	01/24/19	01/24/19	ASTM D2216	
Total Petroleum Hydrocarbons C6-C35 by EPA Method 8015M									
C6-C12	**873**	128	mg/kg dry	5	P9A2410	01/24/19	01/25/19	TPH 8015M	
>C12-C28	**4650**	128	mg/kg dry	5	P9A2410	01/24/19	01/25/19	TPH 8015M	
>C28-C35	**671**	128	mg/kg dry	5	P9A2410	01/24/19	01/25/19	TPH 8015M	
Surrogate: 1-Chlorooctane		*107 %*	*70-130*		*P9A2410*	*01/24/19*	*01/25/19*	*TPH 8015M*	
Surrogate: o-Terphenyl		*102 %*	*70-130*		*P9A2410*	*01/24/19*	*01/25/19*	*TPH 8015M*	
Total Petroleum Hydrocarbon C6-C35	**6190**	128	mg/kg dry	5	[CALC]	01/24/19	01/25/19	calc	

Larson & Associates, Inc.	Project: Lea Unit #8D (Legacy)	Fax: (432) 687-0456
P.O. Box 50685	Project Number: 18-0138-03	
Midland TX, 79710	Project Manager: Mark Larson	

DP-7.2 (0.75')

9A23003-32 (Soil)

Permian Basin Environmental Lab, L.P.

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Organics by GC									
Benzene	**0.00111**	0.00100	mg/kg dry	1	P9A2308	01/23/19	01/24/19	EPA 8021B	
Toluene	**0.0243**	0.00100	mg/kg dry	1	P9A2308	01/23/19	01/24/19	EPA 8021B	
Ethylbenzene	**0.0282**	0.00100	mg/kg dry	1	P9A2308	01/23/19	01/24/19	EPA 8021B	
Xylene (p/m)	**0.0534**	0.00200	mg/kg dry	1	P9A2308	01/23/19	01/24/19	EPA 8021B	
Xylene (o)	**0.0302**	0.00100	mg/kg dry	1	P9A2308	01/23/19	01/24/19	EPA 8021B	
Surrogate: 4-Bromofluorobenzene		*86.9 %*	*75-125*		*P9A2308*	*01/23/19*	*01/24/19*	*EPA 8021B*	
Surrogate: 1,4-Difluorobenzene		*112 %*	*75-125*		*P9A2308*	*01/23/19*	*01/24/19*	*EPA 8021B*	
General Chemistry Parameters by EPA / Standard Methods									
Chloride	**188**	1.00	mg/kg dry	1	P9B2610	02/26/19	02/28/19	EPA 300.0	O-04
% Moisture	ND	0.1	%	1	P9A2412	01/24/19	01/24/19	ASTM D2216	
Total Petroleum Hydrocarbons C6-C35 by EPA Method 8015M									
C6-C12	ND	25.0	mg/kg dry	1	P9A2410	01/24/19	01/25/19	TPH 8015M	
>C12-C28	**108**	25.0	mg/kg dry	1	P9A2410	01/24/19	01/25/19	TPH 8015M	
>C28-C35	ND	25.0	mg/kg dry	1	P9A2410	01/24/19	01/25/19	TPH 8015M	
Surrogate: 1-Chlorooctane		*97.2 %*	*70-130*		*P9A2410*	*01/24/19*	*01/25/19*	*TPH 8015M*	
Surrogate: o-Terphenyl		*102 %*	*70-130*		*P9A2410*	*01/24/19*	*01/25/19*	*TPH 8015M*	
Total Petroleum Hydrocarbon C6-C35	**108**	25.0	mg/kg dry	1	[CALC]	01/24/19	01/25/19	calc	

Larson & Associates, Inc.	Project: Lea Unit #8D (Legacy)	Fax: (432) 687-0456
P.O. Box 50685	Project Number: 18-0138-03	
Midland TX, 79710	Project Manager: Mark Larson	

DP-7.3 (0.75')

9A23003-33 (Soil)

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Permian Basin Environmental Lab, L.P.									
Organics by GC									
Benzene	**0.0162**	0.00101	mg/kg dry	1	P9A2308	01/23/19	01/24/19	EPA 8021B	
Toluene	**0.0656**	0.00101	mg/kg dry	1	P9A2308	01/23/19	01/24/19	EPA 8021B	
Ethylbenzene	**0.0136**	0.00101	mg/kg dry	1	P9A2308	01/23/19	01/24/19	EPA 8021B	
Xylene (p/m)	**0.0762**	0.00202	mg/kg dry	1	P9A2308	01/23/19	01/24/19	EPA 8021B	
Xylene (o)	**0.156**	0.00101	mg/kg dry	1	P9A2308	01/23/19	01/24/19	EPA 8021B	
Surrogate: 4-Bromofluorobenzene		*70.3 %*	*75-125*		*P9A2308*	*01/23/19*	*01/24/19*	*EPA 8021B*	*S-09*
Surrogate: 1,4-Difluorobenzene		*113 %*	*75-125*		*P9A2308*	*01/23/19*	*01/24/19*	*EPA 8021B*	
General Chemistry Parameters by EPA / Standard Methods									
Chloride	**158**	1.01	mg/kg dry	1	P9B2610	02/26/19	02/28/19	EPA 300.0	O-04
% Moisture	**1.0**	0.1	%	1	P9A2412	01/24/19	01/24/19	ASTM D2216	
Total Petroleum Hydrocarbons C6-C35 by EPA Method 8015M									
C6-C12	**1010**	126	mg/kg dry	5	P9A2410	01/24/19	01/25/19	TPH 8015M	
>C12-C28	**10300**	126	mg/kg dry	5	P9A2410	01/24/19	01/25/19	TPH 8015M	
>C28-C35	**1340**	126	mg/kg dry	5	P9A2410	01/24/19	01/25/19	TPH 8015M	
Surrogate: 1-Chlorooctane		*117 %*	*70-130*		*P9A2410*	*01/24/19*	*01/25/19*	*TPH 8015M*	
Surrogate: o-Terphenyl		*105 %*	*70-130*		*P9A2410*	*01/24/19*	*01/25/19*	*TPH 8015M*	
Total Petroleum Hydrocarbon C6-C35	**12600**	126	mg/kg dry	5	[CALC]	01/24/19	01/25/19	calc	

Larson & Associates, Inc.
P.O. Box 50685
Midland TX, 79710

Project: Lea Unit #8D (Legacy)
Project Number: 18-0138-03
Project Manager: Mark Larson

Fax: (432) 687-0456

DP-7.4 (0.75')

9A23003-34 (Soil)

Permian Basin Environmental Lab, L.P.

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Organics by GC									
Benzene	ND	0.00100	mg/kg dry	1	P9A2308	01/23/19	01/24/19	EPA 8021B	
Toluene	ND	0.00100	mg/kg dry	1	P9A2308	01/23/19	01/24/19	EPA 8021B	
Ethylbenzene	ND	0.00100	mg/kg dry	1	P9A2308	01/23/19	01/24/19	EPA 8021B	
Xylene (p/m)	ND	0.00200	mg/kg dry	1	P9A2308	01/23/19	01/24/19	EPA 8021B	
Xylene (o)	ND	0.00100	mg/kg dry	1	P9A2308	01/23/19	01/24/19	EPA 8021B	
Surrogate: 1,4-Difluorobenzene		*113 %*	*75-125*		*P9A2308*	*01/23/19*	*01/24/19*	*EPA 8021B*	
Surrogate: 4-Bromofluorobenzene		*80.3 %*	*75-125*		*P9A2308*	*01/23/19*	*01/24/19*	*EPA 8021B*	
General Chemistry Parameters by EPA / Standard Methods									
Chloride	**45.3**	1.00	mg/kg dry	1	P9B2610	02/26/19	02/28/19	EPA 300.0	O-04
% Moisture	ND	0.1	%	1	P9A2412	01/24/19	01/24/19	ASTM D2216	
Total Petroleum Hydrocarbons C6-C35 by EPA Method 8015M									
C6-C12	ND	25.0	mg/kg dry	1	P9A2410	01/24/19	01/25/19	TPH 8015M	
>C12-C28	ND	25.0	mg/kg dry	1	P9A2410	01/24/19	01/25/19	TPH 8015M	
>C28-C35	ND	25.0	mg/kg dry	1	P9A2410	01/24/19	01/25/19	TPH 8015M	
Surrogate: 1-Chlorooctane		*101 %*	*70-130*		*P9A2410*	*01/24/19*	*01/25/19*	*TPH 8015M*	
Surrogate: o-Terphenyl		*107 %*	*70-130*		*P9A2410*	*01/24/19*	*01/25/19*	*TPH 8015M*	
Total Petroleum Hydrocarbon C6-C35	ND	25.0	mg/kg dry	1	[CALC]	01/24/19	01/25/19	calc	

Larson & Associates, Inc.
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Midland TX, 79710

Project: Lea Unit #8D (Legacy)
Project Number: 18-0138-03
Project Manager: Mark Larson

Fax: (432) 687-0456

DP-7.5 (1.5')

9A23003-35 (Soil)

Permian Basin Environmental Lab, L.P.

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Organics by GC									
Benzene	ND	0.0200	mg/kg dry	20	P9A2308	01/23/19	01/24/19	EPA 8021B	
Toluene	**0.526**	0.0200	mg/kg dry	20	P9A2308	01/23/19	01/24/19	EPA 8021B	
Ethylbenzene	**0.724**	0.0200	mg/kg dry	20	P9A2308	01/23/19	01/24/19	EPA 8021B	
Xylene (p/m)	**1.08**	0.0400	mg/kg dry	20	P9A2308	01/23/19	01/24/19	EPA 8021B	
Xylene (o)	**0.650**	0.0200	mg/kg dry	20	P9A2308	01/23/19	01/24/19	EPA 8021B	
Surrogate: 4-Bromofluorobenzene		*90.0 %*	*75-125*		*P9A2308*	*01/23/19*	*01/24/19*	*EPA 8021B*	
Surrogate: 1,4-Difluorobenzene		*104 %*	*75-125*		*P9A2308*	*01/23/19*	*01/24/19*	*EPA 8021B*	
General Chemistry Parameters by EPA / Standard Methods									
Chloride	**75.4**	1.00	mg/kg dry	1	P9B2610	02/26/19	02/28/19	EPA 300.0	O-04
% Moisture	ND	0.1	%	1	P9A2412	01/24/19	01/24/19	ASTM D2216	
Total Petroleum Hydrocarbons C6-C35 by EPA Method 8015M									
C6-C12	**178**	25.0	mg/kg dry	1	P9A2410	01/24/19	01/25/19	TPH 8015M	
>C12-C28	**2060**	25.0	mg/kg dry	1	P9A2410	01/24/19	01/25/19	TPH 8015M	
>C28-C35	**275**	25.0	mg/kg dry	1	P9A2410	01/24/19	01/25/19	TPH 8015M	
Surrogate: 1-Chlorooctane		*111 %*	*70-130*		*P9A2410*	*01/24/19*	*01/25/19*	*TPH 8015M*	
Surrogate: o-Terphenyl		*105 %*	*70-130*		*P9A2410*	*01/24/19*	*01/25/19*	*TPH 8015M*	
Total Petroleum Hydrocarbon C6-C35	**2510**	25.0	mg/kg dry	1	[CALC]	01/24/19	01/25/19	calc	

Larson & Associates, Inc.	Project: Lea Unit #8D (Legacy)	Fax: (432) 687-0456
P.O. Box 50685	Project Number: 18-0138-03	
Midland TX, 79710	Project Manager: Mark Larson	

DP-6.1 (1')

9A23003-36 (Soil)

Permian Basin Environmental Lab, L.P.

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Organics by GC									
Benzene	ND	0.0204	mg/kg dry	20	P9A2308	01/23/19	01/25/19	EPA 8021B	
Toluene	**0.586**	0.0204	mg/kg dry	20	P9A2308	01/23/19	01/25/19	EPA 8021B	
Ethylbenzene	**0.759**	0.0204	mg/kg dry	20	P9A2308	01/23/19	01/25/19	EPA 8021B	
Xylene (p/m)	**1.67**	0.0408	mg/kg dry	20	P9A2308	01/23/19	01/25/19	EPA 8021B	
Xylene (o)	**0.748**	0.0204	mg/kg dry	20	P9A2308	01/23/19	01/25/19	EPA 8021B	
Surrogate: 1,4-Difluorobenzene		*83.8 %*	*75-125*		*P9A2308*	*01/23/19*	*01/25/19*	*EPA 8021B*	
Surrogate: 4-Bromofluorobenzene		*68.6 %*	*75-125*		*P9A2308*	*01/23/19*	*01/25/19*	*EPA 8021B*	*S-09*
General Chemistry Parameters by EPA / Standard Methods									
Chloride	**91.2**	1.02	mg/kg dry	1	P9B2610	02/26/19	02/28/19	EPA 300.0	O-04
% Moisture	**2.0**	0.1	%	1	P9A2412	01/24/19	01/24/19	ASTM D2216	
Total Petroleum Hydrocarbons C6-C35 by EPA Method 8015M									
C6-C12	**452**	128	mg/kg dry	5	P9A2410	01/24/19	01/25/19	TPH 8015M	
>C12-C28	**2940**	128	mg/kg dry	5	P9A2410	01/24/19	01/25/19	TPH 8015M	
>C28-C35	**380**	128	mg/kg dry	5	P9A2410	01/24/19	01/25/19	TPH 8015M	
Surrogate: 1-Chlorooctane		*103 %*	*70-130*		*P9A2410*	*01/24/19*	*01/25/19*	*TPH 8015M*	
Surrogate: o-Terphenyl		*84.4 %*	*70-130*		*P9A2410*	*01/24/19*	*01/25/19*	*TPH 8015M*	
Total Petroleum Hydrocarbon C6-C35	**3770**	128	mg/kg dry	5	[CALC]	01/24/19	01/25/19	calc	

Larson & Associates, Inc.	Project: Lea Unit #8D (Legacy)	Fax: (432) 687-0456
P.O. Box 50685	Project Number: 18-0138-03	
Midland TX, 79710	Project Manager: Mark Larson	

DP-6.2 (1')

9A23003-37 (Soil)

Permian Basin Environmental Lab, L.P.

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Organics by GC									
Benzene	**0.00158**	0.00104	mg/kg dry	1	P9A2308	01/23/19	01/24/19	EPA 8021B	
Toluene	**0.00551**	0.00104	mg/kg dry	1	P9A2308	01/23/19	01/24/19	EPA 8021B	
Ethylbenzene	**0.00457**	0.00104	mg/kg dry	1	P9A2308	01/23/19	01/24/19	EPA 8021B	
Xylene (p/m)	**0.0225**	0.00208	mg/kg dry	1	P9A2308	01/23/19	01/24/19	EPA 8021B	
Xylene (o)	**0.0203**	0.00104	mg/kg dry	1	P9A2308	01/23/19	01/24/19	EPA 8021B	
Surrogate: 4-Bromofluorobenzene		*51.6 %*	*75-125*		*P9A2308*	*01/23/19*	*01/24/19*	*EPA 8021B*	*S-09*
Surrogate: 1,4-Difluorobenzene		*88.0 %*	*75-125*		*P9A2308*	*01/23/19*	*01/24/19*	*EPA 8021B*	
General Chemistry Parameters by EPA / Standard Methods									
Chloride	**80.7**	1.04	mg/kg dry	1	P9B2610	02/26/19	02/28/19	EPA 300.0	O-04
% Moisture	**4.0**	0.1	%	1	P9A2412	01/24/19	01/24/19	ASTM D2216	
Total Petroleum Hydrocarbons C6-C35 by EPA Method 8015M									
C6-C12	**99.6**	26.0	mg/kg dry	1	P9A2410	01/24/19	01/25/19	TPH 8015M	
>C12-C28	**1620**	26.0	mg/kg dry	1	P9A2410	01/24/19	01/25/19	TPH 8015M	
>C28-C35	**265**	26.0	mg/kg dry	1	P9A2410	01/24/19	01/25/19	TPH 8015M	
Surrogate: 1-Chlorooctane		*102 %*	*70-130*		*P9A2410*	*01/24/19*	*01/25/19*	*TPH 8015M*	
Surrogate: o-Terphenyl		*103 %*	*70-130*		*P9A2410*	*01/24/19*	*01/25/19*	*TPH 8015M*	
Total Petroleum Hydrocarbon C6-C35	**1990**	26.0	mg/kg dry	1	[CALC]	01/24/19	01/25/19	calc	

Larson & Associates, Inc.
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Midland TX, 79710

Project: Lea Unit #8D (Legacy)
Project Number: 18-0138-03
Project Manager: Mark Larson

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DP-6.3 (1')

9A23003-38 (Soil)

Permian Basin Environmental Lab, L.P.

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Organics by GC									
Benzene	ND	0.00101	mg/kg dry	1	P9A2308	01/23/19	01/24/19	EPA 8021B	
Toluene	ND	0.00101	mg/kg dry	1	P9A2308	01/23/19	01/24/19	EPA 8021B	
Ethylbenzene	ND	0.00101	mg/kg dry	1	P9A2308	01/23/19	01/24/19	EPA 8021B	
Xylene (p/m)	ND	0.00202	mg/kg dry	1	P9A2308	01/23/19	01/24/19	EPA 8021B	
Xylene (o)	ND	0.00101	mg/kg dry	1	P9A2308	01/23/19	01/24/19	EPA 8021B	
Surrogate: 1,4-Difluorobenzene		*112 %*	*75-125*		*P9A2308*	*01/23/19*	*01/24/19*	*EPA 8021B*	
Surrogate: 4-Bromofluorobenzene		*79.4 %*	*75-125*		*P9A2308*	*01/23/19*	*01/24/19*	*EPA 8021B*	
General Chemistry Parameters by EPA / Standard Methods									
Chloride	**9.79**	1.01	mg/kg dry	1	P9B2610	02/26/19	02/28/19	EPA 300.0	O-04
% Moisture	**1.0**	0.1	%	1	P9A2412	01/24/19	01/24/19	ASTM D2216	
Total Petroleum Hydrocarbons C6-C35 by EPA Method 8015M									
C6-C12	ND	25.3	mg/kg dry	1	P9A2410	01/24/19	01/25/19	TPH 8015M	
>C12-C28	ND	25.3	mg/kg dry	1	P9A2410	01/24/19	01/25/19	TPH 8015M	
>C28-C35	ND	25.3	mg/kg dry	1	P9A2410	01/24/19	01/25/19	TPH 8015M	
Surrogate: 1-Chlorooctane		*99.4 %*	*70-130*		*P9A2410*	*01/24/19*	*01/25/19*	*TPH 8015M*	
Surrogate: o-Terphenyl		*105 %*	*70-130*		*P9A2410*	*01/24/19*	*01/25/19*	*TPH 8015M*	
Total Petroleum Hydrocarbon C6-C35	ND	25.3	mg/kg dry	1	[CALC]	01/24/19	01/25/19	calc	

Larson & Associates, Inc.
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Project: Lea Unit #8D (Legacy)
Project Number: 18-0138-03
Project Manager: Mark Larson

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DP-6.4 (1')

9A23003-39 (Soil)

Permian Basin Environmental Lab, L.P.

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Organics by GC									
Benzene	ND	0.00101	mg/kg dry	1	P9A2308	01/23/19	01/24/19	EPA 8021B	
Toluene	ND	0.00101	mg/kg dry	1	P9A2308	01/23/19	01/24/19	EPA 8021B	
Ethylbenzene	ND	0.00101	mg/kg dry	1	P9A2308	01/23/19	01/24/19	EPA 8021B	
Xylene (p/m)	ND	0.00202	mg/kg dry	1	P9A2308	01/23/19	01/24/19	EPA 8021B	
Xylene (o)	**0.00138**	0.00101	mg/kg dry	1	P9A2308	01/23/19	01/24/19	EPA 8021B	
Surrogate: 4-Bromofluorobenzene		*72.3 %*	*75-125*		*P9A2308*	*01/23/19*	*01/24/19*	*EPA 8021B*	*S-09*
Surrogate: 1,4-Difluorobenzene		*107 %*	*75-125*		*P9A2308*	*01/23/19*	*01/24/19*	*EPA 8021B*	
General Chemistry Parameters by EPA / Standard Methods									
Chloride	**157**	1.01	mg/kg dry	1	P9B2610	02/26/19	02/28/19	EPA 300.0	O-04
% Moisture	**1.0**	0.1	%	1	P9A2412	01/24/19	01/24/19	ASTM D2216	
Total Petroleum Hydrocarbons C6-C35 by EPA Method 8015M									
C6-C12	ND	25.3	mg/kg dry	1	P9A2410	01/24/19	01/25/19	TPH 8015M	
>C12-C28	**29.8**	25.3	mg/kg dry	1	P9A2410	01/24/19	01/25/19	TPH 8015M	
>C28-C35	ND	25.3	mg/kg dry	1	P9A2410	01/24/19	01/25/19	TPH 8015M	
Surrogate: 1-Chlorooctane		*96.8 %*	*70-130*		*P9A2410*	*01/24/19*	*01/25/19*	*TPH 8015M*	
Surrogate: o-Terphenyl		*102 %*	*70-130*		*P9A2410*	*01/24/19*	*01/25/19*	*TPH 8015M*	
Total Petroleum Hydrocarbon C6-C35	**29.8**	25.3	mg/kg dry	1	[CALC]	01/24/19	01/25/19	calc	

Larson & Associates, Inc.
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Project: Lea Unit #8D (Legacy)
Project Number: 18-0138-03
Project Manager: Mark Larson

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DP-6.5 (2')

9A23003-40 (Soil)

Permian Basin Environmental Lab, L.P.

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Organics by GC									
Benzene	ND	0.00100	mg/kg dry	1	P9A2308	01/23/19	01/24/19	EPA 8021B	
Toluene	**0.00158**	0.00100	mg/kg dry	1	P9A2308	01/23/19	01/24/19	EPA 8021B	
Ethylbenzene	ND	0.00100	mg/kg dry	1	P9A2308	01/23/19	01/24/19	EPA 8021B	
Xylene (p/m)	**0.00277**	0.00200	mg/kg dry	1	P9A2308	01/23/19	01/24/19	EPA 8021B	
Xylene (o)	**0.00530**	0.00100	mg/kg dry	1	P9A2308	01/23/19	01/24/19	EPA 8021B	
Surrogate: 1,4-Difluorobenzene		*113 %*	*75-125*		*P9A2308*	*01/23/19*	*01/24/19*	*EPA 8021B*	
Surrogate: 4-Bromofluorobenzene		*88.7 %*	*75-125*		*P9A2308*	*01/23/19*	*01/24/19*	*EPA 8021B*	
General Chemistry Parameters by EPA / Standard Methods									
Chloride	**253**	1.00	mg/kg dry	1	P9B2801	02/27/19	02/28/19	EPA 300.0	O-04
% Moisture	ND	0.1	%	1	P9A2412	01/24/19	01/24/19	ASTM D2216	
Total Petroleum Hydrocarbons C6-C35 by EPA Method 8015M									
C6-C12	**30.5**	25.0	mg/kg dry	1	P9A2506	01/25/19	01/25/19	TPH 8015M	
>C12-C28	**817**	25.0	mg/kg dry	1	P9A2506	01/25/19	01/25/19	TPH 8015M	
>C28-C35	**119**	25.0	mg/kg dry	1	P9A2506	01/25/19	01/25/19	TPH 8015M	
Surrogate: 1-Chlorooctane		*91.8 %*	*70-130*		*P9A2506*	*01/25/19*	*01/25/19*	*TPH 8015M*	
Surrogate: o-Terphenyl		*95.0 %*	*70-130*		*P9A2506*	*01/25/19*	*01/25/19*	*TPH 8015M*	
Total Petroleum Hydrocarbon C6-C35	**966**	25.0	mg/kg dry	1	[CALC]	01/25/19	01/25/19	calc	

Organics by GC - Quality Control

Permian Basin Environmental Lab, L.P.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch P9A2307 - General Preparation (GC)										
Blank (P9A2307-BLK1)				Prepared & Analyzed: 01/23/19						
Benzene	ND	0.00100	mg/kg wet							
Toluene	ND	0.00100	"							
Ethylbenzene	ND	0.00100	"							
Xylene (p/m)	ND	0.00200	"							
Xylene (o)	ND	0.00100	"							
Surrogate: 1,4-Difluorobenzene	*0.0515*		*"*	*0.0600*		*85.8*	*75-125*			
Surrogate: 4-Bromofluorobenzene	*0.0465*		*"*	*0.0600*		*77.4*	*75-125*			
LCS (P9A2307-BS1)				Prepared & Analyzed: 01/23/19						
Benzene	0.101	0.00100	mg/kg wet	0.100		101	70-130			
Toluene	0.105	0.00100	"	0.100		105	70-130			
Ethylbenzene	0.111	0.00100	"	0.100		111	70-130			
Xylene (p/m)	0.193	0.00200	"	0.200		96.5	70-130			
Xylene (o)	0.106	0.00100	"	0.100		106	70-130			
Surrogate: 1,4-Difluorobenzene	*0.0781*		*"*	*0.0600*		*130*	*75-125*			*S-09*
Surrogate: 4-Bromofluorobenzene	*0.0573*		*"*	*0.0600*		*95.4*	*75-125*			
LCS Dup (P9A2307-BSD1)				Prepared & Analyzed: 01/23/19						
Benzene	0.104	0.00100	mg/kg wet	0.100		104	70-130	3.16	20	
Toluene	0.103	0.00100	"	0.100		103	70-130	1.54	20	
Ethylbenzene	0.104	0.00100	"	0.100		104	70-130	6.54	20	
Xylene (p/m)	0.188	0.00200	"	0.200		93.8	70-130	2.87	20	
Xylene (o)	0.107	0.00100	"	0.100		107	70-130	0.301	20	
Surrogate: 4-Bromofluorobenzene	*0.0508*		*"*	*0.0600*		*84.7*	*75-125*			
Surrogate: 1,4-Difluorobenzene	*0.0762*		*"*	*0.0600*		*127*	*75-125*			*S-09*
Matrix Spike (P9A2307-MS1)	**Source: 9A23003-26**			Prepared: 01/23/19 Analyzed: 01/24/19						
Benzene	0.0859	0.00105	mg/kg dry	0.105	ND	81.6	80-120			
Toluene	0.101	0.00105	"	0.105	ND	96.2	80-120			
Ethylbenzene	0.113	0.00105	"	0.105	ND	108	80-120			
Xylene (p/m)	0.177	0.00211	"	0.211	ND	84.1	80-120			
Xylene (o)	0.0862	0.00105	"	0.105	ND	81.9	80-120			
Surrogate: 1,4-Difluorobenzene	*0.0769*		*"*	*0.0632*		*122*	*75-125*			
Surrogate: 4-Bromofluorobenzene	*0.0471*		*"*	*0.0632*		*74.6*	*75-125*			*S-09*

Organics by GC - Quality Control

Permian Basin Environmental Lab, L.P.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch P9A2307 - General Preparation (GC)										
Matrix Spike Dup (P9A2307-MSD1)	**Source: 9A23003-26**			Prepared: 01/23/19 Analyzed: 01/24/19						
Benzene	0.0782	0.00105	mg/kg dry	0.105	ND	74.3	80-120	9.42	20	QM-05
Toluene	0.0904	0.00105	"	0.105	ND	85.9	80-120	11.3	20	
Ethylbenzene	0.101	0.00105	"	0.105	ND	96.2	80-120	11.2	20	
Xylene (p/m)	0.158	0.00211	"	0.211	ND	75.2	80-120	11.2	20	QM-05
Xylene (o)	0.0807	0.00105	"	0.105	ND	76.6	80-120	6.66	20	QM-05
Surrogate: 4-Bromofluorobenzene	*0.0529*		*"*	*0.0632*		*83.8*	*75-125*			
Surrogate: 1,4-Difluorobenzene	*0.0765*		*"*	*0.0632*		*121*	*75-125*			
Batch P9A2308 - General Preparation (GC)										
Blank (P9A2308-BLK1)				Prepared: 01/23/19 Analyzed: 01/24/19						
Benzene	ND	0.00100	mg/kg wet							
Toluene	ND	0.00100	"							
Ethylbenzene	ND	0.00100	"							
Xylene (p/m)	ND	0.00200	"							
Xylene (o)	ND	0.00100	"							
Surrogate: 4-Bromofluorobenzene	*0.0492*		*"*	*0.0600*		*82.0*	*75-125*			
Surrogate: 1,4-Difluorobenzene	*0.0665*		*"*	*0.0600*		*111*	*75-125*			
LCS (P9A2308-BS1)				Prepared: 01/23/19 Analyzed: 01/24/19						
Benzene	0.0852	0.00100	mg/kg wet	0.100		85.2	70-130			
Toluene	0.0978	0.00100	"	0.100		97.8	70-130			
Ethylbenzene	0.114	0.00100	"	0.100		114	70-130			
Xylene (p/m)	0.181	0.00200	"	0.200		90.7	70-130			
Xylene (o)	0.0863	0.00100	"	0.100		86.3	70-130			
Surrogate: 4-Bromofluorobenzene	*0.0522*		*"*	*0.0600*		*87.0*	*75-125*			
Surrogate: 1,4-Difluorobenzene	*0.0653*		*"*	*0.0600*		*109*	*75-125*			

Organics by GC - Quality Control

Permian Basin Environmental Lab, L.P.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch P9A2308 - General Preparation (GC)										
LCS Dup (P9A2308-BSD1)				Prepared: 01/23/19 Analyzed: 01/24/19						
Benzene	0.0805	0.00100	mg/kg wet	0.100		80.5	70-130	5.70	20	
Toluene	0.0903	0.00100	"	0.100		90.3	70-130	7.96	20	
Ethylbenzene	0.104	0.00100	"	0.100		104	70-130	9.19	20	
Xylene (p/m)	0.184	0.00200	"	0.200		91.9	70-130	1.38	20	
Xylene (o)	0.0824	0.00100	"	0.100		82.4	70-130	4.66	20	
Surrogate: 1,4-Difluorobenzene	*0.0606*		*"*	*0.0600*		*101*	*75-125*			
Surrogate: 4-Bromofluorobenzene	*0.0456*		*"*	*0.0600*		*76.0*	*75-125*			
Matrix Spike (P9A2308-MS1)		**Source: 9A23003-27**		Prepared: 01/23/19 Analyzed: 01/27/19						
Benzene	0.0373	0.00102	mg/kg dry	0.102	ND	36.5	80-120			QM-05
Toluene	0.00477	0.00102	"	0.102	ND	4.67	80-120			QM-05
Ethylbenzene	0.0161	0.00102	"	0.102	ND	15.8	80-120			QM-05
Xylene (p/m)	0.0102	0.00204	"	0.204	ND	5.01	80-120			QM-05
Xylene (o)	0.0695	0.00102	"	0.102	ND	68.1	80-120			QM-05
Surrogate: 4-Bromofluorobenzene	*0.0535*		*"*	*0.0612*		*87.4*	*75-125*			
Surrogate: 1,4-Difluorobenzene	*0.0681*		*"*	*0.0612*		*111*	*75-125*			
Matrix Spike Dup (P9A2308-MSD1)		**Source: 9A23003-27**		Prepared: 01/23/19 Analyzed: 01/27/19						
Benzene	0.0466	0.00102	mg/kg dry	0.102	ND	45.7	80-120	22.3	20	QM-05
Toluene	0.0123	0.00102	"	0.102	ND	12.1	80-120	88.5	20	QM-05
Ethylbenzene	0.0233	0.00102	"	0.102	ND	22.8	80-120	36.5	20	QM-05
Xylene (p/m)	0.0148	0.00204	"	0.204	ND	7.26	80-120	36.5	20	QM-05
Xylene (o)	0.0755	0.00102	"	0.102	ND	74.0	80-120	8.31	20	QM-05
Surrogate: 1,4-Difluorobenzene	*0.0706*		*"*	*0.0612*		*115*	*75-125*			
Surrogate: 4-Bromofluorobenzene	*0.0524*		*"*	*0.0612*		*85.6*	*75-125*			

General Chemistry Parameters by EPA / Standard Methods - Quality Control

Permian Basin Environmental Lab, L.P.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch P9A2412 - * DEFAULT PREP *** **										
Blank (P9A2412-BLK1)				Prepared & Analyzed: 01/24/19						
% Moisture	ND	0.1	%							
Duplicate (P9A2412-DUP1)		**Source: 9A23003-26**		Prepared & Analyzed: 01/24/19						
% Moisture	3.0	0.1	%		5.0			50.0	20	
Duplicate (P9A2412-DUP2)		**Source: 9A23005-03**		Prepared & Analyzed: 01/24/19						
% Moisture	14.0	0.1	%		14.0			0.00	20	
Duplicate (P9A2412-DUP3)		**Source: 9A23010-05**		Prepared & Analyzed: 01/24/19						
% Moisture	5.0	0.1	%		7.0			33.3	20	
Duplicate (P9A2412-DUP4)		**Source: 9A23018-12**		Prepared & Analyzed: 01/24/19						
% Moisture	2.0	0.1	%		1.0			66.7	20	
Batch P9B2608 - * DEFAULT PREP *** **										
Blank (P9B2608-BLK1)				Prepared: 02/26/19 Analyzed: 02/27/19						
Chloride	ND	1.00	mg/kg wet							
LCS (P9B2608-BS1)				Prepared: 02/26/19 Analyzed: 02/27/19						
Chloride	415	1.00	mg/kg wet	500		83.0	80-120			
LCS Dup (P9B2608-BSD1)				Prepared: 02/26/19 Analyzed: 02/27/19						
Chloride	407	1.00	mg/kg wet	500		81.3	80-120	2.05	20	
Duplicate (P9B2608-DUP1)		**Source: 9B21010-17**		Prepared: 02/26/19 Analyzed: 02/27/19						
Chloride	26.1	1.04	mg/kg dry		21.0			21.6	20	

General Chemistry Parameters by EPA / Standard Methods - Quality Control

Permian Basin Environmental Lab, L.P.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch P9B2608 - * DEFAULT PREP *** **										
Duplicate (P9B2608-DUP2)	**Source: 9A23003-10**			Prepared: 02/26/19 Analyzed: 02/27/19						
Chloride	58.3	1.01	mg/kg dry		60.1			2.97	20	
Matrix Spike (P9B2608-MS1)	**Source: 9B21010-17**			Prepared: 02/26/19 Analyzed: 02/27/19						
Chloride	560	1.04	mg/kg dry	521	21.0	104	80-120			
Batch P9B2610 - * DEFAULT PREP *** **										
Blank (P9B2610-BLK1)				Prepared: 02/26/19 Analyzed: 02/28/19						
Chloride	ND	1.00	mg/kg wet							
LCS (P9B2610-BS1)				Prepared: 02/26/19 Analyzed: 02/28/19						
Chloride	414	1.00	mg/kg wet	400		103	80-120			
LCS Dup (P9B2610-BSD1)				Prepared: 02/26/19 Analyzed: 02/28/19						
Chloride	407	1.00	mg/kg wet	400		102	80-120	1.73	20	
Duplicate (P9B2610-DUP1)	**Source: 9A23003-20**			Prepared: 02/26/19 Analyzed: 02/28/19						
Chloride	1.13	1.01	mg/kg dry		3.33			98.6	20	R2
Duplicate (P9B2610-DUP2)	**Source: 9A23003-30**			Prepared: 02/26/19 Analyzed: 02/28/19						
Chloride	247	1.01	mg/kg dry		249			0.541	20	
Matrix Spike (P9B2610-MS1)	**Source: 9A23003-20**			Prepared: 02/26/19 Analyzed: 02/28/19						
Chloride	521	1.01	mg/kg dry	505	3.33	102	80-120			
Batch P9B2801 - * DEFAULT PREP *** **										
Blank (P9B2801-BLK1)				Prepared: 02/27/19 Analyzed: 02/28/19						
Chloride	ND	1.00	mg/kg wet							

General Chemistry Parameters by EPA / Standard Methods - Quality Control

Permian Basin Environmental Lab, L.P.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch P9B2801 - * DEFAULT PREP *** **										
LCS (P9B2801-BS1)				Prepared: 02/27/19 Analyzed: 02/28/19						
Chloride	417	1.00	mg/kg wet	400		104	80-120			
LCS Dup (P9B2801-BSD1)				Prepared: 02/27/19 Analyzed: 02/28/19						
Chloride	406	1.00	mg/kg wet	400		102	80-120	2.46	20	
Duplicate (P9B2801-DUP1)		**Source: 9A23003-40**		Prepared: 02/27/19 Analyzed: 02/28/19						
Chloride	246	1.00	mg/kg dry		253			3.07	20	
Duplicate (P9B2801-DUP2)		**Source: 9A30001-09**		Prepared: 02/27/19 Analyzed: 02/28/19						
Chloride	709	30.5	mg/kg dry		405			54.5	20	R2
Matrix Spike (P9B2801-MS1)		**Source: 9A30001-09**		Prepared: 02/27/19 Analyzed: 02/28/19						
Chloride	3990	30.5	mg/kg dry	3050	405	118	80-120			

Total Petroleum Hydrocarbons C6-C35 by EPA Method 8015M - Quality Control

Permian Basin Environmental Lab, L.P.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch P9A2405 - TX 1005										
Blank (P9A2405-BLK1)				Prepared: 01/23/19 Analyzed: 01/24/19						
C6-C12	ND	25.0	mg/kg wet							
>C12-C28	ND	25.0	"							
>C28-C35	ND	25.0	"							
Surrogate: 1-Chlorooctane	*103*		*"*	*100*		*103*	*70-130*			
Surrogate: o-Terphenyl	*54.7*		*"*	*50.0*		*109*	*70-130*			
LCS (P9A2405-BS1)				Prepared: 01/23/19 Analyzed: 01/24/19						
C6-C12	871	25.0	mg/kg wet	1000		87.1	75-125			
>C12-C28	1080	25.0	"	1000		108	75-125			
Surrogate: 1-Chlorooctane	*112*		*"*	*100*		*112*	*70-130*			
Surrogate: o-Terphenyl	*50.1*		*"*	*50.0*		*100*	*70-130*			
LCS Dup (P9A2405-BSD1)				Prepared: 01/23/19 Analyzed: 01/24/19						
C6-C12	870	25.0	mg/kg wet	1000		87.0	75-125	0.147	20	
>C12-C28	1070	25.0	"	1000		107	75-125	1.05	20	
Surrogate: 1-Chlorooctane	*114*		*"*	*100*		*114*	*70-130*			
Surrogate: o-Terphenyl	*50.4*		*"*	*50.0*		*101*	*70-130*			
Matrix Spike (P9A2405-MS1)	**Source: 9A22005-21**			Prepared: 01/23/19 Analyzed: 01/24/19						
C6-C12	926	28.1	mg/kg dry	1120	16.0	81.0	75-125			
>C12-C28	1140	28.1	"	1120	ND	101	75-125			
Surrogate: 1-Chlorooctane	*109*		*"*	*112*		*96.7*	*70-130*			
Surrogate: o-Terphenyl	*53.7*		*"*	*56.2*		*95.6*	*70-130*			
Matrix Spike Dup (P9A2405-MSD1)	**Source: 9A22005-21**			Prepared: 01/23/19 Analyzed: 01/24/19						
C6-C12	912	28.1	mg/kg dry	1120	16.0	79.8	75-125	1.57	20	
>C12-C28	1130	28.1	"	1120	ND	101	75-125	0.367	20	
Surrogate: 1-Chlorooctane	*111*		*"*	*112*		*98.8*	*70-130*			
Surrogate: o-Terphenyl	*53.9*		*"*	*56.2*		*95.9*	*70-130*			

Total Petroleum Hydrocarbons C6-C35 by EPA Method 8015M - Quality Control

Permian Basin Environmental Lab, L.P.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch P9A2407 - TX 1005										
Blank (P9A2407-BLK1)				Prepared & Analyzed: 01/24/19						
C6-C12	ND	25.0	mg/kg wet							
>C12-C28	ND	25.0	"							
>C28-C35	ND	25.0	"							
Surrogate: 1-Chlorooctane	*94.9*		*"*	*100*		*94.9*	*70-130*			
Surrogate: o-Terphenyl	*53.1*		*"*	*50.0*		*106*	*70-130*			
LCS (P9A2407-BS1)				Prepared & Analyzed: 01/24/19						
C6-C12	881	25.0	mg/kg wet	1000		88.1	75-125			
>C12-C28	848	25.0	"	1000		84.8	75-125			
Surrogate: 1-Chlorooctane	*123*		*"*	*100*		*123*	*70-130*			
Surrogate: o-Terphenyl	*55.3*		*"*	*50.0*		*111*	*70-130*			
LCS Dup (P9A2407-BSD1)				Prepared & Analyzed: 01/24/19						
C6-C12	850	25.0	mg/kg wet	1000		85.0	75-125	3.59	20	
>C12-C28	819	25.0	"	1000		81.9	75-125	3.53	20	
Surrogate: 1-Chlorooctane	*127*		*"*	*100*		*127*	*70-130*			
Surrogate: o-Terphenyl	*58.7*		*"*	*50.0*		*117*	*70-130*			
Matrix Spike (P9A2407-MS1)	**Source: 9A23003-09**			Prepared: 01/24/19 Analyzed: 01/25/19						
C6-C12	1010	25.5	mg/kg dry	1020	12.9	97.9	75-125			
>C12-C28	922	25.5	"	1020	23.9	88.0	75-125			
Surrogate: 1-Chlorooctane	*124*		*"*	*102*		*122*	*70-130*			
Surrogate: o-Terphenyl	*52.9*		*"*	*51.0*		*104*	*70-130*			
Matrix Spike Dup (P9A2407-MSD1)	**Source: 9A23003-09**			Prepared: 01/24/19 Analyzed: 01/25/19						
C6-C12	955	25.5	mg/kg dry	1020	12.9	92.3	75-125	5.92	20	
>C12-C28	871	25.5	"	1020	23.9	83.0	75-125	5.77	20	
Surrogate: 1-Chlorooctane	*119*		*"*	*102*		*116*	*70-130*			
Surrogate: o-Terphenyl	*54.2*		*"*	*51.0*		*106*	*70-130*			

Total Petroleum Hydrocarbons C6-C35 by EPA Method 8015M - Quality Control

Permian Basin Environmental Lab, L.P.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch P9A2408 - TX 1005										
Blank (P9A2408-BLK1)				Prepared & Analyzed: 01/24/19						
C6-C12	ND	25.0	mg/kg wet							
>C12-C28	ND	25.0	"							
>C28-C35	ND	25.0	"							
Surrogate: 1-Chlorooctane	*87.9*		*"*	*100*		*87.9*	*70-130*			
Surrogate: o-Terphenyl	*47.8*		*"*	*50.0*		*95.5*	*70-130*			
LCS (P9A2408-BS1)				Prepared & Analyzed: 01/24/19						
C6-C12	800	25.0	mg/kg wet	1000		80.0	75-125			
>C12-C28	983	25.0	"	1000		98.3	75-125			
Surrogate: 1-Chlorooctane	*105*		*"*	*100*		*105*	*70-130*			
Surrogate: o-Terphenyl	*46.0*		*"*	*50.0*		*92.0*	*70-130*			
LCS Dup (P9A2408-BSD1)				Prepared & Analyzed: 01/24/19						
C6-C12	786	25.0	mg/kg wet	1000		78.6	75-125	1.71	20	
>C12-C28	960	25.0	"	1000		96.0	75-125	2.32	20	
Surrogate: 1-Chlorooctane	*94.0*		*"*	*100*		*94.0*	*70-130*			
Surrogate: o-Terphenyl	*44.7*		*"*	*50.0*		*89.4*	*70-130*			
Matrix Spike (P9A2408-MS1)	**Source: 9A23003-29**			Prepared: 01/24/19 Analyzed: 01/25/19						
C6-C12	981	25.3	mg/kg dry	1010	12.8	95.8	75-125			
>C12-C28	1120	25.3	"	1010	ND	110	75-125			
Surrogate: 1-Chlorooctane	*106*		*"*	*101*		*105*	*70-130*			
Surrogate: o-Terphenyl	*46.4*		*"*	*50.5*		*91.9*	*70-130*			
Matrix Spike Dup (P9A2408-MSD1)	**Source: 9A23003-29**			Prepared: 01/24/19 Analyzed: 01/25/19						
C6-C12	985	25.3	mg/kg dry	1010	12.8	96.3	75-125	0.481	20	
>C12-C28	1150	25.3	"	1010	ND	114	75-125	2.77	20	
Surrogate: 1-Chlorooctane	*117*		*"*	*101*		*116*	*70-130*			
Surrogate: o-Terphenyl	*53.4*		*"*	*50.5*		*106*	*70-130*			

Total Petroleum Hydrocarbons C6-C35 by EPA Method 8015M - Quality Control

Permian Basin Environmental Lab, L.P.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch P9A2410 - TX 1005										
Blank (P9A2410-BLK1)				Prepared: 01/24/19 Analyzed: 01/25/19						
C6-C12	ND	25.0	mg/kg wet							
>C12-C28	ND	25.0	"							
>C28-C35	ND	25.0	"							
Surrogate: 1-Chlorooctane	*123*		*"*	*100*		*123*	*70-130*			
Surrogate: o-Terphenyl	*65.9*		*"*	*50.0*		*132*	*70-130*			*S-09*
LCS (P9A2410-BS1)				Prepared: 01/24/19 Analyzed: 01/25/19						
C6-C12	1020	25.0	mg/kg wet	1000		102	75-125			
>C12-C28	978	25.0	"	1000		97.8	75-125			
Surrogate: 1-Chlorooctane	*119*		*"*	*100*		*119*	*70-130*			
Surrogate: o-Terphenyl	*58.3*		*"*	*50.0*		*117*	*70-130*			
LCS Dup (P9A2410-BSD1)				Prepared: 01/24/19 Analyzed: 01/25/19						
C6-C12	1040	25.0	mg/kg wet	1000		104	75-125	2.11	20	
>C12-C28	980	25.0	"	1000		98.0	75-125	0.161	20	
Surrogate: 1-Chlorooctane	*122*		*"*	*100*		*122*	*70-130*			
Surrogate: o-Terphenyl	*57.8*		*"*	*50.0*		*116*	*70-130*			
Matrix Spike (P9A2410-MS1)	**Source: 9A24004-06**			Prepared: 01/24/19 Analyzed: 01/25/19						
C6-C12	1060	27.8	mg/kg dry	1110	41.5	91.9	75-125			
>C12-C28	1310	27.8	"	1110	706	54.0	75-125			QM-05
Surrogate: 1-Chlorooctane	*135*		*"*	*111*		*121*	*70-130*			
Surrogate: o-Terphenyl	*62.6*		*"*	*55.6*		*113*	*70-130*			
Matrix Spike Dup (P9A2410-MSD1)	**Source: 9A24004-06**			Prepared: 01/24/19 Analyzed: 01/25/19						
C6-C12	1050	27.8	mg/kg dry	1110	41.5	90.3	75-125	1.73	20	
>C12-C28	1310	27.8	"	1110	706	54.2	75-125	0.377	20	QM-05
Surrogate: 1-Chlorooctane	*133*		*"*	*111*		*120*	*70-130*			
Surrogate: o-Terphenyl	*62.3*		*"*	*55.6*		*112*	*70-130*			

Total Petroleum Hydrocarbons C6-C35 by EPA Method 8015M - Quality Control

Permian Basin Environmental Lab, L.P.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch P9A2506 - TX 1005										
Blank (P9A2506-BLK1)				Prepared: 01/25/19 Analyzed: 01/28/19						
C6-C12	ND	25.0	mg/kg wet							
>C12-C28	ND	25.0	"							
>C28-C35	ND	25.0	"							
Surrogate: 1-Chlorooctane	*92.1*		*"*	*100*		*92.1*	*70-130*			
Surrogate: o-Terphenyl	*47.7*		*"*	*50.0*		*95.3*	*70-130*			
LCS (P9A2506-BS1)				Prepared: 01/25/19 Analyzed: 01/28/19						
C6-C12	968	25.0	mg/kg wet	1000		96.8	75-125			
>C12-C28	1150	25.0	"	1000		115	75-125			
Surrogate: 1-Chlorooctane	*96.9*		*"*	*100*		*96.9*	*70-130*			
Surrogate: o-Terphenyl	*43.7*		*"*	*50.0*		*87.3*	*70-130*			
LCS Dup (P9A2506-BSD1)				Prepared: 01/25/19 Analyzed: 01/28/19						
C6-C12	965	25.0	mg/kg wet	1000		96.5	75-125	0.294	20	
>C12-C28	1190	25.0	"	1000		119	75-125	2.82	20	
Surrogate: 1-Chlorooctane	*93.7*		*"*	*100*		*93.7*	*70-130*			
Surrogate: o-Terphenyl	*44.1*		*"*	*50.0*		*88.2*	*70-130*			
Matrix Spike (P9A2506-MS1)	**Source: 9A23003-40**			Prepared: 01/25/19 Analyzed: 01/26/19						
C6-C12	1030	25.0	mg/kg dry	1000	30.5	99.9	75-125			
>C12-C28	2460	25.0	"	1000	817	164	75-125			QM-05
Surrogate: 1-Chlorooctane	*114*		*"*	*100*		*114*	*70-130*			
Surrogate: o-Terphenyl	*48.3*		*"*	*50.0*		*96.7*	*70-130*			
Matrix Spike Dup (P9A2506-MSD1)	**Source: 9A23003-40**			Prepared: 01/25/19 Analyzed: 01/26/19						
C6-C12	1020	25.0	mg/kg dry	1000	30.5	99.3	75-125	0.604	20	
>C12-C28	2170	25.0	"	1000	817	136	75-125	19.0	20	QM-05
Surrogate: 1-Chlorooctane	*114*		*"*	*100*		*114*	*70-130*			
Surrogate: o-Terphenyl	*47.7*		*"*	*50.0*		*95.3*	*70-130*			

Notes and Definitions

S-09	Surrogate recovery limits have been exceeded.
R2	The RPD exceeded the acceptance limit.
QM-05	The spike recovery was outside acceptance limits for the MS and/or MSD due to matrix interference. The LCS and/or LCSD were within acceptance limits showing that the laboratory is in control and the data is acceptable.
O-04	This sample was analyzed outside the EPA recommended holding time.
BULK	Samples received in Bulk soil containers
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
LCS	Laboratory Control Spike
MS	Matrix Spike
Dup	Duplicate

Report Approved By: Brent Barron Date: 3/1/2019

Brent Barron, Laboratory Director/Technical Director

Nº 0556

CHAIN-OF-CUSTODY

Larson & Associates, Inc.
Environmental Consultants
507 N. Marienfeld, Ste. 200
Midland, TX 79701
432-687-0901

DATE: 01/23/2019 PAGE 1 OF 3

PO#: LAB WORK ORDER#: 9A23003

PROJECT LOCATION OR NAME: Lea Unit #8D

LAI PROJECT #: 18-0138-03 COLLECTOR: RD

Data Reported to:

TRRP report? ☐ Yes ☒ No

TIME ZONE: Time zone/State: MST

S=SOIL P=PAINT
W=WATER SL=SLUDGE
A=AIR OT=OTHER

#9A23003

PRESERVATION: HCl | HNO_3 | H_2SO_4 ☐ NaOH ☐ | ICE | UNPRESERVED

ANALYSES: BTEX ☒ MTBE ☐ | TRPH 418.1 ☐ | TPH 1005 ☐ TPH 1006 ☐ | GASOLINE MOD 8015 ☒ | DIESEL - MOD 8015 ☒ | OIL - MOD 8015 ☒ | VOC 8260 ☐ | SVOC 8270 ☐ PAH 8270 ☐ HOLDPAH ☐ | 8081 PESTICIDES ☐ 8151 HERBICIDES ☐ | 8082 PCBS ☐ | TCLP - METALS (RCRA) ☐ TCLP VOC ☐ | TCLP - PEST ☐ HERB ☐ Semi-VOC ☐ | TOTAL METALS (RCRA) ☐ OTHER LIST ☐ | LEAD - TOTAL ☐ D.W. 200.8 ☐ TCLP ☐ | RCI ☐ TOX ☐ FLASHPOINT ☐ | TDS ☐ TSS ☐ % MOISTURE ☐ CYANIDE ☐ | pH ☐ HEXAVALENT CHROMIUM ☐ | EXPLOSIVES ☐ PECHLORATE ☐ | CHLORIDE ☐ ANIONS ☐ ALKALINITY ☐

Field Sample I.D.	Lab #	Date	Time	Matrix	# of Containers	HCl	HNO_3	H_2SO_4 ☐ NaOH ☐	ICE	UNPRESERVED	BTEX ☒ MTBE ☐	TRPH 418.1 ☐	GASOLINE MOD 8015 ☒	DIESEL - MOD 8015 ☒	OIL - MOD 8015 ☒	FIELD NOTES
DP-12.1(3.5')		01/22/19	13:36	S	1				X		X	X	X	X		
DP-12.2(3.5')			13:38													
DP-12.3(3.5')			13:39													
DP-12.4(3.5')			13:40													
DP-12.5(7')			13:41													
DP-8.1(3.5')			13:50													
DP-8.2(3.5')			13:51													
DP-8.3(3.5')			13:52													
DP-8.4(3.5')			13:54													
DP-8.5(7')			13:56													
DP-4.1(0.75')			14:08													
DP-4.2(0.75')			14:09													
DP-4.3(0.75')			14:10													
DP-4.4(0.75')			14:11													
DP-4.5(1.5')			14:12													
TOTAL		15									10	15	15	15		

RELINQUISHED BY:(Signature) DATE/TIME RECEIVED BY: (Signature)

RELINQUISHED BY:(Signature) Rachel Owen DATE/TIME RECEIVED BY: (Signature)

RELINQUISHED BY:(Signature) DATE/TIME 1-23-19 8:42 RECEIVED BY: (Signature) Caro Bene

LABORATORY: PBEL

TURN AROUND TIME
NORMAL ☒
1 DAY ☐
2 DAY ☐
OTHER ☐

LABORATORY USE ONLY:
RECEIVING TEMP: 1-1.1 THERM#: L2
CUSTODY SEALS - ☐ BROKEN ☐ INTACT ☐ NOT USED
☐ CARRIER BILL #
☐ HAND DELIVERED

Nº 0557

CHAIN-OF-CUSTODY

Larson & Associates, Inc.
Environmental Consultants
507 N. Marienfeld, Ste. 200
Midland, TX 79701
432-687-0901

DATE: 01/23/2019 PAGE 2 OF 3

PO#: LAB WORK ORDER#: 9A23603

PROJECT LOCATION OR NAME: Lea Unit #8D

LAI PROJECT #: 18-013B-03 COLLECTOR: RD

Data Reported to:

TRRP report? ☐ Yes ☒ No

TIME ZONE: Time zone/State: MST

S=SOIL P=PAINT
W=WATER SL=SLUDGE
A=AIR OT=OTHER

PRESERVATION: HCl | HNO_3 | H_2SO_4 ☐ NaOH ☐ | ICE | UNPRESSERVED

ANALYSES: BTEX ☒ MTBE ☐ | TRPH 418.1 ☐ TPH 1005 ☐ TPH 1006 ☐ | GASOLINE MOD 8015 ☒ | DIESEL - MOD 8015 ☒ | OIL - MOD 8015 ☒ | VOC 8260 ☐ | SVOC 8270 ☐ PAH 8270 ☐ HOLDPAH ☐ | 8081 PESTICIDES ☐ 8151 HERBICIDES ☐ | 8082 PCBS ☐ | TCLP - METALS (RCRA) ☐TCLP VOC ☐ | TCLP - PEST ☐ HERB ☐ Semi-VOC ☐ | TOTAL METALS (RCRA) ☐ OTHER LIST ☐ | LEAD - TOTAL ☐ D.W. 200.8 ☐ TCLP ☐ | RCI ☐ TOX ☐ FLASHPOINT ☐ | TDS ☐ TSS ☐ % MOISTURE ☐ CYANIDE ☐ | pH ☐ HEXAVALENT CHROMIUM ☐ | EXPLOSIVES ☐ PECHLORATE ☐ | CHLORIDE ☐ ANIONS ☐ ALKALINITY ☐

Field Sample I.D.	Lab #	Date	Time	Matrix	# of Containers	HCl	HNO_3	H_2SO_4 ☐ NaOH ☐	ICE	UNPRESSERVED	BTEX ☒	TRPH 418.1 ☐ TPH 1005 ☐ TPH 1006 ☐	GASOLINE MOD 8015 ☒	DIESEL - MOD 8015 ☒	FIELD NOTES
DP-2.1(3')		01/22/19	14:19	S	1				X		X	X	X	X	
DP-2.2(3')			14:20												
DP-2.3(3')			14:21												
DP-2.4(3')			14:22												
DP-2.5(6')			14:25												
DP-9.1(1.5')			14:59								X	X	X	X	
DP-9.2(1.5')			15:01												
DP-9.3(1.5')			15:02												
DP-9.4(1.5')			15:03												
DP-9.5(3')			15:09												
DP-3.1(2')			15:39												
DP-3.2(2')			15:40												
DP-3.3(2')			15:41												
DP-3.4(2')			15:43												
DP-3.5(4')			15:45												
TOTAL	15										15	15	15	15	

RELINQUISHED BY:(Signature) DATE/TIME RECEIVED BY: (Signature)

RELINQUISHED BY:(Signature) DATE/TIME RECEIVED BY: (Signature)

RELINQUISHED BY:(Signature) DATE/TIME RECEIVED BY: (Signature)

1-23-19 8:45

LABORATORY: DBEL

TURN AROUND TIME
NORMAL ☒
1 DAY ☐
2 DAY ☐
OTHER ☐

LABORATORY USE ONLY:
RECEIVING TEMP: 1-1.1 L2 THERM#:
CUSTODY SEALS - ☐ BROKEN ☐ INTACT ☐ NOT USED
☐ CARRIER BILL #
☐ HAND DELIVERED

№ 0558

CHAIN-OF-CUSTODY

Larson & Associates, Inc.
Environmental Consultants
507 N. Marienfeld, Ste. 200
Midland, TX 79701
432-687-0901

DATE: 01/23/2019 PAGE 3 OF 3

PO#: _____ LAB WORK ORDER#: 9A23003

PROJECT LOCATION OR NAME: Lea unit #8D

LAI PROJECT #: 19-0138-03 COLLECTOR: RD

Data Reported to:

TRRP report? ☐ Yes ☒ No

TIME ZONE: Time zone/State: MST

S=SOIL P=PAINT
W=WATER SL=SLUDGE
A=AIR OT=OTHER

Field Sample I.D.	Lab #	Date	Time	Matrix	# of Containers	PRESERVATION: HCl	HNO_3	H_2SO_4 ☐ NaOH ☐	ICE	UNPRESSERVED	ANALYSES: BTEX ☒ MTBE ☐	TRPH 418.1 ☐ TPH 1005 ☐ TPH 1006 ☐	GASOLINE MOD 8015 ☒	DIESEL - MOD 8015 ☒	OIL - MOD 8015 ☒	VOC 8260 ☐	SVOC 8270 ☐ PAH 8270 ☐ HOLDPAH ☐	8081 PESTICIDES ☐ 8151 HERBICIDES ☐	8082 PCBS ☐	TCLP - METALS (RCRA) ☐ TCLP VOC ☐	TCLP - PEST ☐ HERB ☐ Semi-VOC ☐	TOTAL METALS (RCRA) ☐ OTHER LIST ☐	LEAD - TOTAL ☐ D.W. 200.8 ☐ TCLP ☐	RCI ☐ TOX ☐ FLASHPOINT ☐	TDS ☐ TSS ☐ % MOISTURE ☐ CYANIDE ☐	pH ☐ HEXAVALENT CHROMIUM ☐	EXPLOSIVES ☐ PECHLORATE ☐	CHLORIDE ☐ ANIONS ☐ ALKALINITY ☐	FIELD NOTES
DP-7.1(0.75')		01/22/19	15:22	S	1				X		X		X	X	X														
DP-7.2(0.75')			15:24																										
DP-7.3(0.75')			15:26																										
DP-7.4(0.75')			15:27																										
DP-7.5(1.5')			15:30																										
DP-6.1 (1')			15:33																										
DP-6.2(1')			15:34																										
DP-6.3(1')			15:35																										
DP-6.4(1')			15:36																										
DP-6.5(1')			15:37																										
TOTAL		10							10		10		10	10	10														

RELINQUISHED BY:(Signature) DATE/TIME RECEIVED BY: (Signature)

RELINQUISHED BY:(Signature) DATE/TIME RECEIVED BY: (Signature)

Rachel Dunn

RELINQUISHED BY:(Signature) DATE/TIME RECEIVED BY: (Signature)

1-23-19 845 Caitlin Lee

LABORATORY: PBEL

TURN AROUND TIME

NORMAL ☒
1 DAY ☐
2 DAY ☐
OTHER ☐

LABORATORY USE ONLY:

RECEIVING TEMP: 1-1.1 THERM#: 42

CUSTODY SEALS - ☐ BROKEN ☐ INTACT ☐ NOT USED

☐ CARRIER BILL # _____

☐ HAND DELIVERED

PERMIAN BASIN
ENVIRONMENTAL LAB, LP
1400 Rankin Hwy
Midland, TX 79701

PBELAB

Analytical Report

Prepared for:

Mark Larson

Larson & Associates, Inc.

P.O. Box 50685

Midland, TX 79710

Project: Lea Unit #8D (Legacy)

Project Number: 18-0138-03

Location:

Lab Order Number: 9C18011

NELAP ACCREDITED TNI LABORATORY

NELAP/TCEQ # T104704516-18-9

Report Date: 03/26/19

Larson & Associates, Inc.
P.O. Box 50685
Midland TX, 79710

Project: Lea Unit #8D (Legacy)
Project Number: 18-0138-03
Project Manager: Mark Larson

Fax: (432) 687-0456

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
DP-8.2 (5')	9C18011-01	Soil	03/14/19 13:36	03-18-2019 10:40
DP-8.5 (10')	9C18011-02	Soil	03/14/19 13:42	03-18-2019 10:40
DP-2.5 (11')	9C18011-03	Soil	03/14/19 14:10	03-18-2019 10:40

Larson & Associates, Inc.
P.O. Box 50685
Midland TX, 79710

Project: Lea Unit #8D (Legacy)
Project Number: 18-0138-03
Project Manager: Mark Larson

Fax: (432) 687-0456

DP-8.2 (5')

9C18011-01 (Soil)

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Permian Basin Environmental Lab, L.P.									
Organics by GC									
Benzene	ND	0.00101	mg/kg dry	1	P9C2304	03/23/19	03/23/19	EPA 8021B	
Toluene	ND	0.00101	mg/kg dry	1	P9C2304	03/23/19	03/23/19	EPA 8021B	
Ethylbenzene	ND	0.00101	mg/kg dry	1	P9C2304	03/23/19	03/23/19	EPA 8021B	
Xylene (p/m)	ND	0.00202	mg/kg dry	1	P9C2304	03/23/19	03/23/19	EPA 8021B	
Xylene (o)	ND	0.00101	mg/kg dry	1	P9C2304	03/23/19	03/23/19	EPA 8021B	
Surrogate: 4-Bromofluorobenzene		*110 %*	*75-125*		*P9C2304*	*03/23/19*	*03/23/19*	*EPA 8021B*	
Surrogate: 1,4-Difluorobenzene		*81.8 %*	*75-125*		*P9C2304*	*03/23/19*	*03/23/19*	*EPA 8021B*	
General Chemistry Parameters by EPA / Standard Methods									
Chloride	**21.6**	1.01	mg/kg dry	1	P9C2201	03/22/19	03/22/19	EPA 300.0	
% Moisture	**1.0**	0.1	%	1	P9C1901	03/19/19	03/19/19	ASTM D2216	
Total Petroleum Hydrocarbons C6-C35 by EPA Method 8015M									
C6-C12	ND	25.3	mg/kg dry	1	P9C1903	03/19/19	03/20/19	TPH 8015M	
>C12-C28	ND	25.3	mg/kg dry	1	P9C1903	03/19/19	03/20/19	TPH 8015M	
>C28-C35	ND	25.3	mg/kg dry	1	P9C1903	03/19/19	03/20/19	TPH 8015M	
Surrogate: 1-Chlorooctane		*93.2 %*	*70-130*		*P9C1903*	*03/19/19*	*03/20/19*	*TPH 8015M*	
Surrogate: o-Terphenyl		*112 %*	*70-130*		*P9C1903*	*03/19/19*	*03/20/19*	*TPH 8015M*	
Total Petroleum Hydrocarbon C6-C35	ND	25.3	mg/kg dry	1	[CALC]	03/19/19	03/20/19	calc	

Larson & Associates, Inc.
P.O. Box 50685
Midland TX, 79710

Project: Lea Unit #8D (Legacy)
Project Number: 18-0138-03
Project Manager: Mark Larson

Fax: (432) 687-0456

DP-8.5 (10')

9C18011-02 (Soil)

Permian Basin Environmental Lab, L.P.

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Organics by GC									
Benzene	ND	0.00102	mg/kg dry	1	P9C2304	03/23/19	03/23/19	EPA 8021B	
Toluene	ND	0.00102	mg/kg dry	1	P9C2304	03/23/19	03/23/19	EPA 8021B	
Ethylbenzene	ND	0.00102	mg/kg dry	1	P9C2304	03/23/19	03/23/19	EPA 8021B	
Xylene (p/m)	ND	0.00204	mg/kg dry	1	P9C2304	03/23/19	03/23/19	EPA 8021B	
Xylene (o)	ND	0.00102	mg/kg dry	1	P9C2304	03/23/19	03/23/19	EPA 8021B	
Surrogate: 1,4-Difluorobenzene		*87.1 %*	*75-125*		*P9C2304*	*03/23/19*	*03/23/19*	*EPA 8021B*	
Surrogate: 4-Bromofluorobenzene		*114 %*	*75-125*		*P9C2304*	*03/23/19*	*03/23/19*	*EPA 8021B*	
General Chemistry Parameters by EPA / Standard Methods									
Chloride	**21.4**	1.02	mg/kg dry	1	P9C2201	03/22/19	03/22/19	EPA 300.0	
% Moisture	**2.0**	0.1	%	1	P9C1901	03/19/19	03/19/19	ASTM D2216	
Total Petroleum Hydrocarbons C6-C35 by EPA Method 8015M									
C6-C12	ND	25.5	mg/kg dry	1	P9C1903	03/19/19	03/20/19	TPH 8015M	
>C12-C28	ND	25.5	mg/kg dry	1	P9C1903	03/19/19	03/20/19	TPH 8015M	
>C28-C35	ND	25.5	mg/kg dry	1	P9C1903	03/19/19	03/20/19	TPH 8015M	
Surrogate: 1-Chlorooctane		*97.8 %*	*70-130*		*P9C1903*	*03/19/19*	*03/20/19*	*TPH 8015M*	
Surrogate: o-Terphenyl		*118 %*	*70-130*		*P9C1903*	*03/19/19*	*03/20/19*	*TPH 8015M*	
Total Petroleum Hydrocarbon C6-C35	ND	25.5	mg/kg dry	1	[CALC]	03/19/19	03/20/19	calc	

Larson & Associates, Inc.
P.O. Box 50685
Midland TX, 79710

Project: Lea Unit #8D (Legacy)
Project Number: 18-0138-03
Project Manager: Mark Larson

Fax: (432) 687-0456

DP-2.5 (11')

9C18011-03 (Soil)

Permian Basin Environmental Lab, L.P.

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Organics by GC									
Benzene	ND	0.00105	mg/kg dry	1	P9C2304	03/23/19	03/23/19	EPA 8021B	
Toluene	ND	0.00105	mg/kg dry	1	P9C2304	03/23/19	03/23/19	EPA 8021B	
Ethylbenzene	ND	0.00105	mg/kg dry	1	P9C2304	03/23/19	03/23/19	EPA 8021B	
Xylene (p/m)	ND	0.00211	mg/kg dry	1	P9C2304	03/23/19	03/23/19	EPA 8021B	
Xylene (o)	ND	0.00105	mg/kg dry	1	P9C2304	03/23/19	03/23/19	EPA 8021B	
Surrogate: 4-Bromofluorobenzene		*116 %*	*75-125*		*P9C2304*	*03/23/19*	*03/23/19*	*EPA 8021B*	
Surrogate: 1,4-Difluorobenzene		*85.5 %*	*75-125*		*P9C2304*	*03/23/19*	*03/23/19*	*EPA 8021B*	
General Chemistry Parameters by EPA / Standard Methods									
Chloride	ND	1.05	mg/kg dry	1	P9C2201	03/22/19	03/22/19	EPA 300.0	
% Moisture	**5.0**	0.1	%	1	P9C1901	03/19/19	03/19/19	ASTM D2216	
Total Petroleum Hydrocarbons C6-C35 by EPA Method 8015M									
C6-C12	ND	26.3	mg/kg dry	1	P9C1903	03/19/19	03/20/19	TPH 8015M	
>C12-C28	ND	26.3	mg/kg dry	1	P9C1903	03/19/19	03/20/19	TPH 8015M	
>C28-C35	ND	26.3	mg/kg dry	1	P9C1903	03/19/19	03/20/19	TPH 8015M	
Surrogate: 1-Chlorooctane		*96.4 %*	*70-130*		*P9C1903*	*03/19/19*	*03/20/19*	*TPH 8015M*	
Surrogate: o-Terphenyl		*116 %*	*70-130*		*P9C1903*	*03/19/19*	*03/20/19*	*TPH 8015M*	
Total Petroleum Hydrocarbon C6-C35	ND	26.3	mg/kg dry	1	[CALC]	03/19/19	03/20/19	calc	

Organics by GC - Quality Control

Permian Basin Environmental Lab, L.P.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch P9C2304 - General Preparation (GC)										
Blank (P9C2304-BLK1)				Prepared & Analyzed: 03/23/19						
Benzene	ND	0.00100	mg/kg wet							
Toluene	ND	0.00100	"							
Ethylbenzene	ND	0.00100	"							
Xylene (p/m)	ND	0.00200	"							
Xylene (o)	ND	0.00100	"							
Surrogate: 4-Bromofluorobenzene	*0.0627*		*"*	*0.0600*		*105*	*75-125*			
Surrogate: 1,4-Difluorobenzene	*0.0499*		*"*	*0.0600*		*83.1*	*75-125*			
LCS (P9C2304-BS1)				Prepared & Analyzed: 03/23/19						
Benzene	0.120	0.00100	mg/kg wet	0.100		120	70-130			
Toluene	0.119	0.00100	"	0.100		119	70-130			
Ethylbenzene	0.100	0.00100	"	0.100		100	70-130			
Xylene (p/m)	0.216	0.00200	"	0.200		108	70-130			
Xylene (o)	0.114	0.00100	"	0.100		114	70-130			
Surrogate: 1,4-Difluorobenzene	*0.0611*		*"*	*0.0600*		*102*	*75-125*			
Surrogate: 4-Bromofluorobenzene	*0.0532*		*"*	*0.0600*		*88.8*	*75-125*			
LCS Dup (P9C2304-BSD1)				Prepared & Analyzed: 03/23/19						
Benzene	0.119	0.00100	mg/kg wet	0.100		119	70-130	0.0753	20	
Toluene	0.119	0.00100	"	0.100		119	70-130	0.597	20	
Ethylbenzene	0.107	0.00100	"	0.100		107	70-130	6.55	20	
Xylene (p/m)	0.220	0.00200	"	0.200		110	70-130	1.57	20	
Xylene (o)	0.118	0.00100	"	0.100		118	70-130	3.05	20	
Surrogate: 1,4-Difluorobenzene	*0.0633*		*"*	*0.0600*		*106*	*75-125*			
Surrogate: 4-Bromofluorobenzene	*0.0639*		*"*	*0.0600*		*106*	*75-125*			
Calibration Blank (P9C2304-CCB1)				Prepared & Analyzed: 03/23/19						
Benzene	0.00		mg/kg wet							
Toluene	0.00		"							
Ethylbenzene	0.00		"							
Xylene (p/m)	0.00		"							
Xylene (o)	0.00		"							
Surrogate: 1,4-Difluorobenzene	*0.0489*		*"*	*0.0600*		*81.4*	*75-125*			
Surrogate: 4-Bromofluorobenzene	*0.0578*		*"*	*0.0600*		*96.4*	*75-125*			

Organics by GC - Quality Control

Permian Basin Environmental Lab, L.P.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch P9C2304 - General Preparation (GC)										
Calibration Blank (P9C2304-CCB2)				Prepared & Analyzed: 03/23/19						
Benzene	0.00		mg/kg wet							
Toluene	0.00		"							
Ethylbenzene	0.00		"							
Xylene (p/m)	0.00		"							
Xylene (o)	0.00		"							
Surrogate: 1,4-Difluorobenzene	*0.0522*		*"*	*0.0600*		*87.0*	*75-125*			
Surrogate: 4-Bromofluorobenzene	*0.0653*		*"*	*0.0600*		*109*	*75-125*			
Calibration Check (P9C2304-CCV1)				Prepared & Analyzed: 03/23/19						
Benzene	0.116	0.00100	mg/kg wet	0.100		116	80-120			
Toluene	0.117	0.00100	"	0.100		117	80-120			
Ethylbenzene	0.120	0.00100	"	0.100		120	80-120			
Xylene (p/m)	0.211	0.00200	"	0.200		106	80-120			
Xylene (o)	0.117	0.00100	"	0.100		117	80-120			
Surrogate: 1,4-Difluorobenzene	*0.0608*		*"*	*0.0600*		*101*	*75-125*			
Surrogate: 4-Bromofluorobenzene	*0.0582*		*"*	*0.0600*		*96.9*	*75-125*			
Calibration Check (P9C2304-CCV2)				Prepared & Analyzed: 03/23/19						
Benzene	0.107	0.00100	mg/kg wet	0.100		107	80-120			
Toluene	0.112	0.00100	"	0.100		112	80-120			
Ethylbenzene	0.119	0.00100	"	0.100		119	80-120			
Xylene (p/m)	0.220	0.00200	"	0.200		110	80-120			
Xylene (o)	0.109	0.00100	"	0.100		109	80-120			
Surrogate: 1,4-Difluorobenzene	*0.0610*		*"*	*0.0600*		*102*	*75-125*			
Surrogate: 4-Bromofluorobenzene	*0.0606*		*"*	*0.0600*		*101*	*75-125*			
Matrix Spike (P9C2304-MS1)		**Source: 9C18011-01**		Prepared: 03/23/19 Analyzed: 03/24/19						
Benzene	0.0874	0.00101	mg/kg dry	0.101	ND	86.5	80-120			
Toluene	0.0889	0.00101	"	0.101	ND	88.1	80-120			
Ethylbenzene	0.118	0.00101	"	0.101	ND	117	80-120			
Xylene (p/m)	0.162	0.00202	"	0.202	ND	80.4	80-120			
Xylene (o)	0.0983	0.00101	"	0.101	ND	97.3	80-120			
Surrogate: 1,4-Difluorobenzene	*0.0618*		*"*	*0.0606*		*102*	*75-125*			
Surrogate: 4-Bromofluorobenzene	*0.0651*		*"*	*0.0606*		*107*	*75-125*			

Organics by GC - Quality Control

Permian Basin Environmental Lab, L.P.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch P9C2304 - General Preparation (GC)										
Matrix Spike Dup (P9C2304-MSD1)	**Source: 9C18011-01**			Prepared: 03/23/19 Analyzed: 03/24/19						
Benzene	0.0856	0.00101	mg/kg dry	0.101	ND	84.8	80-120	2.01	20	
Toluene	0.0844	0.00101	"	0.101	ND	83.5	80-120	5.30	20	
Ethylbenzene	0.113	0.00101	"	0.101	ND	112	80-120	4.08	20	
Xylene (p/m)	0.162	0.00202	"	0.202	ND	80.0	80-120	0.455	20	
Xylene (o)	0.0898	0.00101	"	0.101	ND	88.9	80-120	9.04	20	
Surrogate: 1,4-Difluorobenzene	*0.0567*		*"*	*0.0606*		*93.6*	*75-125*			
Surrogate: 4-Bromofluorobenzene	*0.0590*		*"*	*0.0606*		*97.4*	*75-125*			

General Chemistry Parameters by EPA / Standard Methods - Quality Control

Permian Basin Environmental Lab, L.P.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch P9C1901 - TX 1005										
Blank (P9C1901-BLK1)				Prepared & Analyzed: 03/19/19						
% Moisture	ND	0.1	%							
Duplicate (P9C1901-DUP1)		**Source: 9C18011-03**		Prepared & Analyzed: 03/19/19						
% Moisture	5.0	0.1	%		5.0			0.00	20	
Batch P9C2201 - * DEFAULT PREP *** **										
Blank (P9C2201-BLK1)				Prepared: 03/22/19 Analyzed: 03/24/19						
Chloride	ND	1.00	mg/kg wet							
LCS (P9C2201-BS1)				Prepared & Analyzed: 03/22/19						
Chloride	397	1.00	mg/kg wet	400		99.1	80-120			
LCS Dup (P9C2201-BSD1)				Prepared & Analyzed: 03/22/19						
Chloride	405	1.00	mg/kg wet	400		101	80-120	2.00	20	
Duplicate (P9C2201-DUP1)		**Source: 9C18010-02**		Prepared & Analyzed: 03/22/19						
Chloride	3.46	1.06	mg/kg dry		2.90			17.4	20	
Duplicate (P9C2201-DUP2)		**Source: 9C18011-03**		Prepared & Analyzed: 03/22/19						
Chloride	2.17	1.05	mg/kg dry		ND				20	
Matrix Spike (P9C2201-MS1)		**Source: 9C18010-02**		Prepared & Analyzed: 03/22/19						
Chloride	542	1.06	mg/kg dry	532	2.90	101	80-120			

Larson & Associates, Inc.
P.O. Box 50685
Midland TX, 79710

Project: Lea Unit #8D (Legacy)
Project Number: 18-0138-03
Project Manager: Mark Larson

Fax: (432) 687-0456

Total Petroleum Hydrocarbons C6-C35 by EPA Method 8015M - Quality Control

Permian Basin Environmental Lab, L.P.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch P9C1903 - TX 1005										
Blank (P9C1903-BLK1)				Prepared & Analyzed: 03/19/19						
C6-C12	ND	25.0	mg/kg wet							
>C12-C28	ND	25.0	"							
>C28-C35	ND	25.0	"							
Surrogate: 1-Chlorooctane	*118*		*"*	*100*		*118*	*70-130*			
Surrogate: o-Terphenyl	*69.9*		*"*	*50.0*		*140*	*70-130*			*S-09*
LCS (P9C1903-BS1)				Prepared & Analyzed: 03/19/19						
C6-C12	888	25.0	mg/kg wet	1000		88.8	75-125			
>C12-C28	1150	25.0	"	1000		115	75-125			
Surrogate: 1-Chlorooctane	*120*		*"*	*100*		*120*	*70-130*			
Surrogate: o-Terphenyl	*55.6*		*"*	*50.0*		*111*	*70-130*			
LCS Dup (P9C1903-BSD1)				Prepared & Analyzed: 03/19/19						
C6-C12	864	25.0	mg/kg wet	1000		86.4	75-125	2.76	20	
>C12-C28	1130	25.0	"	1000		113	75-125	2.38	20	
Surrogate: 1-Chlorooctane	*120*		*"*	*100*		*120*	*70-130*			
Surrogate: o-Terphenyl	*56.4*		*"*	*50.0*		*113*	*70-130*			
Calibration Blank (P9C1903-CCB1)				Prepared & Analyzed: 03/19/19						
C6-C12	5.37		mg/kg wet							
>C12-C28	11.8		"							
Surrogate: 1-Chlorooctane	*109*		*"*	*100*		*109*	*70-130*			
Surrogate: o-Terphenyl	*64.5*		*"*	*50.0*		*129*	*70-130*			
Calibration Blank (P9C1903-CCB2)				Prepared: 03/19/19 Analyzed: 03/20/19						
C6-C12	6.70		mg/kg wet							
>C12-C28	12.8		"							
Surrogate: 1-Chlorooctane	*100*		*"*	*100*		*100*	*70-130*			
Surrogate: o-Terphenyl	*59.8*		*"*	*50.0*		*120*	*70-130*			

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Midland TX, 79710

Project: Lea Unit #8D (Legacy)
Project Number: 18-0138-03
Project Manager: Mark Larson

Fax: (432) 687-0456

Total Petroleum Hydrocarbons C6-C35 by EPA Method 8015M - Quality Control

Permian Basin Environmental Lab, L.P.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch P9C1903 - TX 1005										
Calibration Check (P9C1903-CCV2)				Prepared & Analyzed: 03/19/19						
C6-C12	519	25.0	mg/kg wet	500		104	85-115			
>C12-C28	484	25.0	"	500		96.8	85-115			
Surrogate: 1-Chlorooctane	*116*		*"*	*100*		*116*	*70-130*			
Surrogate: o-Terphenyl	*62.2*		*"*	*50.0*		*124*	*70-130*			
Calibration Check (P9C1903-CCV3)				Prepared: 03/19/19 Analyzed: 03/20/19						
C6-C12	505	25.0	mg/kg wet	500		101	85-115			
>C12-C28	469	25.0	"	500		93.9	85-115			
Surrogate: 1-Chlorooctane	*112*		*"*	*100*		*112*	*70-130*			
Surrogate: o-Terphenyl	*58.2*		*"*	*50.0*		*116*	*70-130*			
Matrix Spike (P9C1903-MS1)	**Source: 9C18011-03**			Prepared: 03/19/19 Analyzed: 03/20/19						
C6-C12	867	26.3	mg/kg dry	1050	ND	82.4	75-125			
>C12-C28	1130	26.3	"	1050	ND	108	75-125			
Surrogate: 1-Chlorooctane	*123*		*"*	*105*		*117*	*70-130*			
Surrogate: o-Terphenyl	*58.7*		*"*	*52.6*		*112*	*70-130*			
Matrix Spike Dup (P9C1903-MSD1)	**Source: 9C18011-03**			Prepared: 03/19/19 Analyzed: 03/20/19						
C6-C12	864	26.3	mg/kg dry	1050	ND	82.1	75-125	0.311	20	
>C12-C28	1130	26.3	"	1050	ND	108	75-125	0.0660	20	
Surrogate: 1-Chlorooctane	*123*		*"*	*105*		*117*	*70-130*			
Surrogate: o-Terphenyl	*59.2*		*"*	*52.6*		*112*	*70-130*			

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Notes and Definitions

S-09	Surrogate recovery limits have been exceeded.
BULK	Samples received in Bulk soil containers
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
LCS	Laboratory Control Spike
MS	Matrix Spike
Dup	Duplicate

Report Approved By: Brent Barron Date: 3/26/2019

Brent Barron, Laboratory Director/Technical Director

Nº 0426

CHAIN-OF-CUSTODY

Larson & Associates, Inc.
Environmental Consultants
507 N. Marienfeld, Ste. 200
Midland, TX 79701
432-687-0901

DATE: 3/18/19 PAGE 1 OF 1

PO#: LAB WORK ORDER#: 9C18011

PROJECT LOCATION OR NAME: Lea #8D

LAI PROJECT #: 18-0138-03 COLLECTOR: RO

Data Reported to:

TRRP report? ☐ Yes ☒ No

TIME ZONE: Time zone/State: MST

S=SOIL W=WATER A=AIR P=PAINT SL=SLUDGE OT=OTHER

Field Sample I.D.	Lab #	Date	Time	Matrix	# of Containers	PRESERVATION: HCl	HNO_3	H_2SO_4 ☐ NaOH ☐	ICE	UNPRESSERVED	ANALYSES: BTEX ☒ MTBE ☐	TRPH 418.1 ☐ TPH 1005 ☐ TPH 1006 ☐	GASOLINE MOD 8015 ☐	DIESEL - MOD 8015 ☒	OIL - MOD 8015 ☒	VOC 8260 ☐	SVOC 8270 ☐ PAH 8270 ☐ HOLDPAH ☐	8081 PESTICIDES ☐ 8151 HERBICIDES ☐	8082 PCBS ☐	TBLP - METALS (RCRA) ☐ TCLP VOC ☐	TCLP - PEST ☐ HERB ☐ Semi-VOC ☐	TOTAL METALS (RCRA) ☐ OTHER LIST ☐	LEAD - TOTAL ☐ D.W. 200.8 ☐ TCLP ☐	RCI ☐ TOX ☐ FLASHPOINT ☐	TDS ☐ TSS ☐ % MOISTURE ☐ CYANIDE ☐	pH ☐ HEXAVALENT CHROMIUM ☐	EXPLOSIVES ☐ PECHLORATE ☐	CHLORIDES ☒ ANIONS ☐ ALKALINITY ☐ 7/3000	FIELD NOTES
DP-8.2(5')		3/14/19	13:36	S	1				X		X		X	X	X													X	
DP-8.5(10')		1	13:42	1	1				1		1		1	1	1													1	
DP-25(11')		1	14:10	1	1				1		1		1	1	1													1	
TOTAL					3																							

RELINQUISHED BY:(Signature) DATE/TIME 3/18/19 9:30 RECEIVED BY: (Signature)

RELINQUISHED BY:(Signature) DATE/TIME RECEIVED BY: (Signature) 3/18/19 9:45am

RELINQUISHED BY:(Signature) DATE/TIME RECEIVED BY: (Signature)

LABORATORY: PBEL

TURN AROUND TIME
NORMAL ☒
1 DAY ☐
2 DAY ☐
OTHER ☐

LABORATORY USE ONLY:
RECEIVING TEMP: 26 0+1 3.6 L2 THERM#:
CUSTODY SEALS - ☐ BROKEN ☐ INTACT ☐ NOT USED
☐ CARRIER BILL #
☐ HAND DELIVERED

PERMIAN BASIN
ENVIRONMENTAL LAB, LP
1400 Rankin Hwy
Midland, TX 79701

PBELAB

Analytical Report

Prepared for:

Mark Larson

Larson & Associates, Inc.

P.O. Box 50685

Midland, TX 79710

Project: Lea Unit #8D (Legacy)

Project Number: 18-0138-03

Location: None Given

Lab Order Number: 9C22014

NELAP ACCREDITED TNI LABORATORY

NELAP/TCEQ # T104704516-18-9

Report Date: 04/02/19

Larson & Associates, Inc.
P.O. Box 50685
Midland TX, 79710

Project: Lea Unit #8D (Legacy)
Project Number: 18-0138-03
Project Manager: Mark Larson

Fax: (432) 687-0456

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
DP-7.5 (2')	9C22014-01	Soil	03/20/19 16:32	03-22-2019 15:00
DP-9.6 (1.5')	9C22014-02	Soil	03/20/19 16:40	03-22-2019 15:00
DP-9.7 (1.5')	9C22014-03	Soil	03/20/19 16:45	03-22-2019 15:00

DP-7.5 (2')

9C22014-01 (Soil)

Permian Basin Environmental Lab, L.P.

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Organics by GC									
Benzene	ND	0.00109	mg/kg dry	1	P9C2708	03/27/19	03/27/19	EPA 8021B	
Toluene	ND	0.00109	mg/kg dry	1	P9C2708	03/27/19	03/27/19	EPA 8021B	
Ethylbenzene	ND	0.00109	mg/kg dry	1	P9C2708	03/27/19	03/27/19	EPA 8021B	
Xylene (p/m)	ND	0.00217	mg/kg dry	1	P9C2708	03/27/19	03/27/19	EPA 8021B	
Xylene (o)	ND	0.00109	mg/kg dry	1	P9C2708	03/27/19	03/27/19	EPA 8021B	
Surrogate: 4-Bromofluorobenzene		*109 %*	*75-125*		*P9C2708*	*03/27/19*	*03/27/19*	*EPA 8021B*	
Surrogate: 1,4-Difluorobenzene		*84.5 %*	*75-125*		*P9C2708*	*03/27/19*	*03/27/19*	*EPA 8021B*	
General Chemistry Parameters by EPA / Standard Methods									
Chloride	**305**	1.09	mg/kg dry	1	P9C2605	03/26/19	03/27/19	EPA 300.0	
% Moisture	**8.0**	0.1	%	1	P9C2503	03/25/19	03/25/19	ASTM D2216	
Total Petroleum Hydrocarbons C6-C35 by EPA Method 8015M									
C6-C12	ND	27.2	mg/kg dry	1	P9C2603	03/26/19	03/30/19	TPH 8015M	
>C12-C28	**618**	27.2	mg/kg dry	1	P9C2603	03/26/19	03/30/19	TPH 8015M	
>C28-C35	**147**	27.2	mg/kg dry	1	P9C2603	03/26/19	03/30/19	TPH 8015M	
Surrogate: 1-Chlorooctane		*83.8 %*	*70-130*		*P9C2603*	*03/26/19*	*03/30/19*	*TPH 8015M*	
Surrogate: o-Terphenyl		*88.5 %*	*70-130*		*P9C2603*	*03/26/19*	*03/30/19*	*TPH 8015M*	
Total Petroleum Hydrocarbon C6-C35	**765**	27.2	mg/kg dry	1	[CALC]	03/26/19	03/30/19	calc	

Larson & Associates, Inc.
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Midland TX, 79710

Project: Lea Unit #8D (Legacy)
Project Number: 18-0138-03
Project Manager: Mark Larson

Fax: (432) 687-0456

DP-9.6 (1.5')

9C22014-02 (Soil)

Permian Basin Environmental Lab, L.P.

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Organics by GC									
Benzene	ND	0.00100	mg/kg dry	1	P9C2708	03/27/19	03/27/19	EPA 8021B	
Toluene	ND	0.00100	mg/kg dry	1	P9C2708	03/27/19	03/27/19	EPA 8021B	
Ethylbenzene	ND	0.00100	mg/kg dry	1	P9C2708	03/27/19	03/27/19	EPA 8021B	
Xylene (p/m)	ND	0.00200	mg/kg dry	1	P9C2708	03/27/19	03/27/19	EPA 8021B	
Xylene (o)	ND	0.00100	mg/kg dry	1	P9C2708	03/27/19	03/27/19	EPA 8021B	
Surrogate: 1,4-Difluorobenzene		*81.6 %*	*75-125*		*P9C2708*	*03/27/19*	*03/27/19*	*EPA 8021B*	
Surrogate: 4-Bromofluorobenzene		*114 %*	*75-125*		*P9C2708*	*03/27/19*	*03/27/19*	*EPA 8021B*	
General Chemistry Parameters by EPA / Standard Methods									
Chloride	**5.26**	1.00	mg/kg dry	1	P9C2605	03/26/19	03/27/19	EPA 300.0	
% Moisture	ND	0.1	%	1	P9C2503	03/25/19	03/25/19	ASTM D2216	
Total Petroleum Hydrocarbons C6-C35 by EPA Method 8015M									
C6-C12	ND	25.0	mg/kg dry	1	P9C2603	03/26/19	03/30/19	TPH 8015M	
>C12-C28	**55.1**	25.0	mg/kg dry	1	P9C2603	03/26/19	03/30/19	TPH 8015M	
>C28-C35	ND	25.0	mg/kg dry	1	P9C2603	03/26/19	03/30/19	TPH 8015M	
Surrogate: 1-Chlorooctane		*76.2 %*	*70-130*		*P9C2603*	*03/26/19*	*03/30/19*	*TPH 8015M*	
Surrogate: o-Terphenyl		*79.6 %*	*70-130*		*P9C2603*	*03/26/19*	*03/30/19*	*TPH 8015M*	
Total Petroleum Hydrocarbon C6-C35	**55.1**	25.0	mg/kg dry	1	[CALC]	03/26/19	03/30/19	calc	

Larson & Associates, Inc.
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Midland TX, 79710

Project: Lea Unit #8D (Legacy)
Project Number: 18-0138-03
Project Manager: Mark Larson

Fax: (432) 687-0456

DP-9.7 (1.5')

9C22014-03 (Soil)

Permian Basin Environmental Lab, L.P.

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Organics by GC									
Benzene	ND	0.00101	mg/kg dry	1	P9C2708	03/27/19	03/27/19	EPA 8021B	
Toluene	ND	0.00101	mg/kg dry	1	P9C2708	03/27/19	03/27/19	EPA 8021B	
Ethylbenzene	ND	0.00101	mg/kg dry	1	P9C2708	03/27/19	03/27/19	EPA 8021B	
Xylene (p/m)	ND	0.00202	mg/kg dry	1	P9C2708	03/27/19	03/27/19	EPA 8021B	
Xylene (o)	ND	0.00101	mg/kg dry	1	P9C2708	03/27/19	03/27/19	EPA 8021B	
Surrogate: 4-Bromofluorobenzene		*114 %*	*75-125*		*P9C2708*	*03/27/19*	*03/27/19*	*EPA 8021B*	
Surrogate: 1,4-Difluorobenzene		*81.7 %*	*75-125*		*P9C2708*	*03/27/19*	*03/27/19*	*EPA 8021B*	
General Chemistry Parameters by EPA / Standard Methods									
Chloride	**1.53**	1.01	mg/kg dry	1	P9C2605	03/26/19	03/27/19	EPA 300.0	
% Moisture	**1.0**	0.1	%	1	P9C2503	03/25/19	03/25/19	ASTM D2216	
Total Petroleum Hydrocarbons C6-C35 by EPA Method 8015M									
C6-C12	ND	25.3	mg/kg dry	1	P9C2603	03/26/19	03/30/19	TPH 8015M	
>C12-C28	**43.2**	25.3	mg/kg dry	1	P9C2603	03/26/19	03/30/19	TPH 8015M	
>C28-C35	ND	25.3	mg/kg dry	1	P9C2603	03/26/19	03/30/19	TPH 8015M	
Surrogate: 1-Chlorooctane		*89.0 %*	*70-130*		*P9C2603*	*03/26/19*	*03/30/19*	*TPH 8015M*	
Surrogate: o-Terphenyl		*93.8 %*	*70-130*		*P9C2603*	*03/26/19*	*03/30/19*	*TPH 8015M*	
Total Petroleum Hydrocarbon C6-C35	**43.2**	25.3	mg/kg dry	1	[CALC]	03/26/19	03/30/19	calc	

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Project: Lea Unit #8D (Legacy)
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Organics by GC - Quality Control

Permian Basin Environmental Lab, L.P.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch P9C2708 - General Preparation (GC)										
Blank (P9C2708-BLK1)				Prepared & Analyzed: 03/27/19						
Benzene	ND	0.00100	mg/kg wet							
Toluene	ND	0.00100	"							
Ethylbenzene	ND	0.00100	"							
Xylene (p/m)	ND	0.00200	"							
Xylene (o)	ND	0.00100	"							
Surrogate: 1,4-Difluorobenzene	*0.0509*		*"*	*0.0600*		*84.8*	*75-125*			
Surrogate: 4-Bromofluorobenzene	*0.0627*		*"*	*0.0600*		*104*	*75-125*			
LCS (P9C2708-BS1)				Prepared & Analyzed: 03/27/19						
Benzene	0.112	0.00100	mg/kg wet	0.100		112	70-130			
Toluene	0.111	0.00100	"	0.100		111	70-130			
Ethylbenzene	0.0976	0.00100	"	0.100		97.6	70-130			
Xylene (p/m)	0.213	0.00200	"	0.200		107	70-130			
Xylene (o)	0.120	0.00100	"	0.100		120	70-130			
Surrogate: 4-Bromofluorobenzene	*0.0555*		*"*	*0.0600*		*92.5*	*75-125*			
Surrogate: 1,4-Difluorobenzene	*0.0562*		*"*	*0.0600*		*93.6*	*75-125*			
LCS Dup (P9C2708-BSD1)				Prepared & Analyzed: 03/27/19						
Benzene	0.115	0.00100	mg/kg wet	0.100		115	70-130	2.74	20	
Toluene	0.117	0.00100	"	0.100		117	70-130	5.53	20	
Ethylbenzene	0.103	0.00100	"	0.100		103	70-130	5.84	20	
Xylene (p/m)	0.228	0.00200	"	0.200		114	70-130	6.83	20	
Xylene (o)	0.115	0.00100	"	0.100		115	70-130	4.00	20	
Surrogate: 4-Bromofluorobenzene	*0.0604*		*"*	*0.0600*		*101*	*75-125*			
Surrogate: 1,4-Difluorobenzene	*0.0584*		*"*	*0.0600*		*97.4*	*75-125*			
Calibration Blank (P9C2708-CCB1)				Prepared & Analyzed: 03/27/19						
Benzene	0.00		mg/kg wet							
Toluene	0.00		"							
Ethylbenzene	0.00		"							
Xylene (p/m)	0.00		"							
Xylene (o)	0.00		"							
Surrogate: 4-Bromofluorobenzene	*0.0662*		*"*	*0.0600*		*110*	*75-125*			
Surrogate: 1,4-Difluorobenzene	*0.0514*		*"*	*0.0600*		*85.8*	*75-125*			

Organics by GC - Quality Control

Permian Basin Environmental Lab, L.P.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch P9C2708 - General Preparation (GC)										
Calibration Blank (P9C2708-CCB2)				Prepared & Analyzed: 03/27/19						
Benzene	0.00		mg/kg wet							
Toluene	0.00		"							
Ethylbenzene	0.00		"							
Xylene (p/m)	0.00		"							
Xylene (o)	0.00		"							
Surrogate: 4-Bromofluorobenzene	*0.0670*		*"*	*0.0600*		*112*	*75-125*			
Surrogate: 1,4-Difluorobenzene	*0.0478*		*"*	*0.0600*		*79.6*	*75-125*			
Calibration Check (P9C2708-CCV1)				Prepared & Analyzed: 03/27/19						
Benzene	0.113	0.00100	mg/kg wet	0.100		113	80-120			
Toluene	0.114	0.00100	"	0.100		114	80-120			
Ethylbenzene	0.110	0.00100	"	0.100		110	80-120			
Xylene (p/m)	0.212	0.00200	"	0.200		106	80-120			
Xylene (o)	0.119	0.00100	"	0.100		119	80-120			
Surrogate: 4-Bromofluorobenzene	*0.0598*		*"*	*0.0600*		*99.6*	*75-125*			
Surrogate: 1,4-Difluorobenzene	*0.0605*		*"*	*0.0600*		*101*	*75-125*			
Calibration Check (P9C2708-CCV2)				Prepared & Analyzed: 03/27/19						
Benzene	0.113	0.00100	mg/kg wet	0.100		113	80-120			
Toluene	0.118	0.00100	"	0.100		118	80-120			
Ethylbenzene	0.116	0.00100	"	0.100		116	80-120			
Xylene (p/m)	0.224	0.00200	"	0.200		112	80-120			
Xylene (o)	0.119	0.00100	"	0.100		119	80-120			
Surrogate: 1,4-Difluorobenzene	*0.0605*		*"*	*0.0600*		*101*	*75-125*			
Surrogate: 4-Bromofluorobenzene	*0.0608*		*"*	*0.0600*		*101*	*75-125*			
Calibration Check (P9C2708-CCV3)				Prepared & Analyzed: 03/27/19						
Benzene	0.113	0.00100	mg/kg wet	0.100		113	80-120			
Toluene	0.114	0.00100	"	0.100		114	80-120			
Ethylbenzene	0.117	0.00100	"	0.100		117	80-120			
Xylene (p/m)	0.210	0.00200	"	0.200		105	80-120			
Xylene (o)	0.115	0.00100	"	0.100		115	80-120			
Surrogate: 1,4-Difluorobenzene	*0.0628*		*"*	*0.0600*		*105*	*75-125*			
Surrogate: 4-Bromofluorobenzene	*0.0636*		*"*	*0.0600*		*106*	*75-125*			

Organics by GC - Quality Control

Permian Basin Environmental Lab, L.P.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch P9C2708 - General Preparation (GC)										
Matrix Spike (P9C2708-MS1)	**Source: 9C22013-09**			Prepared & Analyzed: 03/27/19						
Benzene	0.0923	0.00114	mg/kg dry	0.114	ND	81.2	80-120			
Toluene	0.0822	0.00114	"	0.114	ND	72.3	80-120			QM-05
Ethylbenzene	0.0836	0.00114	"	0.114	ND	73.6	80-120			QM-05
Xylene (p/m)	0.131	0.00227	"	0.227	ND	57.8	80-120			QM-05
Xylene (o)	0.0686	0.00114	"	0.114	ND	60.4	80-120			QM-05
Surrogate: 1,4-Difluorobenzene	*0.0698*		*"*	*0.0682*		*102*	*75-125*			
Surrogate: 4-Bromofluorobenzene	*0.0686*		*"*	*0.0682*		*101*	*75-125*			
Matrix Spike Dup (P9C2708-MSD1)	**Source: 9C22013-09**			Prepared & Analyzed: 03/27/19						
Benzene	0.0940	0.00114	mg/kg dry	0.114	ND	82.7	80-120	1.84	20	
Toluene	0.0897	0.00114	"	0.114	ND	78.9	80-120	8.75	20	QM-05
Ethylbenzene	0.0908	0.00114	"	0.114	ND	79.9	80-120	8.25	20	QM-05
Xylene (p/m)	0.146	0.00227	"	0.227	ND	64.3	80-120	10.7	20	QM-05
Xylene (o)	0.0781	0.00114	"	0.114	ND	68.7	80-120	13.0	20	QM-05
Surrogate: 1,4-Difluorobenzene	*0.0730*		*"*	*0.0682*		*107*	*75-125*			
Surrogate: 4-Bromofluorobenzene	*0.0759*		*"*	*0.0682*		*111*	*75-125*			

General Chemistry Parameters by EPA / Standard Methods - Quality Control

Permian Basin Environmental Lab, L.P.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch P9C2503 - * DEFAULT PREP *** **										
Blank (P9C2503-BLK1)				Prepared & Analyzed: 03/25/19						
% Moisture	ND	0.1	%							
Duplicate (P9C2503-DUP1)		**Source: 9C22005-03**		Prepared & Analyzed: 03/25/19						
% Moisture	5.0	0.1	%		9.0			57.1	20	R2
Duplicate (P9C2503-DUP2)		**Source: 9C22009-08**		Prepared & Analyzed: 03/25/19						
% Moisture	15.0	0.1	%		14.0			6.90	20	
Duplicate (P9C2503-DUP3)		**Source: 9C22011-05**		Prepared & Analyzed: 03/25/19						
% Moisture	3.0	0.1	%		3.0			0.00	20	
Duplicate (P9C2503-DUP4)		**Source: 9C22011-17**		Prepared & Analyzed: 03/25/19						
% Moisture	7.0	0.1	%		7.0			0.00	20	
Duplicate (P9C2503-DUP5)		**Source: 9C22013-12**		Prepared & Analyzed: 03/25/19						
% Moisture	13.0	0.1	%		12.0			8.00	20	
Duplicate (P9C2503-DUP6)		**Source: 9C22014-03**		Prepared & Analyzed: 03/25/19						
% Moisture	2.0	0.1	%		1.0			66.7	20	R2
Batch P9C2605 - * DEFAULT PREP *** **										
Blank (P9C2605-BLK1)				Prepared: 03/26/19 Analyzed: 03/27/19						
Chloride	ND	1.00	mg/kg wet							
LCS (P9C2605-BS1)				Prepared: 03/26/19 Analyzed: 03/27/19						
Chloride	401	1.00	mg/kg wet	400		100	80-120			

Larson & Associates, Inc.
P.O. Box 50685
Midland TX, 79710

Project: Lea Unit #8D (Legacy)
Project Number: 18-0138-03
Project Manager: Mark Larson

Fax: (432) 687-0456

General Chemistry Parameters by EPA / Standard Methods - Quality Control

Permian Basin Environmental Lab, L.P.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch P9C2605 - * DEFAULT PREP *** **										
LCS Dup (P9C2605-BSD1)				Prepared: 03/26/19 Analyzed: 03/27/19						
Chloride	400	1.00	mg/kg wet	400		99.9	80-120	0.307	20	
Matrix Spike (P9C2605-MS1)		**Source: 9C22011-17**		Prepared: 03/26/19 Analyzed: 03/27/19						
Chloride	570	1.08	mg/kg dry	538	24.5	102	80-120			
Matrix Spike (P9C2605-MS2)		**Source: 9C25007-01**		Prepared: 03/26/19 Analyzed: 03/27/19						
Chloride	4740	12.0	mg/kg dry	1200	3410	111	80-120			
Matrix Spike Dup (P9C2605-MSD1)		**Source: 9C22011-17**		Prepared: 03/26/19 Analyzed: 03/27/19						
Chloride	565	1.08	mg/kg dry	538	24.5	101	80-120	0.865	20	
Matrix Spike Dup (P9C2605-MSD2)		**Source: 9C25007-01**		Prepared: 03/26/19 Analyzed: 03/27/19						
Chloride	4710	12.0	mg/kg dry	1200	3410	108	80-120	0.689	20	

Total Petroleum Hydrocarbons C6-C35 by EPA Method 8015M - Quality Control

Permian Basin Environmental Lab, L.P.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch P9C2603 - TX 1005										
Blank (P9C2603-BLK1)				Prepared: 03/26/19 Analyzed: 03/30/19						
C6-C12	ND	25.0	mg/kg wet							
>C12-C28	ND	25.0	"							
>C28-C35	ND	25.0	"							
Surrogate: 1-Chlorooctane	*79.8*		*"*	*100*		*79.8*	*70-130*			
Surrogate: o-Terphenyl	*41.4*		*"*	*50.0*		*82.9*	*70-130*			
LCS (P9C2603-BS1)				Prepared: 03/26/19 Analyzed: 03/30/19						
C6-C12	868	25.0	mg/kg wet	1000		86.8	75-125			
>C12-C28	1140	25.0	"	1000		114	75-125			
Surrogate: 1-Chlorooctane	*95.3*		*"*	*100*		*95.3*	*70-130*			
Surrogate: o-Terphenyl	*38.4*		*"*	*50.0*		*76.9*	*70-130*			
LCS Dup (P9C2603-BSD1)				Prepared: 03/26/19 Analyzed: 03/30/19						
C6-C12	852	25.0	mg/kg wet	1000		85.2	75-125	1.80	20	
>C12-C28	1110	25.0	"	1000		111	75-125	2.44	20	
Surrogate: 1-Chlorooctane	*92.4*		*"*	*100*		*92.4*	*70-130*			
Surrogate: o-Terphenyl	*36.8*		*"*	*50.0*		*73.7*	*70-130*			
Calibration Blank (P9C2603-CCB1)				Prepared: 03/26/19 Analyzed: 03/30/19						
C6-C12	7.22		mg/kg wet							
>C12-C28	22.9		"							
Surrogate: 1-Chlorooctane	*80.9*		*"*	*100*		*80.9*	*70-130*			
Surrogate: o-Terphenyl	*42.5*		*"*	*50.0*		*85.0*	*70-130*			
Calibration Check (P9C2603-CCV1)				Prepared: 03/26/19 Analyzed: 03/29/19						
C6-C12	413	25.0	mg/kg wet	500		82.7	85-115			
>C12-C28	503	25.0	"	500		101	85-115			
Surrogate: 1-Chlorooctane	*88.5*		*"*	*100*		*88.5*	*70-130*			
Surrogate: o-Terphenyl	*39.2*		*"*	*50.0*		*78.4*	*70-130*			

Total Petroleum Hydrocarbons C6-C35 by EPA Method 8015M - Quality Control

Permian Basin Environmental Lab, L.P.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch P9C2603 - TX 1005										
Calibration Check (P9C2603-CCV2)				Prepared: 03/26/19 Analyzed: 03/30/19						
C6-C12	428	25.0	mg/kg wet	500		85.7	85-115			
>C12-C28	472	25.0	"	500		94.4	85-115			
Surrogate: 1-Chlorooctane	*92.2*		*"*	*100*		*92.2*	*70-130*			
Surrogate: o-Terphenyl	*41.1*		*"*	*50.0*		*82.2*	*70-130*			
Calibration Check (P9C2603-CCV3)				Prepared: 03/26/19 Analyzed: 03/31/19						
C6-C12	516	25.0	mg/kg wet	500		103	85-115			
>C12-C28	521	25.0	"	500		104	85-115			
Surrogate: 1-Chlorooctane	*116*		*"*	*100*		*116*	*70-130*			
Surrogate: o-Terphenyl	*51.5*		*"*	*50.0*		*103*	*70-130*			
Matrix Spike (P9C2603-MS1)	**Source: 9C25009-01**			Prepared: 03/26/19 Analyzed: 03/30/19						
C6-C12	817	25.5	mg/kg dry	1020	11.4	79.0	75-125			
>C12-C28	1290	25.5	"	1020	90.1	117	75-125			
Surrogate: 1-Chlorooctane	*113*		*"*	*102*		*110*	*70-130*			
Surrogate: o-Terphenyl	*47.2*		*"*	*51.0*		*92.5*	*70-130*			

Larson & Associates, Inc.
P.O. Box 50685
Midland TX, 79710

Project: Lea Unit #8D (Legacy)
Project Number: 18-0138-03
Project Manager: Mark Larson

Fax: (432) 687-0456

Notes and Definitions

ROI	Received on Ice
R2	The RPD exceeded the acceptance limit.
QM-05	The spike recovery was outside acceptance limits for the MS and/or MSD due to matrix interference. The LCS and/or LCSD were within acceptance limits showing that the laboratory is in control and the data is acceptable.
BULK	Samples received in Bulk soil containers
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
LCS	Laboratory Control Spike
MS	Matrix Spike
Dup	Duplicate

Report Approved By: Brent Barron Date: 4/2/2019

Brent Barron, Laboratory Director/Technical Director

Nº 0607

CHAIN-OF-CUSTODY

Larson & Associates, Inc.
Environmental Consultants
507 N. Marienfeld, Ste. 200
Midland, TX 79701
432-687-0901

Data Reported to:

DATE: 3/22/19 PAGE 1 OF 1
PO#:
LAB WORK ORDER#: 9C22014
PROJECT LOCATION OR NAME: Lea unit # 8D
LAI PROJECT #: 18-0138-03 COLLECTOR: RO

TRRP report? ☐ Yes ☒ No

TIME ZONE: Time zone/State: MST

S=SOIL W=WATER A=AIR P=PAINT SL=SLUDGE OT=OTHER

PRESERVATION: HCl, HNO_3, H_2SO_4 ☐ NaOH ☐, ICE, UNPRESSERVED

ANALYSES: BTEX ☒ MTBE ☐; TRPH 418.1 ☐ TPH 1005 ☐ TPH 1006 ☐; GASOLINE MOD 8015 ☒; DIESEL - MOD 8015 ☒; OIL - MOD 8015 ☒; VOC 8260 ☐; SVOC 8270 ☐ PAH 8270 ☐ HOLDPAH ☐; 8081 PESTICIDES ☐ 8151 HERBICIDES ☐; 8082 PCBS ☐; TBLP - METALS (RCRA) ☐ TCLP VOC ☐; TCLP - PEST ☐ HERB ☐ Semi-VOC ☐; TOTAL METALS (RCRA) ☐ OTHER LIST ☐; LEAD - TOTAL ☐ D.W. 200.8 ☐ TCLP ☐; RCI ☐ TOX ☐ FLASHPOINT ☐; TDS ☐ TSS ☐ % MOISTURE ☐ CYANIDE ☐; pH ☐ HEXAVALENT CHROMIUM ☐; EXPLOSIVES ☐ PECHLORATE ☐; CHLORIDE ☒ ANIONS ☐ ALKALINITY ☐ M300

Field Sample I.D.	Lab #	Date	Time	Matrix	# of Containers	HCl	HNO_3	H_2SO_4/NaOH	ICE	UNPRESSERVED	BTEX	TRPH/TPH	GASOLINE MOD 8015	DIESEL - MOD 8015	OIL - MOD 8015	CHLORIDE	FIELD NOTES
DP-7.5(2')	01	3/20/19	16:32	S	1				X		X		X	X	X	X	
DP-9.6(1.5')	02	↓	16:40	↓	↓				↓		↓		↓	↓	↓	↓	
DP-9.7(1.5')	03	↓	16:45	↓	↓				↓		↓		↓	↓	↓	↓	

TOTAL

RELINQUISHED BY:(Signature) [signature] DATE/TIME 3/22/19 15:00 RECEIVED BY: (Signature)

RELINQUISHED BY:(Signature) DATE/TIME RECEIVED BY: (Signature)

RELINQUISHED BY:(Signature) DATE/TIME 3/22/19 1500 RECEIVED BY: (Signature) [signature]

LABORATORY: PBEL

TURN AROUND TIME
NORMAL ☒
1 DAY ☐
2 DAY ☐
OTHER ☐

LABORATORY USE ONLY:
RECEIVING TEMP: 1.1-2.1 THERM#: CF1, C2
CUSTODY SEALS - ☐ BROKEN ☐ INTACT ☐ NOT USED
☐ CARRIER BILL #
☐ HAND DELIVERED

Certificate of Analysis Summary 620065

Larson and Associates, Inc., Midland, TX

Project Name: Lea #8D

Project Id: 18-0138-03
Contact: Mark Larson
Project Location:

Date Received in Lab: Thu Apr-04-19 10:05 am
Report Date: 16-APR-19
Project Manager: Holly Taylor

Analysis Requested											
	Lab Id:	620065-001		620065-002		620065-003		620065-004		620065-005	
	Field Id:	DP-4.1 (0.75')		DP-4.2 (0.75')		DP-4.3 (0.75')		DP-4.4 (0.75')		DP-4.5 (1.5')	
	Depth:										
	Matrix:	SOIL		SOIL		SOIL		SOIL		SOIL	
	Sampled:	Apr-02-19 14:30		Apr-02-19 14:31		Apr-02-19 14:32		Apr-02-19 14:33		Apr-02-19 14:35	
BTEX by EPA 8021B	***Extracted:***	Apr-10-19 14:30		Apr-10-19 14:30		Apr-10-19 14:30		Apr-10-19 14:30		Apr-10-19 14:30	
	Analyzed:	Apr-10-19 18:24		Apr-10-19 18:43		Apr-10-19 19:02		Apr-10-19 19:21		Apr-10-19 19:40	
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
Benzene		<0.00201	0.00201	<0.00198	0.00198	<0.00199	0.00199	<0.00198	0.00198	<0.00200	0.00200
Toluene		<0.00201	0.00201	<0.00198	0.00198	<0.00199	0.00199	<0.00198	0.00198	<0.00200	0.00200
Ethylbenzene		<0.00201	0.00201	<0.00198	0.00198	<0.00199	0.00199	<0.00198	0.00198	<0.00200	0.00200
m,p-Xylenes		<0.00402	0.00402	<0.00396	0.00396	<0.00398	0.00398	<0.00397	0.00397	<0.00399	0.00399
o-Xylene		<0.00201	0.00201	<0.00198	0.00198	<0.00199	0.00199	<0.00198	0.00198	<0.00200	0.00200
Total Xylenes		<0.00201	0.00201	<0.00198	0.00198	<0.00199	0.00199	<0.00198	0.00198	<0.00200	0.00200
Total BTEX		<0.00201	0.00201	<0.00198	0.00198	<0.00199	0.00199	<0.00198	0.00198	<0.00200	0.00200

Holly Taylor
Project Manager

Analytical Report 620065

for

Larson and Associates, Inc.

Project Manager: Mark Larson

Lea #8D

18-0138-03

16-APR-19

Collected By: Client

1211 W. Florida Ave
Midland TX 79701

Xenco-Houston (EPA Lab Code: TX00122):
Texas (T104704215-18-28), Arizona (AZ0765), Florida (E871002-24), Louisiana (03054)
Oklahoma (2017-142)

Xenco-Dallas (EPA Lab Code: TX01468):
Texas (T104704295-18-17), Arizona (AZ0809), Arkansas (17-063-0)

Xenco-El Paso (EPA Lab Code: TX00127): Texas (T104704221-18-14)
Xenco-Lubbock (EPA Lab Code: TX00139): Texas (T104704219-18-18)
Xenco-Midland (EPA Lab Code: TX00158): Texas (T104704400-18-18)
Xenco-San Antonio (EPA Lab Code: TNI02385): Texas (T104704534-18-4)
Xenco Phoenix (EPA Lab Code: AZ00901): Arizona (AZ0757)
Xenco-Phoenix Mobile (EPA Lab Code: AZ00901): Arizona (AZM757)
Xenco-Atlanta (LELAP Lab ID #04176)
Xenco-Tampa: Florida (E87429), North Carolina (483)
Xenco-Lakeland: Florida (E84098)

16-APR-19

Project Manager: **Mark Larson**
Larson and Associates, Inc.
P. O. Box 50685
Midland, TX 79710

Reference: XENCO Report No(s): **620065**
Lea #8D
Project Address:

Mark Larson :

We are reporting to you the results of the analyses performed on the samples received under the project name referenced above and identified with the XENCO Report Number(s) 620065. All results being reported under this Report Number apply to the samples analyzed and properly identified with a Laboratory ID number. Subcontracted analyses are identified in this report with either the NELAC certification number of the subcontract lab in the analyst ID field, or the complete subcontracted report attached to this report.

Unless otherwise noted in a Case Narrative, all data reported in this Analytical Report are in compliance with NELAC standards. The uncertainty of measurement associated with the results of analysis reported is available upon request. Should insufficient sample be provided to the laboratory to meet the method and NELAC Matrix Duplicate and Matrix Spike requirements, then the data will be analyzed, evaluated and reported using all other available quality control measures.

The validity and integrity of this report will remain intact as long as it is accompanied by this letter and reproduced in full, unless written approval is granted by XENCO Laboratories. This report will be filed for at least 5 years in our archives after which time it will be destroyed without further notice, unless otherwise arranged with you. The samples received, and described as recorded in Report No. 620065 will be filed for 45 days, and after that time they will be properly disposed without further notice, unless otherwise arranged with you. We reserve the right to return to you any unused samples, extracts or solutions related to them if we consider so necessary (e.g., samples identified as hazardous waste, sample sizes exceeding analytical standard practices, controlled substances under regulated protocols, etc).

We thank you for selecting XENCO Laboratories to serve your analytical needs. If you have any questions concerning this report, please feel free to contact us at any time.

Respectfully,

Holly Taylor

Holly Taylor
Project Manager

Sample Cross Reference 620065

Larson and Associates, Inc., Midland, TX

Lea #8D

Sample Id	Matrix	Date Collected	Sample Depth	Lab Sample Id
DP-4.1 (0.75')	S	04-02-19 14:30		620065-001
DP-4.2 (0.75')	S	04-02-19 14:31		620065-002
DP-4.3 (0.75')	S	04-02-19 14:32		620065-003
DP-4.4 (0.75')	S	04-02-19 14:33		620065-004
DP-4.5 (1.5')	S	04-02-19 14:35		620065-005

Sample receipt non conformances and comments:

None

Sample receipt non conformances and comments per sample:

None

Analytical non conformances and comments:

Batch: LBA-3085314 BTEX by EPA 8021B
Soil samples were not received in Terracore kits and therefore were prepared by method 5030.
Surrogate 4-Bromofluorobenzene recovered above QC limits. Matrix interferences is suspected.
Samples affected are: 620065-002.

Certificate of Analytical Results 620065

Larson and Associates, Inc., Midland, TX

Lea #8D

Sample Id:	**DP-4.1 (0.75')**	Matrix:	Soil	Date Received:	04.04.19 10.05
Lab Sample Id:	620065-001	Date Collected:	04.02.19 14.30		
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	SCM			% Moisture:	
Analyst:	SCM	Date Prep:	04.10.19 14.30	Basis:	Wet Weight
Seq Number:	3085314				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00201	0.00201	mg/kg	04.10.19 18.24	U	1
Toluene	108-88-3	<0.00201	0.00201	mg/kg	04.10.19 18.24	U	1
Ethylbenzene	100-41-4	<0.00201	0.00201	mg/kg	04.10.19 18.24	U	1
m,p-Xylenes	179601-23-1	<0.00402	0.00402	mg/kg	04.10.19 18.24	U	1
o-Xylene	95-47-6	<0.00201	0.00201	mg/kg	04.10.19 18.24	U	1
Total Xylenes	1330-20-7	<0.00201	0.00201	mg/kg	04.10.19 18.24	U	1
Total BTEX		<0.00201	0.00201	mg/kg	04.10.19 18.24	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	105	%	70-130	04.10.19 18.24	
4-Bromofluorobenzene	460-00-4	113	%	70-130	04.10.19 18.24	

Certificate of Analytical Results 620065

Larson and Associates, Inc., Midland, TX

Lea #8D

Sample Id:	**DP-4.2 (0.75')**	Matrix:	Soil	Date Received:	04.04.19 10.05
Lab Sample Id:	620065-002	Date Collected:	04.02.19 14.31		
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	SCM			% Moisture:	
Analyst:	SCM	Date Prep:	04.10.19 14.30	Basis:	Wet Weight
Seq Number:	3085314				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00198	0.00198	mg/kg	04.10.19 18.43	U	1
Toluene	108-88-3	<0.00198	0.00198	mg/kg	04.10.19 18.43	U	1
Ethylbenzene	100-41-4	<0.00198	0.00198	mg/kg	04.10.19 18.43	U	1
m,p-Xylenes	179601-23-1	<0.00396	0.00396	mg/kg	04.10.19 18.43	U	1
o-Xylene	95-47-6	<0.00198	0.00198	mg/kg	04.10.19 18.43	U	1
Total Xylenes	1330-20-7	<0.00198	0.00198	mg/kg	04.10.19 18.43	U	1
Total BTEX		<0.00198	0.00198	mg/kg	04.10.19 18.43	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	135	%	70-130	04.10.19 18.43	**
1,4-Difluorobenzene	540-36-3	104	%	70-130	04.10.19 18.43	

Certificate of Analytical Results 620065

Larson and Associates, Inc., Midland, TX

Lea #8D

Sample Id:	**DP-4.3 (0.75')**	Matrix:	Soil	Date Received:	04.04.19 10.05
Lab Sample Id:	620065-003	Date Collected:	04.02.19 14.32		
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	SCM			% Moisture:	
Analyst:	SCM	Date Prep:	04.10.19 14.30	Basis:	Wet Weight
Seq Number:	3085314				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00199	0.00199	mg/kg	04.10.19 19.02	U	1
Toluene	108-88-3	<0.00199	0.00199	mg/kg	04.10.19 19.02	U	1
Ethylbenzene	100-41-4	<0.00199	0.00199	mg/kg	04.10.19 19.02	U	1
m,p-Xylenes	179601-23-1	<0.00398	0.00398	mg/kg	04.10.19 19.02	U	1
o-Xylene	95-47-6	<0.00199	0.00199	mg/kg	04.10.19 19.02	U	1
Total Xylenes	1330-20-7	<0.00199	0.00199	mg/kg	04.10.19 19.02	U	1
Total BTEX		<0.00199	0.00199	mg/kg	04.10.19 19.02	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	106	%	70-130	04.10.19 19.02	
4-Bromofluorobenzene	460-00-4	118	%	70-130	04.10.19 19.02	

Certificate of Analytical Results 620065

Larson and Associates, Inc., Midland, TX

Lea #8D

Sample Id:	**DP-4.4 (0.75')**	Matrix:	Soil	Date Received:	04.04.19 10.05
Lab Sample Id:	620065-004	Date Collected:	04.02.19 14.33		
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	SCM			% Moisture:	
Analyst:	SCM	Date Prep:	04.10.19 14.30	Basis:	Wet Weight
Seq Number:	3085314				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00198	0.00198	mg/kg	04.10.19 19.21	U	1
Toluene	108-88-3	<0.00198	0.00198	mg/kg	04.10.19 19.21	U	1
Ethylbenzene	100-41-4	<0.00198	0.00198	mg/kg	04.10.19 19.21	U	1
m,p-Xylenes	179601-23-1	<0.00397	0.00397	mg/kg	04.10.19 19.21	U	1
o-Xylene	95-47-6	<0.00198	0.00198	mg/kg	04.10.19 19.21	U	1
Total Xylenes	1330-20-7	<0.00198	0.00198	mg/kg	04.10.19 19.21	U	1
Total BTEX		<0.00198	0.00198	mg/kg	04.10.19 19.21	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	122	%	70-130	04.10.19 19.21	
1,4-Difluorobenzene	540-36-3	104	%	70-130	04.10.19 19.21	

Certificate of Analytical Results 620065

Larson and Associates, Inc., Midland, TX

Lea #8D

Sample Id:	**DP-4.5 (1.5')**	Matrix:	Soil	Date Received:	04.04.19 10.05
Lab Sample Id:	620065-005	Date Collected:	04.02.19 14.35		
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	SCM			% Moisture:	
Analyst:	SCM	Date Prep:	04.10.19 14.30	Basis:	Wet Weight
Seq Number:	3085314				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	04.10.19 19.40	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	04.10.19 19.40	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	04.10.19 19.40	U	1
m,p-Xylenes	179601-23-1	<0.00399	0.00399	mg/kg	04.10.19 19.40	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	04.10.19 19.40	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	04.10.19 19.40	U	1
Total BTEX		<0.00200	0.00200	mg/kg	04.10.19 19.40	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	120	%	70-130	04.10.19 19.40	
1,4-Difluorobenzene	540-36-3	105	%	70-130	04.10.19 19.40	

Flagging Criteria

X In our quality control review of the data a QC deficiency was observed and flagged as noted. MS/MSD recoveries were found to be outside of the laboratory control limits due to possible matrix /chemical interference, or a concentration of target analyte high enough to affect the recovery of the spike concentration. This condition could also affect the relative percent difference in the MS/MSD.

B A target analyte or common laboratory contaminant was identified in the method blank. Its presence indicates possible field or laboratory contamination.

D The sample(s) were diluted due to targets detected over the highest point of the calibration curve, or due to matrix interference. Dilution factors are included in the final results. The result is from a diluted sample.

E The data exceeds the upper calibration limit; therefore, the concentration is reported as estimated.

F RPD exceeded lab control limits.

J The target analyte was positively identified below the quantitation limit and above the detection limit.

U Analyte was not detected.

L The LCS data for this analytical batch was reported below the laboratory control limits for this analyte. The department supervisor and QA Director reviewed data. The samples were either reanalyzed or flagged as estimated concentrations.

H The LCS data for this analytical batch was reported above the laboratory control limits. Supporting QC Data were reviewed by the Department Supervisor and QA Director. Data were determined to be valid for reporting.

K Sample analyzed outside of recommended hold time.

JN A combination of the "N" and the "J" qualifier. The analysis indicates that the analyte is "tentatively identified" and the associated numerical value may not be consistent with the amount actually present in the environmental sample.

** Surrogate recovered outside laboratory control limit.

BRL Below Reporting Limit.

RL Reporting Limit

MDL Method Detection Limit **SDL** Sample Detection Limit **LOD** Limit of Detection

PQL Practical Quantitation Limit **MQL** Method Quantitation Limit **LOQ** Limit of Quantitation

DL Method Detection Limit

NC Non-Calculable

SMP Client Sample **BLK** Method Blank

BKS/LCS Blank Spike/Laboratory Control Sample **BKSD/LCSD** Blank Spike Duplicate/Laboratory Control Sample Duplicate

MD/SD Method Duplicate/Sample Duplicate **MS** Matrix Spike **MSD:** Matrix Spike Duplicate

+ NELAC certification not offered for this compound.

***** (Next to analyte name or method description) = Outside XENCO's scope of NELAC accreditation

QC Summary 620065

Larson and Associates, Inc.

Lea #8D

Analytical Method: **BTEX by EPA 8021B** Prep Method: SW5030B

Seq Number: 3085314 Matrix: Solid Date Prep: 04.10.19

MB Sample Id: 7675535-1-BLK LCS Sample Id: 7675535-1-BKS LCSD Sample Id: 7675535-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	<0.00198	0.0992	0.0999	101	0.101	101	70-130	1	35	mg/kg	04.10.19 16:25	
Toluene	<0.00198	0.0992	0.0939	95	0.0959	96	70-130	2	35	mg/kg	04.10.19 16:25	
Ethylbenzene	<0.00198	0.0992	0.0960	97	0.0986	99	70-130	3	35	mg/kg	04.10.19 16:25	
m,p-Xylenes	<0.00101	0.198	0.192	97	0.197	99	70-130	3	35	mg/kg	04.10.19 16:25	
o-Xylene	<0.00198	0.0992	0.0971	98	0.0992	99	70-130	2	35	mg/kg	04.10.19 16:25	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	105		101		100		70-130	%	04.10.19 16:25
4-Bromofluorobenzene	100		102		100		70-130	%	04.10.19 16:25

Analytical Method: **BTEX by EPA 8021B** Prep Method: SW5030B

Seq Number: 3085314 Matrix: Soil Date Prep: 04.10.19

Parent Sample Id: 620065-001 MS Sample Id: 620065-001 S MSD Sample Id: 620065-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	<0.000386	0.100	0.0945	95	0.0869	86	70-130	8	35	mg/kg	04.10.19 17:03	
Toluene	0.00105	0.100	0.0887	88	0.0856	84	70-130	4	35	mg/kg	04.10.19 17:03	
Ethylbenzene	0.000614	0.100	0.0889	88	0.0861	85	70-130	3	35	mg/kg	04.10.19 17:03	
m,p-Xylenes	0.00170	0.201	0.177	87	0.174	85	70-130	2	35	mg/kg	04.10.19 17:03	
o-Xylene	0.000694	0.100	0.0904	90	0.0890	87	70-130	2	35	mg/kg	04.10.19 17:03	

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	102		97		70-130	%	04.10.19 17:03
4-Bromofluorobenzene	104		109		70-130	%	04.10.19 17:03

MS/MSD Percent Recovery [D] = 100*(C-A) / B LCS = Laboratory Control Sample MS = Matrix Spike

Relative Percent Difference RPD = 200* | (C-E) / (C+E) | A = Parent Result B = Spike Added

LCS/LCSD Recovery [D] = 100 * (C) / [B] C = MS/LCS Result D = MSD/LCSD % Rec

Log Difference Log Diff. = Log(Sample Duplicate) - Log(Original Sample) E = MSD/LCSD Result

Nº 0610

CHAIN-OF-CUSTODY

Larson & Associates, Inc.
Environmental Consultants

507 N. Marienfeld, Ste. 200
Midland, TX 79701
432-687-0901

Data Reported to:

DATE: 4/4/19 PAGE 1 OF 1

PO#: LAB WORK ORDER#:

PROJECT LOCATION OR NAME: Lea #3D

LAI PROJECT #: 1B-0138-03 COLLECTOR: RD

TRRP report? ☐ Yes ☒ No

S=SOIL P=PAINT
W=WATER SL=SLUDGE
A=AIR OT=OTHER

TIME ZONE: Time zone/State: MST

Field Sample I.D.	Lab #	Date	Time	Matrix	# of Containers	PRESERVATION: HCl	HNO_3	H_2SO_4 ☐ NaOH ☐	ICE	UNPRESSERVED	ANALYSES: BTEX ☒ MTBE ☐	TRPH 418.1 ☐ TPH 1005 ☐ TPH 1006 ☐	GASOLINE MOD 8015 ☐	DIESEL - MOD 8015 ☐	OIL - MOD 8015 ☐	VOC 8260 ☐	SVOC 8270 ☐ PAH 8270 ☐ HOLDPAH ☐	8081 PESTICIDES ☐ 8151 HERBICIDES ☐	8082 PCBS ☐	TBLP - METALS (RCRA) ☐ TCLP VOC ☐	TCLP - PEST ☐ HERB ☐ Semi-VOC ☐	TOTAL METALS (RCRA) ☐ OTHER LIST ☐	LEAD - TOTAL ☐ D.W. 200.8 ☐ TCLP ☐	RCI ☐ TOX ☐ FLASHPOINT ☐	TDS ☐ TSS ☐ % MOISTURE ☐ CYANIDE ☐	pH ☐ HEXAVALENT CHROMIUM ☐	EXPLOSIVES ☐ PECHLORATE ☐	CHLORIDE ☐ ANIONS ☐ ALKALINITY ☐	FIELD NOTES
DP-4.1(0.75')		4/2/19	14:30	S	1				X		X																			
DP-4.2(0.75')			14:31																											
DP-4.3(0.75')			14:32																											
DP-4.4(0.75')			14:33																											
DP-4.5(1.5')			14:35																											

TOTAL 5

RELINQUISHED BY:(Signature) DATE/TIME 4/4/19 10:05 RECEIVED BY: (Signature)

RELINQUISHED BY:(Signature) DATE/TIME RECEIVED BY: (Signature)

RELINQUISHED BY:(Signature) DATE/TIME RECEIVED BY: (Signature)

LABORATORY: RD Xenco

TURN AROUND TIME
NORMAL ☒
1 DAY ☐
2 DAY ☐
OTHER ☐

LABORATORY USE ONLY:
RECEIVING TEMP: 2.6 THERM#: 18
CUSTODY SEALS - ☐ BROKEN ☐ INTACT ☐ NOT USED
☐ CARRIER BILL #
☐ HAND DELIVERED

Final 1.000

Page 13 of 14

XENCO Laboratories
Prelogin/Nonconformance Report- Sample Log-In

Client: Larson and Associates, Inc.

Date/ Time Received: 04/04/2019 10:05:00 AM

Work Order #: 620065

Acceptable Temperature Range: 0 - 6 degC
Air and Metal samples Acceptable Range: Ambient

Temperature Measuring device used : R8

Sample Receipt Checklist	Comments
#1 *Temperature of cooler(s)?	2.6
#2 *Shipping container in good condition?	**Yes**
#3 *Samples received on ice?	**Yes**
#4 *Custody Seals intact on shipping container/ cooler?	**N/A**
#5 Custody Seals intact on sample bottles?	**N/A**
#6*Custody Seals Signed and dated?	**N/A**
#7 *Chain of Custody present?	**Yes**
#8 Any missing/extra samples?	**No**
#9 Chain of Custody signed when relinquished/ received?	**Yes**
#10 Chain of Custody agrees with sample labels/matrix?	**Yes**
#11 Container label(s) legible and intact?	**Yes**
#12 Samples in proper container/ bottle?	**Yes**
#13 Samples properly preserved?	**Yes**
#14 Sample container(s) intact?	**Yes**
#15 Sufficient sample amount for indicated test(s)?	**Yes**
#16 All samples received within hold time?	**Yes**
#17 Subcontract of sample(s)?	**N/A**
#18 Water VOC samples have zero headspace?	**N/A**

*** Must be completed for after-hours delivery of samples prior to placing in the refrigerator**

Analyst: PH Device/Lot#:

Checklist completed by: Brianna Teel Date: 04/04/2019

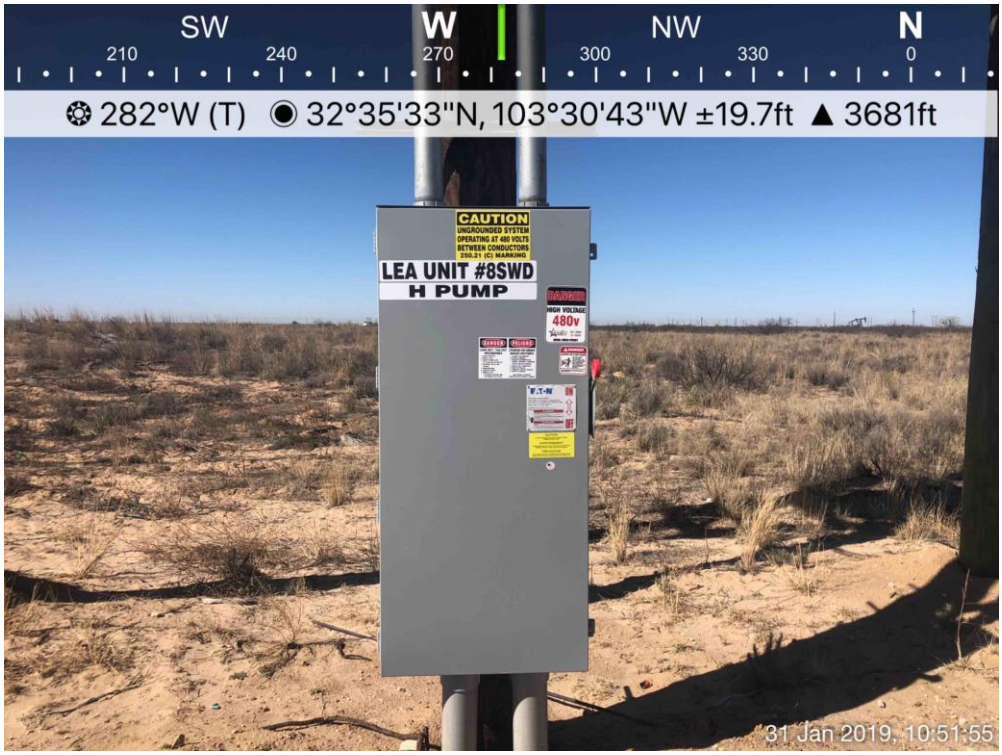
Brianna Teel

Checklist reviewed by: Holly Taylor Date: 04/05/2019

Holly Taylor

Appendix D

Photographs



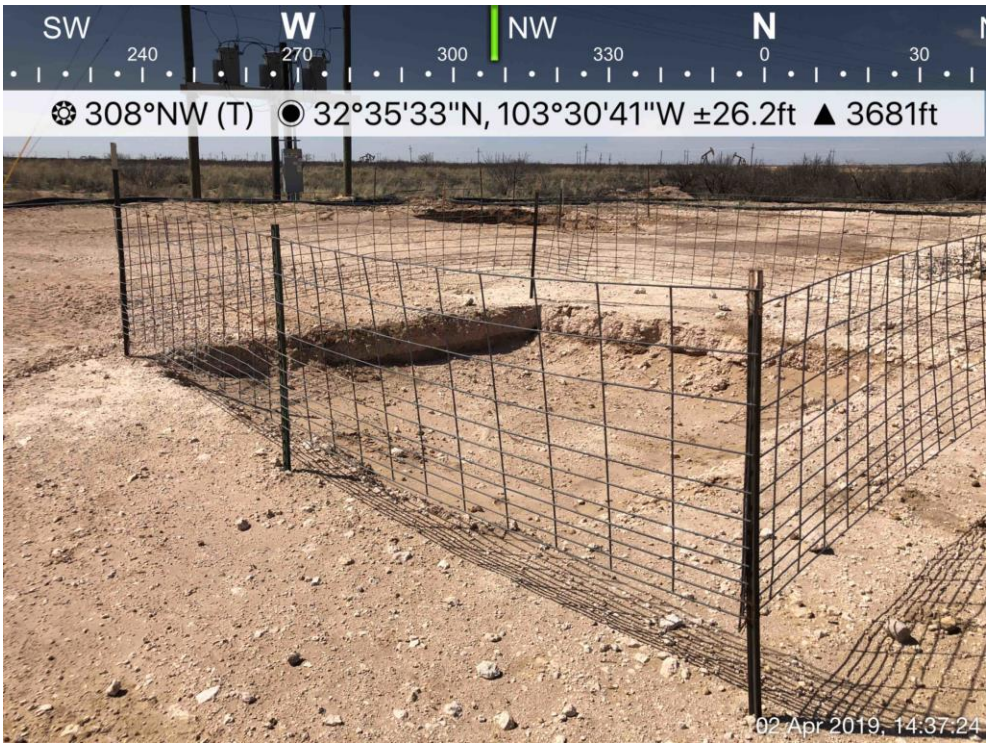
Lea Unit #8D SWD Viewing Northwest, January 31, 2019

Spill Area Viewing Northeast, September 26, 2018

Spill Area Viewing Southeast, September 26, 2018

DP-2 Excavation Viewing Northeast, March 20, 2019

DP-3 Excavation Viewing West, April 2, 2019

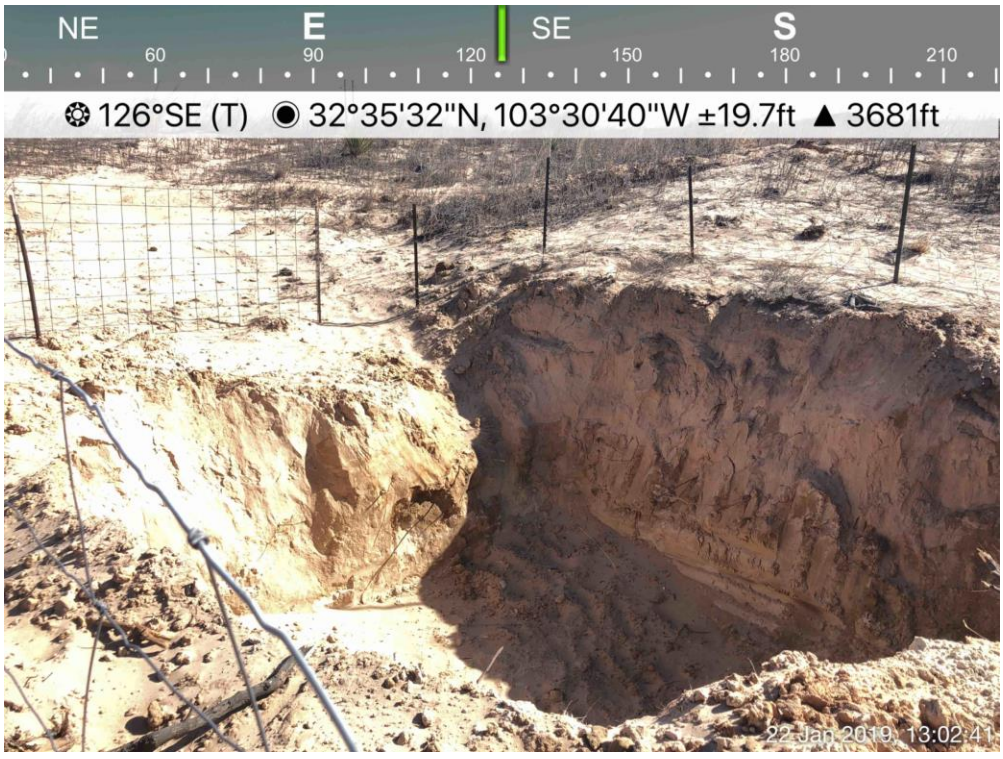


DP-4 Excavation viewing Northwest, April 2, 2019

DP-6 and DP-7 Excavations Viewing North, April 2, 2019

DP-8 Excavation Viewing East, April 2, 2019

DP-9 Excavation Viewing Northwest, March 20, 2019



DP-12 Excavation Viewing Southeast, January 22, 2019

Appendix E

Waste Manifests

R360 ENVIRONMENTAL SOLUTIONS

Permian Basin

Customer:	LEGACY RESERVES OPERATI	Ticket #:	700-973390
Customer #:	CRI3660	Bid #:	O6UJ9A000D7Y
Ordered by:	BRIAN CUNNIGHAM	Date:	1/18/2019
AFE #:		Generator:	LEGACY RESERVES OPERAT
PO #:		Generator #:	
Manifest #:	NA	Well Ser. #:	02431
Manif. Date:	1/18/2019	Well Name:	LEA UNIT
Hauler:	SUPERIOR OILFIELD MAINTEN	Well #:	008
Driver	JOE	Field:	
Truck #	8	Field #:	
Card #		Rig:	NON-DRILLING
Job Ref #		County	LEA (NM)

Facility: CRI

Product / Service	Quantity Units
Contaminated Soil (RCRA Exempt)	20.00 yards

	Cell	pH	Cl	Cond.	%Solids	TDS	PCI/GM	MR/HR	H2S	% Oil	Weight
Lab Analysis:	50/51	0.00	0.00	0.00	0						

Generator Certification Statement of Waste Status

I hereby certify that according to the Resource Conservation and Recovery Act (RCRA) and the US Environmental Protection Agency's July 1988 regulatory determination, the above described waste is:

X RCRA Exempt: Oil Field wastes generated from oil and gas exploration and production operations and are not mixed with non-exempt wast

__ RCRA Non-Exempt: Oil field waste which is non-hazardous that does not exceed the minimum standards for waste hazardous by characteristics established in RCRA regulations, 40 CFR 261.21-261.24 or listed hazardous waste as defined in 40 CFR, part 261, subpart D, as amended. The following documentation is attached to demonstrate the above-described waste is non-hazardous. (Check the appropriate items):

__ MSDS Information __ RCRA Hazardous Waste Analysis __ Process Knowledge __ Other (Provide description above)

Driver/ Agent Signature **R360 Representative Signature**

Customer Approval

THIS IS NOT AN INVOICE!

Approved By: _____ Date: _____

R360 ENVIRONMENTAL SOLUTIONS

Permian Basin

Customer:	LEGACY RESERVES OPERATI	Ticket #:	700-973354
Customer #:	CRI3660	Bid #:	O6UJ9A000D7Y
Ordered by:	BRIAN CUNNINGHAM	Date:	1/18/2019
AFE #:		Generator:	LEGACY RESERVES OPERAT
PO #:		Generator #:	
Manifest #:	NA	Well Ser. #:	02431
Manif. Date:	1/18/2019	Well Name:	LEA UNIT
Hauler:	SUPERIOR OILFIELD SERVICE	Well #:	008
Driver	JOE	Field:	
Truck #	8	Field #:	
Card #		Rig:	NON-DRILLING
Job Ref #		County	LEA (NM)

Facility: CRI

Product / Service	Quantity Units
Contaminated Soil (RCRA Exempt)	20.00 yards

	Cell	pH	Cl	Cond.	%Solids	TDS	PCI/GM	MR/HR	H2S	% Oil	Weight
Lab Analysis:	50/51	0.00	0.00	0.00	0						

Generator Certification Statement of Waste Status

I hereby certify that according to the Resource Conservation and Recovery Act (RCRA) and the US Environmental Protection Agency's July 1988 regulatory determination, the above described waste is:

X RCRA Exempt: Oil Field wastes generated from oil and gas exploration and production operations and are not mixed with non-exempt wast

__ RCRA Non-Exempt: Oil field waste which is non-hazardous that does not exceed the minimum standards for waste hazardous by characteristics established in RCRA regulations, 40 CFR 261.21-261.24 or listed hazardous waste as defined in 40 CFR, part 261, subpart D, as amended. The following documentation is attached to demonstrate the above-described waste is non-hazardous. (Check the appropriate items):

__ MSDS Information __ RCRA Hazardous Waste Analysis __ Process Knowledge __ Other (Provide description above)

Driver/ Agent Signature **R360 Representative Signature**

_____ _____

Customer Approval

THIS IS NOT AN INVOICE!

Approved By: _____ Date: _____

R360 ENVIRONMENTAL SOLUTIONS

Permian Basin

Customer:	LEGACY RESERVES OPERATI	Ticket #:	700-973414
Customer #:	CRI3660	Bid #:	O6UJ9A000D7Y
Ordered by:	BRIAN CUNNIGHAM	Date:	1/18/2019
AFE #:		Generator:	LEGACY RESERVES OPERAT
PO #:		Generator #:	
Manifest #:	NA	Well Ser. #:	02431
Manif. Date:	1/18/2019	Well Name:	LEA UNIT
Hauler:	SUPERIOR OILFIELD SERVICE	Well #:	008
Driver	JOE	Field:	
Truck #	8	Field #:	
Card #		Rig:	NON-DRILLING
Job Ref #		County	LEA (NM)

Facility: CRI

Product / Service	Quantity Units
Contaminated Soil (RCRA Exempt)	20.00 yards

	Cell	pH	Cl	Cond.	%Solids	TDS	PCI/GM	MR/HR	H2S	% Oil	Weight
Lab Analysis:	50/51	0.00	0.00	0.00	0						

Generator Certification Statement of Waste Status

I hereby certify that according to the Resource Conservation and Recovery Act (RCRA) and the US Environmental Protection Agency's July 1988 regulatory determination, the above described waste is:

X RCRA Exempt: Oil Field wastes generated from oil and gas exploration and production operations and are not mixed with non-exempt wast

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__ MSDS Information __ RCRA Hazardous Waste Analysis __ Process Knowledge __ Other (Provide description above)

Driver/ Agent Signature **R360 Representative Signature**

_____ _____

Customer Approval

THIS IS NOT AN INVOICE!

Approved By: _____ Date: _____

R360 ENVIRONMENTAL SOLUTIONS

Permian Basin

Customer:	LEGACY RESERVES OPERATI	Ticket #:	700-973307
Customer #:	CRI3660	Bid #:	O6UJ9A000D7Y
Ordered by:	BRIAN CUNNINGHAM	Date:	1/18/2019
AFE #:		Generator:	LEGACY RESERVES OPERAT
PO #:		Generator #:	
Manifest #:	NA	Well Ser. #:	02431
Manif. Date:	1/18/2019	Well Name:	LEA UNIT
Hauler:	SUPERIOR OILFIELD SERVICE	Well #:	008
Driver	JOE	Field:	
Truck #	8	Field #:	
Card #		Rig:	NON-DRILLING
Job Ref #		County	LEA (NM)

Facility: CRI

Product / Service	Quantity Units
Contaminated Soil (RCRA Exempt)	20.00 yards

	Cell	pH	Cl	Cond.	%Solids	TDS	PCI/GM	MR/HR	H2S	% Oil	Weight
Lab Analysis:	50/51	0.00	0.00	0.00	0						

Generator Certification Statement of Waste Status

I hereby certify that according to the Resource Conservation and Recovery Act (RCRA) and the US Environmental Protection Agency's July 1988 regulatory determination, the above described waste is:

X RCRA Exempt: Oil Field wastes generated from oil and gas exploration and production operations and are not mixed with non-exempt wast

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__ MSDS Information __ RCRA Hazardous Waste Analysis __ Process Knowledge __ Other (Provide description above)

Driver/ Agent Signature **R360 Representative Signature**

_____ _____

Customer Approval

THIS IS NOT AN INVOICE!

Approved By: _____ Date: _____

R360 ENVIRONMENTAL SOLUTIONS

Permian Basin

Customer:	LEGACY RESERVES OPERATI	Ticket #:	700-973332
Customer #:	CRI3660	Bid #:	O6UJ9A000D7Y
Ordered by:	BRIAN CUNNIGHAM	Date:	1/18/2019
AFE #:		Generator:	LEGACY RESERVES OPERAT
PO #:		Generator #:	
Manifest #:	NA	Well Ser. #:	02431
Manif. Date:	1/18/2019	Well Name:	LEA UNIT
Hauler:	SUPERIOR OILFIELD SERVICE	Well #:	008
Driver	JOE	Field:	
Truck #	8	Field #:	
Card #		Rig:	NON-DRILLING
Job Ref #		County	LEA (NM)

Facility: CRI

Product / Service	Quantity Units
Contaminated Soil (RCRA Exempt)	20.00 yards

	Cell	pH	Cl	Cond.	%Solids	TDS	PCI/GM	MR/HR	H2S	% Oil	Weight
Lab Analysis:	50/51	0.00	0.00	0.00	0						

Generator Certification Statement of Waste Status

I hereby certify that according to the Resource Conservation and Recovery Act (RCRA) and the US Environmental Protection Agency's July 1988 regulatory determination, the above described waste is:

X RCRA Exempt: Oil Field wastes generated from oil and gas exploration and production operations and are not mixed with non-exempt wast

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__ MSDS Information __ RCRA Hazardous Waste Analysis __ Process Knowledge __ Other (Provide description above)

Driver/ Agent Signature **R360 Representative Signature**

Customer Approval

THIS IS NOT AN INVOICE!

Approved By: _____ Date: _____

Manifest #

Lazy Ace Landfarm

Lease Operator Information:

Name: Legacy

Address: Hobbs NM

Phone #: 432-234-9150

Originating Location of waste material:

Lease Name: Lea Unit #D

Sec. _____ T _____ R _____

Transporter Information:

Name: Super Vac Hot Shot Services

Address: Hobbs NM

Phone #: 575-631-1217

Driver Signature: _____

Date: 1/21/19

Non-Hazardous Hydro-Carbons:

of Yards: 75

Waste material placed in cell number: _____

Lazy Ace Landfarm, L.L.C.
P.O. Box 130
Eunice, NM 88231

Permit # NM 01-0041
W1/2SW1/4 S22T20SR34E

Contacts:
Danny Berry
(575) 393-6964 - Home
(575) 369-5266 - Cell

" As a condition of acceptance for disposal, I hereby certify that this waste is an exempt waste as defined by the Environmental Protection Agency (EPA). The waste are: generated from oil and gas exploration and production operations, exempt from Resource Conservation and Recovery Act (RCRA) Subtitle C Regulations: and not mixed with non-exempt waste."

Facility Representative: Rachel Owen Date: 01/21/19

White - Original **Canary - Invoice** **Pink - Trucker**

Manifest #

Lazy Ace Landfarm

Lease Operator Information:

Name: Legacy

Address: Hobbs NM

Phone #: 432 239- 9450

Originating Location of waste material:

Lease Name: Lea unit # D

Sec. _____ T _____ R _____

Transporter Information:

Name: Sigma Oilfield Services

Address: Hobbs NM

Phone #: 575 631 1217

Driver Signature: _____

Date: 1/21/19

Non-Hazardous Hydro-Carbons:

of Yards: 80

Waste material placed in cell number: _____

Lazy Ace Landfarm, L.L.C.
P.O. Box 130
Eunice, NM 88231

Permit # NM 01-0041
W1/2SW1/4 S22T20SR34E

Contacts:

Danny Berry
(575) 393-6964 - Home
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" As a condition of acceptance for disposal, I hereby certify that this waste is an exempt waste as defined by the Environmental Protection Agency (EPA). The waste are: generated from oil and gas exploration and production operations, exempt from Resource Conservation and Recovery Act (RCRA) Subtitle C Regulations: and not mixed with non-exempt waste."

Facility Representative: Rachel Owen Date: 1/21/19

White - Original **Canary - Invoice** **Pink - Trucker**

R360 ENVIRONMENTAL SOLUTIONS

Permian Basin

Customer:	LEGACY RESERVES OPERATI	Ticket #:	700-993126
Customer #:	CRI3660	Bid #:	O6UJ9A000D7Y
Ordered by:	BRIAN CUNNINGHAM	Date:	3/20/2019
AFE #:		Generator:	LEGACY RESERVES OPERA
PO #:		Generator #:	
Manifest #:	NA	Well Ser. #:	02431
Manif. Date:	3/20/2019	Well Name:	LEA UNIT
Hauler:	SUPERIOR OILFIELD SERVICE	Well #:	008
Driver	JOE	Field:	
Truck #	7	Field #:	
Card #		Rig:	NON-DRILLING
Job Ref #		County	LEA (NM)

Facility: CRI

Product / Service	Quantity Units
Contaminated Soil (RCRA Exempt)	20.00 yards

	Cell	pH	Cl	Cond.	%Solids	TDS	PCI/GM	MR/HR	H2S	% Oil	Weight
Lab Analysis:	50/51	0.00	0.00	0.00	0						

Generator Certification Statement of Waste Status

I hereby certify that according to the Resource Conservation and Recovery Act (RCRA) and the US Environmental Protection Agency's July 1988 regulatory determination, the above described waste is:

X RCRA Exempt: Oil Field wastes generated from oil and gas exploration and production operations and are not mixed with non-exempt wastes.

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__ MSDS Information __ RCRA Hazardous Waste Analysis __ Process Knowledge __ Other (Provide description above)

Driver/ Agent Signature _____

R360 Representative Signature _____

Customer Approval

THIS IS NOT AN INVOICE!

Approved By: _____ Date: _____

R360 ENVIRONMENTAL SOLUTIONS

Permian Basin

Customer:	LEGACY RESERVES OPERATI	Ticket #:	700-993163
Customer #:	CRI3660	Bid #:	O6UJ9A000D7Y
Ordered by:	BRIAN CUNNGINHAM	Date:	3/20/2019
AFE #:		Generator:	LEGACY RESERVES OPERAT
PO #:		Generator #:	
Manifest #:	NA	Well Ser. #:	02431
Manif. Date:	3/20/2019	Well Name:	LEA UNIT
Hauler:	SUPERIOR OILFIELD MAINTEN	Well #:	008
Driver	JOE	Field:	
Truck #	8	Field #:	
Card #		Rig:	NON-DRILLING
Job Ref #		County	LEA (NM)

Facility: CRI

Product / Service	Quantity Units
Contaminated Soil (RCRA Exempt)	20.00 yards

	Cell	pH	Cl	Cond.	%Solids	TDS	PCI/GM	MR/HR	H2S	% Oil	Weight
Lab Analysis:	50/51	0.00	0.00	0.00	0						

Generator Certification Statement of Waste Status

I hereby certify that according to the Resource Conservation and Recovery Act (RCRA) and the US Environmental Protection Agency's July 1988 regulatory determination, the above described waste is:

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__ MSDS Information __ RCRA Hazardous Waste Analysis __ Process Knowledge __ Other (Provide description above)

Driver/ Agent Signature **R360 Representative Signature**

_____ _____

Customer Approval

THIS IS NOT AN INVOICE!

Approved By: _____ Date: _____

R360 ENVIRONMENTAL SOLUTIONS

Permian Basin

Customer:	LEGACY RESERVES OPERATI	Ticket #:	700-993268
Customer #:	CRI3660	Bid #:	O6UJ9A000D7Y
Ordered by:	BRIAN CUNNINGHAM	Date:	3/20/2019
AFE #:		Generator:	LEGACY RESERVES OPERA
PO #:		Generator #:	
Manifest #:	NA	Well Ser. #:	02431
Manif. Date:	3/20/2019	Well Name:	LEA UNIT
Hauler:	SUPERIOR OILFIELD SERVICE	Well #:	008
Driver	JOE	Field:	
Truck #	7	Field #:	
Card #		Rig:	NON-DRILLING
Job Ref #		County	LEA (NM)

Facility: CRI

Product / Service	Quantity Units
Contaminated Soil (RCRA Exempt)	20.00 yards

	Cell	pH	Cl	Cond.	%Solids	TDS	PCI/GM	MR/HR	H2S	% Oil	Weight
Lab Analysis:	50/51	0.00	0.00	0.00	0						

Generator Certification Statement of Waste Status

I hereby certify that according to the Resource Conservation and Recovery Act (RCRA) and the US Environmental Protection Agency's July 1988 regulatory determination, the above described waste is:

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__ MSDS Information __ RCRA Hazardous Waste Analysis __ Process Knowledge __ Other (Provide description above)

Driver/ Agent Signature **R360 Representative Signature**

_____ _____

Customer Approval

THIS IS NOT AN INVOICE!

Approved By: _____ Date: _____

R360 ENVIRONMENTAL SOLUTIONS

Permian Basin

Customer:	LEGACY RESERVES OPERATI	Ticket #:	700-993294
Customer #:	CRI3660	Bid #:	O6UJ9A000D7Y
Ordered by:	BRIAN CUNNINGHAM	Date:	3/20/2019
AFE #:		Generator:	LEGACY RESERVES OPERATI
PO #:		Generator #:	
Manifest #:	NA	Well Ser. #:	02431
Manif. Date:	3/20/2019	Well Name:	LEA UNIT
Hauler:	SUPERIOR OILFIELD SERVICE	Well #:	008
Driver	JOSE	Field:	
Truck #	7	Field #:	
Card #		Rig:	NON-DRILLING
Job Ref #		County	LEA (NM)

Facility: CRI

Product / Service	Quantity Units
Contaminated Soil (RCRA Exempt)	20.00 yards

	Cell	pH	Cl	Cond.	%Solids	TDS	PCI/GM	MR/HR	H2S	% Oil	Weight
Lab Analysis:	50/51	0.00	0.00	0.00	0						

Generator Certification Statement of Waste Status

I hereby certify that according to the Resource Conservation and Recovery Act (RCRA) and the US Environmental Protection Agency's July 1988 regulatory determination, the above described waste is:

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__ MSDS Information __ RCRA Hazardous Waste Analysis __ Process Knowledge __ Other (Provide description above)

Driver/ Agent Signature **R360 Representative Signature**

_____ _____

Customer Approval

THIS IS NOT AN INVOICE!

Approved By: _____ Date: _____

Permian Basin

Customer:	LEGACY RESERVES OPERATI	Ticket #:	700-993227
Customer #:	CRI3660	Bid #:	O6UJ9A000D7Y
Ordered by:	BRIAN CUNNINGHAM	Date:	3/20/2019
AFE #:		Generator:	LEGACY RESERVES OPERA
PO #:		Generator #:	
Manifest #:	NA	Well Ser. #:	02431
Manif. Date:	3/20/2019	Well Name:	LEA UNIT
Hauler:	SUPERIOR OILFIELD SERVICE	Well #:	008
Driver	JOE	Field:	
Truck #	7	Field #:	
Card #		Rig:	NON-DRILLING
Job Ref #		County	LEA (NM)

Facility: CRI

Product / Service	Quantity Units
Contaminated Soil (RCRA Exempt)	20.00 yards

	Cell	pH	Cl	Cond.	%Solids	TDS	PCI/GM	MR/HR	H2S	% Oil	Weight
Lab Analysis:	50/51	0.00	0.00	0.00	0						

Generator Certification Statement of Waste Status

I hereby certify that according to the Resource Conservation and Recovery Act (RCRA) and the US Environmental Protection Agency's July 1988 regulatory determination, the above described waste is:

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__ MSDS Information __ RCRA Hazardous Waste Analysis __ Process Knowledge __ Other (Provide description above)

Driver/ Agent Signature **R360 Representative Signature**

Customer Approval

THIS IS NOT AN INVOICE!

Approved By: _____ Date: _____

R360 ENVIRONMENTAL SOLUTIONS

Permian Basin

Customer:	LEGACY RESERVES OPERATI	Ticket #:	700-993098
Customer #:	CRI3660	Bid #:	O6UJ9A000D7Y
Ordered by:	BRIAN CUNNINGHAM	Date:	3/20/2019
AFE #:		Generator:	LEGACY RESERVES OPERAT
PO #:		Generator #:	
Manifest #:	NA	Well Ser. #:	02431
Manif. Date:	3/20/2019	Well Name:	LEA UNIT
Hauler:	SUPERIOR OILFIELD MAINTEN	Well #:	008
Driver	JOE	Field:	
Truck #	7	Field #:	
Card #		Rig:	NON-DRILLING
Job Ref #		County	LEA (NM)

Facility: CRI

Product / Service	Quantity Units
Contaminated Soil (RCRA Exempt)	20.00 yards

	Cell	pH	Cl	Cond.	%Solids	TDS	PCI/GM	MR/HR	H2S	% Oil	Weight
Lab Analysis:	50/51	0.00	0.00	0.00	0						

Generator Certification Statement of Waste Status

I hereby certify that according to the Resource Conservation and Recovery Act (RCRA) and the US Environmental Protection Agency's July 1988 regulatory determination, the above described waste is:

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__ MSDS Information __ RCRA Hazardous Waste Analysis __ Process Knowledge __ Other (Provide description above)

Driver/ Agent Signature **R360 Representative Signature**

_____ _____

Customer Approval

THIS IS NOT AN INVOICE!

Approved By: _____ Date: _____

R360 ENVIRONMENTAL SOLUTIONS

Permian Basin

Customer:	LEGACY RESERVES OPERATI	Ticket #:	700-993322
Customer #:	CRI3660	Bid #:	O6UJ9A000D7Y
Ordered by:	BRIAN CUNNINGHAM	Date:	3/20/2019
AFE #:		Generator:	LEGACY RESERVES OPERA
PO #:		Generator #:	
Manifest #:	NA	Well Ser. #:	02431
Manif. Date:	3/20/2019	Well Name:	LEA UNIT
Hauler:	SUPERIOR OILFIELD SERVICE	Well #:	008
Driver	JOE	Field:	
Truck #	20	Field #:	
Card #		Rig:	NON-DRILLING
Job Ref #		County	LEA (NM)

Facility: CRI

Product / Service	Quantity Units
Contaminated Soil (RCRA Exempt)	20.00 yards

	Cell	pH	Cl	Cond.	%Solids	TDS	PCI/GM	MR/HR	H2S	% Oil	Weight
Lab Analysis.	50/51	0.00	0.00	0.00	0						

Generator Certification Statement of Waste Status

I hereby certify that according to the Resource Conservation and Recovery Act (RCRA) and the US Environmental Protection Agency's July 1988 regulatory determination, the above described waste is:

X RCRA Exempt: Oil Field wastes generated from oil and gas exploration and production operations and are not mixed with non-exempt wastes.

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__ MSDS Information __ RCRA Hazardous Waste Analysis __ Process Knowledge __ Other (Provide description above)

Driver/ Agent Signature **R360 Representative Signature**

Customer Approval

THIS IS NOT AN INVOICE!

Approved By: _____ Date: _____

R360 ENVIRONMENTAL SOLUTIONS

Permian Basin

Customer:	LEGACY RESERVES OPERATI	Ticket #:	700-991489
Customer #:	CRI3660	Bid #:	O6UJ9A000D7Y
Ordered by:	BRIAN CUNNINGHAM	Date:	3/15/2019
AFE #:		Generator:	LEGACY RESERVES OPERATI
PO #:		Generator #:	
Manifest #:	NA	Well Ser. #:	02431
Manif. Date:	3/15/2019	Well Name:	LEA UNIT
Hauler:	SUPERIOR OILFIELD SERVICE	Well #:	008
Driver	DENNIS	Field:	
Truck #	3	Field #:	
Card #		Rig:	NON-DRILLING
Job Ref #		County	LEA (NM)

Facility: CRI

Product / Service	Quantity Units
Contaminated Soil (RCRA Exempt)	15.00 yards

	Cell	pH	Cl	Cond.	%Solids	TDS	PCI/GM	MR/HR	H2S	% Oil	Weight
Lab Analysis:	50/51	0.00	0.00	0.00	0						

Generator Certification Statement of Waste Status

I hereby certify that according to the Resource Conservation and Recovery Act (RCRA) and the US Environmental Protection Agency's July 1988 regulatory determination, the above described waste is:

X RCRA Exempt: Oil Field wastes generated from oil and gas exploration and production operations and are not mixed with non-exempt wast

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__ MSDS Information __ RCRA Hazardous Waste Analysis __ Process Knowledge __ Other (Provide description above)

Driver/ Agent Signature **R360 Representative Signature**

_____ _____

Customer Approval

THIS IS NOT AN INVOICE!

Approved By: _____ Date: _____

R360 ENVIRONMENTAL SOLUTIONS

Permian Basin

Customer:	LEGACY RESERVES OPERATI	Ticket #:	700-991519
Customer #:	CRI3660	Bid #:	O6UJ9A000D7Y
Ordered by:	BRIAN CUNNINGHAM	Date:	3/15/2019
AFE #:		Generator:	LEGACY RESERVES OPERAT
PO #:		Generator #:	
Manifest #:	NA	Well Ser. #:	02431
Manif. Date:	3/15/2019	Well Name:	LEA UNIT
Hauler:	SUPERIOR OILFIELD SERVICE	Well #:	008
Driver	DENNIS	Field:	
Truck #	3	Field #:	
Card #		Rig:	NON-DRILLING
Job Ref #		County	LEA (NM)

Facility: CRI

Product / Service	Quantity Units
Contaminated Soil (RCRA Exempt)	15.00 yards

	Cell	pH	Cl	Cond.	%Solids	TDS	PCI/GM	MR/HR	H2S	% Oil	Weight
Lab Analysis:	8	0.00	0.00	0.00	0						

Generator Certification Statement of Waste Status

I hereby certify that according to the Resource Conservation and Recovery Act (RCRA) and the US Environmental Protection Agency's July 1988 regulatory determination, the above described waste is:

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__ MSDS Information __ RCRA Hazardous Waste Analysis __ Process Knowledge __ Other (Provide description above)

Driver/ Agent Signature **R360 Representative Signature**

Customer Approval

THIS IS NOT AN INVOICE!

Approved By: _____ Date: _____

R360 ENVIRONMENTAL SOLUTIONS

Permian Basin

Customer:	LEGACY RESERVES OPERATI	Ticket #:	700-991543
Customer #:	CRI3660	Bid #:	O6UJ9A000D7Y
Ordered by:	BRIAN CUNNINGHAM	Date:	3/15/2019
AFE #:		Generator:	LEGACY RESERVES OPERATI
PO #:		Generator #:	
Manifest #:	NA	Well Ser. #:	02431
Manif. Date:	3/15/2019	Well Name:	LEA UNIT
Hauler:	SUPERIOR OILFIELD SERVICE	Well #:	008
Driver	DENNIS	Field:	
Truck #	3	Field #:	
Card #		Rig:	NON-DRILLING
Job Ref #		County	LEA (NM)

Facility: CRI

Product / Service	Quantity Units
Contaminated Soil (RCRA Exempt)	15.00 yards

	Cell	pH	Cl	Cond.	%Solids	TDS	PCI/GM	MR/HR	H2S	% Oil	Weight
Lab Analysis:	50/51	0.00	0.00	0.00	0						

Generator Certification Statement of Waste Status

I hereby certify that according to the Resource Conservation and Recovery Act (RCRA) and the US Environmental Protection Agency's July 1988 regulatory determination, the above described waste is:

X RCRA Exempt: Oil Field wastes generated from oil and gas exploration and production operations and are not mixed with non-exempt wast

__ RCRA Non-Exempt: Oil field waste which is non-hazardous that does not exceed the minimum standards for waste hazardous by characteristics established in RCRA regulations, 40 CFR 261.21-261.24 or listed hazardous waste as defined in 40 CFR, part 261, subpart D, as amended. The following documentation is attached to demonstrate the above-described waste is non-hazardous. (Check the appropriate items):

__ MSDS Information __ RCRA Hazardous Waste Analysis __ Process Knowledge __ Other (Provide description above)

Driver/ Agent Signature **R360 Representative Signature**

Customer Approval

THIS IS NOT AN INVOICE!

Approved By: _____ Date: _____

R360 ENVIRONMENTAL SOLUTIONS

Permian Basin

Customer:	LEGACY RESERVES OPERATI	Ticket #:	700-991618
Customer #:	CRI3660	Bid #:	O6UJ9A000D7Y
Ordered by:	BRIAN CUNNINGHAM	Date:	3/15/2019
AFE #:		Generator:	LEGACY RESERVES OPERAT
PO #:		Generator #:	
Manifest #:	NA	Well Ser. #:	02431
Manif. Date:	3/15/2019	Well Name:	LEA UNIT
Hauler:	SUPERIOR OILFIELD SERVICE	Well #:	008
Driver	DENNIS	Field:	
Truck #	15	Field #:	
Card #		Rig:	NON-DRILLING
Job Ref #		County	LEA (NM)

Facility: CRI

Product / Service	Quantity Units
Contaminated Soil (RCRA Exempt)	20.00 yards

	Cell	pH	Cl	Cond.	%Solids	TDS	PCI/GM	MR/HR	H2S	% Oil	Weight
Lab Analysis:	50/51	0.00	0.00	0.00	0						

Generator Certification Statement of Waste Status

I hereby certify that according to the Resource Conservation and Recovery Act (RCRA) and the US Environmental Protection Agency's July 1988 regulatory determination, the above described waste is:

X RCRA Exempt: Oil Field wastes generated from oil and gas exploration and production operations and are not mixed with non-exempt wast

__ RCRA Non-Exempt: Oil field waste which is non-hazardous that does not exceed the minimum standards for waste hazardous by characteristics established in RCRA regulations, 40 CFR 261.21-261.24 or listed hazardous waste as defined in 40 CFR, part 261, subpart D, as amended. The following documentation is attached to demonstrate the above-described waste is non-hazardous. (Check the appropriate items):

__ MSDS Information __ RCRA Hazardous Waste Analysis __ Process Knowledge __ Other (Provide description above)

Driver/ Agent Signature _____

R360 Representative Signature _____

Customer Approval

THIS IS NOT AN INVOICE!

Approved By: _____ Date: _____

R360 ENVIRONMENTAL SOLUTIONS

Permian Basin

Customer:	LEGACY RESERVES OPERATI	Ticket #:	700-991584
Customer #:	CRI3660	Bid #:	O6UJ9A000D7Y
Ordered by:	BRIAN CUNNINGHAM	Date:	3/15/2019
AFE #:		Generator:	LEGACY RESERVES OPERAT
PO #:		Generator #:	
Manifest #:	NA	Well Ser. #:	02431
Manif. Date:	3/15/2019	Well Name:	LEA UNIT
Hauler:	SUPERIOR OILFIELD SERVICE	Well #:	008
Driver	DENNIS	Field:	
Truck #	15	Field #:	
Card #		Rig:	NON-DRILLING
Job Ref #		County	LEA (NM)

Facility: CRI

Product / Service	Quantity Units
Contaminated Soil (RCRA Exempt)	20.00 yards

	Cell	pH	Cl	Cond.	%Solids	TDS	PCI/GM	MR/HR	H2S	% Oil	Weight
Lab Analysis:	50/51	0.00	0.00	0.00	0						

Generator Certification Statement of Waste Status

I hereby certify that according to the Resource Conservation and Recovery Act (RCRA) and the US Environmental Protection Agency's July 1988 regulatory determination, the above described waste is:

X RCRA Exempt: Oil Field wastes generated from oil and gas exploration and production operations and are not mixed with non-exempt wast

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__ MSDS Information __ RCRA Hazardous Waste Analysis __ Process Knowledge __ Other (Provide description above)

Driver/ Agent Signature **R360 Representative Signature**

Customer Approval

THIS IS NOT AN INVOICE!

Approved By: _____ Date: _____

Perm Basin

Customer:	LEGACY RESERVES OPERATI	Ticket #:	700-991565
Customer #:	CRI3660	Bid #:	O6UJ9A000D7Y
Ordered by:	BRIAN CUNNINGHAM	Date:	3/15/2019
AFE #:		Generator:	LEGACY RESERVES OPERAT
PO #:		Generator #:	
Manifest #:	NA	Well Ser. #:	02431
Manif. Date:	3/15/2019	Well Name:	LEA UNIT
Hauler:	SUPERIOR OILFIELD SERVICE	Well #:	008
Driver	DENNIS	Field:	
Truck #	3	Field #:	
Card #		Rig:	NON-DRILLING
Job Ref #		County	LEA (NM)

Facil CRI

Prod Service — Quantity Units

Cont ated Soil (RCRA Exempt) — 15.00 yards

	Cell	pH	Cl	Cond.	%Solids	TDS	PCI/GM	MR/HR	H2S	% Oil	Weight
Lab sis:	50/51	0.00	0.00	0.00	0						

Gen Certification Statement of Waste Status

I her rtify that according to the Resource Conservation and Recovery Act (RCRA) and the US Environmental Protection Agency's July ory determination, the above described waste is:

X Exempt: Oil Field wastes generated from oil and gas exploration and production operations and are not mixed with non-exempt wast

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Driv ent Signature ______________________ R360 Representative Signature ______________________

Approval

THIS IS NOT AN INVOICE!

Ap By: ______________________ Date: ______________________

3EAA 3/15/2019 11:43

R360 ENVIRONMENTAL SOLUTIONS

Permian Basin

Customer:	LEGACY RESERVES OPERATI	Ticket #:	700-991651
Customer #:	CRI3660	Bid #:	O6UJ9A000D7Y
Ordered by:	BRIAN CUNNIGHAM	Date:	3/15/2019
AFE #:		Generator:	LEGACY RESERVES OPERAT
PO #:		Generator #:	
Manifest #:	NA	Well Ser. #:	02431
Manif. Date:	3/15/2019	Well Name:	LEA UNIT
Hauler:	SUPERIOR OILFIELD SERVICE	Well #:	008
Driver	DENNIS	Field:	
Truck #	15	Field #:	
Card #		Rig:	NON-DRILLING
Job Ref #		County	LEA (NM)

Facility: CRI

Product / Service	Quantity Units
Contaminated Soil (RCRA Exempt)	20.00 yards

	Cell	pH	Cl	Cond.	%Solids	TDS	PCI/GM	MR/HR	H2S	% Oil	Weight
Lab Analysis:	50/51	0.00	0.00	0.00	0						

Generator Certification Statement of Waste Status

I hereby certify that according to the Resource Conservation and Recovery Act (RCRA) and the US Environmental Protection Agency's July 1988 regulatory determination, the above described waste is:

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__ MSDS Information __ RCRA Hazardous Waste Analysis __ Process Knowledge __ Other (Provide description above)

Driver/ Agent Signature **R360 Representative Signature**

_____ _____

Customer Approval

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Approved By: _____ Date: _____